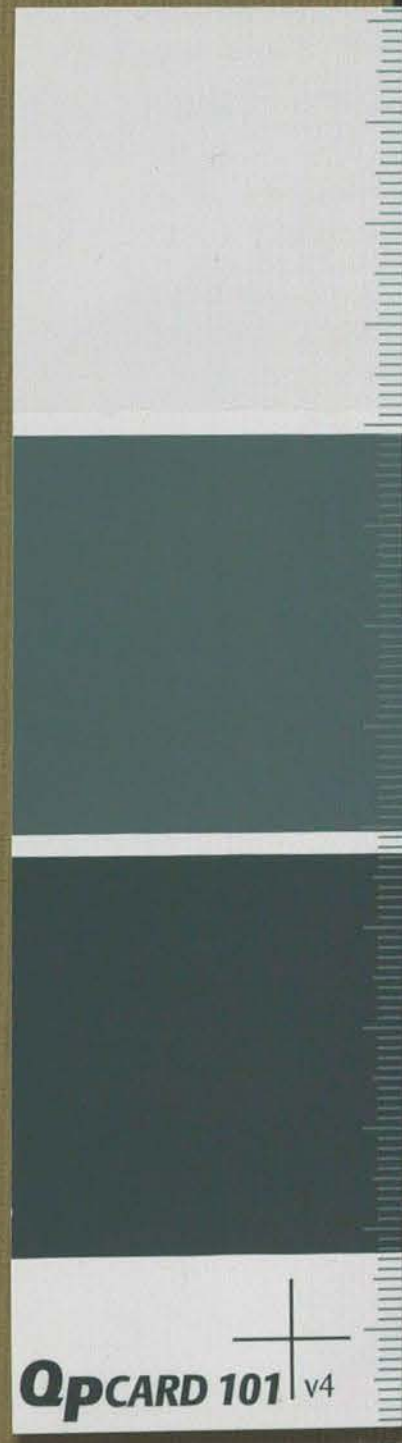
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UNIVERSITY OF NEVADA

AGRICULTURAL EXTENSION DIVISION

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

ANNUAL REPORT OF COOPERATIVE EXTENSION WORK

IN AGRICULTURE AND HOME ECONOMICS

STATE OF NEVADA

1946

by

Cecil W. Creel

Director of Agricultural Extension

ANNUAL REPORT
OF
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION DIVISION
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING
FISCAL YEAR 1945-1946

I NAME OF PROJECT - 1-A Administration

State Office Staff, Organization and Duties

The State Office staff of the Agricultural Extension Division of the University of Nevada, for the fiscal year ending June 30, 1946, consisted of a Director, an Administrative Assistant, a Chief Clerk, an Extension Editor, an Assistant Director for County Agent Work, an Assistant Director for Junior Extension Work, an Assistant Director for Home Demonstration Work, an Extension Marketing Specialist, an Extension Agricultural Economist, an Extension Soil Conservationist, an Extension Forester, an Extension Nutritionist, a part-time bookkeeper and five clerks and stenographers.

The Director of Agricultural Extension is in administrative charge of all cooperative extension work in the State of Nevada, both for the University of Nevada and the United States Department of Agriculture. The Director is also Dean of the College of Agriculture of the University of Nevada and has delegated authority, from the President of the University, over the Agricultural Experiment Station. The general policy is to coordinate the three branches of service for effective agriculture in the state. In the absence of the Director from the state, the President of the University, or in his absence his appointee, becomes Acting Director.

The Administrative Assistant to the Dean of Agriculture, appointed October 1, 1945, has delegated supervision of all equipment, films, clerical staff, correspondence, preparation of and filing of budgets, records and reports of the Extension Service. He acts as State Publication Distribution Officer for the receiving and distribution of bulletins and printed material. He aids the Dean in the preparation of budgets, reports and in other administrative matters in the College of Agriculture and Experiment Station.

The Chief Clerk acts as secretary to the Director and Administrative Assistant and has supervision of the State Office clerical staff. She is in general charge of Extension correspondence and the preparation and filing of records and reports. She assists in the preparation of payrolls, checking of accounts and the keeping of financial records of the Agricultural Extension Division.

The Extension Editor edits all bulletins, prepares news releases, and is in charge of the weekly news service supplied to Nevada newspapers and agricultural publications of adjoining states which serve Nevada.

The Assistant Director for County Agent Work, (change of title), February 2, 1946, has supervision of all adult agricultural extension projects in the various counties.

The Assistant Director for Junior Extension Work, (change of title), February 2, 1946, has supervision of all 4-H Club and Older Youth Work in the various counties. He has charge of the State 4-H Club Camp.

The Assistant Director for Home Demonstration Work, (change of title), October 1, 1946, has supervision of all extension home demonstration work in the various counties, including girls' 4-H Club Work.

The Extension Marketing Specialist is responsible for extension work in the marketing of agricultural products. His duties consist of assisting extension agents in developing agricultural marketing programs, including the furnishing of help in the organization of cooperative marketing associations for crops, livestock and livestock products. This work includes educational guidance to cooperative associations and marketing of dairy and poultry products, sponsored both by the County Farm Bureaus and agencies of the U. S. Department of Agriculture. The Extension Marketing specialist also handles extension work in agricultural credit, with particular reference to the financial assistance which can be furnished to farmers and stockmen by the various federal credit agencies. A portion of his time is devoted to the agricultural outlook work and educational work in connection with the agricultural conservation and land-use planning projects. An important proportion of the time is devoted to promoting dairy and poultry industry of the State by dispensing technical information to dairy and poultry farmers.

The Extension Agricultural Economist is responsible for extension work in farm management, especially in relation to the keeping of farm accounts, so that a ranch operator will have an overall financial picture of his enterprise. Aid is given in the preparation of income tax reports. Work with land-use planning committees has diminished during the war period, but some work is accomplished on land-use, land appraisal, land purchase, land selling and assistance to returning World War II veterans. He also assists with the agricultural outlook work and devotes some time to the training of discussion groups, as well as conducting education work in connection with the agricultural conservation program. He acts as dairy specialist for the State and aids the marketing specialist with poultry information and material.

The Extension Nutritionist, (change of title) August 1, 1945, is responsible for the state program of extension work in food conservation and human nutrition in both rural and urban areas of the State. She is assisted by a part-time Nutrition Consultant who is a member of the resident teaching staff of the Department of Home Economics of the University of Nevada.

The Extension Soil Conservationist is responsible for the state program of the extension work in soil conservation. He assists the extension agents and groups of farmers in the organization of soil conservation districts, and following the organization of such districts, works with the extension agents and soil conservation district directors in the preparation of effective demonstration and work programs for said districts. He also assists extension agents in setting up soil erosion control demonstrations in counties or areas not having legally organized districts.

The Extension Forester is responsible for carrying out farm forestry activities in cooperation with the ranch population of the State. Management of windbreaks or woodlots, cutting of forest products from forest lands, planting of trees, conservation, rural fire protection and other educational projects are provided.

Field Staff, Organization and Duties

The field staff of the Agricultural Extension Division for the fiscal year ending June 30, 1946, consisted of twelve full-time men extension agents, four full-time man assistant extension agents, one full-time woman extension agent-at-large, six full-time women extension agents, and two full-time assistant extension agents. The men extension agents are in charge of the agricultural extension projects, including crop and livestock 4-H Club work. They continue to act as secretaries for the County Agricultural Conservation Associations, and were responsible for the educational work for this program in their respective counties and districts. In the absence of women extension agents in certain counties, the men agents carried the responsibility for home economics 4-H Club work, with such assistance as could be given them by occasional visits from the Assistant Director for Home Demonstration Work.

The women agents were in charge of the home demonstration extension projects, including home economics 4-H Club work, in the counties and districts to which they were assigned. Work and plans for the year were organized around needs for the post-war effort. Additional federal funds made it possible to appoint two assistant home demonstration agents and one agent-at-large, which provided extension service more adequately to areas of limited or no previous service.

With few exceptions, all full-time extension agents were paid their entire salaries from Federal and State Funds appropriated for the support of cooperative extension work in Nevada. In addition to their state appointments, these agents also carried appointments from the United States Department of Agriculture.

With the exception of some extension work on a participating basis in Esmeralda County, it has been necessary to limit the regular activities of the extension agents to the thirteen counties of the State having legally organized farm bureaus. This restriction has been necessary both from the standpoint of efficiency and from the fact that travel funds for extension agents is available only from county and state sources in those counties having organized farm bureaus. Through the use of federal funds it has been possible however, to make the agricultural adjustment and farm security programs available to farmers and farm families living in all counties of the state.

With the exception of one woman district extension agent-at-large and one woman assistant district extension agent, having headquarters in the state office, the extension agents have continued to make their offices in the eleven county seats best located from the standpoint of proximity and highway connections.to the agricultural communites they are designated to serve. Seven of these county extension offices are located with the county Farm Bureaus in Federal Buildings, three offices are located in County Court Houses and one office is located in a rented building, suitable for the purpose. Thirteen extension agents and three assistants are housed in the seven Federal Offices, six extension agents and one assistant are located in the three Court Houses, and two agents and one assistant are established in a rented office building.

A. Relationships with Other Divisions of the University of Nevada

The Agricultural Extension Division is a definite administrative unit of the University of Nevada, coordinate in rank with the College of Agriculture and the Agricultural Experiment Station. Relationships with the College and the Experiment Station have continued to be mutually helpful during the past fiscal year. Increased coordination has been brought about by the appointment July 1, 1945, of a Dean of Agriculture who is Director of the Agricultural Extension Service and Dean of the College of Agriculture. On July 1, 1946, this appointment will be extended to include delegated supervision of the Experiment Station. Members of the faculty of the College and members of the Experiment Station staff have continued to cooperate closely with the Agricultural Extension Division by serving on the State Agricultural Conservation Technical Committee, as well as participating in Program Planning, Agricultural Economic, and Outlook activities.

B. Relationships With State Regulatory Agencies.

Relationships with the State Department of Agriculture and the regulatory departments of the Public Service Division of the University of Nevada continue satisfactory.

C. Relationships with Farm Organizations.

The Farm Bureau maintains an effective State organization and thirteen County units in Nevada. Its membership included over one-third of the farm families and livestock producers of the State. The Grange has one local unit in Washoe County. The Nevada Livestock Association and the Nevada Wool Growers Association, while organized on a state-wide basis, are limited quite largely in their membership to cattlemen and sheepmen residing in northern and eastern Nevada.

The Agricultural Extension Division maintains satisfactory relationships with all of the above mentioned organizations. The County and State Farm Bureaus are designated by State law as the official agencies through which the University of Nevada must carry on its agricultural extension work. The Director of the Agricultural Extension acts as an ex-officio member of the Board of Directors of the Nevada State Farm Bureau and he, together with members of his supervisory and specialist staffs, cooperate with said Board in the formulation of a state-wide agricultural and home economics extension program. County Farm Bureau directors act as county extension project leaders, in which capacity they work closely with the men and women extension agents, both in the formulation and carrying out of extension programs in their respective counties.

D. Relationships With The Nevada State Fair, The Nevada State Livestock Show and County Fairs.

The Agricultural Extension Division has continued to assist in the collection and preparation of crop, livestock, home economics, and 4-H club exhibits at the Nevada State Fair, the Nevada State Livestock Show, and the various County Fairs. State, district, and county extension workers also act as judges at all of these fairs.

E. Relationships With the Agricultural Committee of the Nevada Bankers' Association, and the Agricultural Commission of the American Bankers' Association.

The Extension Division has continued to cooperate with the Agricultural Committee of the Nevada Bankers' Association and with the Agricultural Commission of the American Bankers' Association in support of the Banker-Farmer program.

F. Relationships With Bureaus and offices of the United States Department of Agriculture.

Relationships with all bureaus and offices of the United States Department of Agriculture conducting work in Nevada continue satisfactory. The Agricultural Extension Division is indebted to representatives of the Federal Extension Service, the Agricultural Adjustment Administration, the Farm Security Administration, the Forest Service, the Bureau of Biological Survey, and the Soil Conservation Service for much valuable assistance during the past year.

G. Changes in Relationships of Extension Specialist and County and District Extension Agents.

No changes in the above relationships have occurred during the past fiscal or calendar year.

Extension Staff as of June 30, 1946

Administration

Cecil W. Creel, Director of Agricultural Extension
Clarence E. Byrd, Administrative Assistant
Marie Watkins, Chief Clerk

Supervision

Thomas E. Buckman, Assistant Director for County Agent Work
Margaret M. Griffin, Assistant Director for Home Demonstration Work
Paul L. Maloney, Assistant Director for Junior Extension Work

Specialists

Eda L. Carlson, Extension Nutritionist
L. E. Cline, Extension Marketing Specialist
Herbert J. Freece, Extension Forester
Alfred L. Higginbotham, Extension Editor
Penelope Rice, Nutrition Consultant (part-time)
Otto R. Schulz, Extension Soil Conservationist
Verner E. Scott, Extension Agricultural Economist

District Extension Agents - Agricultural

Fred C. Batchelder,	Esmeralda and Nye Counties
H. Lee Hanson	Douglas and Ormsby
Steve James	Eureka and White Pine
Elwyn M. Trigero	Humboldt and North Lander

Assistant District Extension Agents - Agricultural

Jack S. Cliff	Churchill and Southern Lander
William N. Helphinstine	White Pine

County Extension Agents - Agricultural

Archie R. Albright	Washoe County
Louie A. Gardella	Lyon County
Mark W. Menke	Elko County
Ray K. Peterson	Clark County
Albert J. Reed	Pershing County
Mark A. Stewart,	Lincoln County
John H. Wittwer	Clark County
Charles R. York	Churchill County

Assistant County Extension Agents - Agricultural

Leonard Anker	Washoe County
Warren J. Welsh	Lyon County

District Extension Agents - Home Economics

Miss J. Hazel Zimmerman	Agent-at-Large
Mrs. Olive C. McCracken	Douglas, Ormsby and Storey
Mrs. Rose Spezia	Humboldt, Pershing & N. Lander

Assistant District Extension Agent - Home Demonstration

Mardelle E. Merrill	Douglas, Ormsby and Washoe

County Extension Agent - Home Demonstration

Miss Madge Elder	Lyon County
Miss Lena Hauke	Churchill County
Miss M. Gertrude Hayes	Washoe County
Miss Delphina (Goicoechea) Lopez	Elko County

Assistant County Extension Agent - Home Demonstration

Mrs. Theo Sherman	Churchill County

Source of Extension Revenue

Revenue for the support of the Agricultural Extension Division of the University of Nevada, including the Cooperative Extension work carried on in several counties in the State was derived from the following sources during the fiscal year ending June 30, 1946.

A.	Federal Appropriations -	
	(1) Federal Smith-Lever and Bankhead-Jones Fund	$40,493.58
	(2) Federal Capper-Ketcham Fund	20,583.19
	(3) Federal Norris-Doxey Fund	1,200.00
	(4) Federal Additional Cooperative Fund	11,955.08
	(5) Federal Bankhead-Flannagan	22,021.74
	Total Federal Funds	$96,253.59
B.	State Appropriations	
	(1) College and State (Non-offset)	$38,806.87
	(2) College and State (Offset to Federal Funds)	28,600.40
	Total State Funds	$67,407.27
C.	County Appropriations	
	(1) Appropriations by Boards of County Commissioners	48,741.77
	Total County Funds	$48,741.77
	Grand Total of All public funds available for support of Extension work during the fiscal year.	$212,402.63

Important Additions to Offices and Equipment

The following important items of furniture and equipment were purchased from Federal Extension funds during the fiscal year ending June 30, 1946:

1 - Flexo Lamp
3 - Ring Binders
4 - #337 McMaster Stations
1 - #307 Sub-station
3 - #356 Selector Base
1 - #566 Selector Base
4 - AA Filters & W-2 wires
1 - Bell & Howell Filmosound Model 179
1 - Legal size steel file 4-dr. #6203
1 - Fluorescent Desk Lamp
1 - Fluorescent Desk Lamp
1 - 14" L.C.Smith typewriter Elite type
Material and parts to build hay loader and bailer
1 - Speed graphic case
1 - 4x5 Graflex film pack adapter
6 - 4x5 Graflex short film & plate holders
1 - brief case
1 - tool box
12 - #82-71 Steel files
12 - blocks for files
1 - FM-OTC 44 2,000 watt, 100 volt AC-60 cycle manual generating set
1 - Underwood standard typewriter with Pica type
1 - #1805 4 dr. steel case letter size
1 - Fibre Print case
1 - #3120 Singer Machine
1 - 1942 Hudson - 21 Super six 4 dr. sedan
1 - Royal Typewriter KMM 14
1 - Royal Typewriter KMM 14
1 - Weston Master Meter
1 - Case for Weston Meter
1 - Bell and Howell Filmosound Model 179
4 - legal size Transfer files
1 - Model MF - Rex O Graph Dupl. Machine
6 - Fire Extinguishers for cars
1 - Portable spray tank

P U B L I C A T I O N S

To meet the needs of agricultural reconversion for 1946, news stories continued to provide the major material distributed. By means of these stories, magazine articles, bulletins, leaflets, radio, advertisements and other media the Extension Editor informed Nevadans of the objectives, developments, results and approved practices growing out of subject matter projects. The thirty-five newspapers and five radio stations located in the state were large factors in the dissemination of agricultural news story material.

Approximately 156 state-wide stories were released for 1946. Some news stories originated from the county extension office level, and with more experienced office help this source of information should greatly increase next year. Agents, relieved of war-time activities, should be in a position to make available worthwhile educational information on excellent projects which they are completing.

No new bulletins were printed during 1946, but a recent survey revealed that this need will be remedied during the coming year.

Following is a list of the printed and mimeographed publications issued from November 1, 1945 to October 31, 1946.

Printed Bulletins

Number	Title and Author	Pages	Copies
Leaflet A-46	Milking by Machine by F. B. Headley Agricultural Experiment Station University of Nevada	4	5,000

Mimeographed Material

Plan for Hay Bale Loaders, by Louis Titus, Associate Professor of Agronomy.

What I Ate in the Last 24 Hours, by Ida L. Carlson, Extension Nutritionist.

Steps in Cheese Making, by Vernor E. Scott, Extension Economist.

Planting and Care of Windbreakers in Nevada, by A. L. Higginbotham, Extension Editor.

Make Over Tips for your Wardrobe, by Margaret M. Griffin, Assistant Director for home demonstration work.

Use of Home Freezing Units, by Ida L. Carlson, Extension Nutritionist.

Yield Summary Alfalfa dusted with D.D.T. for Lygus Control, by Thomas E. Buckman, Assistant Director for County Agent Work.

Revised Turkey Bulletin (Brooding, Feeding, and Diseases of Young Turkeys) by L. E. Cline, Extension Marketing Specialist.

Veterans and Farm Machinery, by Louis Titus, Associate Professor of Agronomy.

Home Preparation of Foods for Freezing, by Eda L. Carlson, Extension Nutritionist.

Slides on the Construction of a Cold Box, by A. L. Higginbotham, Extension Editor.

Upholstery and Furniture Renovation, by Eda L. Carlson, Extension Nutritionist.

How to Care for Rayon Fabrics, by Margaret M. Griffin, Assistant Director for Home Demonstration Work.

Important Notes on Rayon, by Margaret M. Griffin, Assistant Director for Home Demonstration Work.

How to Wash and Iron Today's Rayons, by Margaret M. Griffin, Assistant Director for Home Demonstration Work.

Check Sheet for Food Records, by Eda L. Carlson, Extension Nutritionist.

Father-Son Agreements, by Paul L. Maloney, Assistant Director for Junior Extension Work.

Did you Waste any Wheat today ? by Eda L. Carlson, Extension Nutritionist.

Did you salvage any fat today ? by Eda L. Carlson, Extension Nutritionist.

Have you planted a victory garden ? by A. L. Higginbotham, Extension Editor.

Calves, by Paul L. Maloney, Assistant Director for Junior Extension Work.

New Insecticide for Control of Lygus Bugs in Alfalfa, by Thomas E. Buckman, Assistant Director for County Agent Work.

Some Bee Plants of Utah, by L. E. Cline, Extension Marketing Specialist.

Refinishing Furniture, by Margaret M. Griffin, Assistant Director for Home Demonstration Work.

Oil Method of Storing Eggs, by Verner E. Scott, Extension Economist.

Canning Asparagus (Job Breakdown), by Eda L. Carlson, Extension Nutritionist.

Improperly fed Turkeys in Danger of Perosis, by L. E. Cline, Extension Marketing Specialist.

Relative Feeding Value of 1st, 2nd, and 3rd Alfalfa Hay, by Thomas E. Buckman, Assistant Director for County Agent Work.

Effect of Early and Late Grown Hay on Growth of Steers, by Thomas E. Buckman, Assistant Director for County Agent Work.

Preventing and Guarding Against Spoilage in Home Canned Foods, by Eda L. Carlson, Extension Nutritionist.

Home Furnishing Program During War, by Eda L. Carlson, Extension Nutritionist.

Alfalfa Trippings by Insects, by Thomas E. Buckman, Assistant Director for County Agent Work.

Canning Chicken (Job Breckbloom) by Eda L. Carlson, Extension Nutritionist.

Inexpensive Main Dish Salads, by Eda L. Carlson, Extension Nutritionist.

Research Range Plantings, by Thomas E. Buckman, Assistant Director for County Agent Work.

Chats on Agricultural News Writing, by A. L. Higginbotham, Extension Editor.

1948 Turkey Crop Production and Distribution and Turkey Situation, by L. E. Cline, Extension Marketing Specialist.

Bread Recipes, by Eda L. Carlson, Extension Nutritionist.

Save that Venison, by Eda L. Carlson, Extension Nutritionist.

Glamorizing Home Grown Foods, by Eda L. Carlson, Extension Nutritionist.

Methods Used in Distributing Publications

Distribution of bulletins, circulars, including mimeographed circulars, is made to interested persons, resident in Nevada, chiefly through the extension agents. A supply is sent to each county or district office and from there either mailed out or personally delivered by the agents to interested persons. The state extension office retains sufficient copies of all publications to supply direct requests for the same from citizens of Nevada, the U.S. Department of Agriculture, other State extension offices, and reasonable demands from citizens of other states.

SUMMARY REPORT OF WORK ACCOMPLISHED ON PROJECTS

Agriculture

On February 2, 1946, Thomas E. Buckman was appointed as Assistant Director for County Agent Work. He has supervision of the adult program for agriculture. Thirteen counties had cooperative Extension Services with eleven offices and Farm Bureau organizations for agriculture. The supervisor aided the four District Agricultural Extension Agents, two Assistant District Agents, eight County Agricultural Extension Agents, and two Assistant County Agents in the formation of effective project plans of work for the year.

Some effort of the supervisor for the year was concentrated on: a survey of state agricultural needs and resumption of normal projects to meet long felt needs; follow-up work on agent results with their important projects; conferences with agents on an individual and regional basis to provide much needed in-service training for the many new agents employed during the year; improvement of records, reports and procedures of county agents; maintenance of efficient personnel; well-balanced agricultural programs in each county to promote the family, business, economic and social interests of the rural population; coordination of the adult agricultural extension program with other programs devoted to agriculture, and providing agricultural subject-matter information for all county offices. The total number of county agent projects for the year reached 202 and were distributed as follows: range livestock 14, forage crops and pasture 12, agricultural conservation program 17, marketing 22, dairying 21, poultry 10, hog production 6, horses 2, fertilizer 2, soil erosion and water conservation 9, cereal crops 8, farm forestry 10, alfalfa production 11, potato production 2, vegetable production 7, weed control 4, tomato plant production 1, county farm bureau cooperation 13, banker-farmer cooperation 7, farm safety 1, rural fire protection 6, and gardens 17.

Considerable work was done by the supervisor in arranging conferences and demonstrations on the use of sprays for control of lice, ticks, flies and grubs on livestock. The use of DDT, rotenone, and other dusts and sprays were also circularized for control of diseases and insects of some crops.

John H. Wittwer, County Agent of Clark County has been responsible for well executed ground work on a Tomato Plant project of vital interests to growers of Clark County. Specialist assistance from outside the state and a personal survey by Mr. Wittwer (including a visitation to the U. S. Department of Agriculture) of other regions interested in solving the problems of this growing agricultural endeavor has brought advancement of this project to the point where it is a major factor in the production of the county. Cooperation of the State Experiment Station and this Extension Supervisor has been given where possible.

Home Demonstration:

The Assistant Director for Home Demonstration Work had charge of the Home Economics Extension work in the state and supervised all women agents and home economics specialists. This staff consisted of seven agents and two assistant agents serving thirteen of the seventeen counties in the State, one Extension Nutritionist and one part-time Nutrition Consultant. By the use of Bankhead-Flannagan Funds: three full-time women agents were added to the staff and service was thus extended to nine counties; two assistant women agents were employed during the summer months; and a full-time nutritionist specialist was secured.

The Assistant Director devoted much of her time to: working out and revising programs of work at all levels: prepared and approved subject-matter materials used and published by the state office and agents; coordinated work with other agencies; provided for suitable publicity for the home economics division; provided for needed expansion of programs; assisted agents in securing suitable work centers, working materials, equipment and supplies; supervision of 4-H and older youth work in the field of Home Economics; leadership training of leaders of home economics work for 4-H and older youth; assisted with county, district and state-wide 4-H achievement programs, club camps and picnics; assisted with personnel relationships of county and district agents including office procedure, joint reports, etc.; secured aid from many sources for program development concerning home gardens, farm homes and buildings and frozen foods.

Pre-service and in-service training was given special effort through apprentice training, workshops, exchange visits, and conferences throughout the year.

Many projects, which were an outgrowth of the War, were continued such as: food production and conservation, clothing conservation, and repair and care of furnishings. Home and farm management, home and yard improvement, gardens, family and community relationships were of concern to all groups. Six new homemakers' clubs were organized in two new counties. Assistance was continued with school lunch projects, canning, family food budgets, family life and parent education. The State Achievement Day Program was conducted in which county winners competed for state honors in: Style Dress Revue, Kerr Canning, Meal Preparation, and Girls' Record Clothing Achievement.

The Assistant Director aided and supervised the work of the Nutrition Specialist. Work of the specialist was concentrated on such phases as: a follow-up of the previous year's survey of nutritional deficiencies among school children in the state; food production and conservation; food preparation and work simplification; famine relief program; upholstery educational work with homemakers; aided in plans and completion of a 4-H Food Instruction Book and a 4-H Record Book for girls; assistance to county agents, other cooperative groups and homemakers wherever needed and the preparation of news releases.

Junior and Older Youth Work

The Assistant Director for Junior Extension Work, Paul L. Maloney, has charge of the supervision of the 4-H and Older Youth Programs in the various counties. He also supervises the Assistant Director for Home Demonstration Work in preparing the programs and projects for girls' 4-H Clubs. He has charge of the State 4-H Club Camp, subject to the general supervision of the Director of Agricultural Extension.

Extension Agents devoted time to Junior work on the following basis:

	Time devoted to 4-H Club and Older Youth Work	Counties Served
4 men District Extension Agents	Part time	8
2 men Assistant District Agents	Full time	3
7 men County Extension Agents	Part Time	7
1 man County Extension Agent	Full time	1
2 men Assistant County Agents	Full time	2
2 women District Agents	Part time	6
1 woman Agent-at-Large	Part time	State
1 Woman Assistant District Agent	Part time	3
4 Women County Agents	Part time	4
1 Woman Assistant County Agent	Part time	1

Federal Bankhead-Flannagan Funds provided for some of the enlarged staff so that a broadened and more adequate program for Junior and Older Youth service might be effected. Previously, the youth work was conducted through part-time effort of overworked county agents under the direction of an Assistant Director for Agriculture and an Assistant Director for Home Economics. The present expanded program is a step in the direction of providing more Assistant Agents under a full-time supervisor, all of whom devote full-time to the education and development of rural youth.

The Youth Program for 1946 was concentrated upon such goals as: Obtaining and analyzing local and state factual data with the purpose of selecting youth projects more suitable to the individual and area so that more economical and well-rounded development of the youth would result: better selection of adult and experienced older youth leaders for project work with an appropriate induction training, apprenticeship of new agents and more effective supervisory guidance programs; formation of planning groups for more adaptable, long-range programs; better leadership training within each club group, increased membership and larger percentage of completion of projects which leads to more quality than quantity on the part of youth participation and membership; recognizing that older youth program objectives differ from the more youthful 4-H Club work, it was necessary to attempt to set-up youth work for progressive age or group levels; and broadening the educational youth program to meet the needs of the various regions

within the State. The state supervisor gave much time to securing the cooperation of Extension Specialists, County Extension Workers, other State Supervisors and Federal Leaders at adult and youth levels in other fields with the view of integrating agriculture, home demonstration, older youth and 4-H Club work to a farm family unit enterprise. Direct and indirect aid was given in an attempt to evaluate and summarize the results of the youth projects and yearly goals so that improved plans would be formulated for the next year's work.

The largest enrollment of 4-H Club membership since 1920 was experienced in 1946. One of the largest and most successful 4-H Club camps was held in August at the Lake Tahoe State Camp. Departing from past procedures of county agent and adult control the self-government plan was effected this year at the state club camp for the express purpose of more fully developing tomorrows leaders by "doing". Response of the youth under this program was spontaneous and fruitful. The procedure will be continued.

Forty-eight young men and women of the older youth group are pointing the way toward what might be expected of "Junior Agricultural Leaders". Close cooperation with all organizations and agencies working with rural and urban people has been maintained.

Agricultural Economics

Specialist effort in Extension Work in Agricultural Economics was concentrated upon General Farm Accounts, Dairy Herd Improvement Association work, and Miscellaneous Extension work. Lack of time prevented carrying on the Dairy Enterprise Studies. One hundred thirty-three adult farmers were taught to keep complete records of farm finance and operation. From these records plans were made for improved operation in respect to budgeting both time and money. The cooperative feature on the part of the specialist and farmer was discontinued after the farmers learned to keep their own accounts in proper manner. Dairy Herd Improvement Associations were formed in three counties. Testers were still difficult to obtain and dairy cows decreased in number. There was a shift from churning cream to whole milk production. Artificial insemination associations in principal dairy counties, improved sires, better feeding practices and culling of low producing cows received emphasis by this specialist. Thirty-seven herds totalling 740 cows, were enrolled and tested.

Soil Conservation

The Agricultural Extension Service Soil Conservationist cooperated with the Agricultural Adjustment Administration, State Soil Conservation Service and other federal and state agencies engaged in cooperating with farmers in promoting soil and water conservation practices and programs. During the past year the work has extended from demonstration projects within the nine organized soil conservation districts to additional off-

area demonstration farms. The accumulated total of requested farm plans to November 1, 1946, is 99 with total acreage of 306,191. Ninety of these plans have been completed with an acreage of 121,152 represented in the plans made.

Farm Labor

The Extension Farm Labor Program, which had its inception on May 10, 1943, was continued during 1946 under the direction of a State Supervisor of Farm Labor and an Assistant Supervisor, together with part-time personnel on the state level. On county levels, County Extension Agents were responsible for the Farm Labor Program. Twelve county Farm Labor Assistants were appointed for periods of from three to six months to assist agents during the peak season and fourteen part-time clerical assistants were employed for county office aid. Continued demand for increased production on the part of farmers made labor needs paramount. Phases of the farm labor program receiving much attention were: statewide survey of labor needs; mobilization of organizations for the procurement of victory farm volunteers, intrastate, interstate and Mexican labor supply; training programs for youth, urban adults and Mexican Nationals; educational programs with farmers so that better work conditions will be maintained for laborers; labor utilization and work simplification methods and devices; transportation and housing of workers; and deferments of agricultural workers.

During the past year 406 Mexican Nationals, 234 victory farm youth, 3500 local placements within counties, 790 intra-state workers, and 180 insterstate laborers were placedduring the year which was less by 2400 workers than the grand total placed in 1945.

Forestry

Efforts of the Extension Forester were concentrated on farm tree planting, rural fire protection organization, forest products utilization and preservation, and youth forestry programs. Most tree planting took the form of windbreaks. Further effective work was done perfecting the county fire protection organizations. Very little could be accomplished on the formation of farmer sawmill cooperatives. Fence post treating demonstrations and projects were plentiful and were of much interest. The forester cooperated with the state 4-H club program by giving demonstrations at the annual encampment and cooperating with the 4-H club program in Christmas Tree Sales.

For a detailed report of work accomplished during the past year on each approved cooperative extension project, reference is made to the following reports attached hereto, and which are a part of this general report of the Agricultural Extension Division:

PROJECT I-B Publications, Report of Extension Editor A. L. Higginbotham.

PROJECT II-A County Agent Work (Adult Agricultural Projects), Assistant Director Thomas E. Buckman.

PROJECT II-B Home Demonstration Work (Adult Home and Community Projects), Assistant Director Margaret M. Griffin.

PROJECT II-C Junior Extension Work (4-H Club and Older Rural Youth Projects) Assistant Director Paul L. Maloney, assisted by Assistant Director Margaret M. Griffin.

PROJECT III Soil Conservation, Extension Soil Conservationist Otto R. Schulz.

PROJECT V Farm Forestry, Extension Forester, Herbert J. Freece.

PROJECT VI Agricultural Economics, Extension Agricultural Economist, Verner E. Scott.

PROJECT VIII Emergency Farm Labor, State Supervisor Otto R. Schulz, and Assistant State Supervisor William A. Goodale.

PROJECT X Nutrition, Extension Nutritionist, Eda L. Carlson.

GENERAL CONDITIONS AND OUTLOOK FOR 1947

The continued return of extension projects from war-time basis to a peace-time outlook will take place during 1947. War-time restrictions will be alleviated somewhat in this post-war year and shortages of materials will continue to affect progress upon this intended normal return to new and enlarged projects for the agriculture of the state.

Surveys and services by an agent-at-large during the year has revealed the need for further expansion of the adult and 4-H homemaking program to areas not now served. These areas are found in Eastern and Southern Nevada, for which additional Federal and State funds will be needed to provide agents for this work. There is need for more specialist personnel, especially in the fields of housing and home improvement. It is hoped that arrangements can be made to provide; more workshops, training conferences, and opportunities for professional advancement so that better leaders for adult and girl's 4-H work can be secured. Further broadening of the homemaking program will be attempted to accomplish such ends as: improvement of neighborhood leadership technique; a better informed rural citizenry in social, economics, nutrition and health, community, state, and national affairs; revision of subject-matter materials for more effective and educational material for 4-H Home Economics; more adequate pre-service and in-service training for home demonstration agents; improved working relationships between staff members and cooperating groups and agencies; and expanding our programs with cooperating groups concerned with solving peace time problems resulting from the war.

The 4-H Club and Older Youth program will be further broadened and strengthened throughout the coming year under the full-time state supervisor. Need for more personnel on the county level to devote full-time to youth work should be provided by Federal Bankhead-Flannagan Funds and increased county contributions in areas where county agents are already overworked. In counties where the needs for youth programs are not so great, men and women county agents will spend part of their time in youth service programs. No youth who can benefit from the educational influence of the extension service will be deprived of such opportunity. Greater enrollment; a higher percentage of completion of projects attempted; progressively more difficult projects with a wider variety of work attempted on the part of youth in the programs; and improved leadership are some of the goals to receive effective effort throughout the coming year.

The State 4-H Club Camp at Lake Tahoe is being enlarged and made more secure by the purchase of additional land in the form of beach frontage. Arrangements for this valuable addition will be completed early in 1947. With interest increasing throughout the state in the late-summer annual encampment, more improvements and more adequate equipment are

needed to increase facilities and effectiveness of the program so that it will reach more youth in the state. Increased financial aid is needed to carry out such improvements and additions as are contemplated. The state camp, during the summer months, is operated under a full schedule. It is used by rural and urban youth and adult groups carrying on educational work throughout the state and neighboring territory.

Increased demand for farm account assistance indicates that more specialist assistance is needed in agricultural economics. More personnel is needed if this work is to be continued.

Greater attention to quality milk production with emphasis on whole milk will be anticipated next year. More associationswill need to be formed to meet demands.

Materials, equipment and labor shortages will be somewhat eliminated during 1947, which will enable soil conservation practices, held in abeyance during the war period, to be emphasized and the subsequent adjustment of farming to a better balanced and productive unit. Soil fertility methods will receive more concentrated effort during the coming year.

It is anticipated that demands will continue for larger numbers of farm laborers than the domestic supply will furnish, but it is doubtful if foreign labor will be utilized in Nevada during 1947. Intensified methods of procurement, labor saving devices and better utilization of the present supply of labor should take care of our problem for the coming year.

In extension forestry, the programs for farm tree planting should gain momentum during 1947. Further interest in fence post treatment and formation of fire protection districts will take place on the part of rural areas. A more effective youth program in forestry and its related educational features will be effected du to better post-war conditions.

It is probable that the return to normal agricultural project work throughout the state will be swift and fairly complete during the coming year. It will be necessary to restore balance to the endeavor since war conditions imposed much project work for the war effort. Worthwhile and necessary conferences, in-service training of new county agent personnel; effective demonstrations on vital extension education matters of interest to the rural population will need to be stressed and well organized plans of work must be set up to accomplish these and other objectives. County agents will return to more concentrated work on long-view projects.

The tomato plant project in Clark County will receive impetus from all supervisors, specialists and agricultural organizations who can contribute to its development and success. Perhaps state and county funds will be made available to this work. There is need of a plant pathologist for such critical work and general specialist service of this nature throughout the state.

NEVADA AGRICULTURAL EXTENSION SERVICE

II-A COUNTY AGENT SUPERVISION

ANNUAL REPORT

FOR

CALENDAR YEAR

1946

Thomas E. Buckman
Project Leader

1. 1946 COUNTY PROJECT PLANS REVIEWED

Project plans and additions of county agents for 1946 were reviewed in the county offices as well as the supervisor's office. This job was not completed before July 1, on account of the many new county agents who had to become acquainted with their jobs and duties. Progress, however, was satisfactory. All of the new men were keenly alive to their responsibilities and responded to suggestions that improved the quality of their work. The more experienced agents submitted a large number of well thought out projects for the approval of the state extension office.

2. INDUCTION OF NEW AGENTS

Induction conferences were held with two new assistant agents at their headquarters, shortly following their appointment. The two new agents, Leonard Anker, Assistant Agent for Washoe County, and William Helphinstine, Assistant Agent for the White Pine and Eureka district, were properly informed about the methods to be used in planning Extension projects, reporting on the same, etc. Each agent was given a copy of the 81 page Nevada Project Plan as applied to agricultural projects, (by Thomas E. Buckman), and advised to make themselves thoroughly acquainted with its contents.

Elwyn Trigero, newly appointed District Extension Agent, Humboldt and North Lander Counties, was furnished with a copy of the Nevada Project Plan, as applied to Agriculturalprojects (by T.E.B.), and authorized to inspect Agricultural project files in the state office for all county project plans written since 1928, by Nevada County Agents. The file contains 613 project plans and progress reports and is the best source of information available for acquiring newly appointed agents with projects that have been started and carried on successfully or unsuccessfully in the state.

3. IN SERVICE TRAINING OF COUNTY AGENTS

Assistant District Extension Agent Jack Cliff for Churchill and Southern Lander Counties, and Assistant District Extension Agent Will Helphinstine for White Pine and Eureka Counties, attended the Forest Service Field Day at Pole Canyon, Elko County, on June 10, to inspect the range reseeding demonstration. This demonstration covered some 600 acres of range land and results secured may have use in other parts of the state where rainfall, temperature, and growing conditions are the same.

On May 17 the supervisor resumed a practice in vogue before the war, namely, attendance at the annual Agronomy Field Day at Davis, California. Permission was secured for 4 new County Agents who had never before visited the California Experiment Station, to accompany the supervisor on this trip.

County Agents York, Batchelder, and Hansen were the agents selected by the Supervisors to make the trip. Next year another group will be taken to Davis. Of special interest was the breeding work with grains and alfalfa. Agents were made acquainted with C.A. Suneson, Agronomist, Bureau of Plant Industry Soils and Agricultural Engineer, whose headquarters are at Davis, and who gave a talk at the crops department meeting on the Nevada State Farm Bureau, December 3, 1945, "Grain Varieties for Nevada." Agents were able to view the grains Mr. Suneson recommended for Nevada, and discussed their merits with him. The agents were also introduced to Professor B. A. Madson, head of the Division of Agronomy at Davis and other members of this division. Features of the program that were of particular interest were; the seeding of range plants, the discussion of problems of reseeding California range land and management required the year following seeding.

An attempt was made to send 3 County Agents to the Field Day held by the Forest Service and U. S. Sheep Experiment Station at Dubois, Idaho, May 24, but this was not possible due to the resignation of Mr. Olson at Winnemucca, death of Mr. Wilson at Elko, and work in White Pine-Eureka district that prevented County Agents James or Helphinstine from attending this meeting.

A Regional County Agent Supervisory Conference originally planned by the Assistant Director for June at Fallon, was held there July 8 and 9. Agents Albright, Anker, Cliff, Hansen, Reed, Trigero and York were in attendance. Otto R. Schulz, Extension Soil Conservationist and Farm Labor Supervisor, L. E. Cline, Marketing Specialist, and the Assistant Director for County Agent Work were in attendance from the State Extension Office. Mr. Norman Katen, Farm Editor of radio station KOH was invited to attend and meet the agents and to explain the policy of the station regarding agricultural news broadcast over the station. As the result of this conference, Mr. Katen is now personally acquainted with each county agent in Western Nevada and the agents know Mr. Katen and the type of extension story that will fit into KOH programs.

The conference on the 8th was held in the Fallon City Hall and lasted until midnight. The Assistant Director presided and presented information regarding the Nevada Project Plan, Farm Safety Week, Industrial Insurance for agents, prospects for securing equipment for a livestock pest control program in 1947, use of subject-matter circulars.

Mr. Schulz discussed labor current problems with the agents and Mr. Cline explained the advantages of the U. S. Civil Service retirement plan to the agents.

On the following morning, July 9th, the entire group visited the Newlands Experiment Station and inspected the agronomy work going on there. Dr. Oliver F. Smith of the Bureau of Plant Industry, explained to the group about the alfalfa variety work being done on the Station. Superintendent Forest Willhite talked about pastures, grain, fertilizer, irrigation and drainage studies underway at the station.

Sometime this fall it is planned to have a similar tour at the Station, but the subject under consideration will be the livestock projects carried on there. At that time, feeding of steers, hogs and turkeys will be going on, as well as the dairy herd improvement work and it will be possible to devote a full day to livestock production problems of Western Nevada.

Another regional county agent supervisory conference called by the Assistant Director for County Agent work was held at Tonopah, July 11 from 10:00 a.m., to 4:00 p.m. Present were county agents Wittwer, Petersen, Maddy, Batchelder, Helphinstine and Stewart and Extension Soil Conservationist Otto R. Schulz. The same subjects were covered as at the Fallon conference and in addition there was considerable discussion about the use of 2-4 D in Weed Control. The use of Dow Fume at the rate of 40 gallons or more per acre was reported to have controlled Eel Worm in Clark County. Dr. Maddy reported on spraying barns to control flies. Otto Schulz was asked by the agents to discuss the fertilizer problem. This appeared to be as big a problem in the southern counties as in the northern part of the state. Mr. Schulz received reports from the agents regarding progress being made in the labor program.

4. SPECIAL ASSISTANCE TO COUNTY AGENTS, ETC.

Clark County

The Experiment Station was asked to furnish Dr. Maddy, Extension Veterinarian, Logandale, Nevada, with copies of Nevada Agricultural Experiment Station poisonous plant bulletins and with survey of poisonous plants peculiar to the Clark County Area if such a survey has ever been made.

Assisted county Extension office in securing an analysis of a water sample for a Clark County rancher and of considerable interest to the community.

Asked Berkeley Bank of Cooperatives to furnish Clark Dairy of Logandale, Nevada, with information regarding making facility and operating loans to cooperatives.

Elko County

Elko County County Agent, Mark Menke, upon request to the Assistant Director, was furnished with the address of Mr. Borges, whose services were secured to do alfalfa weevil dusting work in Elko County.

Lyon and Washoe Counties

County Agents Gardella and Albright were assisted in securing the services of a truck crop specialist to assist them, and interested growers in the control of onion thrip by dusting with DDT. The services of Dr. Peavy were secured. Agents reported that Dr. Peavy rendered valuable

assistance in successfully coping with this problem.

Lyon County

County Agent Gardella was advised to contact George Schweiss of the State Department of Agriculture, who acts as state grasshopper project leader for the Extension Service and Mr. Wilson of the Bureau of Plant Quarantine and entomologist, regarding grasshopper control experimental work in that county.

Pershing County

A conference was held at Lovelock with County Agent A. J. Reed and Extension Forester Freece regarding a rural fire protection for Pershing County.

Lincoln County

Mark Stewart, County Extension Agent of Lincoln County, conferred with the County Agent leader early in the month, regarding the program to be carried on by Mr. Stewart in Lincoln County. Research Achievement sheets on subjects Mr. Stewart is interested in were secured for him from the United States Department of Agriculture.

SERVICES OF TRUCK CROP ENTOMOLOGIST ASKED FOR IN LYON AND WASHOE COUNTIES

County Agents Gardella, Lyon County, Archie Albright, Washoe County, followed up the suggestions made to them by the supervisor in May that the services of Dr. Howard E. Dorst, Bureau of Entomology and Plant Quarantine, be secured to assist them in their efforts to control onion thrips that will appear in Douglas and Lyon Counties during July. The thrips were a serious threat to the production of onions in these counties. This year there were approximately 200 acres of onions in Lyon County and at least a hundred in Washoe. Dr. Dorst could not come but sent Mr. Peavy whose suggestions resulted in control of the thrips and adoption of dusting with DDT as an approved farm machine for thrip control in onions.

5. SUBJECT MATTER

The following subject matter circular letters are a sample of those prepared and sent out to county agricultural agents during the year. (Where county extension programs were directly involved, as a matter of information, copies were mailed to presidents and secretaries of county farm bureaus as extension project leaders).

No. 37 New REA Funds Allotted
No. 42 Commercial Fertilizer for Potatoes
No. 43 Production of Alfalfa Seed
No. 44 USDA Restricts Purchase and Use of Feed Grains
No. 45 Resting Fields May Possibly Be Freed of Weeds with 2-4-D
No. 46 Cattle Grubs and Lice with Suggestions for their Control in 1947
No. 47 Tick Control on Sheep
No. 48 Oil Method of Storing Eggs

No. 51 English Sparrow Control
No. 52 Control of Cattle Grubs on Cattle in Small Herds
No. 55 DDT Properties, Insecticidal Uses Cautions and Weed Control with chemicals
No. 56 Production and Marketing Administration Staff Appointments and Reassignments
No. 57 Selecting, Fitting and Showing the Beef Steer
No. 58 May Protein Meal Set-Aside is 10%

Attention of agents was called to the annual production and adjustment study conducted each year in Nevada by State and Federal agencies cooperatively under the leadership of Howard Mason of the Agricultural Experiment Station. The study consisted of a special investigation of the balance between sheep and cattle production. Agents were asked to be on the alert with regard to the current livestock situation so that they might pass on to Mr. Mason any information that might be helpful in completing this study.

In addition to the above, the following is listed as typical of other subject matter assistance rendered the counties:

CHURCHILL — Information was furnished the county agent regarding the type of microscope needed for artificial insemination work in dairy herds

ELKO — Made arrangements with Mr. M. R. Miller, Chemist, Nevada Agricultural Experiment Station, regarding analysis of hay fed in a feeding demonstration at Ruby Valley.

HUMBOLDT — Advised agent to secure assistance from County Agent Menke of Elko County and Elko Garden Club for a gardening and landscaping program for Winnemucca.

LYON & WASHOE — Took action to secure specialist's assistance for control of onion thrips.

WHITE PINE AND EUREKA — Informed county agent and assistant agent to contact Desert range experiment station, Milford, Utah, in regard to securing subject matter for development of extension range management program in White Pine & Eureka.

ELKO, NYE & HUMBOLDT — Informed agents how to best contact Rural Electrication Administration in developing electric power line extensions for their communities.

ELKO — The Experiment Station was asked to prepare a brief report of a cattle feeding experiment carried on at Fallon, of particular interest to cattle growers in the northeastern part of the state. This will be issued shortly and placed in the hands of interested county agents.

The Experiment Station was also asked to prepare a progress report on studies made by the station the past two years to determine the feeding value and composition of first, second and third year crops of alfalfa.

6. NEWS SERVICES:

The Extension Editor's attention was called to advisibility of sending out a news story concerning a demonstration held in Elko County on spraying sheep with DDT to control sheep and wood ticks. The story was written as suggested. The editor was also furnished with subject matter for news stories from Clark County regarding tomato plant production and marketing and celery plant production and many other timely stories of what the county agents were doing as well as state-wide summaries of extension work.

Several conferences were held with Extension Editor Higginbotham regarding operation of the news service and the use of radio.

7. PHOTOGRAPHY

12 photos of Clark County tomato and celery plant industry were taken April 21st. The 4 x 5 negatives were made into 8 x 10 enlargements, and will be used by the Clark County Extension office all over the United States to secure publicity concerning their plant production operations.

A picture was taken of the group of engineers and other officials in attendance at the conference on storage and flood control problems in Clark County that was held in the Clark County Extension Office at Las Vegas, April 22.

Two new county agents were instructed in how to use their official cameras.

Several pictures, taken by the writer, were furnished the Extension Editor for use in the state-wide news stories.

County Agent York was supplied with several pictures taken at Churchill County to illustrate news stories in the Fallon papers regarding demonstration work in that county.

Sixteen photographs were taken of cattle and sheep spraying operations in Lyon and Churchill Counties. All sixteen 4x5 negatives were suitable for 8 x 10 enlargements, for news articles, use in bulletins or as pictures to illustrate how this work is done.

The supervisor suggested to the Director that a Kodachrome slide projector for use in giving illustrated talks be purchased for the specialists, especially for nutrition specialists use. The projector was purchased and used effectively.

8. STAFF CONFERENCES CALLED BY THE DIRECTOR ATTENDED

One State Office staff conference was called by the Director during the year was attended by the Supervisor.

The purpose of this conference was to hear Fred C. Jans, of the Federal Extension Office explain the Federal Civil Service Retirement Act as applied to cooperative Extension employees.

State-Wide

No extension staff conferences were called by the Director during the year

REGIONAL COUNTY AGENT SUPERVISORY CONFERENCES

Three Regional County Agent Supervisory conferences were held during the year.

CONFERENCES WITH SPECIALISTS:

Conferences were held with Extension Specialists Schulz and Fresce early in the year as to how they could best carry on their programs in cooperation with County Agents.

Numberous conferences were held during the year with Messrs. Schulz, Goodale, and Titus, regarding the progress of the Emergency Farm Labor program.

9. SPECIAL WORK PARTICIPATED IN

MEETING OF CANNERS, RESEARCH WORKERS, FARMERS AND OTHERS ATTENDED IN MOAPA VALLEY

A meeting of canners, entomologists, educators, plant pathologists and other interested parties, who made a tour of the Moapa Valley tomato plant fields was attended April 18. More than 50 men representing all parts of the United States were in the party. This year about 80,000,000 tomato plants will be produced in the Moapa Valley. About 12,000,000 of them will go to the states east of Colorado: Indiana, Ohio, New York, New Jersey. The remainder of the plant will go to canners in Utah, eastern Colorado and other western states.

When called upon to address this gathering, the Supervisor informed the group that they could count on the University of Nevada doing its part in keeping production up to high efficiency, but more outside help, particularly in research, would be needed. It was also pointed out to the group that while Moapa growers are skilled in production and handling the plants, it would be necessary to maintain satisfactory prices to insure maximum production in the Valley. A good many of the canners were very much concerned as to whether or not with the increased demand for Moapa tomato plants, the Moapa Valley would be able to take care of all their requirements.

The main purpose of visitors tour was to acquaint Drs. Woodbury, Mahoney, and Geise of Washington, D. C., with the Valley and splendid way in which the growers were taking care of their tomato plant acreage. These men who are the canning industry's experts were of the opinion that while they knew the ultimate possibilities of tomato plants of the Valley might be limited, they felt that there are possibilities for expansion if that expansion is based upon a background of research and follows scientific procedure. Research was thought essential as a prelude to bringing into production certain undeveloped acreage that might offer possibilities for plant production.

IRRIGATION AND FLOOD CONTROL CONFERENCE ATTENDED AT LAS VEGAS ON APRIL 22.

The Assistant Director, on the above date attended a meeting of the Muddy Valley Irrigation Company directors, called for the purpose of conferring with State Engineer A. N. Smith of the U. S. Bureau of Reclamation, Dr. O. W. Israelson, Engineer for the Muddy Valley Irrigation Company, the Soil Conservation Service and the University of Nevada Extension Service regarding an adjustment of water rights on the Muddy River so as to pave the way for the construction of a dam at White Narrows, north of Moapa, for the purpose of providing additional irrigation water and flood control protection. A new idea for agreement as to the division of water rights was proposed by the Reclamation Service and is being studied by all parties concerned.

PURCHASE OF LAKE FRONTAGE AT 4-H CLUB CAMP

Bills were sent out to the counties by the writer.

The annual payment by the counties on the purchase of the original State 4-H Camp grounds was completed this month. An early payment was made so that there could be no possible conflict in completing the negotiations for the acquisition of the lake frontage between the 4-H camp grounds and Lake Tahoe.

Arrangements were completed with the Nevada State Farm Bureau Board of Directors for purchase of 340.97 feet of beach for the 4-H Camp but a change in officer of the Nevada State Farm Bureau and a renewal of approved policy prevented the acquisition of the beach in 1946.

CONFERENCES WITH SPECIALIST, ASSISTANT DIRECTORS AND THE DIRECTOR

Mr. Maloney was furnished with complete information regarding the operation of the State 4-H camp and other phases of 4-H Club work, following his appointment as State 4-H Club Leader.

A suggestion was made to Miss Griffin that the motion picture "Freezing Fruits and Vegetables" be secured for showing at fall community center meetings provided that the subject matter meets with her approval.

A conference was held with the director regarding securing the services of a truck crop entomologist for assistance to agents in Lyon and Washoe counties.

Miss Griffin assisted the writer in performing his duties as State Chairman of Farm Safety Week.

10. DEMONSTRATION BALE LOADER SOLD

The model bale loader, constructed during the war on the Nevada campus, was sold during the month to Ben Aldax, Douglas County rancher, who purchased the machine from the Extension Service, and will use it on his ranch in harvesting his hay crop. Louis Titus, Emergency Farm Engineer, who constructed the bale loader in the farm shop at the University of Nevada campus, delivered the machine to Mr. Aldax and assisted him in installing the plates on his trailer for placing the bale loader in proper position when in use. In case the machine needs to be overhauled, Mr. Titus has agreed to do this work in the farm shop on the campus, the boys in Mr. Titus' farm mechanics shop class to do the overhauling needed as part of their class work, under the direction of Mr. Titus.

During the war the practability and use of this machine was demonstrated in 10 Nevada counties by Mr. Titus, working with the County Agent leader and County Agents. The proceeds of the sale of the bale loader will be used towards the purchase of a high pressure spray demonstration outfit, that the Extension Service thinks will be of use on Nevada farms and ranches.

The January, 1946, issue of the National Geographic Magazine, Nevada, Desert Treasure, mentioned the bale loader as an effective farm implement that saved labor. As the result of this the extension office received 85 letters from 24 states and from foreign countries asking for plans. Recently, Mr. Titus received a picture of a bale loader built by a Kentucky farmer after plans and suggestions furnished by Mr. Titus.

COOPERATIVE TO REPLACE MINDEN BUTTER MANUFACTURING COMPANY FORMED BY DOUGLAS COUNTY PRODUCERS

On July 28, Assistant Director attended a meeting called by the Douglas County Agricultural Association to organize a true cooperative according to state and federal laws for the purpose of purchasing the Minden Butter Manufacturing Company. All dairy and egg producers of Carson Valley were invited to attend the meeting. Twenty-two producers present signed up at the meeting, representing 1/4 of the dairy and egg production of the valley.

Producers' agreements and by-laws for the organization prepared by L. E. Cline, Marketing Specialist, were adopted after the producers present decided to go ahead with the organization.

Directors and officers elected were Ed Godecke, President; Frank Settelmeyer, First Vice-president; Clarence Henningsen, Second Vice-president; Clarence Godecke, Secretary; Hubert Bruns, Treasurer; John Feil, Director; Chris Cordes, Director.

The Minden Butter Manufacturing Company was organized in 1908 by farmers of Douglas County, as a stock company, and has continued to operate as such since that time. The name of the new organization which will be The Cooperative Minden Butter Manufacturing Company. Directors of the new cooperative will complete the deal to purchase the business of the Minden Butter Manufacturing Company from its present owners and operators. Leading farmers of the valley expressed themselves that this transaction represents one of the most important business deals Carson Valley has seen for many years, inasmuch as the new type of organization will provide greater effi - ciency in marketing Carson Valley butter and eggs. The management of the creamery will remain the same as for the past 5 years, with Wilbur Stodieck as manager.

ALFALFA WEEVIL CONTROL

Dusting by plane seems to be a well established practice in Nevada. This year, at least four thousand acres of alfalfa has been dusted by air- plane to control the alfalfa weevil. Alfalfa weevil damage appeared about a month later than usual. Counties to report dusting are Pershing, Douglas, Lyon, and Elko.

County agent, Mark W. Menke, had the following to report regarding dusting by airplane, tried for the first time this year in Elko County.

"Three hundred and ninety-one acres of alfalfa were dusted for alfalfa weevil by the Borges Flying Service and an additional 140 acres were dusted with horse-drawn dusting machines. A fairly heavy rain occurred 4½ days after the dusting was done and unusually late cold weather delayed the hatching of some weevil so that some weevil escaped after the rain had washed the dust off. However, most fields that were dusted showed reasonably good results. The earlier the dust was applied in the morning when the air was cold, the better were the results. The first 100 acres dusted at about 4:00 a.m. had almost a 100 percent kill. Areas dusted later in the morning when the air was warming up showed about a 75 percent kill."

GRASSHOPPER CONTROL EXPERIMENT

Dusting alfalfa fields to control grasshoppers by airplane was reported as successful from Lyon County this month. Five percent DDT in prophylite was used. Dusting was done on a bare stubble after the alfalfa crop was removed. A field 20 acres in size was involved in this operation. Results are being checked to determine if this kind of control can be established as an approved practice.

SURVEY SHOWED 7 FROZEN FOOD LOCKERS IN STATE - 1946

A survey of the number of frozen food locker plants in the state was made for K. F. Warner, Extension Meat Specialist, Washington, D. C. Seven were reported by County Agents, 3 in Las Vegas, 2 in Reno, and 2 at Fallon.

ALFALFA VARIETY TESTS PERSHING COUNTY

On June 17, the supervisor accompanied Dr. Oliver F. Smith, of the Bureau of Plant Industry in charge of alfalfa investigations in Nevada, to

Lovelock to assist in harvesting the first cutting of alfalfa variety tests located on the Pitt-Taylor ranch in the upper valley.

The tests plots were seeded 3 years ago. 12 varieties of alfalfa were planted in this plot by Dr. Smith. The most interesting thing noticed in this year's first cutting was that Ranger is pushing Ladak very closely for high production honors. A. J. Reed, Pershing County Agent, was present and also assisted Dr. Smith in harvesting the test. After the work was done at the variety test plot, Dr. Smith, County Agent Reed, and the writer visited several alfalfa fields that were thought to have bacterial wilt.

Yields in the alfalfa variety test plots harvested were as follows:

Variety	Green Wgt.	Yield in Tons	No. Replications
Ladak	62.82	2.93	(5)
Ranger	59.86	2.8	(5)
Arizona Com.	58.76	2.75	(3)
Baltic	57.4	2.68	(4)
Dakota Com.	56.9	2.66	(4)
Kansas Com.	55.04	2.57	(5)
Grimm	54.35	2.54	(4)
Modoc Co.	54.06	2.52	(3)
California Com.	53.19	2.48	(5)
Cossack	52.92	2.47	(5)
Utah Com.	52.6	2.46	(5)
Orestan	52.4	2.45	(3)

JOINT MEETING OF CHURCHILL COUNTY FARM BUREAU DIRECTORS, POULTRYMEN COOP AND CHURCHILL AGRICULTURAL ASSOCIATION ATTENDED

The Assistant Director, on invitation, attended a joint meeting of the Board of Directors of the Churchill County Agricultural Association, the Churchill County Poultrymen's Association, and the Churchill County Farm Bureau, called for the purpose of discussing ways and means of the most efficient handling cooperative purchase of farm supplies and feeds in Churchill County. Mr. William Brown, representing National Cooperatives, Inc., addressed the meeting as did Mr. Coverston, Fallon representative of the Association Oil Company, who is supplying members of the Churchill County Agricultural Association with petroleum products under a discount contract, recently executed with the company.

Mr. Brown is affiliated with Associated Cooperatives, Inc., Oakland, California, a regional subsidiary of National Cooperatives, Inc., which was set-up in California to serve that State and western Nevada cooperative purchasing organizations, as a wholesale supplier of automotive and farm supplies. Pacific Supply Cooperative, Walla Walla, Washington, and the Utah Cooperative Association, Salt Lake City, Utah, are the other two regional members of National Cooperatives, Inc., in the Western States. The assistant director was called upon to make a statement regarding different types of cooperatives and the functions of a general farm organization.

Mr. Jay Porter, chairman of the Churchill County Agricultural Association stated his views and called on officials of the Poultry Association to express themselves regarding how they thought the problem of cooperative

purchasing could be best met in the county. Farm bureau officials then expressed themselves as wanting to keep the farm bureau as an education organization while representatives of both the coops expressed themselves as being favorable to merging the activities of both their organizations in order to eliminate duplication, to secure greater volume of business, thereby reducing costs of supplies to members and providing better service to members.

Following this discussion and adjournment of the general meeting, the Board of Directors of the Churchill County Poultrymen and the Churchill Agricultural Association met with Mr. Brown, representing the National Cooperative; Charles York, County Agent and the Assistant Director to further consider the proposed merger. It was decided to ask Mr. Cline, Extension Marketing Specialist, to assist the cooperatives in the proposed merger operations and that the Board of Directors of each cooperative would next report back to the membership of their respective coops the benefit of the proposed merger to individual members and for appropriate action on the proposal.

LIVESTOCK SPRAYING

Results of the cattle spraying at the community pasture in Fallon last month were so successful, that the operation will be repeated in the near future, the effect of the DDT to control flies, mosquitoes, having worn off.

One lot of steers in the community pasture were not sprayed with DDT when the first demonstration was held. The difference in the cattle sprayed and those not sprayed, was very marked. The sprayed animals were not pestered with flies, and insects, while those not sprayed were continually fighting insects and are not grazing nearly as contentedly as those that were given the protective spraying with DDT.

ARTIFICIAL BREEDING

The Nevada Agricultural Experiment Station purchased a high-grade bull calf of proven ancestry, from the California Polytechnic School at San Luis Obispo for use in cooperation with the Artificial Breeding Program of the Churchill Dairy Herd Improvement Association. County Agent York is very optimistic regarding the possibilities for increasing butterfat production in the herds of members in the Improvement Association. York is of the opinion butterfat production can be increased 100 pounds per cow in four years time by the use of the bull provided by the Experiment Station and a second one that the Association is negotiating for.

COMMUNITY CENTER MEETING AT FALLON ATTENDED

A county-wide community center meeting of the Churchill County Farm Bureau was attended at Fallon, on June 20. Richard N. Cronshey, a representative of the Challenge Cream and Butter Association, reported to this meeting concerning the results of his two-week visit to dairymen who are

members of the Milk Producers Association on the Newland's Project. Services of Mr. Cronshey, who is manager of the second largest milk distribution plant in Los Angeles County, California, were made available to the Newland's Project dairymen, by the Milk Producers Association, for the purpose of aiding them in their effort to produce high quality clean milk. As a result of Mr. Cronshey's visit, they will be able to better meet the requirements of the Federal Food and Drug Administration, Nevada State and City authorities; for clean milk, not only for bottling, but also for manufacturing purposes. Mr. Cronshey conducted his work in cooperation with County Agent York and in working with individual dairymen, stressed can washing, dirty lids, use of poor filters and filter discs, dirty clothing, open pail milking, clipping cow practice, and washing the udder of dairy cows to produce clean milk. The goal of Mr. Cronshey's work with the Fallon dairymen was to feature those practices which mean "clean milk", and not "cleaned milk".

PROCEEDINGS OF THE EXTENSION LIVESTOCK EXTERNAL INSECT CONTROL CONFERENCE AND TRAINING SCHOOL FOR COUNTY AGENTS AND OTHERS INTERESTED.

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Elko, Nevada

December 4 and 5, 1946

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AND OTHER MATERIAL THAT WILL BE USEFUL IN DEVELOPING A STATE-WIDE PROGRAM FOR THE CONTROL OF LIVESTOCK EXTERNAL INSECT PESTS IN NEVADA

Thomas E. Buckman
Assistant Director for County Agent Work
Agricultural Extension Division
University of Nevada
Reno, Nevada

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INTRODUCTION

The special two-day training school for county agents, ranchmen and others was held in Elko, Nevada, December 4 and 5. The school was conducted by Dr. E. G. Kelly of Kansas. Dr. Kelly has had considerable experience with livestock insects and was invited to Nevada on that account.

The first day was taken up with discussion of cattle grubs from every angle. The life of the grub in the animal, its exit and the changes it undergoes to become a heel fly. Considerable time was given to the types of damage caused by the cattle grubs. The attack of the heel fly, which is adult stage of the grub, that causes cattle to run with their tails over their backs. The running into bogs, mires and through brush in an effort to get away from the fly causes much damage to the cows that are heavy with calf, often causing a premature birth and the loss of the calf. The injury that is caused by the tiny grub in its route from the heel of the animal to the oesophagus, from the oesophagus to the back and the making of the holes in the skin on the back. Every ranchman knows about the big bumps on the backs of the cattle at certain seasons of the year, mostly in early summer. The injury to the flesh in the loins and the damage to the hide which is later made into leather.

It required all day to get this lesson and then came the discussion of methods of control.

The second day was given to the careful study of lice and the control methods, horn flies, stable flies and mosquitoes. Then the common house flies were brought into the picture for they are transmitters of many diseases of the human as well as some to cattle. These flies are readily combatted with DDT.

There was considerable time given to the study of the common old horse flies. These flies have vicious biting mouths; they can cause great pain to cattle, horses and other livestock. There is no good remedy known at the present time.

The county agents and ranchers asked numerous questions which were well answered in most cases. The county agents made plans for a program of livestock control before they left Elko for their homes. In these plans were the location of spraying equipment, rotenone bearing powders and DDT.

The discussion of DDT was informal and to the point. The results of treating cattle with DDT in Kansas were good and the results were of such importance that the ranchmen present expressed a desire to treat their cattle with it in 1947. The DDT protected cattle for as long as 20 to 30 days in the summer, the first treatment being about 15 days, later treatments for longer periods. However, the contented cattle were the product of the treatments. That is what the growers wanted and that is what they got. Cattlemen say that if the cattle are free from the tormenting flies they do better. There is no reason why they should not do better. The tests made in Kansas showed that they do do better. Many head of cattle showed that the treated cattle gained at least a half pound more per day during the season than cattle that were not protected from the flies. Calves on treated cows gained 50 to 75 pounds more than calves on untreated cows. Such gains along with the contentment of the animals was enough to interest any ranchman.

It is hoped that these proceedings will be of value and used in developing a more comprehensive livestock insect control program for the State of Nevada.

November 12, 1946

To - County Extension Agents Batchelder, Hansen, James, Trigero, Helphinstine, Albright, Gardella, Menke, Petersen, York, Anker, and Dr. Maddy.
From - Thomas E. Buckman, Assistant Director for County Agent Work
Subject - Livestock Pest Control meeting to be held at Elko, December 4 and 5.

Dear Agent:

We are planning a livestock pest control conference for County Agents at Elko, December 4 and 5. I have secured the services of Dr. E. G. Kelly, Extension Entomologist for Kansas for this meeting. Kansas has one of the best Extension programs for livestock pest control in the country. Dr. Kelly is one of the best Extension men I know and is a man all of you County Agents will want to meet, as Extension has a big job in pest control work, one adaptable to your county and one that your livestock men are very much interested in.

Livestock pest control has made much progress in recent years. As the result of the new insecticides coming into use, Extension programs are expanding. Questions continually arise concerning dosages, materials to use, methods of application - spraying, dusting and dipping - size and type of equipment for various conditions, organization for most effective types of programs, etc. This applies particularly to control of; cattle grubs, flies, lice, ticks and screwworms.

Enclosed is a copy of the tentative program.

Make your reservations immediately at the Stockmen's or Commercial Hotel at Elko. County Agents from adjoining counties should plan to travel together where possible. Make your own arrangements regarding this.

Please acknowledge this letter. Due to its importance, notice of this meeting is sent to you as a request, as it is highly important that you be present because you will have an opportunity at this meeting to get first hand the best information on this subject that is available in the country.

Very truly yours,

Thomas Buckman

Thomas E. Buckman
Assistant Director for County Agent Work

TEB:ps
enclosure

TENTATIVE PROGRAM

Livestock Pest Control Conferences
of
Nevada County Agents
and
Others Interested
Elko, Nevada
December 4 and 5, 1946

Cattle Grub Control
Research Results
County by County
Extension Experience

Louse Control
Research Results
County by County
Extension Experience

DDT and Other Materials for Fly Control
Research Results
County by County
Extension Experience

Other Livestock Pests
Research Results
County by County
Extension Experience

Screwworms
Research Results
County by County
Extension Experience

Ticks
Research Results
County by County
Extension Experience

Committees will be selected at the opening to prepare a Summary Report of each of the major topics discussed.

STOCK PEST CONTROL CAMPAIGN WILL BE LAUNCHED

An educational program to eliminate pests from Nevada livestock will be launched at a meeting at Elko, December 4 and 5.

Called by University of Nevada Agricultural Extension Service, the meeting will include the explanation and demonstration of the newest methods of controlling livestock pests which cause a heavy loss to Nevada's most important agricultural industry.

Invited to the meeting are livestock men from throughout the state and persons connected with the extension service or other official agencies having to do with the welfare of the livestock industry.

In charge of the meeting is Thomas Buckman, Assistant Director of the University of Nevada Agricultural Extension Service, who has just returned from a conference of state and federal workers in livestock pest control at Cheyenne.

Dr. E. G. Kelly, Extension Entomologist of Kansas State College, will be the chief speaker at the meeting.

The Kansas Man, Buckman said, is one of the best livestock pest control program men in the U. S.

"Recent developments in power spray equipment and of new insecticides, such as DDT, now make it possible to control livestock pests more easily and cheaply than ever before", Buckman said in explaining the purpose of the meeting.

"It is now feasible to work in pest control effectively as part of routine ranch operations."

(More)

From-University of Nevada Agricultural Extension Service, Reno, Nevada.
Cooperative Agricultural Extension Work, Acts of May and June,1914,
Cecil W. Creel, Director..... A. L. Higginbotham, Editor.

DISCUSSED AT THE CONFERENCE WILL BE METHODS OF APPLICATION -- INCLUDING SPRAYING, DUSTING AND DIPPING — SIZE AND TYPE OF EQUIPMENT, MATERIALS, DOSAGES, AND OTHER DETAILED INFORMATION ABOUT PEST CONTROL.

HOW TO COPE WITH THE SPECIAL ENEMIES OF NEVADA LIVESTOCK -- CATTLE GRUBS, FLIES, LICE, TICKS -- IS ON THE ELKO MEETING PROGRAM.

A PLAN OF AN EDUCATIONAL PROGRAM OF LIVESTOCK PEST CONTROL TO COVER THE ENTIRE STATE WILL BE WORKED OUT BY THE PERSONS PRESENT.

TWO ELKO MEN WHO ATTENDED THE CHEYENNE MEETING, MARK W. MENKE OF THE EXTENSION SERVICE AND HARRY GALLOWAY OF THE STATE DEPARTMENT OF AGRICULTURE, WILL BE ON HAND AT THE MEETING TO GIVE THEIR OBSERVATIONS.

--30--

EXTENSION LIVESTOCK EXTERNAL PEST CONTROL CONFERENCE

ELKO, NEVADA
December 4 & 5, 1946

Meeting called to order 9:15 a.m. in the Elks' Building, Elko, by Thomas E. Buckman, Assistant Director for County Agent Work. Mr. Buckman introduced Dr. E. G. Kelly, Extension Entomologist, as leader of the training school.

Meeting opened by Buckman. Said general livestock pest control conference. Everyone introduced himself. Meeting opened with 21 agents, Dr. Kelly and others. Buckman told of recent conference at Cheyenne on external livestock insect control. Proceedings of Cheyenne meeting read:

Cattle grub report. Gardella said dusting for grubs did not prove effective on 900 head of cattle. Dr. Kelly, Extension Entomologist of Kansas, said that rotenone mixed with Tripoli earth should be used on grubs, rubbed in dry, and never mixed with a solution because will not mix; will settle and dilute mixture. Kelly warned to look for .5% and not to confuse with "5%". Kurtz said 4% rotenone is highest percentage now available. Two pounds more rotenone should be added per 100 gallons of diluent, to bring solution up to 5% for a total of 9½ pounds. Rotenone will keep many years if acidified, but will deteriorate within a short time if slightly alkaline. Very important if dipping solution to be held over on the ranch. It should be tested with litmus. Sulphur can be added to preserve acidity.

Dipping vats: Churchill 4; Douglas 3; Lyon 3 (2 in use); Mineral 1; Washoe 3 (all in use); Nye none; Humboldt none; Lander none; Eureka none; Elko 15 to 20 (none in use); White Pine none; Lincoln none; Esmeralda none. Temperature of water makes no difference in length of time cattle should be in the vat (should be two minutes at least).

Cheyenne grub report read and discussed. Points covered. Discussion lead by Dr. Kelly. (Bulletin, "Insects in Kansas", #255, Mr. J. C. Mohler, Secretary, State Board of Agriculture, Topeka, Kansas. Write to him individually.) Said grub is worst enemy insect of cattle. Only five states interested in grub eradication in 1941. Expression, "hightail it" originated with cattle grub nearly 2,000 years ago. Told life cycle of grub from life cycle chart. When grubs begin to show, get a small bottle and pickle it in alcohol (50%). Grubs are black in color when full grown, when white they die. Hard black stage is resting stage, until ready to hatch into a fly. (Mr. Buckman to write to E. W. Laake, Dallas, Texas, for specimens of cattle grubs for county agents.) Grubs have no mouths with which to eat. They live a maximum of only two days. They lay 250 to 500 eggs each, on hair on legs. Ninety per cent of the eggs are laid between dew-claws and hooves. They stay in aesophagus six to nine weeks. The nose is on one end, the head on the other. No DDT controls now known are effective against heel flies. Other hide injuries are due to too large brands, barbed wire, poor butchering, and improper curing of hides. It takes about 5 to 6 years to clean up cattle grubs in a given area. Don't quit when the job is <u>thought</u> to be done!

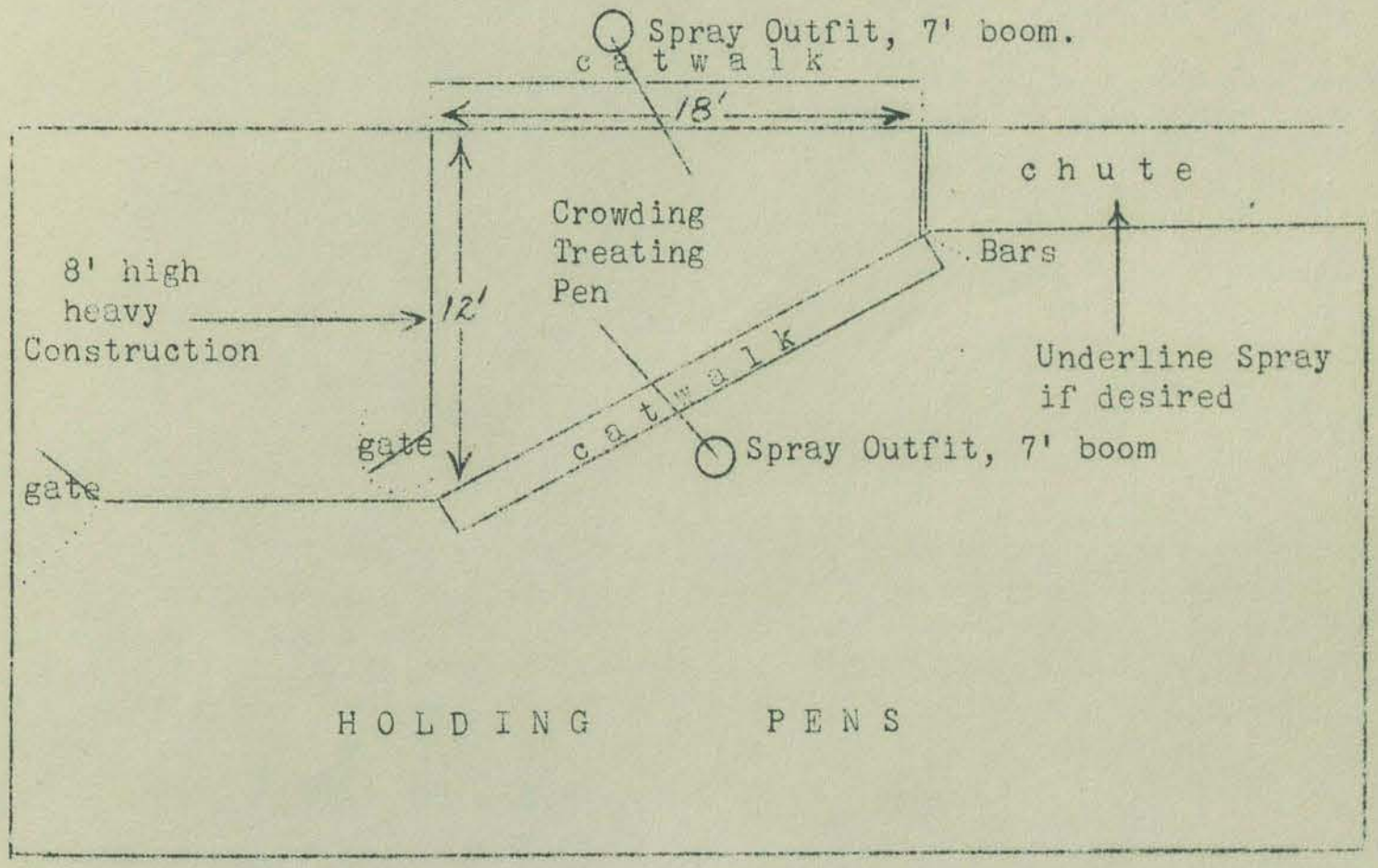
Meeting called to order at 1:50 p.m.

H. Cozier stated that both varieties of grubs were present in Elko County. Cattle cannot be worked after 9:00 a.m. during grub season because of cattle restlessness. He has just bought a new spray outfit, but has not used it yet.

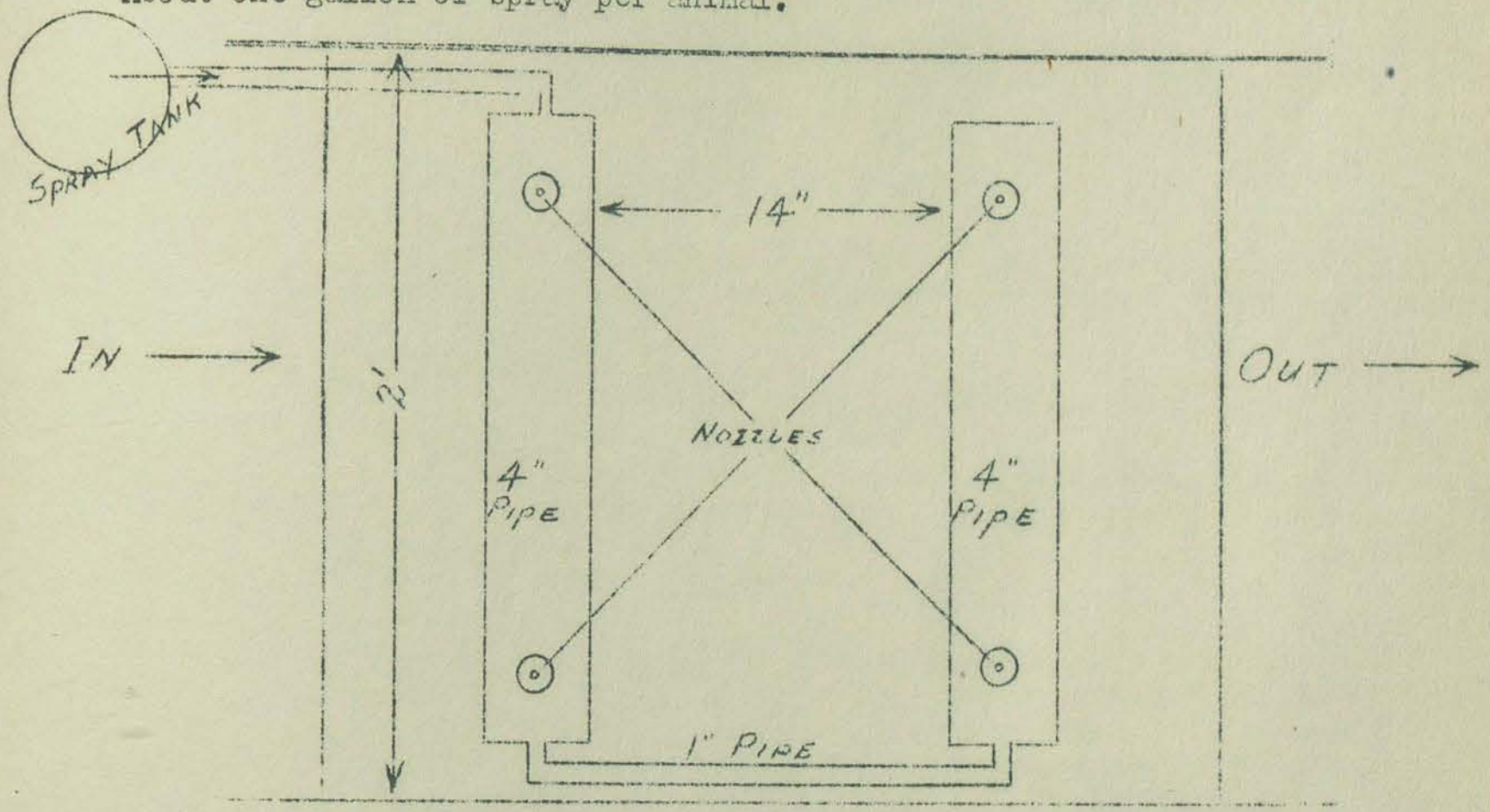
"C attle Grub Control and Importance to Beef Cattle Industry" by Dr. E. W. Laake, read by Anker. Commenting, Dr. Kelly discussed publicity for a grub program.

Methods of grub control by Dr. Kelly:

1. Squeezing grubs out by hand in small herds.
2. Treating by hand, wet. Use a palmetto kitchen scrub brush to scrape off scabs after soaking. Also in small herds. Sulphur added is good. Litmus paper is needed to test acidity. Alkalai destroys effectiveness of rotenone.
3. Treating dry by hand. Rub dust in by hand. Use 5% rotenone dust.
4. Spray machines (pressure): 400 to 500 pounds of pressure necessary. The new spray head with hole drilled in center of diaphragm is the most effective and has higher pressure. He warned stockmen not to buy a spray outfit of less than 400 pounds of pressure. Good corrals, fences, chutes are needed.



About one gallon of spray per animal.



UNDERLINE SPRAY IN CHUTE

Use 50 feet of hose with at least 400 pounds of pressure at gauge. Use only high pressure hose. Use clamps 2⅓ inches wide to hold hose to connections. A 200 gallon tank is large enough to hold the spray solution. Partitions in tank unnecessary. It can also be used for fire fighting with another nozzle. (2,4 - D and DDT sprays should be bought for each individual spray because the 2,4 - D will kill plants.) There is no worry about pressure around the eyes and ears. Emphasized that DDT spray helps prevent pink-eye. The Bordo nozzle is very good and recommended by Dr. Kelly.

J. W. Helth from Deeth, said he used his new spray outfit and so far results were very good. The cattle now seem to do better and look finer than they ever have looked on his ranch. He sprayed twice, early in March and between the 15th and 20th of April.

Kelly: DDT and Rotenone both are not always necessary. Rotenone alone is sufficient. Agitation in spray machine tanks is absolutely necessary.

Inventory of high-pressure spray machines in Nevada: Churchill 2 custom; Douglas none; Lyon 1; Pershing none; Humboldt 1; Lander none; Eureka none; Elko 3 ranches, 1 custom; White Pine none; Lincoln none; Nye none; Washoe, 3 farm, 1 custom; Grazing Service 2 (located in Reno and Elko).

BITING FLIES

Horn fly, stable fly, horse or deer fly.

1. Stable fly (leg fly, barn fly). Bloodsucker

a.) Lay eggs after 2 meals. Lay eggs on straw, larvae feed on decaying straw. Raise several families a year.
b.) DDT kills in 20 minutes through pulvillus, or nerve-center suction cup between claws on feet.
c.) Life days (on average).
d.) Four to eight pounds DDT to 100 gallons water.

2. Horn fly. Bloodsucker.
a.) Feed on fresh cow dung, lay eggs in it. Hatch in 10 minutes, grow in 5 days. Larvae crawl away into grass and grow to flies.
b.) Same as horn fly
c.) Life 15 days average.
d.) Four to eight pounds DDT to 100 gallons water.

3. Horse fly: Bloodsucker.
a.) Lays 400 to 500 eggs on sticks near water in July and August.
b.) Accused of transmitting diseases including polio and sleeping sickness of horses
c.) Can be killed with DDT by spraying.

Barn spray should be light spray, 80 pounds of pressure of an oil base nature. Beware of fire! Powder should be 2½ per cent. Spray should not be a mist, but a soft, light spray. Two and one-half per cent at a rate of one gallon per 1,000 square feet of surface will be effective against flies for a period of from 10 to 80 days. Four pounds of 50 per cent DDT per 100 gallons of water has been effective for similar periods. Paint with DDT (50% wettable).

Russell Weeks. Lice on the feed lot of steers. He sprayed it once. Twenty days later no lice, although very lousy before treatment. Sprayed in a holding pen, not chute. Used 50 gallons of spray on 29 head. He recommended not stirring up the cattle so they get nervous.

Three committees appointed by chairman Buckman:

1. State program (Extension - What to do) Menke, Chairman; Gardella; York; Gallaway; Mabee; F. W. Wilson; J. P. Jacobsen; Schulz. Review Cheyenne report for part of subject matter.

2. Projects and demonstrations including 4-H Club - How to do it. Albright, Chairman; Peterson; Trigero; Batchelder; Hansen; Helphinstine; Anker, Maloney, Dr. Kelly

3. Supplies and equipment. Gardella, Kurtz, Weaver, Galloway, Sanford.

Meeting recessed at 5:30 p.m. to meet again at 7:30 p.m. at Extension office.

Ear ticks on cattle in Cheyenne report by C. S. Rude, B.E. and P.Q., Menard, Texas.

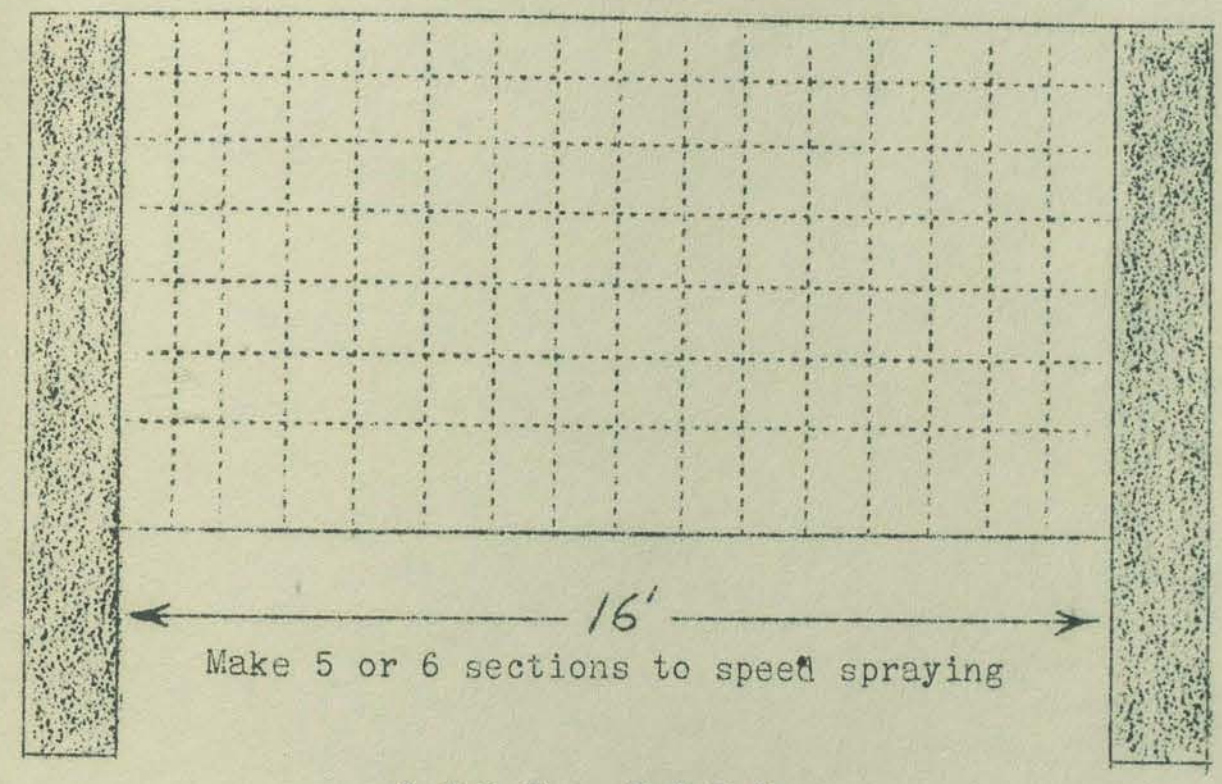
Meeting - December 5, 1946

Meeting called to order 9:30 p.m. by Buckman. Gave business for the day. Called on Dr. Kelly for discussion of sheep ticks or keds. Ticks, 8 legs; flies 6 legs. The sheep tick is actually a fly. True ticks are hard to kill with any known insecticide; ked is easy to kill. The difference in weight be-

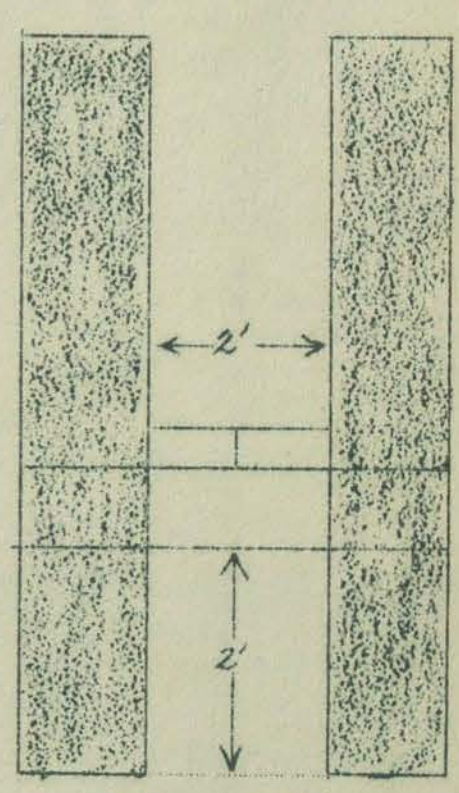
tween a lamb not ked infested and one infested is approximately 40 pounds at 80 pounds. It is ot known if early lambing reduces the number of ticks on new-born lambs. When lambs are sprayed, it is unnecessary to spray the underline if these lambs have not been shorn.

Professor Wilson asked about maggots found on hind quarters of sheep with scours about green grass time. Kelly said they were blow flies, not tick or ked maggots. Benzol is good to use, but Lysol or oils are not good. Benzol penetrates the skin and kills maggots entering the skin.

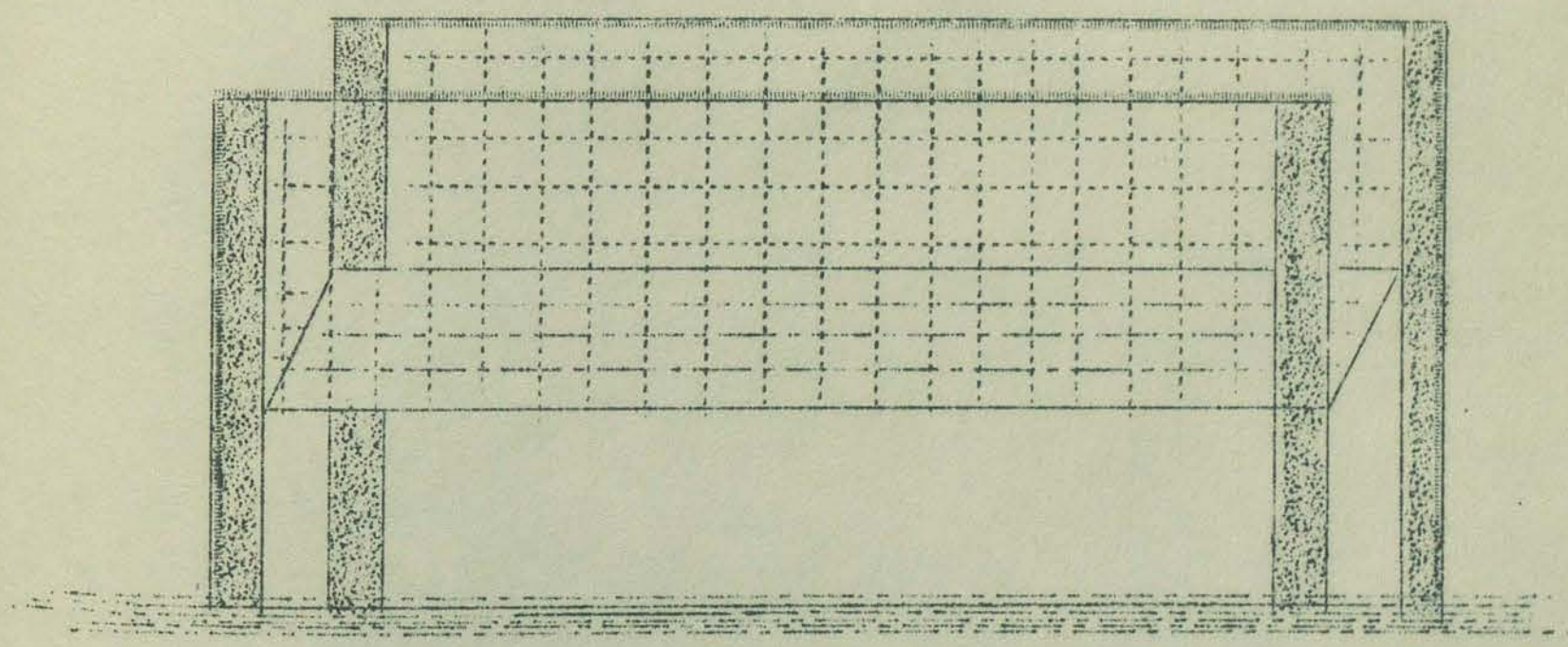
Mr. Jacobsen said most of the Nevada sheep ticks leave shortly after shearing. The number 4 nozzle is used for sheep spraying.



SIDE VIEW



FRONT VIEW



Chute approximately 2 feet wide, 100 feet long, raised 2 feet above the ground, woven wire sides.

Chute is filled and the sheep held there until thoroughly sprayed, paying particular attention to the underline, flank, and dock regions.

The best time to dip or spray is three - four weeks before lambing. If lambs are sprayed after shearing, the operator should allow at least seven days to elapse. Spray sheep in Idaho in October before going to winter range and again in summer before returning to summer range. If sheep are sprayed in fall, they will stay fairly clean for nearly 2 years. If bands are sprayed once a year for three years, they will be almost clean and will stay that way, especially if all new rams are cleaned before being turned in with the flocks.

Sheep ticks do not live long if off sheep. Nevada ticks found in spring on sagebrush are spotted fever ticks - not sheep ticks.

Ben zene hexachloride should not be recommended by county agents, unless a written guarantee by salesman is included. Too many bugs get in this chemical. Damage is not always apparent before 30-120 days. It is a good delouser, however.

Chutes for spraying sheep discussion by Mr. Buckman.

Chris Sheerin called upon for few words, complimented Dr. Kelly and development of DDT and rotenone. Commented on economic value of the type of conference being held.

Kelly: 1-5 sheep keds found on an animal, should mark that animal for spraying. Ticks found largely on front shoulder above center line.

Cattle lice: 3 kinds. Long nose and broad nose lice, long nose in clusters. Broad nose is commonly called blue louse. Life cycles of both nearly identical. Both cluster on an animal. Both are blood suckers. Lice have 6 legs. Spray twice with 12 days. Sprays will not kill eggs. DDT or rotenone will kill about 98% per application. Some cattle are very resistant to lice, others are not. Some bulls' progeny have been observed to be this way. Suggested that louse resistant cattle can be bred. If lice cannot be killed on an animal, the animal should be sold.

Menke suggested rotenone and DDT spray mix be used for spray and lice both. Kelly recommended rotenone on first spray or dip and both insecticides for a second spray 15-18 days later. Cattle oilers worthless. Warned against mixing own DDT out of pure stuff.

Mosquitoes killed easily by DDT when cattle sprayed. Will kill fish, too, if used in the vicinity of streams or pools. Females, only, are feeders. Males do not bite. Therefore, control is easy by spraying.

Black gnats are best controlled by rubbing vaseline in noses of sheep.

Page 336 in "Insects in Kansas", for punkeys. No good control for head maggots. Benzol has been used. Injected with a syringe with a soft rubber nozzle, one nostril at a time. Allow to remain in nostril $\frac{1}{2}$ minute. Stand sheep on haunches with nose in air. Release and treat other nostril. Very slow work. Symptoms: Sheep in huddles, brownish mucous dripping from nostrils. Flies fly by and shoot live maggots into nose.

After spraying horses with DDT do not harness or saddle until dry or animals will scald. Will last about eight days, but no longer, due to perspiration which washes off DDT.

Mr. Kurtz: Plenty of rotenone and DDT on hand at present. Urged to lay in a supply of both in very near future. Strikes now tying up rotenone in harbors, with the possibility of worse luck in future.

Menke brought up labeling of chemicals and suggested that all companies get together. Dr. Kelly agreed heartily.

Equipment committee report given by Chairman Gardella. He said no equipment now available. The committee approved the nozzle (#4 flat spray disc) recommended by Dr. Kelly. Discussed agitators. Only power outfits wanted, with at least 400 pounds of pressure, except on small farms.

Report of Committee on County Project Recommendations at the County Agent Insect Control Conference at Elko, Nevada, December 4 and 5, 1946.

There is evident need for an insect pest control program in each county of the state. The type of insects and their econonic importance are not the same in all of the counties, and, since climatic and other conditions are different, each county must of necessity work out their insect control program to fit their local area. All counties have some types of lice, flies, keds and ticks that need to be controlled, and most counties need a grub control program.

We recommend the following procedure to carry on the insect control program:

1. A survey and study should be made to determine the type and quantity of insect infestation and the importance of the control to farmers and ranchers.

2. Work out a program to eliminate the insects in your area.

   a. Make up a complete plan of procedure in detail as a guide in carrying out the program. Things in this plan should be: When should I start? How shall I proceed to develop the program? Complete notes should be kept on results and variations, etc.

   b. Get necessary materials on hand to avoid delays when demonstrations are scheduled.

3. Sell the program to the farmers, ranchers, bankers, meat packers, butchers feeders, civic organizations, newspapers and others concerned with the economics of the control program.

   Sell the program by:

   a. Organizing a control committee through Farm Bureau or commodity group organization.

   b. Put on demonstrations to show what can be accomplished by controlling the insects. (Adult and 4-H demonstrations)

c. Publicize through radio, newspapers, circulars, etc.

d. Prepare exhibits and displays.

4. Make the program continuous.

RECOMMENDATIONS OF STATE PROGRAM COMMITTEE PARASITE CONTROL

The State Program Committee recommends that a uniform state survey should be made to determine over the state:

1. A. When the first cattle grubs appear in the animal's back.
   B. When the first cattle holes appear in the animal's back.
   C. When the last cattle holes appear in the animal's back.
   D. When the first flies appear to bother livestock and numbers.
   E. When the flies disappear as shown by animal's behavior.
   F. The average number of grubs showing in each different locality.
   G. The kind of cattle grubs found in Nevada and the regions where they occur. (Northern and Common)

2. In regard to sheep, the relative numbers and importance of injury from keds and wood ticks should be determined for the different regions of Nevada. It is suggested that the State Sheep Commission Assist in securing this information.

3. A definite educational program on animal parasite control should be carried out by the Extension Service, in line with all the best information now available in the recommendations of the Cheyenne and Oklahoma City meetings.

4. All available sources of information on the above should be used and compiled. (Sources of information suggested are W.P.A. Entomology Research, U.S. Bureau of Entomology, Experiment Stations, U.S.D.A., etc.) We recommend that this be done by the Experiment Station and State Department of Agriculture in cooperation and that they determine the species of cattle grubs found in Nevada from specimens sent in by Extension Agents or others.

Elko County

EQUIPMENT AND SUPPLY COMMITTEE REPORT

Elko, Nevada
December 5, 1946

COMMITTEE:

Louie A. Gardella ---Yerington---Chairman
Pat Sanford----------Reno, Nevada
O. A. Kurtz----------Sacramento, California
Fred Wilburn---------Elko, Nevada
Kelly Weaver---------Fallon, Nevada
Wayne Cole-----------Ely, Nevada

EQUIPMENT:

Equipment, particularly new sprayer rigs, are very hard and almost impossible to obtain. The committee recommends that all availability orchard sprayers be investigated as possible sprayers, and that the State Extension Staff make strenuous efforts to obtain Surplus Army Decontamination Units.

Ranchers or groups purchasing new units may choose any Make or Size they desire that fits their purposes, but the unit must have the following features:

Tank---100 to 300 gallon tank (Preferable 300 gallons)
Equipt with a mechanical agitator.
Pump---10 to 25 gallon per minute capacity
Pump---to develop a pressure up at least 400#

A trailer type spray rig is preferable since truck used in operating could be used for other work when not in use on a spraying job. If a 300 gallon tank is used a 3/4 to 1 ton truck should be used to pull same. A surplus army 3/4 ton weapon carrier, 4 wheel drive, is a very good truck for this purpose.

MATERIALS:

Materials for a rotenone preparation or DDT should be purchased from a reliable firm, preferable one operating in a state which has rather stringent chemical registration laws.

For small cattle or dairymen having only a few herd of cattle to spray, and when no sprayer is available or the cost to bring one onto the farm is too high, the committee recommends that Grubby cattle be marked and that small hand sprayer with a mechanical agitator be purchased for spraying with DDT.

NOZZLES:

Nozzles are difficult to get at the present time and the committee recommends that a solid cone nozzle or a flat spray nozzle be used. Spray supply firms generally carry supplies needed.

sgd/ Louie A. Gardella, Chairman

The Deming bucket pump and Hayes and Sears, Roebuck sprayers are considered good. Size of pressure spray tanks approved was 100-300 gallons, outfits to have self-filling pumps, with pump capacity of 10-25 gallons. The report was accepted.

It was suggested that cooperatives or custom-sprayers stock chemicals were necessary for spraying. The California Spray Chemical Company would be glad to work on this with any stocker, Mr. Kurtz said.

Cattle can be sprayed at almost any temperature. Twelve below zero has not hurt them in numerous tests. Care must be given in spraying sheep in cold weather. Spring and fall spraying is very important. Boots for operators are recommended with heavy brass toes to reduce injuries to feet.

The State Program Committee Report was given by Menke, Chairman.

Mr. Mabee suggested periodically mimeographed reports to report progress of control work on its jobs.

Dr. Kelly suggested that each county set its goals for the number of cattle to be treated for grubs, lice, flies; number of barns to be treated; number of sheep; number of hogs for lice and mange. Also, the number of farmers who will participate, also cattle ear tick.

"Don't say a thing cannot be done because while you are saying it, somebody else will be doing it", quoted Dr. Kelly in regard to the spray programs being outlined for the state.

"Destructive and Useful Insects", Metcalf and Flint entomology reference book, McGraw-Hill publishing company, recommended by Mr. Buckman for each agent.

Dr. J. E. Ackert, internal parasite specialist, Manhattan, Kansas

Mabee and Kurtz thanked chairman for privilege of attending meeting.

Meeting adjourned at 4:00 p.m. following which Mr. Schulz spoke on the farm labor program.

Those present were:

	NAME	ADDRESS
1.	Archie R. Albright	Reno, Nevada
2.	Leonard A. Anker	Reno, Nevada
3.	Ray K. Petersen	Las Vegas, Nevada
4.	F. F. Weaver	Fallon, Nevada
5.	Harry E. Gallaway	Reno, Nevada
6.	Bill Helphinstine	Ely, Nevada
7.	Louie A. Gardella	Yerington, Nevada
8.	Elwyn M. Trigero	Winnemucca, Nevada
9.	Otto R. Schulz	Reno, Nevada
10.	Charles R. York	Fallon, Nevada
11.	Ezra Funk	Elko, Nevada
12.	W. B. Mabee	Elko, Nevada (Bureau Entomology, Plant Quarantine)
13.	H. L. Hansen	Minden, Nevada
14.	Thomas Buckman	Reno, Nevada
15.	Mark W. Menke	Elko, Nevada
16.	Oliver A. Kurtz	Sacramento, California (California Spray Chemical Corporatio:
17.	F. W. Wilson	Reno, Nevada
18.	Paul L. Maloney	Reno, Nevada
19.	Wayne Cole	Ely, Nevada
20.	E. G. Kelly	Manhattan, Kansas
21.	Fred C. Batchelder	Lovelock, Nevada
22.	Fred Fernald	Elko, Nevada
23.	John H. Goodner	Elko, Nevada
24.	Tom Kane	Lee, Nevada
25.	I. L. Ambler	Elko, Nevada
26	H. A. Bieroth	Mountain City, Nevada
27.	C. A. Laing	North Fork, Nevada
28.	J. W. Helth	Deeth, Nevada
29.	Earnest Barigar	Elko, Nevada
30.	Wray Weathers	Deeth, Nevada
31.	Ira Pierce	Elko, Nevada
32.	Harry Cazier	Wells, Nevada
33.	Donald Jones	Wells, Nevada
34.	Frank Winchell	Wells, Nevada
35.	Mrs. Frank Winchell	Wells, Nevada
36.	Louis Sharp	Elko, Nevada
37.	J. P. Jacobsen	Elko, Nevada
38.	Louis Peterson	Deeth, Nevada
39.	Russel Weeks	Wells, Nevada
40.	Noel Clark	Reno, Nevada
41.	Gene Brown	Elko, Nevada
42.	Chester Bannen	Reno, Nevada
43.	Chris Sheerin	Elko, Nevada

South Dakota State College of Agriculture and Mechanic Arts and United States Department of Agriculture Cooperating

COOPERATIVE EXTENSION WORK
IN AGRICULTURE AND HOME ECONOMICS
STATE OF SOUTH DAKOTA

10/28/46

Extension Service

Spear Fish, South Dakota

Mr. T. Buckman
Extension Service
University of Nevada
Reno, Nevada

Dear Buckman:

Enclosed find a couple of pictures of spraying chutes that we use for sheep spraying here.

The chute with the sheep in it is a permanent installation by a set of shearing pens and is close enough to a dam that water can be pumped directly from the dam into the sprayer.

The other chute is portable and is put together with hinges with drop pins. The pins can be pulled and the whole thing loaded on a pick-up and moved from ranch to ranch.

I would suggest building the chutes about 100 ft. long and 2 feet wide.

Yours truly,

sgd/ Fred Wilson
Assistant Animal Husbandman
Spearfish, S.D.

P.S.

We can handle up to 4500 a day with these chutes if a goat or lead sheep is used to help fill the pens. That takes more time than anything.

Churchill County

Cooperative Extension Work
in
Agriculture and Home Economics
State of Nevada

County Extension Office
Fallon, Nevada
October 14, 1946

Thomas E. Buckman
Assistant Director
Agricultural Extension Service
University of Nevada
Reno, Nevada

Dear Mr. Buckman:

To date we have sprayed approximately 2500 head of cattle with DDT water soluble for the control of flies, ticks, lice and mosquitoes with very good results in the control of all four.

All of the cattle in the community pasture were sprayed twice this summer with many reports from the cattlemen that the mosquitoes were far and in-between as against a year ago.

We have sprayed, that is, under our supervision 50 dairys including the dairy cows, barns and out buildings, etc.

We have done no work on cattle grubs but have a program lined up for the whole county which will start in February 1947.

Also cooperated with Louie Gardella with the spraying of several hundred head of sheep in the Fernley area.

In all of our spraying in general we find that the spray is effective for all the way from 2 weeks to 6 weeks. Some of the cattlemen claim that the spray was still effective after 80 to 90 days but I believe it was from the control of flies and mosquitoes rather than the continued effective of the spray.

Yours very truly,

sgd/ Charles R. York
County Extension Agent

CRY/gt

Clark County

Cooperative Extension Work
in
Agriculture and Home Economics
State of Nevada
Las Vegas, Nevada

Extension Service
County Agent Work

Logandale, Nevada Office
October 15, 1946

Mr. Thomas Buckman
Asst. Director of Extension
University of Nevada
Reno, Nevada

Dear Sir:

In reply to your telegram of October 12, 1946, my general veterinary work takes a majority of my time. Mastitis control and artificial breeding are side line projects. I have not had time for any large scale pest control program, however I am enclosing several leaflets I have prepared for local distribution.

As you know here in Southern Nevada the fly problem is almost a year around problem. Dr. Snith of the public health department is to be commended for his initiative in personally spraying all the dairy barns in each valley with a 5% DDT solution in kerosene. This spraying has reduced the fly population of these two valleys to almost nothing. The effects of the spraying wear off in 30 to 60 days and it has to be repeated. Dr. Smith has not been able to do any spraying the last few months and I have been advocating that each dairyman spray his own barn.

Screwworms are a constant menace in this area. I have been advocating the use of smear 62 for use on all wounds to eliminate this menace. The users of this medicine are extremely well pleased with it and praise it highly over the home remedies they formerly used.

Cattle grubs in this area are a minor problem and since there are no large herds to deal with, I have not advocated the use of the large power spray outfits. I have on the other hand advocated the use of the 3% rotenone dust applied to each animal's back. The users have been well satisfied.

Ear ticks of cattle are sometimes a detriment to dairy cattle in this area. Some of the Home Remedies used in treatment have been even more detrimental. I have used a 20% emulsion of DDT in Pine Oil; one ounce is placed in each ear; I have not had time for any controlled research on this problem but the results seem satisfactory.

I have advocated the use of Carbon Disulfide in the treatment of horses for the elimination of bots. I have not received much favorable response largely because the horses of this area aren't considered worth the bother and expense of treating.

I have nothing about lice control because it is no problem in this area, at least at the present time.

Please excuse my personal typing. I would have sent this on to Las Vegas for retyping, but I was afraid that it might not reach you in time.

Yours truly,

sgd/ Keith T. Maddy
Extension Veterinarian

Clark County

U. S. Department of Agriculture
University of Nevada Agricultural Extension Division Clark County Farm Bureau Cooperating.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF NEVADA

Extension Service
County Agent Work

Las Vegas, Nevada

THE USE OF 100 PERCENT D.D.T. TECHNICAL IN THE HOME AND IN THE BARN

by
Dr. Keith T. Maddy -- Extension Veterinarian

D.D.T. It is dichloro-diphenyl-trichloroethane. In its pure form it is quite poisonous if taken internally. Due precautions should be taken in handling and storing the pure form.

The toxic dose of D.D.T. by mouth by man is between .1 and .2 grams per kilo of body weight. This is many times the amount that could ordinarily be ingested in sprayed or dusted food or drink. Canaries and goldfish should be kept out of spraye rooms for two days. It is apparently quite safe for people and animals to continue to use a sprayed room.

PREPARATION FOR USE: A five percent solution in kerosene is the standard preparation. Use a high grade kerosene. Use two pounds of D.D.T. technical for each five gallons of kerosene. Put the D.D.T. in a large bucket and add the kerosene to it. The D.D.T. will gradually go into solution. Every five to 10 minutes, dip off the solution, and pour it through a cloth strainer. If a five gallon mixture is being made, 2 pounds of D.D.T. are used and about 3½ gallons of kerosene has to be poured over the powder before it all goes into solution. After all the powder has gone into the solution pour the remainder of the kerosene in with the kerosen which was used to dissolve out the D.D.T. Allow the solution to stand overnight before use. If at any time any D.D.T. precipitates out of solution, it should be filtered out by a cloth strainer as the crystals plug up the spray guns.

APPLICATION: DO NOT SPRAY THIS SOLUTION NEAR ANY SORT OF A FLAME! HANDLE IT WITH ALL THE PRECAUTIONS THAT SHOULD BE TAKEN WITH THE USE OF KEROSENE! It is important to use a coarse or wet spray so that as much of the material as possible will remain on the surface treated. When the oil evaporates, the D.D.T. remains and acts as a residual insecticide that kills flies and other insects by contact. A sprayer with the nozzle adjusted for large droplets is recommended. The dosage should be from 1 quart to 1 gallon of spray to 1000 square feet of surface. This should be governed by the amount required to wet the surface without running. Spray the walls, ceiling and doors. Apply the D.D.T. to screens with a brush. This spray may be applied to anything which kerosene will not damage. Since kerosene is sometimes used to clean clothes it is obvious that curtains, mattresses, pillows and overstuffed furniture may be sprayed. After spraying, it may be necessary to leave the doors open for a couple of days to let the kerosene odor leave the room. Certain wall papers and calcimine walls may be stained by the kerosene spray.

D.D.T. when properly applied will kill insects for one to four months after application.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF NEVADA
Las Vegas, Nevada

Extension Service
County Agent Work

THE CONTROL OF EAR TICKS OF CATTLE

By Dr. Keith T. Maddy
Extension Veterinarian

Ear ticks of cattle are often very detrimental to their well being in that the irritation results in diminished appetite bringing about smaller gains in beef animals and decreased milk production in dairy animals.

CONTROL: Many home remedies are used with varying results but none are equal to a 20 percent emulsion of DDT in Pine Oil. Any veterinarian or stockmen supply company can furnish such a product.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF NEVADA
Las Vegas, Nevada

Extension Service
County Agent Work

THE CONTROL OF CATTLE GRUBS IN SMALL HERDS

By Dr. Keith T. Maddy
Extension Veterinarian

The spraying of cattle with a large spray outfit with a rotenone and sulfur solution for the control of grubs is quite practical in large cattle herds. However, in the case of small herds, a practical control measure consists of dusting the backs of all cattle with a powder containing 1 to 3 percent rotenone. Veterinarians and stockmen's supply companies market such a product.

This powder is sprinkled over the animal's back and is rubbed into the hair with the finger tips. This treatment is repeated at 30 day intervals until 3 treatments have been given.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF NEVADA
Las Vegas, Nevada

Extension Service
County Agent Work

SCREW WORM AND BLOW FLY CONTROL

By Dr. Keith T. Maddy
Extension Veterinarian

The maggots of screw worm flies and the other blowflies cause considerable loss to livestock raisers each year. These maggots infest every sort of accidental and surgical wound of domestic animals. The fly lays the eggs in the wound, 11 hours later the maggots hatch and begin their work of tissue destruction. The maggots work for from 4 to 7 days; they drop to the soil, pupate and emerge as flies in from 7 to 60 days.

CONTROL:

1. Avoid all possible injuries when handling livestock.

2. Eliminate all projections around farms, such as nails, rods, wire and slivers.

3. Castrated males, especially, should be examined in warm weather for larvae in the prepucial sheaths.

4. Practice bloodless castration when practical and possible.

5. Avoid surgery in fly season (dehorning, castration, docking).

6. Examine the navels of the new born and apply smear 62.

7. Treat all wounds whether surgical or accidental with smear 62. This is an excellent healing oil, larvae killer, and fly repellent developed by U.S.D.A. research. It contains benzol, diphenylamine and turkey oil as well as lampblack. It can be obtained from any veterinarian or stockmen's supply company.

Elko County

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Nevada

Extension Service
County Agent Work

Elko, Nevada

October 14, 1946

Mr. Thomas E. Buckman
Assistant Director for County Agent Work
University of Nevada
Reno, Nevada

Dear Mr. Buckman:

There has been very little actual work done here on control of insect parasites on livestock. W. J. Helth of Starr Valley sprayed his cattle this spring for cattle grubs and claims that he is satisfied with the work and that it did some good even though he was the only one in the community to spray. In addition to Helth, H. H. Cazier and Ed Friendly have purchased small spraying outfits.

I organized a demonstration about two weeks ago in cooperation with Bill Wright of the Seventy One Ranch and Ed Friendly at which eighteen livestock growers were present. At this demonstration a Mr. Abildgaard of San Jose, California demonstrated a new type of equipment for drenching the animal thoroughly. We used DDT in this demonstration but the fly season was about over and the purpose was to demonstrate the equipment. This outfit catches the spray material and reuses it a large number of times so the cost of the material is slight. It works on the theory of thorough drenching at low pressure. There seems to be some question as to whether this thorough drenching at 50# pressure is as effective as 350 to 400# pressure and using less material. Mr. Abildgaard claims that for ox warbles, a spray gun can be used hitting the animals on the back with such force that it will knock the scabs off over the cattle grubs.

There is a lot of interest in this work here and several ranchers have been in during the past week asking about the best type of equipment to buy. Personally I favor the type of equipment that can also be used for spraying a few fruit trees and for spraying with 2-4-D for weed control.

To date the only work done on sheep ticks was the spraying demonstration given at Wendover this spring and which has been fully reported by J. W. Wilson in his April report. Mr. Schull has written me several letters trying to secure custom jobs spraying Elko County sheep. To date, however, I have never had a sheepman inquiring about a spray program.

Very truly yours,
sgd/ Mark W. Menke
County Extension Agent

MWM:el

A G R I C U L T U R A L N E W S S E R V I C E
Release Upon Receipt - 1946-4-15-#36- A&AB-330 - Exclusive in your City

Spraying of Sheep
With DDT
Tried in Elko

Spraying of range sheep with DDT to control and eliminate sheep and wood ticks is being practiced in Elko County, according to Joseph W. Wilson, Elko County Agent of the University of Nevada Agricultural Extension Service.

Large sheep outfits in Nevada and Idaho, Wilson said this week, are interested in spraying with DDT because they feel that, in killing the ticks, they will reduce or eliminate tuleremia, and sheep tick paralysis, which affects ewes about the time of lambing.

Nevada sheep men say that ticks are a constant source of irritation to the lambs each spring and that tick control should help in developing a larger, fatter lamb.

First bunch if sheep sprayed with the DDT belong to W. D. Beers and Son, who,at that time, treated about 700 head of their range flocks of 8,000.

The spraying operation took place near Boon Springs in southeastern Elko county and required only a little less than two hours.

Cost of the first spraying, which was a demonstration, was about $8.00. The formula used, it is reported by Wilson, was wettable DDT powder of 50 percent concentration at the rate of 4 pounds to 100 gallons of water.

(More)

From - University of Nevada Agricultural Extension Service, Reno, Nevada
Cooperative Agricultural Extension Work, Acts of May and June, 1914.
Cecil W. Creel, Director .....A. L. Higginbotham, Editor.

A high-pressure sprayer, capable of producing 400 pounds, was used, since experience in Idaho was indicated the need for high pressure in this type of spraying of either sheep or cattle. It was especially important in the demonstration, Wilson said, since the Beer's sheep had not been sheared and the wool was heavy.

The animals were sprayed along both edges of the back, rather than on the back, and also on the neck, the back of the head, and in the crotch of the ewes. Sheep were run through a chute single file.

Spraying of cattle for ox warble also is being carried on in Elko County.

Humboldt County

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Nevada

County Agent Work
Extension Service

October 16, 1946

Mr. Thomas E. Buckman
Assistant Director
Nevada Extension Service
University of Nevada
Reno, Nevada

Dear Mr. Buckman:

In reply to your telegram of October 12, 1946. The agent has visited 8 ranches for demonstrations and talks on the use of DDT on animals for the control of ticks and lice.

A spray dip demonstration was held in Paradise Valley spraying 20 bulls for the control of lice and ticks. Eight ranchers attended the demonstration.

The Home Demonstration Agent and the agent have discussed in meetings on the proper use of DDT for fly control and garden use. The agent has talked to the druggists on supply houses in this area advising them on what types of DDT have been recommended for animal and fly control.

The agent in his talks with ranchers in this area has found that they are satisfied with the results of DDT but they seem to feel that the problem is more with an economic application or method of applying DDT to the range herds.

I hope that this information answers your telegram and if I can be of any further assistance to you, please let me know.

Yours very truly,

sgd/ Elwyn M. Trigero
District Extension Agent

EMT:g

LIVESTOCK PEST CONTROL CARRIED OUT IN LYON AND MINERAL COUNTIES

CATTLE:

Churchill County -

Approximately two thousand head of cattle were sprayed in Fallon, Nevada, with a two and one-half percent DDT solution, for control of horn flies. Charles York reported good results.

Mineral County -

Approximately two thousand head of cattle were sprayed in April, with Rotenone, for control of cattle grubs. This included all cattle in the Schurz area and the cattle had just been moved into the Lake pasture. We had considerable trouble because of poor hose.

The cattle were very grubby, some yearlings having as high as thirty-five grubs on their backs at the time of spraying. Results on the effectiveness of the spraying cannot be judget yet, but reports of the herdsmen indicate that the cattle were not seriously molested by heel flies. The cattle will be checked early in 1947 to determine the reduction in grubs.

Many of these cattle were heavily infested with lice at the time of spraying and special attention was given to "lousy" cattle. It is the opinion of the agent that a material reduction in lice had occurred when the cattle were checked in June. The cattle looked good. Since cattle were just moved in, the pasture was clean and a good full results were obtained.

These same cattle were sprayed again during the later part of July, with DDT, for control of horn flies, flies, mosquitoes and horse flies. Flies of all types are very bad in this area.

The spraying results were very good. The cattle were checked ten days after spraying and no horn flies or common flies were noted. The mosquito population was materially reduced also, according to the herdsmen, as well as the horsefly population.

Approximately five weeks later, when they were moved to a different pasture, the cattle remained comparatively free of all flies.

The Indian Agent and cattle owners were very pleased with the results.

Lyon County -

Grub Control

Some seven hundred to eight hundred cattle were sprayed with Rotenone, for control of grubs. The season was well advanced when the cattle were sprayed and such a small percentage of cattle were sprayed that the agent does not expect any reduction in the grub population on cattle in 1947. Both stockmen and dairymen, however, were made aware of the serious infestation of grubs in cattle.

Horn Fly and other Fly Control -

Some two thousand head of cattle, owned by between fifteen and twenty farmers and ranchers, were sprayed with DDT for control of horn flies, barn flies, house flies and other pests, between July and September. Results were very satisfactory, every operator reporting an immediate reduction of pests. The cattle were reported to have done better after spraying. Six or eight dairy herds were sprayed twice. Each application being effective between four and five weeks.

Ten dairy barns and corrals were sprayed for the control of flies and excellent results were obtained, according to reports of operators.

Sheep -

In May, approximately two thousand head of sheep, owned by some twenty-five farmers, were sprayed with DDT for control of sheep ticks. A one hundred percent kill was reported by all cooperators, except one who complained that the results did not seem satisfactory to him. In addition to the control of ticks, the spraying resulted in considerable protection of sheep and lambs from horn flies and mosquitoes.

One operator reported that after the spraying he sold fat lambs during the summer for the first time since he had been operating.

Swine -

Between seven hundred and eight hundred head of hogs were sprayed with DDT for control of lice. Corrals and pens were also sprayed. Many hogs and hog pens are badly infested with lice. Operators reported a very effective control.

Poultry -

Some twenty chicken houses and grounds were sprayed for control of lice and mites. When mites were present, Rotenone was added to the solution. Results, according to operators, were one hundred percent effective with one treatment.

SUMMARY:

Approximately twenty-five hundred head of cattle were sprayed for control of grubs with Rotenone and seventy-five hundred

head were sprayed with DDT for control of horn flies, etc.

Two thousand sheep were sprayed with DDT for control of sheep ticks.

Seven hundred and fifty hogs were sprayed with DDT for control of lice.

Ten dairy barns were sprayed with DDT for control of flies.

Fifteen chicken houses were sprayed with DDT and Rotenone for control of lice and mites.

The results were good in all instances, except one and the agent did not check the complaint.

/Sgd/ LOUIE A. GARDELLA
County Extension Agent

DDT USED TO CONTROL SHEEP TICK

Approximately 950 head of sheep belonging to several sheep men in Fernley were sprayed with DDT by Harold Lutton and Louie A. Gardella, County Agent, last week. The concentrate of 50% wettable DDT was used in a solution of .2%, and spraying was done with a pressure of 350 to 400 pounds. The cost of spraying per head was approximately .06¢, but this cost could have been reduced to approximately .04¢ if they had been in large herds and the facilities adequate for fast handling. Charles Viaene, one of the cooperators, reported four days after spraying that over 80% of the sheep ticks had been killed and more appeared to be dying. Floyd Ryan reported 90% kill of ticks after five days and it appeared that 100% kill would be obtained before the effectiveness of DDT wore off.

Further checks will be made on the results obtained and results will be available at the Farm Bureau Office to anyone interested in using DDT to control sheep ticks.

Washoe County

(News Story - October 4, 1946)

A new type cattle spray-dip machine was demonstrated at the Mt. Rose Ranch south of Reno October 2nd. About 75 people attended the very good demonstration on lice control.

75 head of steers were sprayed to show the desirability of the new type spray machine. The portable chute sprayer is equipped with pump supply tank and 25 spray nozzles directed to spray every inch of the animal's body.

Dr. Fisher and Dr. Moss of the U.S.D.A Bureau of Animal Industry discussed various phases of the operation. Members of the Extension Service and State Department of Agriculture inspected the machine and its operation very carefully, with the many ranchers present.

The machine was well accepted by the group as a time saver over the vat dip. It is an improvement over vat dipping also because it is less exciting to the animals and it is better suited to small numbers of cattle because small amounts of the insecticide may be prepared. The sprayer is mobile and does a good job of spraying a complete cover of insecticice over the animal.

Mr. William Abildgaard told of the operation of the machine and the possible uses. The Nevada Spray Company, owners of the machine, operated it.

Actual results of the spraying, of course, cannot be determined immediately but all were impressed by the quick and easy spraying of the cattle which required about 15 seconds per animal.

a 1/4% solution of D.D.T., Rotenone and sulfur was used, the demonstration being to control lice which begin to show in large numbers when the weather gets cool.

It is believed November is the best month to spray for lice in this area, according to Archie Albright, County Extension Agent.

WASHOE COUNTY PEST CONTROL WORK

A 50% wettable DDT powder was used on dairy cows in a solution equal to 1/4 of 1% with very good results. The dairy cows were sprayed with a 4-gallon pressure sprayer completely covering the animal's body with a fine spray of the solution. One spraying every three weeks was sufficient to control flies 98%.

Horses were sprayed with the same solution at intervals of 15 days, which resulted in 75% control of all types of flies. The large black horse flies were the only ones that were not controlled successfully.

The only grub control work that was done, a solution of Rotenone and sulphur was used. This was applied as a dip with only fair results.

Control of hog lice was tried using DDT with good results.

A lack of proper equipment has curtailed our demonstration work in Washoe County.

THE LIVESTOCK MARKET'S VIEWPOINT OF CATTLE GRUBS AND CATTLE LICE CONTROL PROGRAM

Ray L. Cuff, National Live Stock Loss Prevention Board, Radio Program and Demonstration of Cattle Grub and Cattle Lice Control, Season 1946-1947
November 26, 1946--12:30 to 1:30 p.m.
Kansas State College, Manhattan, Kansas

- - - -

Livestock Market Interests wish to congratulate Kansas for being the Number I state in the numbers of cattle treated for grubs in the 1945-1946 season. You have treated 795,000 head, or about 20% of the total 4,083,991 cattle treated for grubs in the United States, as reported by the U. S. Bureau of Entomology. Kansas together with Oklahoma and Texas last season treated approximately 40% of all cattle treated for grubs in the United States.

This did not just happen. Kansas' outstanding record is due largely to its farmers and ranchers working together in a state-wide, cooperative program with the U. S. Bureau of Entomology, Kansas State College Extension Service, Kansas State Livestock Sanitary Commissioner, the National Live Stock Loss Prevention Board, Southwestern Region, County Agents, Broadcasting stations and our Progressive Farm Press.

Our livestock market operators recognize the actual dollars and cents loss sustained in raising, selling, buying and processing grubby and lousy cattle. When a cattle salesman offers grub-free cattle he can ask a higher price for his customer. Cattlemen often ask us the question: "Do we actually get a premium on grub-free cattle?" The answer is that the top price is usually set on cattle showing the highest dressing percentage with the least cut-out loss in meat and hides. That is why, everything else being equal, grubby cattle usually sell for less. The average "dock" on grubby cattle is from 25¢ per cwt. to $1.00 per cwt., or $50. and upward per carload. A real lousy steer is docked around $1.00 per cwt. The grower usually pays his own grub bills.

When buyers of fat and feeder cattle ride into a pen, they pass their hands over the backs to determine the quality and the amount of possible grub damage.

Buyers who are purchasing cattle to put into feedlots know that grubby, lousy cattle are restless, spend too much time rubbing against and breaking down fences and feedbunks, are bound to have lowered vitality and will not make the most efficient, profitable gains. They know that such cattle that will not feed out well will have to be bought for less.

A few years ago, one of our market interests that kept accurate records on grub losses and devaluations in slaughter cattle found that, during the grub season, the actual average loss from grubs was $3.56 per head on all grubby cattle slaughtered at his plant from November through May. He reported an average devaluation of $1.25, straight across, on all cattle slaughtered throughout the year at his plant. Spending 3½¢ per head for Derris or Cube' powder may prevent a grub dock of $3.50 per head. It is reasonable to suspect that buyers govern their bids on a yield basis.

On one lot of 900 steers on feed, last season, one of our cooperators decided to treat half for grubs and let the other half go, in order to test the profit angle of grub control. Killing-bed reports showed that the necessary trimming of the untreated, grubby cattle lowered the carcasses one grade. This meant a price "dock" or $1.00 per cwt., or an average devaluation of $8.00 per grubby carcass or a loss of $200 on each carload of untreated, grubby cattle.

Market tests carried on in different states have shown that grubby cattle on feed, treated for grubs at the proper time, gained an average of from one-fourth to one-half pound per day more than like, untreated cattle in similar lots, during the first sixty days after treatment. Treated cattle gain faster.

The condition of the hide is an important factor in determining values of cattle, since approximately 7% of the live weight and 11% of the value of the average steer is in the hide. You can't grow grubs and a good hide on a steer at the same time. A grubby hide is one that has five or more grub holes. Grubs "pepper" holes in the back leather, the thickest and most valuable part of the

hide. Even when grub holes heal, the resulting scar tissue makes for lower priced leather.

Of the 1945 federally inspected cattle kill of 14,538,405 head, approximately 35% of the hides were grubby. In these over 5,000,000 grubby cattle the estimated loss in gains of 20 pounds per head amounted to some 101,000,000 pounds of beef. The trimming of approximately two pounds of beef from grubby carcasses caused 10,177,000 pounds of beef to be "thrown down the hole". The world needs this beef today to feed hungry people.

We at the livestock markets actually practice what we preach on cattle fly, louse and grub control. The first livestock market, anywhere, to offer its patrons the service of spraying outbound cattle with DDT for fly control, on a custom basis, was at Kansas City on June 15, 1946. The standard price maintained at the several markets now offering this service is 15¢ per head, with a maximum of $6.00 per carload. For fly and louse control we used a 0.40% DDT spray that thoroughly wet the entire body.

We at the livestock markets are looking forward to the day when we can offer for sale, in carload lots, known, grub-free fat and feeder cattle from clean area. The well organized, ten Kansas counties that this past season treated from 90% to 95% of all cattle can surely finish the job. There will be grub reinfestation until every hoof in a given county is grub-free and only grub-free, replacement cattle are brought into these clean counties. The demand from the Corn Belt for grub and louse-free replacement cattle is the surest way to get action in grub and louse clean-ups in the range, feeder-producing sections. Our Livestock Market interests believe that grub and louse cleanups are possible, practical and profitable.

CATTLE-GRUB CONTROL AND ITS IMPORTANCE TO THE BEEF CATTLE INDUSTRY

(For Kansas Radio Program, November 26, 1946, 12:30 to 1:30 p.m.)

By E. W. Laake

Before the second World War, cattle-grub control was not too seriosly considered in the United States. Only a few States had started cattle-grub control programs and these rarely covered more than a small portion of a county. In fact, in most instances only individual herds of the most progressive cattle owners were treated for grub control. This lack of interest in cattle-grub control in our Nation, with its progressive and rapidly advancing civilization, is all the more surprising because for the last Century almost every cattle owner has been fully aware that the heel fly, which is the parent of the cattle-grub, was one of the worst insect pests attacking his cattle. He also knew very well that cattle-grubs in the backs of his cattle were cutting many holes in the animal's hide, and when he slaughtered cattle that there was a lot of swollen, discolored, ugly looking meat over the ribs and loins where the grubs were located. Unfortunately, however, the average cattleman did not recognize the heel fly as actually being the parent of the cattle-grub, nor did he believe that by controlling the cattle-grub he would also control the heel fly. This confusion, together with our lack of knowledge relative to effective methods for controlling either the heel fly or the cattle-grub was, no doubt, responsible for our long delay in earnestly starting cattle-grub control programs in the United States.

At the beginning of the recent World War it was obvious to all those concerned with the production and supply of meat for our war effort that, in order to meet our needs, we had to increase our production of beef, milk, and leather at least 10 per cent without increasing our cattle population or feed, either of which was impossible due to shortage of labor and machinery.

The solution to this question was quickly reached at a National Conference called by the Secretary of Agriculture. At this meeting were packers, tanners, heads of cattlemen's organizations, and livestock experts from the States, and the United States Department of Agriculture. They all agreed that the additional 10 per cent of beef, milk, leather, and other beef and dairy products so urgently needed for our war effort could be produced without increasing the cattle population or feed, if we could control the number one enemy of our cattle--the cattle-grub. The Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture, in cooperation with State Extension Personnel and other State and local organizations, immediately started a cattle-grub control program in the principal cattle-producing and cattle feeding states.

It was fortunate for all of us that through extensive and timely research work before the recent war, the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture had found that rotenone, the active principle in the roots of certain plants, such as derris and cube, was effective for killing cattle-grubs, and that the Bureau had also devised suitable means for applying this insecticide to cattle under all sorts of natural conditions. Since all of the rotenone bearing roots have to be imported, the supply during the war years was much too short for a Nation-wide grub control program, but with the substantially greater supply we are now receiving, we can and must greatly extend the cattle-grub control program during the coming season. That this will be done is evidenced by our Bureau's recent survey relative to the number of cattle that were treated last season and the estimated number to be treated during the coming season. This survey revealed that at least 33 states will participate in the cattle-grub control program during the coming season, and that the total number of cattle to be treated will be nearly double the number treated last year. Incidentally, this survey also revealed that Kansas

led the Nation last year in the number of cattle treated, and that it will again be the number one State this season in the cattle-grub control program with an estimated number of 1,460,000 cattle to be treated. I want to take this opportunity to commend and congratulate the cattlemen of Kansas for this achievment and at the same time urge them to continue to extend this splendid program from year to year until cattle-grubs in Kansas are eradicated. With the fine leadership that Kansas has in the Extension Department of the Kansas State College here at Manhattan, the State Livestock Sanitary Commission and the Kansas State Board of Agriculture at Topeka, the National Livestock Loss Prevention Board at Kansas City and especially the County Agent in each County of this State, and with the full cooperation of the cattlemen, there is little reason for doubt that Kansas will not remain in front in the cattle-grub control program in the future and be the first State in the Nation to eradicate this important pest.

If there are still some cattlemen in this State or this Nation who believe that the heel fly and its off-springs, the cattle-grubs, are not injurious to cattle, they should be shown:

FIRST: The heel fly attacking a herd of cattle so that they could see how this little fly will stampede a whole herd of cattle, running the animals madly over cliffs, into wire fences, into water holes, and into almost any other place where they can avoid the attacks of this fly.

This chasing and milling of the animals prevents them from feeding, results in injuries, such as bruises or broken bones, and causes heavily pregnant cows to lose their calves. One Kansas Rancher stated that he lost 20 per cent of his calf crop from 1,200 cows during one heel fly season.

SECOND: They should be shown the eggs which the heel fly has securely attached to the hair of the animal and the small grubs that hatch from the eggs

and then penetrate the skin of the animal leaving a painful, swollen, and bloody area where the grubs have entered the animal's body.

THIRD: They should be shown the young grubs tearing their way through the animal's body for a period of seven to eight months, causing destruction of vital tissues, leaving swollen, discolored areas, where they have roamed about and stunting the normal growth of young cattle.

FOURTH: They should be shown the older and larger grubs that have cut holes through the skin on the animal's back, where they remain another month or two beneath the skin, in puss-filled cysts, causing intense inflamation and injury to the choicest flesh and ruining the animal's hide for leather.

The records of our packers show that millions of pounds of choice beef, surrounding the encysted grubs in the cattle they slaughter annually, are ruined and must be trimmed away. The removal of this unsightly and inedible meat, which is a total loss, requires extra labor and only defaces and devalues the carcass still more. The records of our tanners show that millions of hides are partially ruined annually because of the holes made by grubs in the center of the hide, which is the thickest and best portion of the hide for leather.

FIFTH: They should be shown the records recently made on weight gains of grub-freed cattle as compared to weight gains of infested cattle. These records reveal that feeder cattle freed from grubs gain from 1/3 to 1/2 pound more per day than infested animals on the same amount of feed. When this is expressed in terms of feed lost in feeding grub-infested animals, it means that the cattlemen of the United States are spending several million tons of valuable feed annually to feed cattle-grubs instead of producing beef. Imagine the labor and machinery expended annually for producing all this feed--not to produce more beef, but to feed cattle-grubs.

SIXTH: They should be shown all of the damage that the cattle-grub causes to our dairy cattle, and the loss to our dairy industry.

SEVENTH: They should be shown that if cattle are treated systematically with rotenone bearing powder applied either as a dust, wash, spray, or dip, that most of the cattle-grubs are killed and that the following season there will be few or no heel flies to start another generation of grubs to torment the cattle and cause an estimated loss of about $200,000,000 annually to our cattlemen and our Nation.

If all of this evidence could be shown to those cattlemen who have been indifferent to the cattle-grub control program, I am certain that even the most skeptical of them would be thoroughly convinced that the heel fly and cattle-grubs really are injurious to cattle, that they inflict a terrific loss on the cattle industry annually, and that they can be controlled by treating the animals only with rotenone bearing powders either in dusts, sprays, wash, or dips as recommended by the United States Department of Agriculture, the State Extension specialists, and the local County Agent, all of whom are always at the command of the cattleman and eager to help him solve his cattle-grub problems.

Organizing the County for Livestock Insect Control

Radio script presented by Howard Myers, County Agent, Alma, Kansas, November 26, 1946, over Radio Station KSAC on the Cattle-grub Control Broadcast.

As a producer of livestock and handling steers, it is my observation that anything that can be done to make cattle more comfortable is a good management practice and that is just exactly what the control of cattle-grubs and lice do. I have had market men caution me when on the market, that there would be a market discrimination on grubby cattle. This caution was given to me long before the extensive control program of lice and grubs was initiated.

In the fall of 1944, 37 outstanding cattlemen, who are active in the County Farm Bureau and Cattlemen's Association, each subscribed $20 each to purchase a power spraying outfit. This cooperative idea made possible wide spread spraying in every township. In two years time these men were paid in full from the saving made from this spray operation. The charge for service in Wabaunsee County is 10 cents per head for spraying, with a minimum charge of $5 for any operations less than 50 head.

My first personal experience with this spraying was in the fall of 1944. I observed as mentioned that my cattle were all more comfortable, their hair was better, and while I did not weigh them, I feel confident the spraying resulted in additional pounds of beef.

In my immediate community around Paxico, Kansas, nearly everyone with 50 head or more had them sprayed. Every operator I have talked with very highly recommends spraying for cattle grubs and lice.

Many of the demonstrations presented by 4-H club members in our county has done much to stimulate interest in the very worthwhile livestock project. In fact, I believe they have been responsible for reaching many of the homes that might not have been reached.

The past grazing season, I participated in spray treating my cattle for the horn fly with the new DDT. Again I did not have any way to measure the additional pounds of beef, but I feel very sure that the four sprays that my steers received last summer is evident of additional pounds of beef.

These livestock parasite control programs mean much to the producer and it behooves all men operators of livestock to avail themselves of such service and to keep abreast of the time in the latest information.

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Extension Service
U.S. Dept. Agriculture

Report
of
Livestock Pest Control Conferences
held at
Oklahoma City, Okla., October 21-22
and
Cheyenne, Wyo., October 24-25, 1946

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The conferences held at Oklahoma City, Oklahoma, October 21-22 and at Cheyenne, Wyoming, October 24-25, 1946, on livestock pest control came about through letters addressed to the directors of agricultural extension and the directors of the agricultural experiment stations of the States concerned, by M. L. Wilson, Director of Extension Service and R. W. Trullinger, Chief of Office of Experiment Stations, USDA, respectively. Interest in the need for holding such conferences was practically unanimous on the part of the State Directors.

Representatives from all States west of the Mississippi River with the exception of California and Minnesota were in attendance. These representatives included entomologists, veterinarians, animal husbandmen in the fields of research and extension and a few administrators and county agents. Both research and extension workers represented the USDA.

The conferences were informal in character and M. P. Jones and C. D. Lowe were elected chairman and secretary, respectively. Topics were taken up in the following order: cattle grubs, lice, flies, and other livestock pests (screwworms, ticks, etc.). Under each topic research results from Federal and State sources were presented, followed by reports of extension activities State by State. Free discussion of each topic was encouraged and engaged in so that a full and comprehensive cross-section of thinking would be obtained.

At the opening of each conference small committees were selected to take notes and to prepare reports on each of the major topics discussed. These reports including recommendations were presented to the whole group for discussion and approval at the close of each meeting.

These reports as approved follow and lists of those attending the two conferences and of pertinent literature are appended.

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Oklahoma City

Cattle Grub Committee Report

M. W. Muldrow, H. Schmidt, J. N. Roney, Chairman

The committee reports:--Rotenone is the only toxicant recommended for control of the cattle grub. The rotenone powder may be used as a dust or in water suspension. The rotenone bearing powder should be 325-mesh fineness and contain 5% rotenone.

The toxicant may be applied as a dust, a spray, by hand washing or dipping.

Dust

For a complete coverage of infested areas a minimum of 3 ounces of dust per animal should be used and thoroughly worked into the animal's hair. Power dusters have not proved effective as yet.

The dusts should contain the following proportions of ingredients:
1 part by weight of rotenone bearing powder (ground root)
2 parts by weight of a diluent--namely, tripoli earth or pryophyllite.

Spray

Power spraying is very satisfactory for use on large herds. The fastest operation can be obtained with a nozzle pressure of 400-500 pounds per square inch. With this pressure and a 3 nozzle boom and No. 4 discs, an animal can be sprayed in 8 to 10 seconds. At lower pressures a much longer time for application is needed to obtain a thorough wetting of the skin. If dipping is used the animals should be held in the vat a minimum of 2 minutes.

Recommended formula for sprays:
7-½ pounds of 5% rotenone bearing powder (ground root).
100 gallons of water.
Amount generally required is one gallon per grown animal.

When power sprayer is used no wetting agent is needed, but such is necessary for washes and dips.

Washes

Formula: 12 ounces of 5% rotenone bearing powder (ground root).
2 ounces of soap.
1 gallon of water.
Use 1 pint per animal.

Dips

Formula: 100 pounds 5% rotenone bearing powder.
100 pounds of wettable sulfur.
1000 gallons of water.
It is desirable to hold the animals in the vat at least 2 minutes.

Interval Between Treatments

For most economical control, apply the materials at 30-day intervals during the grub season. For complete eradication it is recommended that the application be made at two-week intervals and at least 4 times.

Benzene hexachloride and other new insecticides are still in the experimental stages.

Extension workers point out that producers must be sold on the economic importance of controlling cattle grubs in their own herds.

This group recommends that further research work be instituted along the following lines:
1. Specific evaluation of losses due to cattle grub infestations.
2. Further search for more efficient materials for cattle grub control.
3. Further information on biology of the cattle grub.

Oklahoma City

Louse Control Committee Report

W. S. McGregor, Walter D. Armer, E. F. Knipling (member at large), Stirling Kyd, Chairman

A. Cattle Lice

1. DDT
   a. Dipping - One dipping with a 0.5% DDT Suspension (made from wettable or water dispersible DDT) has been found to give practical control.
   b. Large Power Spraying - When large power sprayers are used it is recommended that 0.5% DDT Suspension be applied at the rate of 6 to 8 quarts per adult animal. Under most conditions 2 treatments at about a 3-week interval will be necessary.
   c. Small Power Units or Hand Spraying - 1.5% DDT Suspension is recommended for use in small power outfits or knapsack-type sprayers. Approximately 2 quarts should be applied to each mature animal and 2 applications at about a 3-week interval is recommended.
   d. Dusting - A 10% DDT dust, applied at the rate of 6-8 oz. per adult animal may be used. A second treatment, applied about 3 weeks after the first, is required.
2. Rotenone
   a. Dips - The old standard rotenone dip formula of 10 lbs. of 5% cube or derris powder, 100 lbs. of a 325-mesh wettable sulfur to each 1000 gals, of water, is recommended. Two applications applied at 14 to 18 day intervals are necessary.
   b. Sprays - One pound of 5% cube or derris powder to each 100 gallons of water is recommended for power sprayers. Two applications applied at 14 to 18 day intervals are necessary.
3. Equipment
   a. When applying DDT or rotenone sprays, power equipment is recommended for large herds. For best results these outfits should maintain at least 250 lbs. nozzle pressure.
   b. On small herds good results can be obtained by using small power outfits, or knapsack-type sprayers. It cannot be over-emphasized that the coat of the entire animal must be thoroughly saturated. Particular attention should be paid to wetting the head, ears, brisket, escutcheon, and the tail head and brush.
   c. If liquid treatments cannot be used, dust may be applied with the garden-type rotary or bellows duster.
4. Other Materials
   a. Benzene Hexachloride - Due to wide variations in the chemical composition of samples of Benzene hexachloride that have been tested, and due to a lack of sufficient toxicological information regarding the effects of this material on man and animals, its use is not recommended at this time. It is recognized, however, that certain samples of benzene hexachloride used at concentrations of 0.1 to 0.3 percent gammaisomer have been highly effective in controlling cattle lice.
   b. 1068 and 3956 - Sufficient information is not available upon which to base any recommendations for the use of 1068 and 3956.

B. Sheep and Goat Lice

1. It is recommended that Stock 1235 (see BE&PQ Cir. E-679) be used in water at a 0.2% DDT concentration. Dips are preferred and sprays are not recommended unless dipping facilities are not available. A Thorough wetting of the animal is essential if the spraying method is used.

Sheep and goats may be dipped in any condition of fleece but it is recommended that the dipping be done out of the shearing pen. This will save handling the animals and will result in savings of dipping material.

The 1235 Stock Solution should be tested for compatability with the water before charging vats. Very hard waters may not give a satisfactory emulsion.

This same treatment is recommended for the control of dog lice and fleas on dogs. DDT in any form is not recommended for use on cats.

C. Hog Lice

1. One dipping with a 0.75% DDT Suspension has been found to give complete control. If dipping facilities are not available, sprays with the same concentration are suggested but more than one treatment may be necessary.

D. General Statements

1. Early Treatments - For cattle lice it is recommended that control treatments be applied before louse populations reach a high level. The exact dates for applying treatments cannot be specified due to geographical differences and other factors, but it is suggested that the optimum time of treatment be determined in the different localities by close examination of the animals in the fall.
2. Coordination with fly control operations - Due consideration should be given to applying DDT in amounts and thoroughness of coverage to obtain adequate control of lice when cattle are treated for fly control. Such consideration may eliminate the need for a specific louse control treatment at a later date.

E. Recommendations for further research

1. Further and more careful studies on the feasibility of controlling lice by following a more careful hornfly control program.
2. Study of the effects of different types of water on the residual properties of DDT.
3. Studies of the compatibility of DDT and arsenical dips.
4. Extensive studies on the relative effectiveness of DDT, benzene hexachloride, 1068, 3956, and other new materials for the control of lice on livestock.
5. Further studies on equipment and new and improved methods of application.
6. Studies on the relative efficiency and safety of DDT emulsions and suspensions.
7. Additional information on the spread of lice, particularly on the importance of flies and the litter in barns and stables.
8. Specific information pertaining to the losses resulting from louse infestations on all types of livestock.

Oklahoma City

DDT and Other Materials for Fly Control Committee Report

A. L. Smith, W. G. Bruce, Geo. D. Jones, Chairman

In consideration of the control of ectoparasites of cattle, this committee feels that recommendations should not be limited to any one species of insect. For instance, it has been brought out by various Federal and State workers that effective hornfly control by the use of DDT will also keep some other ectoparasites under control.

It is also realized that different methods of application will be used and that concentration of DDT sprays and the amount of material used will vary with the method of application. On the average stock farm the materials will be applied by hand sprayers and small power sprayers. Large operators will use dipping vats and large power sprayers.

It is the recommendation of this committee that only water-dispersible (wettable) powders be used for the control of hornflies on cattle. DDT water-dispersible powder has been found to be economical and effective under a wide variety of conditions, and has been proved to be safe from a toxicological standpoint for use on livestock. No other DDT preparations available at this time are known to combine all these properties.

The concentration of DDT and the quantity to use depends upon the method of application and local conditions. It has been found that sprays should contain a minimum of 0.2% DDT for satisfactory hornfly control. For longer protection from hornfly attack, the higher concentrations, up to 1.5% of DDT, are desirable.

The quantity of spray to be applied will vary with the size and breed of animal and method of application. The quantity will vary from one pint to one quart or more when cattle are sprayed. Larger quantities will be used when cattle are dipped.

DDT sprays when applied only to the livestock are considered ineffective in the control of the stable fly but this pest can be controlled by spraying barns, sheds, and other resting places of the flies.

For the control of stable flies and house flies on the farm or ranch, sprays containing 2.5% DDT (made by mixing 2 pounds of wettable powder containing 50% of DDT to 5 gallons of water) should be applied to the interiors of barns, sheds, and other resting places of the flies. These sprays are best applied by small power sprayers or knapsack sprayers, completely wetting the interior surfaces without appreciable run-off. The pressure of power sprayers should be reduced to about 100 pounds per square inch to avoid rebound of the spray and consequent waste.

DDT has not been found effective in the control of the horse fly.

Proposed Research and Educational Activities

1. Toxicity of DDT and other new insecticides to livestock.
2. Control of horse flies and deer flies.
3. Control of buffalo gnats.
4. More work in the concentrations of DDT sprays for the control of hornflies.
5. Effect of DDT on screwworm flies.
6. Control of stable flies.
7. Effect of DDT on mosquitoes attacking cattle.
8. Intensive education and demonstration of control measures.

Oklahoma City

Other Livestock Pests Committee Report

F. Gray Butcher, I. H. Roberts, C. B. Rude, Chairman

Your committee suggests a marked intensification of educational procedures on the screwworm fly problem. These should include:

1. Further education in screwworm areas, with insistence on more complete compliance with the ranch management program outlined in BE&PQ Cir. E-520.
2. Education of local shippers as to the seriousness of permitting transportation of infested or susceptible animals. This should include recognition of damage to the reputation of the shipping area.
3. Marked increase of education in the more northern States where infestations recur as to dangers from screwworms, with emphasis on inspection when newly arrived stock are unloaded, recognition and immediate attention to treatment of all cases of infested animals.

We recognize the need of critical consideration of adequate regulations pertaining to the shipping of animals from screwworm infested areas. These should include adequate provisions for inspection and treatment at loading points, feeding and rest stations en route and at destination. Car and truck disinfestation with DDT residual spray is also indicated.

Accordingly, we recommend that all persons present at this conference attempt to initiate interest and action from their local livestock industry on this matter. Immediate consideration to proper regulatory measures by the USDA and State regulatory agencies is also recommended.

Due to the scarcity of turkey red oil, adequate supplies of Smear 62 cannot be expected. Also due to this shortage, many materials labeled as Smear 62 are improperly formulated, with a marked decrease in their effectiveness. Accordingly, a satisfactory new material known as Smear 882 has been developed and should be introduced to stockmen. This new smear has been developed by the same agency that developed Smear 62, and it has proved to be equal in performance. The formula of the new smear is: Diphenylamine - - 32 parts)
Benzol - - - - - 35 parts)
Lamp Black - - - -21 parts) by weight
Triton X 300 - - 2 parts)
N-Butyl alcohol - 10 parts)

This formula is similar to Smear 62 which contains Diphenylamine 3-½ parts, benzol 3-½ parts, lamp black 2 parts, and turkey red oil 1 part (all proportions by weight). Details of the new formula will be available about December 15 in E. Circular No. 708 of BE&PQ under the tentative title "smear 882 for the Treatment of Screwworms in Livestock."

The committee calls attention to the efficiency of the new fleece worm remedy, formula MS793F (Menard Station No. 793 Fleece worm remedy) as outlined in Cir. E-633 of the BE&PQ. The formula consists of: diphenyl, 10 parts; benzol, 84 parts; triton 770, 1 part; N-butyl alcohol, 5 parts (all proportions by weight). It is recommended that an educational program be instituted relative to its use throughout the sheep raising areas.

Ticks

Your committee recognizes the importance of the Brown Winter Tick in certain areas and recommends its control by use of DDT. Results from Bureau of Entomology and Plant Quarantine studies reported in Journal of Econ. Ent., Volume 31, May 1946, with use of Stock No. 1235. This consists of 1 part (by weight) of DDT in 5 parts of soluble pine oil. When diluted to contain 0.8% DDT this treatment gave very effective control when applied as a wash or spray. Thorough wetting of all portions of the animal is essential. DDT wettable powder at similar strength has likewise been reported effective.

For the Lone Star Tick, discussion revealed no effective methods of control against this pest.

Gulf Coast Tick

W. C. Bruce reported that in Florida 2.3% DDT spray gave excellent control, apparently equal to smears. Good control was also reported with both DDT smears and washes by C. S. Rude in Texas. Reference is made to BE&PQ Cir. E-686, reporting the use of Stock No. 1037 as a control measure. This material is composed of DDT, 5%; rosin, 47%; Hercolyn (hydrogenated methyl abietate) 33%; and dibutyl phthalate, 15% (all percentages by weight). Same strength DDT spray was also effective against Cattle Fever Tick in a limited number of tests. In a single test pasture treatment with DDT airplance spray provided approximately 90% kill.

Spinose Ear Tick

DDT is not effective against this form. Pyridine in a non-drying adhesive smear has proven very effective. A formula known as Stock 1029 is recommended. It consists of pyridine, 10%; rosin 45%; hercolyn, 40% and dibutyl phthalate, 15%. Two treatments per year, at spring and fall round-ups are recommended, but the animal treatment must be supplemented with spraying of the various areas where the ticks are concentrated, especially under salt throughs. For this use a mixture of equal parts kerosene and crank case oil is recommended. Details are given in BE&PQ Cir. E-695.

Brown Dog Tick

This tick is becoming a more general pest on dogs, and as a nuisance around houses. Good control can be obtained with DDT treatment of infested premises and on animals. Building treatment requires thorough coverage of walls, baseboards and casing with 5% DDT in an odorless kerosene and a 10% DDT powder blown into cracks. On dogs, a 10% DDT powder or 1% DDT pine oil emulsion wash is recommended. One to three treatments indicated. Further details reported in BE&PQ Cir. E-292.

Sheep Tick or Ked

Research has revealed two materials effective against this pest. (1) Rotenone dip, at rate of 0.5 lb. of 5% rotenone-bearing powder (ground root) per 100 gallons water. (2) 0.2% DDT dip prepared from Stock No. 1235 (see BE&PQ Cir. E-679).

A single treatment with either material results in complete kills and suggests the possibility of complete eradication.

Where dipping is not considered practical, spraying and dusting may be used. A 0.25% DDT spray applied with a power sprayer has produced somewhat erratic results but promises acceptable farmer control in certain areas on medium open fleece breeds.

Dust application of 0.5% rotenone with a power duster has given similar results.

Sheep Head Bot (Grub-in-Head)

Control obtained by injection of a 3% acqueous lysol solution into the nasal passages under pressure. Procedure and equipment described in Journal of the American Veterinary Medical Association (97 (765) Dec. 1940) is and in mimeograph issued by U. S. Bureau of Animal Industry under title, "The sheep Head Grub and Methods of Control."

Poultry Ticks and Mites

Tests have shown that fowl ticks and poultry mites may be effectively controlled by complete spraying of poultry houses and roosting places with a solution of 5% DDT in kerosene. Similar strength of DDT in emulsions and suspensions are effective against fowl ticks.

We recommend further investigations on methods and materials for control of ticks, poultry parasites, and sheep head bots. This is especially necessary for the Lone Star Tick. Studies for improved screwworm smears should be continued and research on hog mange control procedures is desirable.

Cheyenne

Cattle Grub Committee Report

T. R. Robb, Joseph Muir, G. S. Weaver, Ephriam Hixson, Chairman

A. Summary

1. Rotenone is the only known insecticide that will give satisfactory control of cattle grubs.
2. Time of treatment: Begin 30 days after the first grubs appear in the back, repeat at 30-day intervals as needed.
3. Number of applications: Minimum of two applications in the common grub area and 4 to 5 for the northern grub area where the two species overlap. Vary number of treatments according to local needs.
4. Concentration for various methods.
   Wash - 12 ounces of 5% rotenone powder in 1 gallon of water with suitable wetting agents--neutral soap, 2 ounces, or wettable sulfur, 6 ounces.
   Dust - Rotenone plus diluent to make 1 to 1.67 percent rotenone in the finished dust. (Diluents: Tripoli earth, Pyrophyllite, 325-mesh.)
   Sprays - 7-½ pounds 5% rotenone powder (without wetting agent) in 100 gallons of water, or 5 pounds 5% rotenone powder, 10 pounds of wettable sulfur per 100 gallons of water, depending upon hardness of water. Rotenone extracts at suitable concentrations may be used.
   Dip - Dipping in general for grubs considered too expensive, but where used: 7-½ to 10 pounds 5% rotenone powder, 10 pounds wettable sulfur, 100 gallons of water - hold animals in vat 2 minutes. Two ounces of muriatic acid per 1000 gallons of water suggested as substitute for sulfur.
5. Dosage per animal - Use enough to cover infested area and to penetrate into grub holes. Dust, 3 ounces per animal; spray, 1 gallon per animal.
6. Pressure for spraying - 400 pounds per square inch. Use a solid cone pattern, drive-spray nozzle.
7. Equipment for holding and handling - Chutes or narrow pens preferable.
8. Extension Program
   Losses - occur from cost of trimming grubby carcasses, loss of meat and hides. Losses also occur during the heel fly egg laying season because of the annoyance to the animals. Heavy losses probably occur from grubs migrating through tissues of animal although no data are available to support the statement.
   Educational programs should be extended to take information on losses and also best methods of control to growers. Four-H and vocational agriculture students are probably the best medium for projecting the program to the farm. The extension service job is to promote, educate and help organize programs, but except for demonstration purposes it should not actually participate in control activities.

Cheyenne

Louse Control Committee Report

R. W. Every, F. W. Wilson, C. E. Smith, H. C. Manis, Chairman

Recommendations: Cattle Lice

Methods - Spraying
Dipping
Washing

Concentrations

Spraying - DDT - 0.25-0.5% (4-8 lbs. of 50% wettable DDT)
Minimum - 0.25%. One application.

Dipping - DDT - 0.25-0.5% (4-8 lbs. of 50% wettable DDT)
Minimum - 0.25%. One application.
Rotenone - 1 lb. 5% ground cube or derris root (fine)
10 lb. 325-mesh wettable sulfur
100 gals of water - followed in 16-18 days by second application.

Dusting - DDT - 3-10% dust can be used if desired.

Washing - For individuals or small groups of animals DDT - 0.25-0.5% (4-8 lbs. 50% wettable DDT) 1 application.

Further Research needed on -

1. DDT in combination with other insecticides.
2. Dusting with insecticides.
3. Newer insecticides (Benzene hexachloride, Volsicol, 1068, etc.)
4. Economic losses occuring from infestations.

Sheep and Goat Lice:

Dipping - 1235 Stock Emulsion - 10 pints to 100 gallons of water (.2% DDT)
0.5% DDT suspension (8 lbs. 50% wettable DDT to 100 gallons) 1 application.

Further research needed on spraying.

Hog Lice:

Dipping - For hog lice a single dipping has been found to give complete control when the concentration of DDT is as high as .75% using 50% wettable powder.

Spraying - Satisfactory control of hog lice can be obtained with one treatment of DDT sprays (using 50% wettable powder) at concentrations of .25% to .5% DDT. For complete control a second treatment may be required. Sprays should be applied so as to thoroughly wet the animal. The Stock emulsion 1235 diluted to .4% DDT is also recommended.

Dusts - It was reported that a 10% DDT dust applied at the rate of 1 pound per 200 square feet of floor space gave satisfactory control of hog lice where hogs had access to good hog houses and could be thoroughly exposed to the treated litter and floors.

Chicken Lice -

(1) Sodium fluoride - 1 oz. to 1 gal. of water - by dipping. ("Pinch" method for use during cold weather)
(2) 5%-10% DDT dust.

Further research needed on DDT, Benzene hexachloride, etc.

Cheyenne

DDT and Other Insecticides for Fly Control Committee Report

Harold Gunderson, J. J. O'Connell, George List, E. G. Kelly, Chairman

1. Horn Flies and Mosquitoes:
Use 0.2% DDT in high pressure sprayers (400-500 lbs. pressure), or 0.5% DDT in low pressure or hand-operated sprayers (ordinarily from 1 to 2 quarts of spray as required per animal). Use 50% DDT wettable spray powder made by reliable company. Number of applications can be determined by observations of grower and/or sprayer operator. Spray when fly count on 3 consecutive days averages 25 horn flies per animal. Make counts at same time each day.

2. Stable flies and house flies:
Spray inside walls, ceilings, windows, supports, piping and wires of farm outbuildings with 2-½% DDT, using 50% DDT wettable powder. Where breeding places cannot be eliminated or treated adequately, soak 3 ft. cords in 5% DDT and hang in and near heavily infested buildings. In addition, for stable fly, eliminate all breeding places around the barnyard, if possible; spray outside walls, fences, straw and wood piles and other breeding and resting places with 0.2% DDT or 0.5% DDT every time the animals are sprayed.

3. Pressure:
The amount of pressure to be used in spraying buildings must be determined by each State, however, we feel that 60 to 100 lbs. pressure is most desirable.

4. Quantity of spray per 1000 square feet:
General experience indicates that 1 to 2 gallons of 2-½% to 5% DDT per 1000 sq. ft. of surface is most effective and most economical. With higher pressures and higher gallonage, reduce the DDT concentration. We subscribe to the U. S. Bureau of Entomology and Plant Quarantine recommendation of 200 - or -- mg. per sq. ft. as a standard to work from. Individual experience will indicate the wisdom of increasing or decreasing this dosage.

5. Equipment:
The most satisfactory equipment for general use appears to be as follows:

Cattle: 3 nozzle broom, 4 to 6 ft. handle, trigger cut-off. Nozzle aperture 4/64 to 5/64 with whirl plates.

Barns: For 0.2% DDT, same as above. For 2-½% DDT use 1 No. 4 or No. 5 disc nozzle or 80-0.2 flat or fan nozzle. The amount of pressure will determine the type of nozzle to use; 50-80 pounds pressure -- flat or fan nozzle, 150-400 lbs. pressure, cone-type nozzle.

Cheyenne

Other Livestock Pests Committee Report

H. B. Mills, Claire Titensor, Clifford Iverson, Martin Muma, C. S. Rude, Chairman

This committee endorses the report of the Oklahoma City conference on education and regulation as they relate to screwworm control. It feels that an educational program in outlaying areas, where infestations are not necessarily common, is important.

This committee further endorses the above committee's statement relative to the substitution of Smear 882 for Smear 62.

It further endorses the statement of the Oklahoma City group concerning wool maggot educational and control work.

The winter tick recommendations of the Oklahoma City committee are in accord with the ideas expressed at the Cheyenne meeting.

There is some evidence that the spinose ear tick may be establishing itself in areas to the north of those presently accepted as within its permanent range of distribution. The committee would further suggest increased attention on the part of extension and research workers to this pest as it may occur in northern areas. We agree with statements of the Oklahoma City group relative to control. Recommended controls for the sheep tick include: (1) 4 pounds of 50% DDT wettable powder in 100 gallons water; (2) 0.2% DDT water solution prepared from emulsion stock 1235, as described in BE&PQ Cir. E-679; (3) 6 ounces of ground root containing 5% rotenone in 100 gallons water.

These materials give complete control when carefully applied either as a dip or spray. A spray applied only to the back of an animal gives practical control but not eradication.

DDT sprays, outlined above should be applied at the approximate rate of 2 quarts per animal. Time of treatment should be governed by local conditions and practices, and mixing of treated and untreated animals should be avoided.

Through spraying of chicken houses with 0.2% DDT will completely eradicate bedbugs, and give several months residual action. Chicken mite control was not discussed at this conference.

Cheyenne

Report of the Committee on Recommendations for Further Research

E. G. Kelly, H. C. Manis, Ephriam Hixson, C. S. Rude, E. F. Knipling, Chairman

The committee on recommendations for further research recognizes the great advances that have been made on the boilogy and control of insects and other external parasites of animals. The committee is aware of the fact, however, that more effective and more desirable methods of control are needed for many of the pests of livestock. Also, certain biological data are urgently needed to serve as a guide in developing the most effective methods of control.

Discussions of the many problems under a wide variety of conditions as brought out during the last two days have suggested the need for outlining specific research activities. Although many of these are applicable to other parts of the country they are for the most part of primary concern in the western part of the United States.

The recommendations set forth are intended primarily for those groups and individuals charged with the responsibility of conducting research. Extension service personnel can, however, contribute valuable data on the practical aspects of pest control and it is urged that they take advantage of every opportunity to obtain precise information on the effectiveness of various methods of control.

A. Cattle Grubs

1. Research should be directed towards the development of methods that will permit control of cattle grubs with a single treatment before the larvae reach the back of the animal.
2. Further studies on immunity and resistance of the hosts to the parasite should be initiated.
3. Further studies on the relative efficiency of rotenone dusts, sprays or washes are needed employing various dosages of active ingredient.

4. Studies on the relative efficiency of various types of spray equipment are needed including the effects of various degrees of pressure and amounts of liquid employed.
5. Obtain further data on the residual action of various rotenone treatments applied under different environmental conditions.
6. Tests with new insecticides should continue, including such materials as benzene hexachloride, 1068, 3956, and others that might prove effective.
7. Information on the distribution and seasonal activity of H lineatum and H bovis are needed. This information should serve as a guide in determining schedule of treatments.

B. Louse Control
1. Further studies on the optimum concentration and relative efficiency of DDT dusts, suspensions and emulsions are needed for control of lice on livestock.
2. The relative effectiveness and practicability of DDT, benzen hexachloride, 1068, and 3956 and other louse treatments should be determined for all species of lice affecting livestock.
3. The relative efficiency and practicability of dips and sprays for controlling lice on livestock.

C. Flies affecting livestock
1. Horn flies
a. Further studies in various localities are needed to determine the optimum concentration and amounts of DDT spray to apply for horn fly control.
b. Further observations on the biology of horn flies are required. Of particular importance is a thorough knowledge of normal season abundance and life history. Such information may prove useful in determining the most effective spray program.
c. Determine the relative effectiveness of DDT, 1068 and 3956 for controlling horn flies.
2. Stable flies
a. An effective material for application to the animals is urgently needed.
b. Further studies on the treatment of buildings and other resting places as a control for stable flies are recommended.
3. Horse flies and deer flies
a. Intensive studies on the biology and control of deer flies and horse flies are recommended.
4. Black flies
a. Investigations on the control of black flies affecting livestock are suggested.

D. Ticks
1. Determine the effectiveness of DDT, 1068, benzene hexachloride, 3956 and other new insecticides for the control of various species of ticks affecting livestock.

E. Poultry Parasites
1. Investigations on the control of lice, mites and ticks affecting poultry are desirable.

F. Screwworms
1. Development of more effective and more desirable screwworm treatment.
2. Continue surveys and other studies that will provide information useful in preventing the spread of screwworms.
3. Obtain more information on the biology, distribution, importance and control of sarcophagid parasites affecting fur bearing animals.

G. Hog Mange

1. Further research on the control of hog mange is recommended.

H. Sheep Bots

1. Further research on the control of sheep bots is recommended.

General Recommendations:

1. Obtain precise information on the losses caused by various insects and arachnids affecting livestock.
2. Further tests and observations are needed to determine the feasibility of controlling lice and other parasites in conjunction with the fly control program.
3. Further studies are suggested in efforts to improved equipment and methods of application for the control of pests of livestock.
4. Studies on the factors influencing the lasting properties and effectiveness of DDT and other insecticides are needed. Consideration should be given to evaluating the various factors such as rainfall, sunlight, humidity, type of surface, degree of pressure employed in applying sprays, etc.
5. Further tests against various pests are needed with combinations of various insecticides, such as DDT, rotenone, sulfur and other newer materials.
6. Studies on the mode of action of DDT and other insecticides in killing horn flies, stable flies, house flies, and horse flies.
7. Further information on the toxicological effects on man and animals is urgently needed for DDT, benzen hexachloride, 1068 and 3956.

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The Sheep Head Grub and Methods of Control. USDA, BAI Proc. Cir. July 1941.
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Outlook for Supplies of Rotenone Insecticides

Review of the world's supply of rotenone-bearing root shows that the quantity that should be available for use in the United States for the insecticidal year beginning October 1, 1946, will be substantially the same as the amount that was available in 1942. With this quantity there is reason to believe that the amounts that can be made available for use in cattle grub control during the 1946-47 season will be substantially greater than those used in any preceding year.

However, estimates of the quantities that States desire to use for this purpose disclose that they contemplate using amounts many times greater than those used last year. It is suggested, therefore, that those responsible for cattle grub control implement their orders as promptly as possible and then plan their programs around the amounts which the industry indicates they can supply by the time needed.

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Persons Attending the Conferences

At Oklahoma City, Oklahoma

Arizona (Tuscon, unless indicated)
- W. D. Armer - Ext. An. Hus.
- W. J. Pistor - Vet. Exp. Sta.
- J. N. Roney - Ext. Ent., P.O. Box, 751, Phoenix

Arkansas (Fayetteville, unless indicated)
- W. R. Horsfall - Ent. Sta. & Col.
- Chas. Lincoln - Ext. Ent.
- M. W. Muldrow - Ext. An. Hus., P.O. Box 391, Little Rock

Louisiana (Baton Rouge)
- W. S. McGregor - Ext. Eng.
- C. E. Smith - Ent. Exp. Sta.

Missouri (Columbia)
- Chas. R. Kyd - Ext. An. Hus.
- Geo. D. Jones - Ext. Ent.
- Curtis W. Wingo - Ent. Exp. Sta.

New Mexico)State College, unless indicated)
- J. W. Benner - Vet. Exp. Sta. & Ext.
- Irwin H . Roberts - Vet. BAI, P.O. Box 464, Albuquerque
- Joe V. Whiteman - Ext. An. Hus.

North Dakota (Fargo)
- F. G. Butcher - Ext. Ent.

Oklahoma (Stillwater unless indicated)
- Clyde A. Bower - State Dept. Agri., Oklahoma City
- F. A. Fenton - Ent. Sta. & Col.
- D. E. Howell - Ent. Sta. & Col.
- Joseph H. Kitzhofer - BAI, 607 Leonhardt Bldg., Oklahoma City

Oklahoma (cont'd)
- Stirling Kyd - Ext. Ent.
- C. F. Stiles - Ext. Ent.

Texas (College Station)
- Paul Gregg - Ext. Ent.
- Chas. A. King, Jr. Ext. Ent.
- H. Schmidt - Vet. Exp. Sta.
- A. L. Smith - Ext. An. Hus.
- F. L. Thomas - Ent. Exp. Sta.
- R. D. Turk - Vet. Col.

At Cheyenne, Wyoming

Colorado (Fort Collins, unless indicated)
- Maurice T. James - Ent. Exp. Sta.
- Geo. M. List - Ent. Sta. & Col.
- Gordon T. Mickle - Ext. Ent.
- C. E. Smith - Vet. BAI, P.O. Box 885, Colorado Springs

Idaho (Moscow)
- H. C. Manis - Ent. Ext. Sta. & Col.

Iowa (Ames)
- H. Gunderson - Ext. Ent.

Kansas (Manhattan)
- E. G. Kelly - Ext. Ent.

Montana)Bozeman)
- H. B. Mills, Ent. Exp. Sta.

Nebraska (Lincoln, unless indicated)
- S. W. Alford - Ext. Vet.
- Ephriam Hixson - Ent. Sta. & Col.
- M. H. Muma - Ext. Ent.
- W. T. Spencer - Livestock Loss Prevention Board, Omaha

Nevada (Reno, unless indicated)
T. E. Buckman, - Asst. Dir. Ext.
Harry E. Gallaway - State Dept. Agri.
Mark W. Menke, Co. Agt., Elko

Oregon (Corvallis)
Robert W. Every - Ext. Ent.

South Dakota (Brookings, unless indicated)
J. J. O'Connell - Ext. An. Hus.
Clifford I. Iverson - Ext. An. Hus. & Sta.
Gilbert S. Weaver - Ext. Vet.
Fred W. Wilson - Ext. An. Hus., Spearfish

Utah (Logan)
M. L. Miner - Vet. Exp. Sta.

Washington (Pullman)
David R. Brannon - Ext. Ent.
Joseph Muir - Ext. An. Hus.

Wyoming (Laramie, unless indicated)
W. I. Bowersox, - BAI, Cheyenne
W. T. Brettell - Co. Agt., Cheyenne
Donald G. Denning - Ent. Exp. Sta.
G. H. Good- State Vet., Cheyenne
L. J. Hoffman - BAE, Cheyenne
Geo. Knutson - BAE, Cheyenne
John K. Nimino - Asst. Co. Agt., Cheyenne
T. R. Robb - Ext. Ent., Torrington
C. E. Titenser - Ext. Ent., Worland

USDA Representatives attending both conferences

F. C. Bishop, BE&PQ, Washington DC
E. F. Kipling, BE&PQ, Washington, DC
E. W. Laake, BE&PQ, Dallas, Texas
C. S. Rude, BE&PQ, Menard, Texas
W. G. Bruce, BE&PQ, Savannah, Ga.
M. P. Jones, Ext. Ent. Washington, DC
C. D. Lowe, Ext. An. Hus., Washington, DC

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Note - In compiling this document the desire was to incorporate the committee reports as they were turned in at the conferences. After examining them, however, it was decided to make a few changes in the interest of greater uniformity in style of presentation and clarity.

Since time did not permit checking the revisions with the authors it is hoped that they will be accepted by them as intended. C. D. L.

LYON COUNTY

LIVESTOCK INSECT CONTROL GOALS FOR 1947

SPRAY:

1. 20,000 cattle, with rotenone to control cattle grubs - will probably commence operations January 1st.
2. 30,000 cattle, with DDT to control Horn flies.
3. 10,000 sheep, with DDT to remove ticks or keds.
4. 2,000 hogs, to remove lice

ACKNOWLEDGMENTS

Assistance rendered:

Dr. E. G. Kelly, Extension Entomologist, Kansas State College of Agriculture and Applied Science - Manhattan, Kansas

Merlin P. Jones, Extension Entomologist, Extension Service, USDA, Washington, D. C.

Fred Wilson, Assistant Animal Husbandman, Spearfish, South Dakota

H. Lee Hansen, District Extension Agent, Minden, Nevada (for the detailed minutes taken of the meeting at Elko.)

Mark W. Menke, County Extension Agent, Elko, Nevada (for arrangements made at Elko for the conference)

Frederick W. Wilson, Professor of Animal Husbandry, University of Nevada

Harry Galloway, State Department of Agriculture, Reno, Nevada

W. B. Mabee, Bureau of Entomology and Plant Quarantine, Elko, Nevada

O. A. Kurtz, Spray Chemical Corporation, Sacramento, California

and

The stockmen and others who participated in the deliberations.

AGRICULTURAL NEWS SERVICE

RELEASE UPON RECEIPT - 1946-7-30-#86-A&AB-300-EXCLUSIVE IN YOUR CITY

BALED HAY LOADER GAINS FAME THROUGH ARTICLE

FAME OF A HOME-MADE BALED HAY LOADER, AS USED IN NEVADA DURING THE WAR YEARS WHEN LABOR WAS SHORT, HAS SPREAD TO MANY PARTS OF THE WORLD.

REFERRED TO BRIEFLY IN THE ARTICLE ON NEVADA IN THE NATIONAL GEOGRAPHIC MAGAZINE LAST WINTER, THE PLANS FOR THE LOADER AND HOW IT IS CONSTRUCTED HAVE BEEN SOUGHT BY FARMERS IN FOUR FOREIGN COUNTRIES AND TWENTY-FIVE STATES.

PLANS AND SPECIFICATIONS HAVE BEEN SENT WITHOUT CHARGE TO INQUIRING FARMERS BY THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, AND IT IS ASSUMED THAT MANY OF THE LOADERS WHICH HAVE PROVED SO VALUABLE IN NEVADA AS LABOR-SAVING DEVICES HAVE BEEN CONSTRUCTED THROUGHOUT THE COUNTRY AND ABROAD.

ORIGINATED BY J. S. WINTERS AND J. P. FAIRBANK OF THE COLLEGE OF AGRICULTURE AT THE UNIVERSITY OF CALIFORNIA, THE BALED HAY LOADER WAS INTRODUCED INTO NEVADA BY THOMAS BUCKMAN, ASSISTANT DIRECTOR OF COUNTY AGENT WORK, TO HELP MEET THE WARTIME LABOR SHORTAGE.

A MODEL WAS CONSTRUCTED BY THE EXTENSION SERVICE, UNDER THE DIRECTION OF LOUIS TITUS, EXTENSION ENGINEER, AND DEMONSTRATED THROUGHOUT THE STATE.

AS A RESULT, A CONSIDERABLE NUMBER OF THE DEVICES WERE BUILT BY FARMERS THEMSELVES OR THROUGH THE HELP OF BLACKSMITH SHOPS.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR. . . . . A. L. HIGGINBOTHAM, EDITOR.

PARTLY DISCARDED AUTOMOBILES AND OTHER MACHINERY WERE UTILIZED IN MAKING A LOADER.

APPLICATIONS FOR THE PLANS CAME TO THE EXTENSION SERVICE FROM AUSTRALIA, NEW ZEALAND, HOLLAND, FRANCE, MASSACHUSETTS, MINNESOTA, VIRGINIA, ARKANSAS, KANSAS, TEXAS, IDAHO, WISCONSIN, CALIFORNIA, PENNSYLVANIA, UTAH, TENNESSEE, OHIO, GEORGIA, IOWA, MICHIGAN, MISSOURI, COLORADO, NEW YORK, INDIANA, SOUTH DAKOTA, KENTUCKY, WEST VIRGINIA, MONTANA, AND ILLINOIS.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-7-15-#80-SPL-540- EXCLUSIVE IN YOUR CITY

SPRAYING WITH DDT CONTROLS TICKS ON NEVADA SHEEP

SUCCESSFUL SPRAYING OF NEVADA SHEEP TO CONTROL SHEEP TICKS IS BEING PRACTICED IN SEVERAL PARTS OF THE STATE UNDER THE DIRECTION OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

A 100 PERCENT KILL, OR NEARLY THAT, HAS BEEN REPORTED IN THE TESTS, ACCORDING TO THOMAS BUCKMAN, ASSISTANT DIRECTOR FOR COUNTY AGENT WORK.

NOT ONLY EFFECTIVE BUT INEXPENSIVE, IS THE NEW METHOD OF CONTROLLING SHEEP TICKS, BUCKMAN SAID, POINTING OUT THAT IT IS A GREAT IMPROVEMENT OVER THE OLD METHOD OF DIPPING IN INSECTICIDES.

IF THE NEW METHOD IS TO BE PRACTICED WITH RANGE FLOCKS, HE STATED, THE OPERATION WILL HAVE TO BE TIMED TO FIT INTO WITH YEAR-ROUND ROUTINE OPERATIONS.

BOTH RANCH AND FARM SHEEP HAVE BEEN SPRAYED WITH DDT, WITH UNIFORMLY GOOD RESULTS.

FIRST OF THE NEVADA EXPERIMENTS WAS CARRIED ON IN ELKO COUNTY WITH THE W. D. BEERS AND SONS FLOCK OF EIGHT THOUSAND.

ONE OF THE LATEST TESTS WAS RECENTLY COMPLETED WITH ABOUT A THOUSAND SHEEP BELONGING TO SEVERAL SHEEPMEN IN FERNLEY.

IN THE FERNLEY SPRAYING, WHICH IS REPRESENTATIVE OF THAT BEING DONE IN OTHER PARTS OF THE STATE, THE METHOD DEVELOPED BY THE UNIVERSITY OF IDAHO AGRICULTURAL EXPERIMENT STATION WAS FOLLOWED.

THE SHEEP WERE TREATED WHILE CROWDED TIGHTLY INTO A CHUTE MADE BY TWO FENCES.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

THE EQUIPMENT WAS A POWER SPRAYER DELIVERING 350 POUNDS OF PRESSURE.

THE SPRAYING MATERIAL WAS APPLIED WITH THE SPRAY NOZZLE HELD AGAINST THE WOOL AND MOVED FROM SIDE TO SIDE ALONG THE BACK AND AROUND THE EARS.

THE OUTFIT WAS A 300 GALLON TRAILER-TYPE BEAN SPRAYER WITH A 2 INCH NOZZLE SPRAYER. THE NOZZLE WAS HELD DIRECTLY ON THE SHEEP, OR A FEW INCHES AWAY FROM HIM. ABOUT ONE-THIRD TO ONE-HALF GALLON OF DDT SOLUTION WAS USED ON EACH SHEEP.

IN THE FERNLEY EXPERIMENT, 50 PERCENT WETTABLE DDT WAS USED AT A SOLUTION STRENGTH OF 2 PERCENT, OR 4 POUNDS OF 50 PERCENT DDT TO ONE-HUNDRED GALLONS OF WATER.

COST OF SPRAYING PER HEAD, ACCORDING TO LOUIE A. GARDELLA, LYON COUNTY AGRICULTURAL EXTENSION AGENT, WAS APPROXIMATELY 6 CENTS, BUT COULD HAVE BEEN REDUCED TO 4 CENTS IF THE FLOCK HAD BEEN ASSEMBLED AND FACILITIES PREPARED FOR RAPID HANDLING.

SHEEP TICKS FEED UPON THE BLOOD OF THE WOOLIES, CAUSING IRRITATION AND REDUCING THE VITALITY OF THE ANIMALS. TICKS OFTEN REDUCE THE VITALITY OF LAMBS SO MUCH AS TO CAUSE RETARDED GROWTH OR EVEN DEATH. HEAVILY INFESTED LAMBS DO NOT DEVELOP NORMALLY.

ACCORDING TO THE IDAHO EXPERIMENTS, THE BEST TIME TO SPRAY SHEEP WITH DDT TO CONTROL TICKS IS IN THE FALL AFTER THE SHEEP ARE BROUGHT TO WINTER QUARTERS OR IN FARM FLOCKS AFTER THE WEATHER IS COOL.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-7-15-#78-B&AB-280- EXCLUSIVE IN YOUR CITY

FARM SAFETY WEEK IN NEVADA SET FOR JULY 21-27

FARMERS THROUGHOUT THE STATE ARE BEING CALLED UPON BY THOMAS BUCKMAN, ASSISTANT DIRECTOR FOR COUNTY AGENT WORK OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, TO USE FARM SAFETY WEEK, JULY 21-27, TO CHECK UP ON AND ELIMINATE FARM HAZARDS.

WHILE THE PREVENTION OF ACCIDENTS WHICH COST PROPERTY AND LIVES IS A YEAR-ROUND JOB, BUCKMAN ASKED THAT THE RURAL PEOPLE JOIN TOGETHER NEXT WEEK TO FOCUS ATTENTION ON THE FARM SAFETY PROBLEM.

AGRICULTURAL EXTENSION AGENTS THROUGHOUT THE STATE ARE COOPERATING WITH THE FARMERS IN TAKING STEPS TO MAKE WORK AND LIFE ON FARM AND RANCH SAFER.

THE OCCUPATIONAL DEATH RATE IN AGRICULTURE NATIONALLY, THE ASSISTANT DIRECTOR SAID, CONTINUES TO BE THE LARGEST OF ANY LARGE INDUSTRY, AND NEVADA FARMERS ARE NOT EXEMPT FROM LOSS.

HE POINTED OUT THAT, ACCORDING TO THE RECORDS OF THE NEVADA STATE INDUSTRIAL COMMISSION, ONE THOUSAND ACCIDENTS PROBABLY WILL OCCUR ON NEVADA'S FARMS THIS YEAR, WITH FIVE DEATHS OR CASES OF PERMANENT DISABILITY, AND FORTY-TWO OF PERMANENT PARTIAL DISABILITY.

INCLUDED, OF COURSE, IS NOT THE GREAT LOSS OF PROPERTY, OR THE INCONVENIENCE OR LOSS OF TIME.

FARMERS AND FARM HOMEMAKERS CAN USE THE WEEK ADVANTAGEOUSLY, BUCKMAN SAID, IN CHECKING UP ON HAZARDS IN CONNECTION WITH MACHINERY AND EQUIPMENT, BUILDINGS AND THE FARMYARD, FIRE DANGERS, HANDLING OF ANIMALS, THE ELECTRIC SYSTEM, THE USE OF HAND TOOLS, SANITATION AND HEALTH, AND THE FARM HOME.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

BUCKMAN IS CHAIRMAN OF THE NEVADA STATE COMMITTEE OF EXTENSION WORKERS AND OTHERS WHO ARE COOPERATING WITH THE FARM SAFETY DIVISION OF THE NATIONAL SAFETY COUNCIL DURING THE WEEK.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-11-25-#133-A&AB-430- EXCLUSIVE IN YOUR CITY

STOCK PEST CONTROL CAMPAIGN WILL BE LAUNCHED

AN EDUCATIONAL PROGRAM TO ELIMINATE PESTS FROM NEVADA LIVESTOCK WILL BE LAUNCHED AT A MEETING AT ELKO, DECEMBER 4 AND 5.

CALLED BY UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, THE MEETING WILL INCLUDE THE EXPLANATION AND DEMONSTRATION OF THE NEWEST METHODS OF CONTROLLING LIVESTOCK PESTS WHICH CAUSE A HEAVY LOSS TO NEVADA'S MOST IMPORTANT AGRICULTURAL INDUSTRY.

INVITED TO THE MEETING ARE LIVESTOCK MEN FROM THROUGHOUT THE STATE AND PERSONS CONNECTED WITH THE EXTENSION SERVICE OR/OTHER OFFICIAL AGENCIES HAVING TO DO WITH THE WELFARE OF THE LIVESTOCK INDUSTRY.

IN CHARGE OF THE MEETING IS THOMAS BUCKMAN, ASSISTANT DIRECTOR OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, WHO HAS JUST RETURNED FROM A CONFERENCE OF STATE AND FEDERAL WORKERS IN LIVESTOCK PEST CONTROL AT CHEYENNE.

DR. E. G. KELLY, EXTENSION ENTOMOLOGIST OF KANSAS STATE COLLEGE, WILL BE THE CHIEF SPEAKER AT THE MEETING.

THE KANSAS MAN, BUCKMAN SAID, IS ONE OF THE BEST LIVESTOCK PEST CONTROL PROGRAM MEN IN THE U. S.

"RECENT DEVELOPMENTS IN POWER SPRAY EQUIPMENT AND OF NEW INSECTICIDES, SUCH AS DDT, NOW MAKE IT POSSIBLE TO CONTROL LIVESTOCK PESTS MORE EASILY AND CHEAPLY THAN EVER BEFORE", BUCKMAN SAID IN EXPLAINING THE PURPOSE OF THE MEETING.

"IT IS NOW FEASIBLE TO WORK IN PEST CONTROL EFFECTIVELY AS PART OF ROUTINE RANCH OPERATIONS."

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
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DISCUSSED AT THE CONFERENCE WILL BE METHODS OF APPLICATION -- INCLUDING SPRAYING, DUSTING AND DIPPING — SIZE AND TYPE OF EQUIPMENT, MATERIALS, DOSAGES, AND OTHER DETAILED INFORMATION ABOUT PEST CONTROL.

HOW TO COPE WITH THE SPECIAL ENEMIES OF NEVADA LIVESTOCK -- CATTLE GRUBS, FLIES, LICE, TICKS -- IS ON THE ELKO MEETING PROGRAM.

A PLAN OF AN EDUCATIONAL PROGRAM OF LIVESTOCK PEST CONTROL TO COVER THE ENTIRE STATE WILL BE WORKED OUT BY THE PERSONS PRESENT.

TWO ELKO MEN WHO ATTENDED THE CHEYENNE MEETING, MARK W. MENKE OF THE EXTENSION SERVICE AND HARRY GALLOWAY OF THE STATE DEPARTMENT OF AGRICULTURE, WILL BE ON HAND AT THE MEETING TO GIVE THEIR OBSERVATIONS.

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A G R I C U L T U R A L N E W S S E R V I C E
RELEASE UPON RECEIPT - L946-L2-23-#L42-B & AB-470- EXCLUSIVE IN YOUR CITY

CAMPAIGN LAUNCHED TO CONTROL NEVADA STOCK PESTS

A STATE-WIDE EDUCATIONAL PROGRAM TO PROMOTE THE CONTROL OF EXTERNAL LIVESTOCK PESTS IN NEVADA, BASED ON NEW RESEARCH, IS NOW UNDER WAY, ACCORDING TO THOMAS BUCKMAN, ASSISTANT DIRECTOR FOR COUNTY AGENT WORK, OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

LAUNCHED AT A MEETING OF EXTENSION WORKERS, LIVESTOCK MEN, AND OTHERS IN ELKO RECENTLY, THE PROGRAM CALLS FOR A LOCALIZED CAMPAIGN IN EACH COUNTY OF THESTATE.

FIRST STEP IN EACH COUNTY, ACCORDING TO THE RECOMMENDATIONS OF THE ELKO CONFERENCE, IS TO BE A SURVEY TO DETERMINE THE TYPE AND QUANTITY OF INSECT INFESTATION AND THE IMPORTANCE OF THE CONTROL TO FARMERS AND RANCHERS.

THEN WILL FOLLOW A FULL EDUCATIONAL PROGRAM INCLUDING DEMONSTRATIONS AND ACTUAL PRACTICE OF THE PRINCIPLES OF CONTROL.

FIRST COUNTY IN THE STATE TO GET UNDERWAY IS LYON, WHICH HAS ALREADY, BUCKMAN ANNOUNCED, OUTLINED ITS GOAL FOR 1947.

INCLUDED IS THE SPRAYING OF 42,000 HEAD OF LIVESTOCK TO CONTROL VARIOUS INSECTS WHICH ARE PARASITES OF LIVESTOCK.

FIRST ACTIVITY IS SCHEDULED TO BE THE SPRAYING OF 20,000 HEAD OF CATTLE WITH ROTENONE TO CURB CATTLE GRUBS. ALSO ON THE PROGRAM IS THE SPRAYING OF 30,000 HEAD OF CATTLE WITH DDT FOR HORN FLIES, 10,000 SHEEP WITH DDT TO REMOVE SHEEP TICKS OR KED, AND 2,000 HOGS TO REMOVE LICE.

(MORE)

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THE ENTIRE MATTER OF INSECT PEST CONTROL WAS GONE INTO AT THE ELKO MEETING, AT WHICH THE CHIEF SPEAKER WAS DR. F. G. KELLY OF KANSAS STATE COLLEGE AGRICULTURAL EXTENSION SERVICE AND AUTHORITY ON LIVESTOCK PEST CONTROL.

ONE ENTIRE DAY AT THE MEETING WAS TAKEN UP BY A DISCUSSION OF CATTLE GRUBS.

DR. KELLY TOLD OF THE LIFE IN THE GRUB IN THE ANIMAL AND OUTLINED THE KINDS OF DAMAGE CAUSED BY IT.

HE POINTED OUT THAT CATTLE RUN INTO BOGS AND MIRE AND THROUGH BRUSH IN AN EFFORT TO GET AWAY FROM THE EFFECT OF THE FLY AND GREAT DAMAGE RESULTS, ESPECIALLY TO COWS HEAVY WITH CALF, OFTEN CAUSING PREMATURE BIRTH.

SECOND DAY OF THE NORTHWESTERN NEVADA SESSION WAS GIVEN OVER TO A STUDY OF LICE, HORN FLIES, STABLE FLIES, AND MOSQUITOES AND METHODS OF CURBING THEM.

THE COMMON HOUSE FLY IS NOT TO BE OVERLOOKED, DR. KELLY SAID, SINCE IT IS A TRANSMITTER OF MANY DISEASES OF HUMAN BEINGS AS WELL AS SOME OF CATTLE. FLIES ARE READILY COMBATED WITH DDT.

REPORTS OF THE RESULTS OF TREATING CATTLE WITH DDT IN KANSAS RESULTED IN A DETERMINATION BY MANY RANCHMEN PRESENT TO TREAT THEIR CATTLE WITH IT IN 1947.

THE KANSAS ENTOMOLOGIST SAID THAT IF CATTLE ARE FREE FROM TORMENTING FLIES THEY GROW BETTER, MANY HEAD IN KANSAS GAINING AT LEAST A HALF POUND MORE A DAY DURING THE SEASON THAN ANIMALS NOT PROTECTED FROM THE FLIES.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-8-26-#95-B&AB-470- EXCLUSIVE IN YOUR CITY

CRESTED WHEATGRASS REBUILDS NEVADA RANGELANDS

REBUILDING OF DEPLETED OR DENUDED NEVADA RANGE LANDS WITH CRESTED WHEATGRASS HAS PROVED SUCCESSFUL ON FAVORABLE SITES WHERE ANNUAL PRECIPITATION IS 8 INCHES OR MORE, ACCORDING TO THOMAS BUCKMAN, ASSISTANT DIRECTOR OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

TESTS CARRIED ON JOINTLY BY THE FOREST SERVICE AND THE GRAZING SERVICE IN HUMBOLDT COUNTY, TOGETHER WITH THOSE OF STOCKMEN IN NORTHERN NEVADA, HE SAID THIS WEEK, INDICATE THAT CRESTED WHEATGRAS IS THE BEST COVER FOR REBUILDING THE RANGE.

TOGETHER WITH NORTHERN AND WESTERN NEVADA AGENTS, BUCKMAN SAW WHAT CAN BE DONE DEMONSTRATED BY THE TWO FEDERAL AGENCIES IN PARADISE VALLEY AND NEAR WINNEMUCCA TEN DAYS AGO.

ON SEVEN PLOTS WHICH WERE INSPECTED, THE CRESTED WHEATGRASS WAS GROWING BOTH WITH AND IN PLACE OF NATIVE GRASSES TO FURNISH ADDITIONAL FORAGE WHEN BADLY NEEDED IN THE SPRING BEFORE STOCK GO TO THE HIGHER RANGES.

CRESTED WHEATGRASS IS THE BEST GRASS FOR RESEEDING BIG SAGEBRUSH TYPE RANGE, RICHARD HURD, ECOLOGIST OF THE INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION OF THE FOREST SERVICE, WHO IS IN CHARGE OF THE HUMBOLDT COUNTY EXPERIMENTS, TOLD THE EXTENSION WORKERS.

IT HAS BEEN PLANTED SUCCESSFULLY, THE EXPERIMENTS SHOW, BOTH ON LAND CLEARED PARTLY OR WHOLLY OF BRUSH AND ON LAND DENUDED BY FIRE.

"BRUSH COMPETITION MUST BE LARGELY REDUCED BEFORE SUCCESSFUL RESEEDING CAN BE EXPECTED," HURD EXPLAINED.

(MORE)

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"METHODS OF SAGEBRUSH ERADICATION WHICH HAVE PROVED SUCCESSFUL ARE THE WHEATLAND PLOW AND THE RAIL. TO PRESERVE NATIVE GRASSES ON THE GROUND, THE USE OF THE RAIL IS RECOMMENDED. THE WHEATLAND PLOW IS MORE EFFICIENT IN ERADICATING SAGEBRUSH."

OCTOBER AND NOVEMBER, HE SAID, ARE THE BEST MONTHS TO PLANT CRESTED WHEATGRASS, TO INSURE NO CHANCE OF GERMINATION UNTIL SPRING, WHEN THE SEEDLINGS EMERGE. A FEW LARGE SCALE SPRING PLANTINGS OF CRESTED WHEATGRASS HAVE BEEN SUCCESSFUL IN NORTHERN NEVADA ON THE SAGEBRUSH TYPE, BUT THE PERIOD FOR SEEDING IN LATE MARCH AND EARLY APRIL IS SHORT AND MORE HAZARDOUS.

THE GRASS SHOULD BE PLANTED ONE-HALF TO ONE INCH DEEP AND IT USUALLY TAKES THREE YEARS TO REACH A MATURE STAND. FOR BEST RESULTS, HURD SUGGESTS TWO YEARS' PROTECTION FROM GRAZING FOLLOWING SEEDING.

BURNED OVER AREAS, HE SAID, SHOULD BE RESEEDED THE FALL AFTER THE BURN FOR BEST RESULTS. DENSE STANDS OF BRONCO GRASS ALMOST INVARIABLY INVADE BURNS IN NORTHERN NEVADA AND THE RESEEEING SHOULD PRECEDE THIS GROWTH.

DERRELL FULWIDER, DISTRICT GRAZIER OF THE GRAZING SERVICE, POINTED OUT THAT THE PURPOSE OF RESEEDING IN THE HUMBOLDT AREA IS TO INCREASE THE CARRYING CAPACITY OF THE APRIL-MAY RANGE SO AS TO RELIEVE HIGHER RANGES.

WATER DEVELOPMENT IN UNDERUTILIZED AREAS TO RELIEVE THE GRAZING LOAD ON RESEEDED AREAS IS A VERY IMPORTANT MANAGEMENT FACTOR, HE SAID.

THE EXPERIMENTAL PLOTS IN HUMBOLDT COUNTY RANGE IN SIZE UP TO 600 ACRES. SOME NORTHERN NEVADA STOCKMEN HAVE SUCCESSFULLY SEEDED AREAS LARGER THAN THIS ON PRIVATELY OWNED LAND.

(MORE)

BUCKMAN SAID THAT CRESTED WHEATGRASS APPEARS TO BE A POSSIBLE ANSWER TO THE USE OF UNDEVELOPED LAND ON MANY RANCHES WITH INSUFFICIENT PRECIPITATION.

THROUGH SURPLUS IRRIGATION WATER, WHEN IT IS AVAILABLE, AND NATURAL PRECIPITATION, HE STATED, IT MAY BE POSSIBLE TO IMPROVE PASTURE ACREAGE BY THE PLANTING OF CRESTED WHEATGRASS.

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13 COOPERATION WITH OTHER AGENCIES

The State Department of Agriculture was asked to make available to the Extension Service the results of test weed control plots sprayed throughout Nevada in 1945 with 2, 4-D as soon as the department survey is completed this spring.

Conferences were held with the U. S. Fish and Wild Life Service regarding distribution of bait for poisoning rodents through county Extension offices.

The Nevada Hereford Association was assisted in holding their Annual Sale at Reno.

On May 22, a conference called by the State Agricultural Society and State Planning Board was attended. This meeting was held on the Fair Grounds in Reno, with representatives of the State Agricultural Society, Nevada Junior Livestock Show, Nevada Hereford Association and the Reno Rodeo Association. The Assistant Director for County Agent Work represented the State Extension Office and Archie Albright, Washoe County Agent, was present as manager of the Junior Livestock Show. Clarence Thornton, Vice-president of the State Agricultural Society, presided at the meeting. The purpose of the meeting was to give the architect of the State Planning Board information regarding what improvements were desirable from the standpoint of the organizations that have used the Fair Grounds, or might have possible use for them. Other present were A. M. McKenzie, the architect of the State Planning Board, F. W. Wilson, Frank Helmick of the legislative bureau, Lester Hilp, Ray Peterson, Glen Myers, Charles Short and Leonard Anker.

The conference resulted in recommendations to the State Planning Board that plans be drawn up at once for a combined livestock pavilion including a judging and sales ring with necessary exhibit corrals and stalls for holding the Nevada Junior Livestock Show, and the annual Hereford sale conducted by the Nevada Hereford Association, other livestock exhibitions and agricultural meetings. General plans for the use of the entire grounds were discussed, but it was the consensus of opinion that the livestock pavilion should be the first unit constructed, and that it be started soon, so as to provide if possible, quarters for the Hereford sale which was to be held on November 11 and 12.

The State Agricultural Society had $15,000 to its credit in the State Treasury at Carson (fire insurance money) that could be used to start construction of the livestock pavilion. The Assistant Director for County Agent work suggested that the building be located on the southwest corner of the Fair Grounds so as not to interfere with any other proposed activities, or uses of the grounds, to provide room for further expansion, to provide adequate parking facilities for automobiles, and the servicing of the livestock pavilion area. This suggestion was carried out and the first unit was constructed in time for the Hereford Sale.

The manager of the State Fair, C. J. Thornton, was furnished a new County Agent personnel list in order to facilitate mailing of the State Fair Planning list.

Dr. Kenneth G. McKay, Extension Specialist and Veterinary Science, University of California, Berkeley, was contacted regarding cattle grub spraying demonstrations in California, carried by the Extension Service for that state. Dr. McKay furnished the writer with a copy of his annual report which gives in detail recommendations and results secured.

One conference was held with Ed Reed, P.M.A. Secretary, regarding ACA operations.

One conference was held with Frank Galloway of the State Department of Agriculture regarding spraying livestock pests and weed control work.

A conference was held with C. J. Thornton, Vice-president of the State Agricultural Society and Manager of the State Fair regarding county exhibits at the fair.

The Experiment Station prepared a progress report of the steer feeding experiment carried on at Fallon, asked for by the supervisor. 100 copies of this report were mimeographed in the State Extension office and copies were sent to the counties by the supervisor in circular letter No. 78. 25 copies were furnished Mr. Headley, Mr. Fleming, and Mr. Wilhite for their use. Included with this letter was another summary prepared by the Experiment Station relative to the feeding value of first, second and third crop alfalfa hay; also prepared at the request of the Assistant Director.

Several conferences were held with the War Assets Corporation regarding sale of surplus equipment.

A conference was held with Forrest Wilhite, Superintendent of the Newlands Field Station at Fallon, of the Bureau of Plant Industry, Soils, and Agricultural Engineering, U.S.D.A. on May 28, for the purpose of holding a County Agent Regional supervisory conference at the Station in June. An evening meeting was planned and held. On the following morning and early afternoon, the agents present inspected alfalfa plots, pastures, winter barley tests, fertilizer tests, drainage and livestock work under way at the Newlands Station.

Another conference with Mr. Wilhite was held at Fallon where in company with Mr. Wilhite, the Assistant Director visited several areas at Fallon where land has been reclaimed, and put into pasture, and where there is a possibility for further reclamation and pasture development. There are now 11,000 acres of irrigated pasture on the Newlands project due to the work of the Newlands' Field Station and former County Agent Royal D. Crook, and the leadership of a number of farmers who decided that a considerable portion of their ranches could be more profitably devoted to pasture and to the production of hay. The purpose of this conference was to plan further pasture expansion on the project.

A study was made of a report to County Agent Wittwer by Gerald Thorne, Division of Nematology, Bureau of Plant Industry, Soils and Agricultural Engineering, Salt Lake City, Utah. Mr. Thorne made a survey of tomato seedings on May 15 and 16, visiting about 165 acres of approximately 200 acres in the valley. 9 of the 26 fields visited were infested to some degree with a root-knot nematode.

Another report studied of considerable importance to Clark County tomato plant growers reviewed was a "Report to Mesa County Colorado Research Committee", by John L. Horner, Colorado Experiment Station. In Colorado Experiment Station. In Colorado interested counties have a county agricultural research committee and authority is given by law to the county commissioners to appropriate money for research work. This set up has been in operation in Mesa County for several years, and the county commissioners there have been supplementing the Experiment Station funds with an appropriation in order to get sufficient research work done to meet the agricultural needs of the county.

Inasmuch as this county is a large user of Moapa Valley tomato plants, Mr. Horner, representing the Colorado Experiment Station and Mesa County Research Committee, carried on experiments in cooperation with County Agent Wittwer and Moapa Valley tomato growers, to determine the best methods of shipping Moapa Valley tomato plants to Colorado growers in Mesa County, so they not only arrive in good condition but give maximum production.

COMMUNITY PASTURE ON NEWLANDS IRRIGATION DISTRICT AT FALLON INSPECTED

The Assistant Director conferred at considerable length with Mr. Ward Emery, Secretary of the Irrigation District Board and Mr. Erb, one of the Directors of the Board, regarding the community pasture, its management, carrying capacity, classes of livestock using the pasture, future development, etc.

About 2,000 head of cattle are now using the pasture, by the end of the year the irrigation board hopes to see this number increased to 4,000. The district spent $6,000 this year on improvements to the pasture. Most of this expenditure was used to construct ditches to spread the water over the pasture. Strawberry clover does well, as do many of the grasses. A good many trees have been planted for shade for livestock. The Assistant Director suggested to these men that the purchase of a spray outfit for cattle spraying and weed control work might be a profitable investment for the district, and farmers interest in raising livestock in the community pasture.

REPORT FOR BIENNIUM:

A report of County Agents activities for the biennium was prepared for the Director's use in making his report to the President.

Agricultural projects have been carried on during the biennium with fourteen agricultural agents in the thirteen counties of the State having organized farm bureaus.

Important agricultural projects included:

Range Livestock Improvement
Forage Crops and Pastures
Agricultural Conservation Program
Marketing
Dairying
Poultry
Hog Production
Horses
Fertilizers
Soil Erosion and Water Conservation
Cereal Crops
Farm Forestry
Alfalfa Production
Potato Production
Vegetable Production
Weed Control
Tomato Plant Production
Farm Safety
Rural Fire Protection, and
Victory Gardens

Projects totaled 200 for the 13 counties.

During the biennium, the various phases of the marketing of agricultural products, through the ordinary channels of trade as well as through cooperative marketing associations, were subjects of special study and promotion. Continued assistance was given by county agents to existing cooperative marketing associations which assisted the farmers and stockmen of the State in securing more adequate marketing facilities for cattle, sheep, wool, poultry, eggs, turkeys, vegetables, tomato and celery plants.

Full cooperation has been given the Agricultural Adjustment Administration and Soil Conservation Service in carrying out the conservation and adjustment programs in the State. County agricultural agents, cooperating with farm committees, helped administer the agricultural conservation program, as well as carrying on the educational phases of this work.

Extension agents after V-J Day, were called upon more than ever before, to furnish technical information and to help develop leadership to meet the individual and group problems confronting farm people. Office calls on county agents at their headquarters totaled 37,235 in 1945 and a total of 31,000 in 1946.

FARM SAFETY WEEK WAS OBSERVED JULY 21-27 IN NEVADA:

Farm Safety has been a project in some counties of the State but this year special emphasis was given to the program during National Farm Safety Week observed throughout the Nation, July 21-27.

Maynard Coe, Director of Farm Division of the National Safety Division of the National Safety Council, asked the Assistant Director for County Agent Work, to serve as chairman for the National Safety Week campaign in Nevada, July 21-27. This responsibility was accepted and plans were formulated for observing this week in the state.

Radio Station KOH cooperated with the Extension Service in emphasizing this program by putting on a daily broadcast as part of their Farm and Home Hour at noon, July 21 to 26 inclusive.

The following people appeared on this program:

NAME	DAY	SUBJECT
Archie R. Albright	Monday	Prevention of Livestock Accidents
M. Gertrude Hayes	Tuesday	Home Safety
Leonard Anker	Wednesday	Falls, Their Prevention
Tom Williams	Thursday	Prevention of Highway Traffic Accidents
Thomas E. Buckman	Friday	The Reason for Farm Safety Week in Nevada

An informal committee consisting of Archie Albright, Miss M. Gertrude Hayes, Norman Katen of KOH, A. L. Higginbotham and Extension Forester Herbert J. Freece helped organize the program for the week. Miss Margaret M. Griffin and Louis Titus responded to requests for assistance.

The State Highway Patrol authorized Thomas Williams to appear on KOH and Dan Sullivan of the Nevada Industrial Commission authorized the use of accident statistics secured by the Industrial Commission.

Extension Editor A. L. Higginbotham prepared and sent to the State newspapers the following stories;

Dangers of Fire on Ranches Named by Forester
Kitchen Accidents on Farms May be Averted
Farm Safety Week in Nevada Set for July 21-27
Nevada Farm Mishap Record Reviewed for Week
Fires on Farm Preventable Forester Says

The United Press of Reno released an article on Farm Safety prepared by Mr. Titus to the papers of the State.

A special four-page circular was prepared and printed as an extension circular by the Assistant Director and released for distribution during Farm Safety Week.

Archie R. Albright and Miss Hayes, Washoe County Extension Agents mailed a copy of this letter to each farmer and homemaker in Washoe County.

Mr. Albright in his letter stated:

"Dear Cooperator:

"Did you know that one worker out of every four on farms have an accident sometime during the year?

"The Nevada Industrial Commission can show you that this is true in Washoe County.

"Did you know that two-thirds of these accidents were serious enough to disable the injured worker for more than seven days?

"Did you know that farmers accident insurance rates are high because of the high risk on farm workers?

"Of course, you cannot eliminate all accidents, but you can reduce accidents by being cautious and eliminating the causes of accidents.

"Why not give yourself the test on the inside page to show yourself how careful you really are.

Very truly yours,

Sgd. Archie R. Albright
County Extension Agent - Washoe County"

As the outgrowth of the effort put on the Farm Safety Week, Extension Forester Freece, hereafter will secure from the Industrial Commission each month, a detailed report of the accidents reported to the Commission during the month.

This record will be tabulated in his office by counties and by accidents so that a more thorough record and background for accident prevention on farms and ranches of the state will be available.

It is anticipated that the information he secures will provide a background for developing a real Farm Safety Program in Nevada.

Mr. Freece's headquarters being in Carson City, this will become a regular monthly job for his office. The actual work involved in securing the records from the Industrial Commission is purely nominal but will provide information that has been lacking for developing a Farm Safety Program in the State. This project can easily become an important one in every county extension program. Its importance will be stressed by the Supervisor in assisting County Agents develop programs.

ANNUAL REPORT

EXTENSION NUTRITIONIST

Eda L. Carlson

December 1, 1945 to December 31, 1946

ANNUAL STATISTICAL REPORT

Days in Office	149
Days in Field	107
Annual Leave	26
Sick Leave	16
Miles Traveled	6357
Extension Agents Visited	11
Farm or Home Visits	78
Method Demonstrations	24
Attendance	214
Other Meetings	3
People Assisted	79
Upholstery Workshops	55
Attendance	1430
Letters	278
Circular Letters	12
News Articles	12
Phone Calls	324
Office Calls	128
Leaflets Prepared	9
Bulletins	707
Inter-Office Conferences	71
Other Conferences	33

ANNUAL NARRATIVE REPORT

In looking over the record of the past year, we find that some of the things we proposed to do were not accomplished and other unexpected activities had to be crowded in.

1. Analysis of Project Situation

A limited nutrition study made in 1945 under the sponsorship of the Nevada Public Health service, the State Nutrition Committee and Nevada Extension Service indicated that signs of nutritional deficiencies were evident in some Nevada school children.

Activities and Accomplishments

1. Fact-finding study to secure additional data as to the nutritional status of Nevada school children.

A follow-up state wide study of one-day food records was undertaken in the spring of 1946 by the State Food and Health Coordinating Committee, of which the Extension Service is an integral part. 48 schools in 15 counties sent in one-day food records. These were tabulated and analyzed by members of the Extension Staff.

The results corroborated the facts found in 1945, that the foods most often lacking were citrus fruits, green and yellow vegetables, milk and whole grain cereals.

A second collection of one-day food records was made in the fall of 1946 to determine if there was any difference in the findings at different seasons of the year. The tabulation of these records is underway but not yet completed.

2. Methods of teaching nutrition

The main tool for teaching nutrition used by the Extension Nutritionist was an illustrated talk giving the results of the Wilkins' study in Nevada, with slides showing children with nutritional deficiencies, as well as well-grown children, and pictorial charts of the factual findings. Some of these pictures were of Nevada children supplemented with pictures from other states.

The slides were also used extensively by Mrs. Andrew Rice, Nutrition Consultant, and were shown before the Grange, church groups, home economics classes, and numerous Parent-Teacher Association groups, as well as the annual State meeting of the Parent-Teacher Association.

Much of the manual work of preparing the charts was done by the Extension Nutritionist, who also helped in arranging for the making of the slides.

3. Food Production and Conservation

Six state-wide news articles were prepared on the raising of home gardens, home canning and curing of hams and bacons.

The importance of food production and conservation was also stressed in talks before homemakers groups.

The Extension Nutritionist and Home Extension Agent, Lena Hauke, attended a conference at the Albany Research Laboratory and conferred with department heads of that institution and specialists in the Extension Service, at Berkeley, California, in regard to various problems in the freezing of foods. They also visited commercial freezing plants in the vicinity.

Together they conducted a conference on freezing for all county home extension agents, members of the State staff and University Home Economics Department.

Sets of slides on freezing of foods were procured from the California Extension Service for Nevada Home Extension Agents.

The Extension Nutritionist took part in a Field Day in Lyon County and gave instruction in the freezing of foods.

She also demonstrated proper methods of canning to the University Home Economics Class, the Relief Society in Clark County and to new members of the home demonstration staff.

Individual instruction was also given to home extension agents and to numerous homemakers in urban Washoe County.

The pressure cooker testing service was continued in urban Washoe County through the Extension Nutritionist's office. Rural homemakers in Washoe and other counties in the State were served by home extension agents.

A planting plan to provide an adequate diet for 400 people was worked out for Dr. Tillim of the Nevada State Hospital. This involved conferences with Professor V. E. Scott and Archie Albright as to crop yields, etc.

In a personal visit to Dr. Tillim at the hospital, suggestions and advice were given regarding the setting up of a canning unit at the hospital. Bulletins were supplied on proper storage of vegetables, and information was secured for him, regarding Canary Reed grass seed.

Food Preparation

Two state-wide news articles were prepared on the roasting of wild ducks and the cooking of half turkeys.

One leaflet, was issued on Inexpensive Main-Dish Salads for Home and Group Luncheons. This was prepared at the request of a local church group and then was mimeographed and sent to all home extension agents for distribution. A leaflet was also prepared on Glamorizing Home Canned Foods.

One new agent was given instruction in preparing cakes by the quick mixing method.

Work Simplification

A demonstration in Time-Saving Cookery was given before the various homemakers groups in Lyon County and to one group in Ormsby County. For this demonstration a leaflet was prepared giving menus and recipes for an inexpensive one-hour dinner and other time-saving recipes.

A one-page leaflet, "Make Every Motion Count" was also prepared for this demonstration.

Famine Relief Program

Three state-wide news articles were prepared on saving fats and oils, and wheat, and the importance of the famine program was stressed at group meetings. Circular letters were sent to county extension agents urging that they stress the fat salvage program in their districts.

In addition, three fact sheets were prepared on saving fats and oils, saving wheat, and raising home gardens. These were widely distributed by county extension agents and other groups.

A mimeographed leaflet on using extenders in making yeast bread was prepared and distributed to Nevada homemakers.

Upholstery

One of the reasons why some things were crowded out of the Plan of Work was the conducting of upholstery workshops.

The Extension Nutritionist attended the upholstery workshop held in March and took the training along with the home extension agents.

Later she assisted in training new agents in upholstery. Acting as agent-at-large, she conducted three workshops in Eureka, Clark and Lincoln Counties in cooperation with Field Agent, J. Hazel Zimmerman. These workshops were each of a week's duration with classes morning, noon, and night. Both group demonstrations, and individual instruction and assistance were given. Those enrolled brought chairs, davenports, and miscellaneous pieces to work on. Some of the pieces were completely dismantled down to the frame. Some needed major and minor repairs before re-upholstering.

At the evening sessions, there were numerous men who came to work along with their wives. The program was received with a great deal of enthusiasm and much of the work was very professional looking.

4-H Food Instruction Book

This is one job that did not get completed. Outlines for 1st, 2nd, and 3rd year projects were drafted after individual conferences with home extension agents and 4-H leaders. Other educators were also consulted in order to coordinate 4-H Food instruction with instruction given in other educational institutions in the State.

The 4-H Food Record Book was also revised in collaboration with Miss Griffin and Miss Hayes, and sent to the printer. The actual work on the subject matter for 4-H food instruction books was just barely started and remains to be done next year.

Public Relations

Harmonious working relations existed with the University Home Economics Department, the Food and Health Coordinating Committee, the Public Health Service, School Lunch Program, State Department of Vocational Education, and Parent-Teacher Association.

Assistance to Agents

Four women agents were given training in canning, freezing, testing of pressure cookers, upholstery and cake baking. One man agent was trained in pressure cooker testing.

Women extension agents were supplied with various types of demonstration equipment, and with new subject matter material. Special requests for information on recipes, etc. were also taken care of.

Talks and demonstrations were given in six counties.

Individual Assistance

Numerous and varied requests were received for advice and assistance on various phases of food preparation, canning, freezing, dehydrating, meat curing, egg preservation, food spoilage, etc.

Urban homemakers in Washoe County were given home instruction in canning of foods.

Students at the University were assisted with subject matter material.

Demonstration Equipment

Equipment secured for home extension agents included upholstery supplies, and food preparation equipment.

The major purchase for the state office was a home-type freezer box - custom made. This piece of equipment will be of assistance in training agents, home economics students and homemakers in freezing of foods.

News Releases

The following news releases were prepared for state-wide publication through the Extension News Service.

Nevada Gardens Said Help in Famine Relief
Now Is A Good Time to Prepare For Canning Season
Preservation Aid Available for Homemakers

Culled Chickens Suggested for Home Canning
Canning of Chickens to Help Grain Saving Program
Nevada Homemakers Save Wheat for Famine Relief
Salvage of Fats and Oils Told for Homemakers
Nevada Fat Salvage Helps Unfortunates Abroad
Roasting Wild Ducks Explained for Hunters' Wives
Rural Nevadans May Cure Own Ham and Bacon
Federal Meat Grades No Longer Compulsory
Nevada Homemakers Told About Thanksgiving Turkey

Publications

The following leaflets were prepared in mimeograph form:

Job Break-down, Canning of Chicken
Job Break-down, Canning of Asparagus
Fact Sheet - Did You Salvage Any Fat Today?
Fact Sheet - Did You Waste Any Bread Today?
Fact Sheet - Have You Planted a Victory Garden?
4-H Food Outline - First Year
4-H Food Outline - Second Year
4-H Food Outline - Third Year
Make Every Motion Count
Time Saving Cookery
Inexpensive Main-Dish Salads for Home and Group Luncheons
Use Less Flour in Yeast Breads
Glamorizing Home Canned Foods

Recipe Testing

All recipes used in leaflets were tested and checked before publication. Most of this work had to be done at home for lack of laboratory facilities. This is quite a handicap. It is hoped that some provision may be made in the future for laboratory space and equipment.

Swan Song

It seems impossible to end without writing in the first person since this is my final report.

In leaving the Extension Service and Nevada, I shall miss the many friendships made among the members of the staff and the public at large. My years with the Nevada Extension Service have been a very plæasant experience and a profitable one too. I feel quite certain that I have learned more than I have taught.

I hope my services have not been in vain, but that in a small way at least, I may have given real assistance and helped to strengthen the program.

Eda L. Carlson
Eda L. Carlson
Extension Nutritionist

CANNING CHICKEN
Job Breakdown

Steps	Key Points
1. Wash chicken	but do not soak in water
2. Wipe with clean damp cloth	
3. Cut chicken into pieces	(See illustrations Bulletin AWI-110)
4. Trim off large lumps of fat	
5. Sort pieces into 3 piles	Meaty pieces, bony pieces, and giblets
6. Make broth of bony pieces	
7. Drain broth	skimming off fat
8. Strip meat from bones	May be canned as little pieces if desired
9. Pour hot broth over raw meaty pieces	to cover
10. Cover and precook	until medium done (no pink color at center)
11. Remove hot jars from water	one at a time-avoid placing on cold surface
12. Put salt in jars	1/2 teaspoon to pint
13. Pack chicken in jars	Second joints and drumsticks with skin next to glass--breast in center--smaller pieces fitted in - 1" head space
14. Cover with hot liquid	leaving 1" head space
15. Work out air bubbles	by pushing knife down sides of jar
16. Add more broth	if needed, leaving 1" head space
17. Wipe jar rim	with clean damp cloth
18. Exhaust jars	
1. Place lids in position	(For self-sealing type use old lids, loosely (replacing with new ones for (processing.
2. Put jars in canner	as soon as filled
3. Add boiling water to canner	if necessary to bring to within 2" of top of jar
4. Place cooker lid in position	unfastened - petcock open
5. Let steam pour from petcock	10 minutes
6. Remove jars and seal	completely
19. Remove excess water from cooker	if more than called for in manufacturer's directions
20. Replace sealed jars in canner	
21. Fasten canner lid securely	petcock open
22. Heat until steam escapes from petcock	
23. Let steam escape for 7 minutes	to drive all air out of cooker
24. Close petcock	
25. Heat to 10 lbs. pressure plus altitude correction	1/2 lb. additional for each 1,000 feet above sea level
26. Adjust heat	to hold pressure steady
27. Record beginning and ending time	on paper
28. Process proper time	With bone, 65 minutes for pints. Without bone, 75 minutes for pints. Giblets, 75 minutes for pints.
29. Turn off heat	as soon as processing time is up
30. Slide cooker from burner	
31. Allow pressure to drop to zero	slowly
32. Wait 2 minutes	no longer
33. Unfasten lid, wait 1 minute more	before removing lid from cooker
34. Take off lid	spreading towel over lid to protect face
35. Remove jars	to cloth-covered surface
36. Cool	without disturbing lid--space between for air circulation--away from drafts
37. Test seal	next day
38. Label and store	in cool, dark, dry place

6/26/46

CANNING ASPARAGUS
Job Breakdown

Steps	Key Points
I. GET JARS READY	Inspect; wash in soapy water; rinse; heat
II. PREPARING ASPARAGUS	
1. Take off tough ends	by bending stalk and allowing it to snap
2. Clean edible portion	by scraping off scales
3. Sort asparagus into 3 piles	thin, medium, and thick stalks
4. Wash	with brush
5. Rinse	in clean water
6. Cut tip ends	4" in length
7. Cut ends	into 1" pieces
8. Tie tip ends into bundles	for easy handling
9. Blanch in boiling water	2-3 minutes depending on size of stalks
III. FILLING JARS	
1. Remove jars from hot water	avoid placing on cold surface
2. Pack hot asparagus, tips down	not too tightly - leave 1/2" head space
3. Cover with boiling water	leaving 1/2" head space
4. Add pure salt - not "free running" table salt, never iodized salt	1/2 teaspoon to 1 pint
5. Work out air bubbles	by pushing knife down sides of jar
6. Add more liquid if needed	leaving 1/2" head space
7. Wipe off jar rim	with clean moist cloth
IV. EXHAUSTING JARS	
1. Dip lid in hot water and place on jar loosely, according to type	Rubber ring (if used) in place on jar or lid screw band or zinc cap just started in its groove; lighting jar, short wire up. If self-sealing metal lid is used, leave new lid off jar placing another lid on for exhausting.
2. Place jars on rack in cooker	water boiling-to within 2" of top of jars
3. Place cooker lid in position	leave unfastened - petcock open
4. Let steam pour from open petcock	for 10 minutes
V. SEALING AND PROCESSING	
1. Remove jars and seal completely	placing new wet lids on self-sealing type jars
2. Remove excess water from cooker	if more than specified by manufacturer
3. Replace jars in cooker	not touching each other or side of cooker
4. Place lid on cooker and fasten	securely - petcock open
5. Heat, allowing steam to escape from petcock for 7-10 minutes	to drive all air out of cooker
6. Close petcock	
7. Heat to 10 lbs. pressure plus altitude correction	an additional 1/2" for each 1,000 feet above sea level
8. Adjust heat	to hold pressure steady
9. Write down starting and ending time	on paper
10. Hold pressure steady	for required time (asparagus 30 min.)
VI. REMOVING JARS	
1. Turn off heat	when processing time is up
2. Slide cooker from burner	
3. Let pressure drop to zero	slowly
4. Wait 2 minutes then open petcock	slowly
5. Unfasten lid, and wait 1 minute more	
6. Remove cooker lid	lifting away from face - covered with towel to protect face
7. Remove jars to cloth covered surface	do not attempt to tighten self-sealing lids
8. Cool out of drafts	space between jars for air circulation
9. When thoroughly cold, test seal	next day
10. Label and store	in cool, dark, dry place

DID YOU SALVAGE ANY FAT TODAY?

FATS AND OILS ARE DESPERATELY NEEDED!

Here's Why

They are easily exported; high in calorie value.
Combined with grain products they can at least sustain life and help to maintain a minimum level of health in famine stricken countries.
They are vitally needed in making soap to combat diseases now rampant throughout Europe and Asia.

How To Save Fats

Purchase 20% less fats and oils.

Bake, broil, and boil foods instead of frying.

Eliminate foods fried in deep fat during the famine emergency.

Substitute cooked salad dressings for mayonnaise.

Limit pastry desserts. Make only single-crust pies in place of two-crust kinds.

Use peanut butter for fat content, as well as for protein and B vitamins.

Trim excess fat from meat and poultry before cooking. Render separately and strain. Avoid overheating. No smoking is the rule.

Collect drippings from broiler, roaster, frying pan, and top of the soup kettle and use for cooking and seasoning. Some good ways to use saved fats are:

In making gravy and sauces for scalloped dishes.

To flavor plain boiled vegetables; to take the place of butter in mashed potatoes; mixed with a little vinegar for wilted lettuce; and for panning cabbage, squash and other vegetables.

Use it as the fat in meat piecrust, cake, gingerbread, waffles, muffins, biscuits, stuffing for poultry or meat.

"Butter" bread crumbs with it.

Salvage all fats that cannot be re-used and turn them in to your butcher. Every bit of fat unfit for use as food is needed for making soap.

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A TEASPOON OF FAT A DAY SAVED BY EVERY MAN, WOMAN AND SCHOOL CHILD IN THE UNITED STATES WILL MEAN A TOTAL SAVING OF AT LEAST ONE MILLION POUNDS OF FAT A DAY.

SAVE A LITTLE - HELP A LOT

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Cooperative Extension Work in Agriculture and Home Economics, University of Nevada, Agricultural Extension Division, and United States Department of Agriculture Cooperating, State of Nevada.

DID YOU WASTE ANY BREAD TODAY?

COULD YOU HAVE USED LESS?

YOU can help in the fight against famine by saving wheat and wheat products.

Why Wheat Is Important

It is the most vital commodity for shipment to famine countries.
It is easily transported.
It supplies high food and calorie value.
It can be used to feed the most people in the shortest time.

Ways To Save Wheat

Reduce purchase of wheat products by 40%.

Don't hoard or waste flour. Buy only as needed and keep in a cool dry place. Weevils are likely to develop if flour is stored in a warm place for very long.

Prevent waste of bread - store carefully - utilize left-over bread in tasty ways.

For sandwiches served at home, make open-face types instead of using the usual two slices - or let potato salad take the place of the sandwich. Don't trim off and discard crusts when making sandwiches.

Use less macaroni and noodles, more potatoes.

Substitute potatoes for bread - one small serving of potato offers approximate food value of one slice of bread.

Use mashed potatoes - in place of biscuit crust or meat pie
- in place of bread in stuffings
- in place of toast when serving poached eggs or creamed dishes.

Use oatmeal or cornmeal to replace part of wheat flour in making bread, biscuits, muffins, pancakes, cookies.

Let oatmeal take the place of wheat bread at breakfast. An average serving of oatmeal equals approximately 2 slices of bread in food value.

Use left-over oatmeal to thicken gravies, soups and stews.

Use oatmeal as a binder in meat loaf instead of bread or crackers.

Skip the three-layer cake, lavish with flour, sugar and fat, during the famine emergency. Serve instead fruit, egg or milk desserts. For the occasional cake serve plain loaf cake or cup cakes or a cake made of two thin layers with fruit filling and meringue topping.

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IF EVERY AMERICAN WILL SAVE TWO SLICES OF BREAD A DAY, THAT WILL BE ENOUGH TO GIVE 20 MILLION STARVING PEOPLE THEIR DAILY BREAD FOR THE NEXT 6 MONTHS.

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Cooperative Extension Work in Agricultural and Home Economics, University of Nevada, Agricultural Extension Division, and United States Department of Agriculture Cooperating, State of Nevada.

HAVE YOU PLANTED A VICTORY GARDEN?

HELP SAVE WHAT WE'VE WON.

Every pound of food that we can save in our homes, every pound that we can grow in our gardens, every pound that we can preserve for future use will add to the supply available for famine relief.

Why Produce and Preserve Food at Home

1. To increase total food supply, making possible larger shipments abroad.

2. To reduce the overload on transportation facilities with more locally-grown produce.

3. To increase family security through protection against possible shortages, savings on the food bill, better nourishment, and increase in value of the home investment.

4. To make it easier to save "a slice of bread a day" by enabling you to have an extra fresh vegetable with every meal.

5. To eat better. You can't beat fresh vegetables and fruits right out of your own garden for flavor and nutrition.

6. To give you fine exercise. Nothing like a little spade and hoe work to keep you out in the fresh air and in good shape.

How YOU Can Add Your Bit To The World Food Supply

1. Grow part of your family's needs to release food stocks that can be used somewhere else in the world.

2. Plan your garden carefully. Grow enough to supply your needs for fresh vegetables with plenty over for home canning.

3. Make successive plantings for continuous supplies and late crops.

4. If space is limited, maybe you can fit your plans with those of your neighbor, so that you can do some swapping.

5. Keep down weeds and grass, and cultivate as necessary.

6. Watch for insects and other pests and apply the right treatment in time.

7. Work towards a permanent garden. Consider planting small fruits and berries.

8. Make your victory garden serve you all year round by preserving and storing part of its output.

9. Can and preserve seasonally abundant commercial crops while they are cheap and plentiful.

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EVERY POUND OF FOOD THAT WE SAVE AND PRODUCE BUILDS THAT MUCH HIGHER OUR OWN WALL AGAINST POSSIBILITY OF FOOD SHORTAGE IN OUR OWN NATION.

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Cooperative Extension Work in Agriculture and Home Economics, University of Nevada, Agricultural Extension Division, and United States Department of Agriculture

OUTLINE

FIRST YEAR FOODS

Meeting 1 ORGANIZATION - Elect Officers
Food Habit Score Card

Meeting 2 FRUITS - - Fruit Juices, Fresh Fruit, Cooking Fruit (fresh and dried)

Why Eat Breakfast?

Breakfast is the meal which helps to wake you up. The word "breakfast" means that you break your fast. For twelve hours or more you have had nothing to eat so your stomach is empty. Could a flying fortress take off without gasoline? You can't get off to a good start for school, work or play without a good breakfast to keep your engine going.

Kitchen Etiquette

Remember that cleanliness is one of the first requirements when working with foods.
Wash hands and clean fingernails before handling food.
Arrange hair neatly and then keep your hands away from it.
Use a different spoon for tasting and stirring.
Wear a washable dress or apron.
Keep your work table and stove neat and orderly.
Read the recipe and plan out your procedure before you start.
Do not waste food.
Leave the kitchen clean.

Dishwashing - two different girls each meeting

Meeting 3 MILK - - Beverages, Cocoa, Egg Nog, Fruit-milk drink

Tune Up To Eat

Get a long night's sleep.
Rise at least 10 minutes earlier.
Use soap and water freely.
Walk or play out-of-doors every day.
Be cheerful

How To Measure

Types of Breakfasts

The kinds and amounts of food one eats for breakfast depend on one's age and activities. Grandma does not need the amounts of food that growing boys and girls need. A man who works in an office all day does not need the same breakfast as a man who is chopping wood or farming. However, every one should eat a good breakfast.

A good breakfast is made up of fruit, cereal, bread and butter, and milk. Eggs, bacon or ham will make a good breakfast even better.

Plan Light Breakfast - what other foods are needed for the day.

Meeting 4 CEREALS - - Cooked, dry (opportunity to taste a variety of different kinds) Variations with fruit

What Foods Do For Us

Eating is a very big part of growing up. Isn't it so? Where would you be without food? Food does more for us than just helping in the job of growing. The proper food has almost everything to do with making a girl pretty or a fellow nice looking. What happens when you cut down on milk, vegetables and meat? Yes, you get hollow-eyed, sallow-skinned, you haven't the energy of a hibernating bear--and just about as poor a temper.

Avoiding Waste - Clean Place

Table Setting - Individual cover

Prepare and Serve Light Breakfast

Meeting 5 TOAST AND VARIATIONS (milk toast, cinnamon toast, and French toast)

Plan medium breakfast - What other foods are needed for the day?

Time Management

(Plan the menu carefully and make an order of the work by listing things that need to be started early to save time and energy. Plan how to serve the meal, clear the table, wash the dishes and put kitchen in order.)

Meeting 6 PREPARE MEDIUM BREAKFAST

Serving Breakfast

Breakfast etiquette (dress - courtesies)

Meeting 7 EGGS
Cooked in shell - scrambled - poached - fried - shirred

How to gain weight

Food Habit Score Card

Meeting 8 BREAKFAST MEATS (bacon, ham, sausage)

Plan hearty breakfast or "brunch"

Meeting 9 ACHIEVEMENT BREAKFAST or "brunch" for mothers

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(Optional)

Meeting 10 MUFFINS OR GRIDDLE CAKES

Meeting 11 WAFFLES AND VARIATIONS

Meeting 12 JUST FOR FUN -- popcorn balls - fruit punch - outdoor breakfast or hike.

2nd Year
4-H Food Outline

(This outline covers suggested subject matter for the 2nd year 4-H Food Project, arranged for a minimum of 12 meetings. It is suggested that wherever possible the subject matter be spread over more meetings to permit more thorough instruction.)

First Meeting - Election of Officers
Explanation of Unit - built around lighter meal of the day, luncheon or supper.
What constitutes a good lunch
Types of lunches.
Packed Lunch - Tips on sandwich making. Sandwich fillings. Make sandwiches and raw vegetable relishes. Discuss other foods which should be included.
Prepare and serve milk beverage with sandwiches and relishes.
Dishwashing - review

2nd Meeting - Quick Breads - Biscuits and variations; cornbread; gingerbread; quick loaf breads.
Different leavening agents.
How to measure.
How to judge quick breads.
Kitchen Etiquette.
Plan luncheon around cream soup for next meeting. (Cream soup, quick bread, fruit dessert, beverage)

3rd Meeting - Cream Soups - Characteristics of good cream soup - method of mixing, etc.
Prepare and serve luncheon
Table Setting

4th Meeting - Desserts - Should make meal more attractive and add to the food value of the meal.
Choice of dessert - For hearty meal; simple, light dessert.
For light meat; a dessert more rich in food value.

Milk Desserts - Custards and variations; junket; tapioca, cornstarch, bread and rice puddings; etc.
Storage and care of milk.

Fruit Desserts - Fresh and canned fruits, fruit whips, brown betty, Norwegian prune pudding, blushing apples, apple crisp, etc.

5th Meeting - Salads - Tossed green, cole slaw, fruit, vegetable, main dish.
Have all ingredients cold, and salad greens crisp and dry.
Selecting salads - Leafy or light salads with hearty meal
Tart salads with fish
Hearty salads for main dish
Fruit salads may be desserts
Salad Dressings - French, fruit, cooked, Chiffonade.
Plan luncheon around salad for next meeting.

6th Meeting - Salad luncheon - prepare and serve
Cookies - drop, rolled, ice box.

7th Meeting - Meat alternates - eggs, cheese, beans.
Omelets, cheese fondue, macaroni and cheese, corn pudding, baked or chili beans, etc.
Use of left-overs - Stuffed peppers, cabbage rolls, Spanish rice with meat, etc.

8th Meeting - Meat and fish - Inexpensive cuts; low-heat cookery; pan-frying and broiling.

9th Meeting - Cakes - cup cakes, layer cakes, loaf cakes.
High altitude adjustments.
Icings - Butter-sugar icing; 7-minute icing; cooked fillings.

10th Meeting - Beverages - coffee, tea and punch
Plan achievement luncheon; also tea.
Table courtesies and conversation
Time management.

11th Meeting - Achievement luncheon, prepare and serve

12th Meeting - Simple tea, prepare and serve.
(This may precede luncheon meeting)

3rd Year
4-H Food Outline

(This outline covers suggested subject matter for the 3rd year 4-H food project, arranged for a minimum of 12 meetings. It is suggested that wherever possible the subject matter be spread over more meetings to permit more thorough instruction.)

First Meeting - Election of officers
How to plan dinner menus - daily food needs.
Appetizers and Relishes - Tomato juice cocktail, fruit and fruit cups, stuffed celery.

2nd Meeting - Vegetables - Proper methods of cooking to preserve maximum color, flavor and nutritive value.
Leafy vegetables, pod vegetables, root vegetables.
Serve vegetable plate - (with poached egg or stuffed egg, if desired.)

3rd Meeting - Party Salads - aspics, gelatin salads, salads for special occasions.

4th Meeting - Yeast bread and rolls.
Judging bread and rolls.
(A simple buffet luncheon may be prepared and served)

5th Meeting - Meats - Roast, broiled, breaded.
Gravy - Brown gravy; country gravy.
(Serve meat with simple appropriate accompainments)

6th Meeting - Poultry and Stuffings
(Serve with appropriate accompainments)

7th Meeting - Cakes - Sponge and Angel food
Judging cakes.
(Serve with milk or fruit beverage)

8th Meeting - Pastry - Plain, hot-water, puff, graham cracker.
Pie Fillings - various kinds
Tarts

9th Meeting - Frozen Desserts - ice cream sherbet, mousses, velva fruit, Bavarian cream.
Review Cookies - fancy for teas.

10th Meeting - Plan family dinner menu
Plan company dinner menu
Invitations and introductions.

11th Meeting - Prepare and serve family dinner
Table Setting - family service
Table Etiquette
(Check plans for company dinner)

12th Meeting - Prepare and serve company dinner.
Table Setting - formal service.

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Suggestions for other meetings or 4th Year Work.

Making soup stock.
Using soup meat - meat croquettes, meat pies, hash, aspic.

Variety meats - Liver, heart, tongue, kidney, sweetbreads, brains.

Deep fat frying - French fries, fritters, doughnuts

Fish -baked fish, dried oysters, Newbergs.

Tea refreshments - canapes, fancy cookies, cream puffs, meringues.

Prepare and serve formal tea

Quantity Cooking

MAKE EVERY MOTION COUNT

Do more work in less time and with less fatigue.

1. Keep everything within easy reach.
   Arrange materials, tools, and supplies where they are used most.
   Arrange equipment to avoid back-tracking, wandering around, going empty handed. (Don't make a race track of your kitchen.)
   Have a definite place for everything - to make routine work automatic.
   Arrange things for easy handling - avoid crossing arms and hands.
   Ask yourself: Do I walk too much? Do I reach too much?
   Do I have to move things to find what I want?

2. Eliminate any part of a task you can.
   Ask yourself: Is this part of the job necessary?
   What would happen if I left it out?
   Handle materials and tools as little as possible.
   Ask yourself: Do I pick up and put down things too much?
   Do I move things from one place to another unnecessarily?

3. Combine two or more tasks into one.
   Use trays, roller table or cart to move and carry supplies, dishes, etc.
   Ask yourself: Have I thought through the way I am going to do this task?
   Can I combine this task with another?

4. Have the best tool for the job; sharp knives, a cutting board, a good stiff vegetable brush - keep all tools in good condition.
   Ask yourself: Is this the best tool to use? Is it in good condition?
   Do I move tools from one hand to another too much?
   Do I grip handles too tightly? Do I push equipment too hard?

5. Make both hands work.
   Reach for two things instead of one.
   Use the fewest hand and arm movements that you can.
   Work with rhythm. Smooth curved motions are easier than short jerky ones.
   Ask yourself: Do I use both hands or does one go along for company?

6. Sit to work whenever possible and save energy for more important jobs.
   Have a comfortable work chair. Sit with back straight, feet flat on floor or on foot rest. Ask yourself: Do I stand when I could sit?

7. Alternate an easy job after a heavy one.
   Take short rest periods when you begin to slow down in your work.
   Ask yourself: Am I tired, nervous and confused at the end of the day?
   Do I schedule regular rest periods?

8. Choose the best body position for the job.
   Keep back as nearly straight as possible - walk and stand with feet parallel.
   Avoid lifting and carrying heavy loads by having equipment suited to the job
   Adjust work surfaces to the right height and plan for good lighting.
   When necessary to lift and carry, do it correctly, using the large muscles of the body. When possible, divide the load and carry part in each hand.
   Drop things into containers rather than lift or stoop.
   Ask yourself: Do I tire and strain myself: by stooping too much?
   by lifting the hard way? by standing when I could sit?
   by bending when I could stand?

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icultural Extension Service, University of Nevada, and U. S. Department of
ulture Cooperating

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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
UNIVERSITY OF NEVADA, AGRICULTURAL EXTENSION DIVISION, AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING
STATE OF NEVADA

TIME-SAVING COOKERY

By Eda L. Carlson, Extension Nutritionist

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The length of time spent on food preparation does not insure adequacy of nutrition or aesthetic appeal. Many homemakers could save a great amount of time if meals were simplified by reducing the variety of foods served at each meal; by serving one-dish meals occasionally; by serving more foods raw, by choosing simple recipes; by keeping supplies and equipment within easy reach, and by studying work habits to eliminate unnecessary steps and motions.

Planning menus in advance helps to save time. It makes it possible to gear meal-preparation to the rest of the day's activities. On very busy, tiring days, choose recipes that can be mixed easily and quickly. When household duties are lighter, plan to prepare foods in advance for busy days.

In planning meals, consider the time element of all recipes, select those that can be prepared in smooth-running order without haste or over-lapping of time.

Assemble all ingredients and utensils before starting preparation and use a tray to carry supplies from storage space to work center in order to save time and effort in walking back and forth.

AN INEXPENSIVE DINNER WHICH MAY BE PREPARED AND COOKED IN ONE HOUR

Heart Patties
One-Step Creamed Potatoes - Twenty Minute Beets
Cole Slaw with No-Oil Salad Dressing
Bread and Butter
Fresh Fruit in Season or Canned Fruit and Cookies
Coffee, Tea, or Milk

Order of Work: Start potatoes first; they require 45 minutes cooking time. Next prepare the meat patties which require 30 minutes cooking time; then the beets which cook in 20 minutes, and lastly the cole slaw. The recipes which follow serve 4 to 6.

ONE-STEP CREAMED POTATOES

3 cups raw potatoes, cubed
1 cup milk
1/2 teaspoon salt
few grains pepper
2 tablespoons butter

Put potatoes, milk, salt and pepper into top of double boiler. Place over boiling water. Simmer 45 minutes, or until potatoes are tender. If sauce needs thickening, lightly sprinkle flour over top and stir until well blended. Cook five minutes after flour has been added.

HEART PATTIES

1 pound beef or veal heart
1/2 cup cracker crumbs (about 12 crackers)
1 medium onion
2 tablespoons flour
2 tablespoons milk
1 egg
1 teaspoon salt
1/8 teaspoon pepper

Wash heart in warm water and dry thoroughly. Trim hard parts. Grind, together with onion and crackers. Add remaining ingredients, and mix well. Shape into patties. Roll in flour and brown in 2 tablespoons drippings. Cover closely and cook slowly for 30 minutes.

TWENTY-MINUTE BEETS

8 beets
2 cups boiling water
2 tablespoons butter or
1/2 cup sweet pickle juice

Peel raw beets, shred or cut in match-like strips. Put in heavy pan, add water and cover with tight fitting lid. Cook rapidly for 20 minutes. Add butter or sweet pickle juice and serve hot.

COLE SLAW WITH NO-OIL DRESSING

2 teaspoons sugar
1/2 teaspoon salt
1/8 teaspoon pepper
1/16 teaspoon paprika
1/4 teaspoon mustard
2 tablespoons chopped onion
2-1/2 tablespoons mild vinegar
1/4 cup evaporated milk, full strength
3 cups shredded cabbage

Mix dry ingredients; add onion and vinegar, then add the evaporated milk gradually. Beat until thickened. Pour over the shredded cabbage and serve.

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Following are other time-saving recipes:

DELICATE CREAMED CABBAGE

1 quart cabbage, finely shredded
1 pint milk, hot
1-1/2 teaspoons sugar, if desired
1/2 teaspoon salt
2 tablespoons flour
2 tablespoons butter
1/2 cup cream or top milk, (optional)

Simmer the finely shredded cabbage for 5 minutes in the hot milk with the salt and the sugar, if desired. Stir to prevent burning. Blend the butter and flour together, add to the hot cabbage and cook until thickened. If cream or top milk is used, add it at the same time as the butter and flour.

The vegetable should not be allowed to entirely lose its crispness, but should have about the same texture as slaw. The flavor should be milder than that of ordinary creamed cabbage.

BAKED SHREDDED BEETS

Pare beets, grate, shred or slice very thin. Place in casserole; season with salt, pepper, butter, 1 teaspoon sugar, 1 tablespoon vinegar and dash of nutmeg. Add 1/2 cup water. Cook closely covered in oven until vegetable is tender, about 30 minutes.

NEAR FRENCH FRIED POTATOES

Cut pared white potatoes into regular French-fried shape. Boil for 5 minutes. Drain well. Place in one layer in a pan greased with flavorful drippings, such as sausage or bacon fat, or with butter. Set in hot oven (450° F.). When hot, brush with more of the fat, sprinkle with salt, stir occasionally. Bake until delicately browned.

WILTED LETTUCE

Dice and cook several slices bacon until crisp. Remove bacon. To the fat add a small onion, chopped; cook until it turns yellow. Add 1/2 cup vinegar. When heated add 2 quarts garden lettuce or shredded head lettuce. Cover and cook until lettuce is just wilted. Season with salt and pepper and serve garnished with the crisp bacon.

CABBAGE CHOP SUEY

3 cups shredded cabbage
1 cup celery, cut in thin strips
2 small carrots, cut in strips
1 onion, sliced
1 tablespoon shortening
1 tablespoon soy sauce
Salt and pepper to taste

Heat shortening piping hot in frying pan. Drop in finely shredded cabbage and other vegetables, adding soy sauce, salt and pepper. Stir well, cover tightly, and steam for 5 minutes, stirring several times,

Green peppers and sliced string beans may also be added to above recipe.

QUICK SOUPS

Save all liquid from cooked vegetables. Add an equal quantity of whole milk or top milk, a little butter, salt and pepper to taste. Bring to boiling point, serve hot in bouillon cups.

QUICK LEMON PUDDING

1 cup sugar
1/4 cup cornstarch
1/8 teaspoon salt
1-1/2 cups boiling water
1/2 cup lemon juice
1 egg, separated

Mix sugar, salt, and cornstarch in sauce pan, add boiling water. Cook, stirring constantly, until thickened. Lower heat and cook very slowly for 5 minutes, stirring occasionally. Beat egg yolk, add lemon juice and stir into pudding. Cook 1 minute. Fold into beaten egg white. Pour into serving dishes. Chill before serving.

QUICK BRAN MUFFINS

3/4 cup milk
1 cup bran flakes
1/4 cup brown sugar
1 egg
1 cup flour
1/4 teaspoon salt
3 teaspoons baking powder
1/4 cup shortening

Pour milk on bran flakes and sugar; let stand 10 minutes. Then add beaten egg and mix. Add sifted dry ingredients and melted shortening. Mix lightly. Pour into greased muffin tins, and bake in hot oven 450° F. fifteen minutes.

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INEXPENSIVE MAIN-DISH SALADS

(For home and group luncheons)

By Eda L. Carlson, Extension Nutritionist

SALMAGUNDI SALAD

(Serving: 1/2 cup)

Ingredients	6 servings	25 servings	200 servings
Potatoes, cooked, cubed	1 cup	4 cups	20 lbs. (3 gal.)
Bologna, diced	1/4 to 1/2 lb.	1 lb.	8 to 10 pounds
Peas, fresh or canned	1/2 cup	4 cups	10 #2 cans or 2#10 can
Celery, diced	1/2 cup	4 cups	12 lbs. (1 gal.)
French Dressing	2 tb.	1/2 cup	2 cups
Salad Dressing	3 tb.	3/4 cup	4 cups
Salt to taste	3/4 teaspoon	1 tb.	1/2 cup
Sweet Pickle or sweet pickle relish	1 tb.	1/4 cup	2 cups

Combine the potatoes, bologna, peas, celery, and French Dressing and chill for 30 minutes. Add the salad dressing and arrange on lettuce leaves or on a Cole Slaw base.

LUNCHEON SALAD

(Serving: 1/2 cup)

Ingredients	6 servings	25 servings
Potato cubes, cooked	1-1/2 cups	6 cups
Carrot cubes, cooked	1-1/2 cups	6 cups
Frankfurters, cooked, sliced	3/4 cup	3/4 lb.
Parsley, chopped	2 t.	3 tb.
French Dressing	2 tb.	1/2 cup
Mock Mayonnaise	2 tb.	1/2 cup

Mix together potato balls, carrot balls, frankfurters and chopped parsley. Moisted with French Dressing and mayonnaise. Chill in refrigerator until ready to serve. Serve on lettuce leaves.

CABBAGE AND SALMON SALAD
(Serving: 1/2 cup)

Ingredients	6 servings	25 servings
Cabbage, chopped	1-1/2 cups	6 cups
Salmon, flaked	3/4 cup	1 can
Peanuts	1/4 cup	1 cup
Celery, diced	1/4 cup	1 cup
Salt to taste		
Mayonnaise, to moisten		

Mix and serve immediately. If left to stand, the peanuts will darken the salad.

CORNED BEEF SPECIAL
(Serving: 1/2 cup)

Ingredients	6 servings	25 servings
Corned beef	3/4 cup	3 cups
Cabbage	2 cups	1 quart
Carrots, grated	3/4 cup	3 cups

Mix together, moisten with salad dressing and serve on lettuce leaves.
Variations: Horseradish, to taste, may be added to salad dressing.
Ham may be used in place of the corned beef.

COLE SLAW
(Serving: 1/2 cup)

Ingredients	6 servings	25 servings	200 servings
Cabbage, shredded	3 cups	3 qts.	6 gal.
Sugar	2 t.	8 t.	1 cup
Salt	1/2 t.	2 t.	1/3 cup
Pepper	1/8 t.	1/2 t.	4 t.
Paprika	1/16 t.	1/4 t.	2 t.
Mustard	1/2 t.	2 t.	1/3 cup
Chopped Onion	1 tb.	1/4 cup	2 cups
Evaporated milk, full strength	1/4 cup	1 cup	6 cups
Mild vinegar	2-1/2 tb.	2/3 cup	3 cups

Mix the dry ingredients and add the onion. Add the vinegar and then gradually add the evaporated milk. Beat until thickened. Pour over the shredded cabbage and serve.

COOKED SALAD DRESSING

Ingredients	1-1/2 cups	1-1/2 quarts
Flour	2 tb.	1/2 cup
Sugar	2 tb.	1/2 cup
Salt	1 t.	4 t.
Mustard	1/2 t.	2 t.
Paprika	1/4 t.	1 t.
Eggs	1	4
Vinegar	1/4 cup	1 cup
Water	1/2 cup	2 cups
Evaporated Milk	1/2 cup	2 cups
Butter (or margarine)	1 tb.	1/4 cup

Mix flour, sugar, salt and mustard in a bowl. Add eggs and beat until well mixed and smooth. Add vinegar and water and beat. Place in double boiler and cook until mixture is thick and smooth. Remove from fire, beat in the butter. When cool, thoroughly beat in milk.

MOCK MAYONNAISE

Ingredients	2-1/2 cups	5 cups
Eggs	1	2
Sugar	2 tb.	1/4 cup
Mustard	1 t.	2 t.
Salt	1-1/2 t.	1 tb.
Vinegar	1/4 cup	1/2 cup
Lemon Juice	3 tb.	1/3 cup
Salad Oil	1 cup	2 cups
Flour	1/3 cup	2/3 cup
Paprika	1/8 t.	1/4 t.
Cold Water	1/3 cup	2/3 cup
Boiling Water	2/3 cup	1-1/3 cups
Sweet Pickle Juice	1 tb.	1/4 cup

Break eggs into bowl, beat lightly, add sugar, mustard, salt, vinegar, pickle juice and salad oil. Stir until blended. Mix flour and cold water to smooth paste. Add to boiling water, stirring constantly, cook until thick. Add to the egg mixture and beat until smooth.

TOMATO FRENCH DRESSING

Ingredients	1-1/2 cups	6 cups
Garlic	1 tiny clove	2 medium cloves
Salt	1/2 t.	2 t.
Mustard, dry	1/2 t.	2 t.
Paprika	1/2 t.	2 t.
Sugar	1 tb.	1/4 cup
Vinegar	1/3 cup	1-1/3 cup
Oil	1/3 cup	1-1/3 cup
Tomato Juice	1 cup	1 quart

Place the garlic in a bowl. Add the salt. Mash and rub the garlic until it dissolves. Add the mustard, sugar, paprika, and vinegar. Mix well. Add the oil and tomato juice. Place in a jar with a tight lid and shake well, or beat with an egg beater.

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USE LESS FLOUR IN YEAST BREADS

During the famine emergency

By Eda L. Carlson, Extension Nutritionist

To make wheat flour go farther in bread making, the following extenders can be used to replace part of the wheat flour - oatmeal, cornmeal, potatoes, sweet potatoes, rye flour.

About half as much rye flour may be substituted for wheat flour, and about 1/3 as much of oatmeal or cornmeal. These extenders are mixed withthe wheat flour and the bread is made in the standard way.

In using potatoes, the mashed potato is thinned with potato water, then mixed with softened yeast before flour is added. Only a small quantity of potato can be used - about 1 cup mashed potato to 5 or 6 cups flour is usually recommended. Bread made with potatoes is inclined to become moist and sticky on rising. The dough should therefore be made somewhat stiffer than when all flour is used.

The following recipes give good results:

OATMEAL BREAD

2 cups rolled oats
½ cup molasses
1 teaspoon salt
1 tablespoon shortening
1 cup boiling water
1 cup evaporated milk
1 cake yeast
dissolved in ½ cup lukewarm water
5 cups flour

1. Measure oats, molasses, salt and shortening into bowl.
2. Stir in the boiling water. Let stand one hour.
3. Beat in the milk, dissolved yeast and flour.
4. Let rise until double in bulk.
5. Knead well. Shape into loaves. Put into greased bread pans. Let rise again until double in bulk.
6. Bake in a moderate oven (375° F.) about 45 minutes.

POTATO BREAD
(2 loaves)

½ cup boiling water, or potato water
2 teaspoons salt
1 tablespoon shortening
1 tablespoon sugar
1½ cups mashed potatoes
1 cake yeast, softened in ½ cup lukewarm water
About 5 cups flour

1. Add the salt, shortening and sugar to the boiling water.
2. Stir into the mashed potatoes. Cool until lukewarm.
3. Stir in the softened yeast.
4. Add about one-third of the flour, stirring it in with a spoon. Add another thrid of the flour kneading it in with the hands. Work in the remainder of the flour on the board, using enough to make a somewhat stiff dough.
5. Knead the dough for about 10 minutes, or until it is smooth and elastic. Place in greased bowl and let rise in warm place (80° 85° F.) until almost double in bulk, (about 1½ hours).
6. Punch the dough down and shape into loaves. Place in bread pans which have been greased on the bottom. Let rise again until almost double in bulk. (about 1 hour)
7. Bake in hot oven 400° F. for 15 minutes, then reduce temperature to 350° F. Baking time about 45 minutes. When bread is done, lightly greas the top crust.

CORN BREAD
(2 loaves)

1 cup corn-meal
3½ cups water
3 teaspoons salt
½ cup sugar
2 tablespoons shortening
1 cake compressed yeast softened in 2/3 cup warm water
About 6 cups flour (enough to make medium dough)

1. Cook the corn-meal in the water ten minutes.
2. Add salt, sugar and fat to the mush. Cool until lukewarm, stirring occasionally to prevent a film.
3. When cool, add the yeast and beat well.
4. Add the flour and mix well.
5. Knead, using as little flour on the board as possible.
6. Put into a greased bowl, let rise until almost doubled in bulk.
7. Punch down and mold into loaves, place in pan and let rise until it is almost doubled in bulk.
8. Bake in a hot oven 400°F. for 15 minutes, then reduce temp. to 350°.
9. Lightly grease top when bread is taken from oven.

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The following recipes give good results:

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2 cups rolled oats
½ cup molasses
1 teaspoon salt
1 tablespoon shortening
1 cup boiling water
1 cup evaporated milk
1 cake yeast
dissolved in ½ cup lukewarm water
5 cups flour

1. Measure oats, molasses, salt and shortening into bowl.
2. Stir in the boiling water. Let stand one hour.
3. Beat in the milk, dissolved yeast and flour.
4. Let rise until double in bulk.
5. Knead well. Shape into loaves. Put into greased bread pans. Let rise again until double in bulk.
6. Bake in a moderate oven (375° F.) about 45 minutes.

POTATO BREAD
(2 loaves)

½ cup boiling water, or potato water
2 teaspoons salt
1 tablespoon shortening
1 tablespoon sugar
1½ cups mashed potatoes
1 cake yeast, softened in ½ cup lukewarm water
About 5 cups flour

1. Add the salt, shortening and sugar to the boiling water.
2. Stir into the mashed potatoes. Cool until lukewarm.
3. Stir in the softened yeast.
4. Add about one-third of the flour, stirring it in with a spoon. Add another thrid of the flour kneading it in with the hands. Work in the remainder of the flour on the board, using enough to make a somewhat stiff dough.
5. Knead the dough for about 10 minutes, or until it is smooth and elastic. Place in greased bowl and let rise in warm place (80° 85° F.) until almost double in bulk, (about 1½ hours).
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CORN BREAD
(2 loaves)

1 cup corn-meal
3½ cups water
3 teaspoons salt
½ cup sugar
2 tablespoons shortening
1 cake compressed yeast softened in 2/3 cup warm water
About 6 cups flour (enough to make medium dough)

1. Cook the corn-meal in the water ten minutes.
2. Add salt, sugar and fat to the mush. Cool until lukewarm, stirring occasionally to prevent a film.
3. When cool, add the yeast and beat well.
4. Add the flour and mix well.
5. Knead, using as little flour on the board as possible.
6. Put into a greased bowl, let rise until almost doubled in bulk.
7. Punch down and mold into loaves, place in pan and let rise until it is almost doubled in bulk.
8. Bake in a hot oven 400°F. for 15 minutes, then reduce temp. to 350°.
9. Lightly grease top when bread is taken from oven.

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GLAMORIZING HOME CANNED FOODS

By Eda L. Carlson, Extension Nutritionist

Not that home canned foods need glamorizing. They are plenty good served plain without any trimmings.

But sometimes the homemaker has a yen to try something new or she may want to pep up jaded appetites by serving something different or there are always times when she wants to dress up her home canned food for party fare.

The recipes which follow suggest ways in which home canned foods can make many new appearances.

APRICOT WHIP

2 cups apricot pulp
1 cup cold water
1 teaspoon almond extract
3 egg whites
1 tablespoon Knox gelatin
1 cup sugar
1 tablespoon lemon juice
1/8 teaspoon salt

Rub canned apricots through a coarse strainer until two cups of pulp is obtained. Soak gelatin in cold water for 10 minutes. Heat apricot pulp to the boiling point, stir in the gelatin and cool until beginning to stiffen, stirring occasionally. Then beat until foamy, fold in stiffly beaten egg whites and flavoring, and pour into a mold rinsed in cold water. Chill, turn out and garnish with halves of apricots or pieces of blanched almonds.

APRICOT UPSIDE DOWN CAKE

2 cups canned apricots
2/3 cup brown sugar
2 tablespoons butter

BATTER

1 cup flour
2 teaspoons baking powder
1/4 teaspoon salt
3/4 cup sugar
1 egg, separated
3/4 cup milk
1 teaspoon vanilla, or lemon juice

Melt butter in baking pan; spread brown sugar evenly in pan and arrange drained apricots over it.

Sift flour, sugar, salt and baking powder together three times. Heat milk to boiling point. Beat egg yolk lightly; pour the hot milk over it. Add milk and egg mixture to the dry ingredients and beat with egg beater 1 minute. Fold in stiffly beaten egg white. Add flavoring.

Pour batter over apricots. Bake in moderate oven (375° F.) until cake is golden brown, 45 minutes to 1 hour. Cool slightly in the pan and then turn out. Serve slightly warm.

SPICED APPLE SAUCE COOKIES

34 large cookies

1/2 cup shortening, or margarine
1 cup sugar
1 egg, well beaten
2 cups flour
1 teaspoon baking powder
1/2 teaspoon baking soda
1/2 teaspoon salt
1/4 teaspoon cloves
1/2 teaspoon cinnamon
1 cup apple sauce, thick

Cream shortening or margarine with sugar. Add egg. Mix thoroughly. Sift flour, measure and sift with baking powder, soda, salt and spices. Add this flour mixture alternately with the apple sauce to first mixture. Mix thoroughly. Drop by teaspoonfuls on to well-oiled cookie sheet. Bake in moderate oven (350° F.) until brown.

GRAHAM-APPLE PUDDING

4 cups applesauce
1/4 pound graham crackers (rolled)

Place applesauce in a baking pan and cover with graham crackers about 1/2 inch thick. Sprinkle with cinnamon; dot with butter. Put in oven and bake until brown - about 20 minutes.

PIE CHERRY COMPOTE

1 pint Pie cherries
1/2 cup brown sugar

Add the brown sugar to the cherries. Heat to the boiling point; cool, serve in sauce dishes.

UNDER-THE-SEA SALAD

1 package lime flavored gelatin
1/2 cup juice of canned pears
1 package cream cheese
1/4 teaspoon salt
1 teaspoon vinegar
2 cups canned pears, diced
1/8 teaspoon ginger
1-1/2 cups boiling water

Dissolve gelatin in boiling water. Add pear juice, salt, and vinegar. Pour half-inch layer into loaf pan. Chill until firm. Chill remaining gelatin mixture until cold and syrupy. Whip with rotary beater until thick and fluffy. Cream cheese with ginger and fold into whipped gelatin gradually. Then fold in pears. Pour over firm first layer of gelatin. Chill until firm. Unmold on crisp lettuce leaves and serve with mayonnaise. Serves ten.

RHUBARB BLANC MANGE

1 cup milk
1-1/2 cups rhubarb sauce (strained)
1/4 cup cornstarch
3/8 cup sugar
Salt

Combine sugar, salt and cornstarch. Add the scalded milk stirring constantly. As the mixture thickens, add the rhubarb sauce. Cook in double boiler 20 minutes. Serve cold. (Good for Pie Filling)

PEACH BAVARIAN

1 package Lemon or Orange Jell-O
1 cup boiling water
1 cup peach juice
1/2 cup cream, whipped
1 cup crushed peaches, sweetened and drained
2 or 3 drops almond extract

Dissolve Jell-O in boiling water. Add peach juice. Chill until cold and syrupy. Place in bowl of cracked ice or ice-water and whip with rotary egg beater until fluffy and thick like whipped cream. Fold in whipped cream, peaches, and flavoring. Turn into individual molds. Chill until firm. Unmold. Garnish with peach slices. Serves 6.

STUFFED PEACH SALAD

Allow a half of a stoned peach for each individual. Into the hollow of each put a cream cheese and nut ball, made by mashing the cream cheese, adding one-fourth the quantity of chopped nut-meats and shaping with the hands. Over these pour French dressing made with lemon juice and let stand for thirty minutes to chill. Serve with a garnish of lettuce and pass mayonnaise, if desired. Accompany with tiny toasted sandwiches made of buttered white bread and orange marmalade.

PUMPKIN CUSTARD

2 eggs
1 cup brown sugar
1/2 teaspoon salt
1-1/4 teaspoons cinnamon
1 teaspoon ginger
1/8 teaspoon cloves
dash nutmeg
1/3 cup boiling water
1-1/2 cups canned pumpkin
1 tall can Irrad. Evap. milk (1-2/3 cup)

Mix salt and spices. Add boiling water slowly to blend well. Beat eggs. Add sugar, spice mixture, pumpkin and milk. Pour into a buttered baking dish or custard cups. Set in a pan of hot water. Bake in a moderate oven (350° F.) until custard is set.

Yield: 6 servings. This mixture may be used as pumpkin pie filling. It will make one large deep pie.

HARVARD BEETS

3 cups canned beets, cubed
2 tablespoons sugar
1-1/2 teaspoons cornstarch
1/4 teaspoon salt
1/4 cup vinegar
1/4 cup water
1 tablespoon butter

Mix the sugar, cornstarch and salt; add the vinegar and water. Let the sauce boil for 5 minutes, stirring constantly. Add the fat, pour the sauce over the heated beets and let stand for a few minutes to absorb the sweet-sour flavor of the sauce.

CORN OMELET

Pour 1 cup cold milk on
1-1/2 cups stale bread crumbs
(If crumbs are very dry a little more milk may be required)
Beat well 3 eggs with
1-1/2 teaspoon salt
1/8 teaspoon pepper
3 tablespoons melted butter

Add 2-1/2 to 3 cups canned corn, and mix with crumbs and milk. Bake in a buttered casserole in moderate oven 375° F. just long enough to set the egg and brown top. 45-60 minutes.

CORN FRITTERS

1 cupful flour
1 teaspoon baking powder
1 teaspoon sugar
1 teaspoon salt
2 cups canned corn
2 eggs, separated

Mix flour, baking powder, sugar and salt. Add corn and the beaten yolks of egg. Fold in the beaten whites of the eggs and bake as you would griddle cakes or form in thin flat cakes and fry in hot fat. Drain on brown paper and serve hot.

CORN CHOWDER

2 cups potatoes, diced
2 slices bacon (or salt pork)
1/2 medium onion
1 cup boiling water
1 cup canned corn
1 tablespoon flour
1 teaspoon salt
2 tablespoons butter
3 cups milk

Cut pork in half inch cubes; fry slowly until light brown and crisp, add onions and cook slowly 5 minutes. Put potatoes, pork cubes, onion and boiling water into a kettle and cook until potatoes are soft. Add corn, stir flour into fat which was fried out from the pork then add the milk which has been heated in double boiler. Cook 20 minutes. Combine vegetables and white sauce. Reheat and serve. 1 cup per serving.

CARROT AND CORN CHOWDER

2 slices bacon, chopped
2 tablespoons onion, chopped
1-1/2 cups carrots, finely chopped
1 cup canned corn
3 cups milk

Heat the bacon and onion in the bottom of soup kettle; add the carrots and corn. Stir and toss in the kettle until as hot as possible without danger of burning, then add the milk, season to taste with salt and pepper, boil up once and serve.

HAM AND CORN CHOWDER

3/4 cup boiled ham, ground
2 potatoes, chopped
1 small onion, minced
1 cup sweet corn
1-1/2 cups hot water
1-1/2 cups milk
Salt to taste

Cut the fat from the ham; put ham through meat grinder. Brown in frying pan with a little of the ham fat. Remove the ham then brown the onion. Add the potatoes, ham, corn, salt, and hot water. When potatoes are tender add the milk and heat thoroughly. Do not boil. Serve with crackers.

SAVORY STRING BEANS

1 pint string beans
1 or 2 slices bacon
1/2 small onion
1-1/2 teaspoon vinegar

Mince bacon, fry out, add vinegar. Heat beans, drain. Add the minced onions, cooking until transparent. Add the bacon-vinegar mixture. Season to taste. Serve hot.

GREEN BEANS SUPREME

1 pint canned beans
1/3 cup sour cream or 1/3 cup cream or evaporated milk plus 1 teaspoon vinegar
1 cup medium coarse bread crumbs
1/2 teaspoon salt
1/8 teaspoon pepper
1/4 cup melted butter

Drain beans and place in a shallow baking dish. Pour sour cream over top. Combine crumbs, seasonings, and butter; sprinkle over beans. Bake in moderate (350° F.) oven. Approximately 20 minutes. Serves 4.

SAVORY SPINACH

1 pint spinach
1/4 cup sharp French dressing
1 tablespoon prepared horseradish

Combine the spinach with the French dressing and horseradish and heat thoroughly.

SPINACH EN CASSEROLE

2 tablespoons butter or shortening
1 tablespoon flour
1/2 teaspoon salt
1/8 teaspoon pepper
1/4 teaspoon paprika
3/4 cup milk
2 cups cooked spinach
4 hard cooked eggs, sliced
Buttered crumbs

Make white sauce by melting butter, adding flour, salt, pepper, and paprika and mixing well. Add milk slowly and bring to boiling point, stirring constantly to prevent lumping. Cook until thick and smooth. Put a layer of spinach in bottom of greased casserole or individual casseroles. Add a layer of sliced eggs. Pour some sauce over layers of spinach and egg. Add more spinach, eggs and sauce, repeating layers until all is used. Sprinkle top with buttered crumbs. Add a little grated cheese, if desired. Bake in moderate oven (350° F.) about twenty minutes, or until thoroughly heated through and brown on top.

VINAGRETTE SPINACH

1 teaspoon minced onion
4 tablespoons butter, margarine, or salad oil
1/2 teaspoon prepared mustard
2 tablespoons lemon juice or vinegar
3/4 teaspoon salt
1/8 teaspoon pepper
2 chopped, shelled, hard-cooked eggs
1 pint canned spinach

Saute onion in 1 tablespoon butter until tender. Then add remaining ingredients, except spinach, and heat thoroughly. Pour over spinach; toss, and serve. Serves 4.

CREAM OF SPINACH SOUP

2/3 cup canned spinach
2 tablespoons butter
2 tablespoons flour
1/8 teaspoon pepper
1 teaspoon scraped onion
3 cups milk
3/4 teaspoon salt

Put spinach through a sieve. Melt butter, add flour, pepper and onion. Mix thoroughly then add spinach pulp and milk. Cook until thick stirring constantly. Add salt and serve hot.

TOMATO ASPIC

1 package lemon jello
2 cups tomato juice
2 tablespoons sugar
3 to 4 tablespoons vinegar
1/8 teaspoon cloves
1/8 teaspoon pepper
1 teaspoon salt
1 teaspoon chopped onion

Heat tomato juice to boiling. Pour over jello. Combine vinegar, sugar, cloves, and onion, mix well. Then add to jello and pour into mold. Serve plain, or surrounded with hard-cooked eggs, crab, lobster, or shrimp, or mold in rings and fill centers with sea food or cottage cheese.

TOMATO JUICE COCKTAIL

1 cup tomato juice
1 tablespoon mild vinegar
2 teaspoons sugar
Tiny bit of bay leaf
1 slice onion (1 teaspoon when grated or minced)
1 tablespoon lemon juice
1 bruised celery stalk (or shake of celery salt)

Mix and let stand 15 minutes. Strain through cheese cloth. Chill and serve in small glasses.

CREAM OF TOMATO SOUP

1-1/2 cups canned tomatoes
1 small tablespoon sugar
1/4 teaspoon soda
1/4 cup butter
1 quart milk
1 slice onion
4 tablespoons flour
1 teaspoon salt
1/8 teaspoon pepper

Scald milk with onion; remove onion and thicken milk with flour mixed with cold water until smooth enough to pour. Cook 20 minutes, stirring constantly at first.

Cook tomatoes and sugar 15 minutes. Rub through strainer and add soda.

Combine mixtures and strain into a heated dish over butter, salt and pepper.

TOMATO SAUCE

2 cups tomato puree
1 slice onion
3 tablespoons flour
3 tablespoons butter or fat
1 teaspoon salt
1/8 teaspoon pepper
3/4 teaspoon sugar
1 bay leaf
2 whole allspice
1 whole clove

Simmer the tomato, onion, sugar and spices for 10 minutes. Strain through a fine sieve and measure the liquid. For each cup of liquid, blend 2 tablespoons flour and 2 tablespoons melted fat; add the tomato juice with salt and pepper to season and stir until thickened. Continue to cook over hot water for 5 to 10 minutes. Serve hot.

BEEF CREOLE WITH MACARONI

1 pint jar canned beef
3 tablespoonfuls bacon fat or drippings
1 large sliced onion
1 pimento or green pepper
3 cupfuls tomato
1-1/2 teaspoonfuls salt
1/3 teaspoonful pepper
2 cloves
1/2 package macaroni

Melt and heat the bacon fat or drippings and cook the onion in it until golden brown. Add the pimento or pepper coarsely chopped, the tomato, salt, pepper and cloves. Simmer for fifteen minutes, then add the macaroni which has been cooked until tender in rapidly boiling salted water. Simmer for ten minutes longer. Heat the beef and thicken the gravy, if desired, with a little flour rubbed smooth in cold water. Place the meat in the center of a deep platter and surround it with the Creole macaroni.

CHICKEN CROQUETTES

2 cups finely minced canned chicken
1/3 teaspoon salt
1/3 teaspoon celery salt
3 tablespoons butter
4 tablespoons flour
1 cup milk
Few Grains Cayenne
Few Grains Nutmeg
1-1/4 teaspoons lemon juice
1/2 teaspoon onion juice
1 egg
Fine dry bread crumbs
Wesson Oil

Make a white sauce of the butter, flour and milk. Combine the meat and seasonings and chill the mixture. Shape into small cylindrical croquettes, using a rounding tablespoon of the mixture for each. Slightly beat the egg and dilute it with a fourth cup of water. Roll the croquettes in fine dry crumbs, then in the egg, and then in fine dry crumbs. Fry in deep fat. Drain on unglazed paper.

CHICKEN SOUFFLE
(Serves 4)

1 cup thick white sauce
1 cup stale bread crumbs
1-1/4 cups canned chicken
1/2 cup mushrooms
3 eggs
1/2 teaspoon parsley

Add bread crumbs to sauce and cook 2 minutes. Remove from fire, add chicken, egg yolks well beaten, and parsley. Then fold in egg whites beaten stiff. Turn into greased baking dish set in pan of hot water, and bake 40 minutes at 350° F.

Variation: For a richer souffle, make the white sauce with evaporated milk, diluted with chicken broth.

12-18-46

UNIVERSITY OF NEVADA

AGRICULTURAL EXTENSION DIVISION

C. W. CREEL

DIRECTOR

Annual Report of Extension Work in Agricultural Economics and Marketing

(Project No. 6)

for

January 1st to December 31

1 9 4 6

L. E. CLINE

Extension Marketing Specialist

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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION DIVISION AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

NAME OF PROJECT: Agricultural Economics and Marketing
Date Approved August 8, 1930

SUBJECT PROJECT: Marketing Agricultural Products
1946

SUBJECT PROJECT PHASE 1946 Cooperative Marketing and Cooperative Marketing Associations

Among the most important lines of work carried on by this office since its establishment has been the organization of cooperative marketing associations. During the year 1946 the following new cooperative marketing associations were organized:

Minden Cooperative Butter Manufacturing Company, Minden, Nevada
Nevada Vegetable Plant Growers' Association, Logandale, Nevada
Eureka County Live Stock Association, Eureka, Nevada
Lund Irrigation and Water Company, Lund, Nevada
Fallon Farmers' Cooperative Incorporated, Fallon, Nevada
Fernley Valley Produce Growers' Association, Fernley, Nevada (In process of organization)
Moapa Ice Cream Association, Overton, Nevada

In the case of all the preceding organizations the representative of this office met with interested groups on several occassions for the purpose of determining if an association was advisable, and to acquaint the prospective members with the legal requirements for setting up a cooperative organization under Nevada statutes, as well as to discuss all the provisions needed to meet the working requirements of each organization.

The interested people seldom realize the task of properly organizing a non-profit cooperative organization and completing all the requirements under the laws of the state.

In order to expedite the organization efforts of the people interested, this office has in all cases prepared the Articles of Incorporation and By-Laws for presentation to the groups to be organized, after which they were reviewed by an organization committee appointed before final presentation to the whole group for final acceptance.

During this process of organization special effort is always made to promote discussion of marketing agricultural products in general and cooperative marketing in particular.

Cooperative marketing in Nevada has special handicaps in that production centers are small and scattered and the membership is also limited and rather widely scattered. In addition to this, the surplus commodities seeking a market through cooperatives are not large and in many cases adjacent areas have a deficit in production for short periods, all of which make for unfavorable conditions at times for cooperative marketing.

In order to overcome these handicaps, cooperative buying by the members is being undertaken in one organization, the Fallon Farmers Cooperative Association, for the time being in order to better utilize the time of the employed personnel and facilities and to augment the income of the association and increase the benefits to the members.

Cooperative marketing, as promoted by the Nevada Extension Service, dates back to 1923 with the formation of the Churchill County Poultrymen Inc. This organization has functioned continuously and has rendered valuable service in marketing eggs and poultry and in supplying feed until the middle of 1946, when it merged with a cooperative buying organization in the same locality.

Assistance in organizing cooperative associations has continued to the present time, when practically every farming community has access to a properly organized cooperative organization that is capable of servicing the farming community in any capacity that is desired.

Because of changes in importance of agricultural production in various localities in the state, marketing and service requirements change making it advisable to discontinue previously established cooperatives and organize new ones.

At the present time the most active cooperatives are those rendering service to dairyment, poultrymen and vegetable growers. The need for livestock marketing is being recognized more fully and it is anticipated that a statewide organization serving livestock interests will be in operation during the year 1947.

At the present time there are twenty-five cooperative associations functioning in the state for cooperative selling, buying, and service purposes. These associations are principally local although there are turkey, poultry and dairy associations functioning as state organizations.

There are a number of organizations scattered throughout the state which are now inactive, but which can easily be rejuvenated if production is stimulated in the area in which the operation was at one time important.

A new development in cooperative services for Nevada is being promoted by the Nevada State Farm Bureau, which in itself is a federation of county Farm Bureau associations within the state, and which is incorporated under the non-profit cooperative laws of Nevada. This organization has been functioning as a legislative and educational association for the promotion and protection of Nevada's agriculture, and is now entertaining the thought of entering the business field for the purpose of facilitating the marketing of the products of its members and the purchasing of supplies for its members.

Since this is a very radical departure from its present activities and involves a separation from its legal status as a state organization, legislation will be required which is anticipated with the convening of the 1947 legislature. This change over from the present status contemplates the organization of one state-wide and four regional business organizations that will eventually handle farm products, farm supplies, and a number of service activities for its members on a state-wide, regional and local basis. Much development work will be required before this organization can function. This office will no doubt participate in the various phases of this prospective organization development, since it concerns the welfare of the farmers of the state.

Sub-Project Phase 1946 News Stories and Circular Letters

An important part of the work of this office has always been the preparation of circular letters and news stories covering the production and marketing of agricultural products produced in the state and the economic problems in this connection. This has been proven one of the most effective means of disseminating production and marketing information. It has the advantage of extensive and quick coverage of people interested throughout the state, and the cost of circulating the information is very small compared to the effectiveness of the method.

Many of the news stories covering current production and marketing subjects are first submitted to the Extension News Editor, after which they are edited, put in mimeograph form and circulated among the newspapers of the state for printing. The editors of the state and county newspapers cooperate with the Extension News Service and give space in their papers for the stories, thus providing an inexpensive and very effective means of circulating the information intended for the agricultural readers.

Circular letters are used when a more exhaustive treatment is needed for a subject. The information contained in news stories and circular letters during the past year has covered in general the following subject matter: Production and marketing of field crops and livestock including poultry and turkey, feed supplies, and outlook information on these subjects.

The following are titles to news stories and circulars prepared for distribution by this office in 1946:

State Poultry Industry reaches Low Point in Production
Methods of Holding Eggs for Scarce Supply
Can Turkeys Compete in Post War Agriculture?
Twilight Zone in the Life of the Growing Turkey
Fifty-seven Cooperative Corporations Serving Nevada Farmers
Turkey Industry in Nevada Reviewed for 1946
Nevada Turkey Outlook for 1946
Plenty Turkeys in Sight for Nevada Holidays
1946 Turkey Crop Slightly Smaller but Earlier
Little Change in Relative Importance of Turkey Producting Areas
Government Demand Stimulated 1946 Turkey Crop
Selling Price is Cut on Government Wool
Potato Acreage Cut Suggested for Nevada Farmers
1946 Potato Outlook
Fewer Beef Cattle on Feed for 1946
Fowl Pox in Turkeys Can Be Serious
Value of Fresh Green Pasture in the Turkey Ration
Improperly Fed Turkeys Are Always in Danger of Perosis
Late Summer Malnutrition of Turkeys
Fewer Cattle on Feed in the West, More in the Corn Belt
Poultry Feed Order Effective Now.
Restricted Use of Protein Feeds Effects Production
Post-War Turkey Feeding Problems
U. S. Wheat Conservation W.F.O. 144 Effective Now
Prevent Blue Backed Turkeys and Save the Profits
Guard Against Slipped Tendons
New Developments in Turkey Disease Control
Shortage of Grain Faces Livestock Growers
Nevada Grain Production Up
1946-47 Feed Supply to be Greater
Government Buys Surplus Meat Poultry

4

Scarce Feed. Surplus of Poultry and Eggs
1946 Egg Outlook
War Food Administration Order Directs Grain Shipments to Europe
Egg Surplus Price Program Effective Now
Efficiency for Poultrymen in Nevada Urged for 1946
Bargains in Eggs for the Careful Buyer
Storing Eggs for Winter Use, a Good Practice
Civil Service Retirement Program (2)
Feeding Turkeys

Sub-Project Phase 1946 Turkey Production and Marketing

An important line of work, which has been carried on by this office for a number of years has been the production of turkeys and the marketing of them by cooperative efforts. Each year considerable time has been devoted to this work. The turkey industry, while not being a major industry, has been important in the western part of the state.

Special attention has been given to the industry by this office since 1931 along promotional and marketing lines. Cooperative marketing efforts were started in 1928 and have been continued up to the present time. Marketing turkeys by cooperative effort has dominated the industry up to the present time. Selling turkeys by government grade in uniform boxes, which were started in Nevada with the first cooperative effort in turkey marketing, is still practical and generally accepted as the proper method of marketing in the turkey growing centers of the state today.

Turkey growing is well adapted to the climatic and agricultural conditions of the state and is worthy of greatly increased production. Cooperative marketing agencies are sufficiently developed in the western part of the state to provide a marketing system for all the turkeys produced.

The Nevada turkey marketing association is a state-wide marketing association, which is a member of a regional turkey marketing association (The Norbest Turkey Growers Association, Salt Lake City, Utah). This cooperative set-up provides a market for all turkeys in the state, not otherwise contracted for, and guarantees the highest possible producer's price.

Considerable time of this office has been devoted to the furtherance of cooperative marketing of turkeys of the state through the two organizations mentioned.

In October, 1946, research work was inaugurated by this office for the purpose of determining the ratio of edible cooked meat to the drawn and dressed weights of turkeys of different sizes and sex. Similar information was also planned to cover the various parts of turkeys such as breast, legs, and thighs. It was anticipated that the information to be secured would indicate a definite advantage in yield of edible meat and economy of price of large turkeys over small turkeys and help to overcome the market disadvantage that plagued the large tom turkeys during the 1946-47 season.

The experimental work performed yielded the information that was desired in a very striking way and provided some valuable data, showing the greater economy in yield of edible meat in large turkeys over small turkeys. This information will be used during the 1947 cold storage marketing season to stimulate a more general use of large turkeys, which have been penalized from 5 cents to 20 cents per pound is compared to small hen turkeys on the retail market.

On the basis of the information secured it would appear that large tom turkeys should sell for as much per pound or more than the small hen turkeys sell for, on the basis of edible meat. This research work should be of great value to Nevada turkey growers in subsequent years.

Sub-Project Phase 1946 Agricultural Outlook Studies and Reports

Extension work in Agriculture outlook for Nevada has been an important activity since it was inaugurated. Approximately 15 percent of the time of this office is devoted to agricultural outlook studies and reports.

U. S. Department of Agriculture literature relating to agricultural outlook, current supply, demand and price of agricultural products is received at the office and kept on hand for study and reference. Agricultural trade journals are also received currently and filed. In this connection this office cooperates closely with P.M.A. in reporting supplies and demands for agricultural products in the state.

In the marketing field Nevada producers have been in a very favorable position, in that throughout the war period Nevada agricultural producers have produced only a portion of the needs of the state, and prices have been very favorable.

The activities of this office in connection with agricultural outlook work have consisted in reviewing all literature on subjects pertaining to supply, demand and prices coming to the office and selecting the information applicable to Nevada agriculture. An effort is made to summarize and present in news story form the most important and timely material on outlook subjects for Nevada newspapers. of an outlook nature were prepared for local and state Nevada papers.

The reports of the U. S. Slatisticians reporting information for California, Utah, and Nevada were carefully followed and analyses made for Nevada State and county newspapers.

Agricultural outlook work is considered by this office as one of the most important activities. This is especially true now that government control measures are due to affect supply, demand, and prices less in the future than in the war period, and Nevada producers will bemore subject to fluctuations in the supply and demand for their products.

Sub-Project Phase 1946

Civil Service Retirement Plan As
Applied to Nevada Extension Personnel

In April, 1946, this office was delegated to have charge of the Civil Service Retirement program for Nevada Extension Personnel. Prior to the enactment of legislation admitting county Extension agents and State Extension Staff into the U. S. Civil Service program, very few extension workers were eligible to the benefits of the Civil Service Retirement Plan. This legislation became effective July 1st, 1942, but the program was not put into effect until 1945. This program applied only to Extension workers having federal appointments.

The first work in Nevada in this connection consisted in preparing circular letters conveying the essential information to all eligible personnel. This excited some questions requiring conferences and correspondence. Later it was necessary to prepare service records for all those holding government appointments. Following this, the mandatory payments were prepared for those eligible who expressed a desire to be included in the U. S. Civil Service plan. This was done in the case of 14 employees, 10 of whom were admitted up to the end of the year. 1946 applications are still pending, but are expected to be accepted soon. It is anticipated that additional employees will make application for retirement under this plan.

Since this program has been made available two circular letters have been prepared and sent to Extension workers and a number of conferences have been held and letters sent out in reply to requests for information.

Sub-Project Phase 1946 Miscellaneous Activities

There are a large number of services that devolve on the office of Extension marketing Specialist, which can not be planned for in advance. These services are important and are in line with the agricultural advancement of the state. Some of them are of a temporary nature and some develop into improtant projects. It is estimated that approximately twenty percent of the time of this office during the calendar year 1946 have been devoted to these activities.

These miscellaneous activities are listed under the following headings:

Service on state technical committee of the War Food Organization
Cooperation with the Nevada Experiment Station in dairy, hog, and turkey experiments
Cooperation with Nevada State Farm Bureau and various county farm bureaus in their agricultural programs
Participation in conferences with U. S. Department of Agriculture representatives in programs applying to Nevada

Sub-Project Phase 1946 Numerical Statement

The following numerical statement is provided to show emphasis placed on the various phases of activities of this office. The major part of the time was devoted to activities in the office. This amounted to 202-1/2 days. This time was spent in attending meetings at state headquarters, in conference with visitors seeking advice, in correspondence covering inquiries on production and marketing of agricultural products, and in studying federal reports and reports from states covering government and state activities affecting agriculture. A considerable part of the time spent in the office was devoted to preparing news stories and circular letters. These news stories and circular letters were prepared for state-wide distribution covering agricultural subjects.

The correspondence amounted to 440 letters and there were 41 news stories and circular letters prepared.

During the past year 86-1/2 days were spent away from the office attending meetings within the state and outside the state. The major part of the time spent away from the office was devoted to organization work in connection with the formation of new cooperative marketing organizations and in attendance at monthly and annual meetings of old organizations. Some of this time was devoted to visiting farms for the purpose of giving technical information in connection with the production and marketing of crops and livestock. There were 76 farm visits.

The trips outside the state were for the purpose of attending meetings called by United States Department of Agriculture and regional marketing associations for the purpose of discussing marketing matters relating to specific crops.

The total number of meetings within and without the state amounted to 43. The total attendance at these meetings was 842. The number of miles travelled in attending the above meetings and making the above visits to farms amounted to 5,644 miles by automobile and 7,880 by train and bus.

The days included in this summary do not cover Sundays, holidays, nor annual leave taken.

UNIVERSITY OF NEVADA

Agricultural Extension Division

Cecil W. Creel

Director

Annual Report of Agricultural Extension Work

(Project 2-B)

Extension Work in Home Economics

for

1946

By
Margaret M. Griffin

Assistant Director
for
Home Demonstration Work

UNIVERSITY OF NEVADA
AGRICULTURAL EXTENSION SERVICE
AND

U. S. DEPARTMENT OF AGRICULTURE COOPERATING
STATE OF NEVADA
1946

Name of Project: II-B Extension Work in Home Economics by means of County and District Extension Agents.

Leader: Margaret M. Griffin, Assistant Director for Home Demonstration Work.

I. SUPERVISORY ACTIVITIES

A. Supervisory Situation

The change made in the state supervisory staff during the past fiscal year that provided three assistant directors instead of two, necessitates some revision of working plans and relationships on the part of the Assistant Director for Home Demonstration Work. The three assistant directors were assigned as follows: one for county agent work; one for junior extension work; and one for home demonstration work.

The Assistant Director for Home Demonstration Work had charge of the Home Economics Extension work in the state and directly supervised all women agents and home economics specialists. She assisted in the formulating of state, district, county and community programs of work in the home economics field; suggested and approved changes made in programs; prepared and approved subject-matter materials used and published by the state office and agents; coordinated work with other agencies; provided for suitable and adequate publicity for the home economics division of the State Extension Service; proposed and provided for needed and approved expansion of programs; assisted agents in acquiring suitable work centers, working materials, equipment and supplies.

The Assistant Director for Home Demonstration Work had charge of all 4-H and older youth work in the field of Home Economics, working with the Assistant Director for Junior Extension Work. She had direct supervision of leadership training for leaders of 4-H home economics projects and all subject-matter material used for these projects. She assisted the Assistant Director for Junior Extension Work with county, district, and state-wide 4-H programs such as county and state achievement programs, state club camps, and county picnics and camps.

The Assistant Director for Home Demonstration Work cooperatively worked with the Assistant Director for County Agent work in the following:

personnel relationships of county and district agents, including office procedure, joint reports, etc. In the development of programs concerning home gardens, farm homes and buildings, and frozen foods, the Assistant Director for County Agent work provided some supervisory assistance to the women extension agents especially in those phases of the work that come more directly under the field of Agriculture, rather than Home Economics.

B. PERSONNEL PROBLEMS

1. Staff

During the fiscal year, November 1, 1945 to October 31, 1946, the staff of the Home Demonstration Division of the Extension Service was increased in number. As of October 31, 1946, the staff consists of the following:

Miss Margaret M. Griffin	Assistant Director for Home Demonstration Work
Mrs. Eda L. Carlson	Extension Nutritionist
Dr. Penelope B. Rice	Nutrition Consultant (1/8 time)

Women Extension Agents	County
Miss M. Gertrude Hayes	Washoe
Miss Lena Hauke	Churchill
Mrs. Olive C. McCracken	Douglas, Ormsby
Mrs. Rose Spezia	Humboldt, Pershing, Northern Lander
Miss Rae Scott	Elko
Miss Madge Elder	Lyon
Miss J. Hazel Zimmerman	Agent-at-Large - White Pine, Clark, Lincoln, and Eureka Counties

Miss J. Hazel Zimmerman was assigned on April 22, 1946 as agent-at-large. She worked almost entirely in Lyon County until the appointment of Miss Elder as agent for that county on June 8, 1946. Miss Zimmerman made a survey of the need for the program in Mineral County, then worked in White Pine, Eureka, Lander, Clark and Lincoln Counties. Miss Rae Scott was assigned on September 25 to replace Mrs. Delphina Lopez (Goicoechea) resigned.

During the summer months, June, July, and Augustnthe following assistant agents were employed:

Mrs. Theo Sherman	Churchill County
Mrs. Mardelle Merrill	Washoe, Douglas, and Ormsby Counties

Thus, seven agents and two assistant agents served directly thirteen of the seventeen counties in the State, and the Extension

Nutritionist and the Assistant Director for Home Demonstration Work served as agents-at-large to the other counties. However, additional personnel is necessary in order to adequately meet the needs of all of the counties in the State. Agents-at-large cannot do the work satisfactorily. The extensive area of counties, isolated homes and travel conditions do not allow for enough follow-up work with all groups when agents are assigned to more than one county.

The survey made in Mineral County indicated that there was a definite need for assistance to the homemakers who are living in the crowded area of the Naval Munitions Plant at Hawthorne, as well as by women and children in rural homes. It is planned that Miss Elder, newly assigned agent to Lyon County, will also serve as agent for Mineral County during the coming year.

Existing budgets made no allowance for an expanded home demonstration program. Salaries for agents, Mrs. Spezia, Mrs. McCracken, Miss Zimmerman, and the assistant agents, Mrs. Sherman and Mrs. Merrill came from Bankhead-Flannagan funds, Travel and other expenses were met by some Federal and some State funds. Further needed expansion of the program will require more funds -- State and Federal.

Additional specialists are needed on the State staff, especially one in the fields of housing and home improvement. The system heretofore used of assigning specialist duties to agents is not satisfactory especially because of the expansion of their regular programs which curtails the amount of time that might be devoted to specialist duties. Furthermore, "specialists" should be qualified specialists in their individual fields. It would be advisable to have both a specialist in nutrition and one in housing and home improvement, or at least a part-time person attached to the staff in each field.

2. Training

a. Agents

Because of the difficulty that exists in finding trained and experienced personnel for home demonstration positions, it has been necessary to provide pre-service and in-service training particularly adapted to the type of personnel that we can employ. During the past year, all new employees had some Extension experience. Madge Elder, Lyon County agent, had worked for two summers as an Emergency Assistant, had had extensive experience as a 4-H girl, and had taught at the Billinghurst Junior High School in Reno for one year. During the time that she had been employed as an Emergency Assistant, she had worked for three months with the Washoe County Woman Agent, and the following summer had worked under the immediate supervision of the Extension Nutritionist and Assistant Director

for Home Demonstration Work doing varied work in the home economics field.

Apprentice training was provided for newly assigned agents, especially in the fields of foods and nutrition, extension methods and 4-H work. Rae Scott, assigned as agent for Elko on September 25, 1946, had apprenticeship training for three weeks under Miss Goicoechea, the outgoing agent.

Since there was such a great demand from homemakers for assistance in home improvement, special training programs were held in this field. A workshop of one-week duration was conducted in March. Furniture refinishing and upholstering was given to the agents by Mr. Rankin Mansfield, who was particularly qualified in this work. The agents gained greatly from this workshop, and each of them conducted similar workshops for homemakers for one-week to three-week periods throughout their counties. The Extension Nutritionist became so interested and apt in this work that she conducted workshops in Lincoln and Clark Counties, serving as an agent-at-large. During these workshops, community and neighborhood leaders were trained, who contined teaching the work to women in their communities.

The Extension Nutritionist and the Agent from Churchill County, Miss Lena Hauke, attended a conference on freezing methods given by staff members of the Home Demonstration Division of the California Extension Service which was arranged by the State Home Demonstration Leader of California at the request of the Assistant Director for Home Demonstration Work in Nevada. They conferred with department heads of the Albany Research Laboratory and nutrition specialists in the Extension Service at Berkeley, California. They also visited commercial freezing plants in the vicinity. After their return to Nevada, they conducted a conference on freezing methods for all women extension agents, members of the state staffs of the Extension Service and University Home Economics Department. Sets of slides on the freezing of foods were procured from the California Extension Service and distributed to the agents in Nevada.

No specialists from the National Office visited Nevada during the year, which was regretable as the training and inspiration that they could have provided to the personnel would have been of great value. Although the training programs, on upholstery and freezing methods were held, it was not possible to hold workshops attended by all agents every two months as planned. This was due to the heavy schedules of the agents and also because of travel expense.

In-service training was provided the various agents in the counties by means of conferences and demonstrations conducted by the Assistant Director of Home Demonstration Work and the Extension Nutritionist. Subject-matter materials, visual and other teaching aids were prepared, selected and disseminated to the agents by the State staff.

Exchange visits by agents between counties was done in the line of training. Agents acted as judges at the Elko County Fair and at the Nevada State Fair held at Fallon during the summer.

Agents were provided training offered by various public agencies such as the Red Cross, Cancer Control Program, Tuberculosis Association, and Health Clinics, to the extent that they were able to give their cooperation in bringing a knowledge of these programs and their provisions to the women in their groups. They also brought cases needing care to the attention of health authorities.

Agents were influenced to make a continuous evaluation of their work accomplishments and of current trends in order to adjust their programs to best meet present and changing conditions.

In addition, training conferences were held with the agents when they were in Reno for such state-wide activities as the State Achievement Day Program, Junior Livestock Show, and during 4-H Camp.

There is a great need for agents to take continuous additional training. Provision of training courses in the Extension field, both graduate and under-graduate, should be provided at the University of Nevada. Opportunities for the professional advancement of agents must become more available, and they must be given an opportunity to have time to take this work.

b. Leadership Training

The expansion of the 4-H program in homemaking projects necessitated training of new leaders and the agents spent much time in working with the leaders both individually and in groups. During the first part of the year, the Assistant Director for Home Demonstration Work called a meeting attended by the Head of the School of Home Economics and the Professor of Home Economics Education of the University of Nevada, the State Supervisor of Home Economics Education, State Department of Education, two county agents and the Assistant Director for Home Demon-

stration Work. It was agreed by the group that all subject matter and methods used for 4-H work should be correlated with approved educational methods and subject matter. The need for adequate training of leaders was emphasized. The meeting was very instrumental in creating a better understanding and making for better cooperation between the groups represented, to the end that improved cooperation resulted at the local levels.

Leadership training conferences were conducted by the agents and the Assistant Director for Home Demonstration Work throughout the year. In Churchill County the program functions were well through a Leaders' Council. In Washoe County, the leaders meet several times a year not only for training, but to organize and carry on various community programs, and contests among their groups. These include gardening programs, health drives, safety campaigns and others.

There is a need for much more leadership training. Statewide programs would be of value, but district or county programs seem to be most effective. It is advisable that outside leaders for the training programs help the agents. There is an apparent need of more standardization of the work throughout the State, both in 4-H and adult work done under lay leaders.

c. Training For State Staff Members

The Assistant Director for Home Demonstration Work attended the Regional Extension Conference held at Fort Collins August 5-8, 1946; a regional 4-H Club conference held in Salt Lake November 10-15, 1945; and the National Outlook Conference, Washington, D.C., October 7-11, 1946. She attended the Regional Farm Bureau Meeting held at Yellowstone Park, June 26-29, 1946, at which time she was one of the guest speakers at the meeting of the Women's Department. She spoke on "Future Farm Bureau Members", which mainly concerned the youth group.

The Extension Nutritionist attended the training program on freezing methods given by staff members of the California Extension Service at Berkeley.

3. Improvement of Working Conditions to Retain Agents

Opportunities and facilities for studying the Federal Retire-

ment System were made available to the agents. Mr. L. E. Cline, a specialist in the State Office was put in charge of this service, and some of the agents made arrangements to avail themselves of this opportunity.

Salary increases were made in a few cases, but it is advisable that further adjustments be made.

Additional equipment and educational supplies were provided for the agents during the year. Kits of supplies for upholstery work were assembled by the State Office and distributed to the agents. A heavy-duty sewing machine was purchased and used by the various agents as needed. Slides, movies, visual aid materials, subject-matter materials were continually supplied.

Since the time of the agents is being taken more and more with group and individual contacts in their attempts to work with more people, it seems that it would be advisable for a larger part of the demonstration and illustrative materials to be prepared at a central point for distribution to the agents. They do not have sufficient time to spend hours in the preparation of all of the materials required--or at least their time could be spent to better advantage if this phase of their work could be alleviated.

An effort was made to secure work centers for the agents. This was accomplished in two communities, and plans are materializing for more of these centers. The centers will be a means of reaching more people as well as a means of publicizing what the Home Demonstration Program has to offer.

The Assistant Director for Home Demonstration Work has assisted the agents with their schedules so that more efficiency has resulted. This can be further stressed, and such efficiency will have to be worked out if the home demonstration field will appeal to young women now preparing for their careers.

Subject-matter materials have been revised both for adult and 4-H work. The 4-H foods bulletins are practically finished, and the 4-H clothing material is in the process of revision. Other timely subject matter has been published and given to agents and others requesting it.

4. Developments under Bankhead-Flannagan Funds

Through these funds it was possible to employ three full-time women agents, serving eight to nine counties, that had not been provided with the service; two assistant agents who worked during the summer months; and a full-time nutrition specialist.

C. PROGRAM

1. Program Determination

During the past year, all Home Economics work both for adults and rural young people was centered on programs contributing to their needs and interests as homemakers and members of their family groups and communities. Agents worked closely with councils, executive committees and with entire homemaking clubs in determining the program that was to be carried on and also in regard to its execution.

It was continually apparent that homemakers were needing and requesting help with their many new problems in the rapidly expanding field of family and community life. Every effort was made by the agents to give the homemakers a broadened program of homemaking. Economic problems and public policies; social relationships, adjustments and cultural values; health and medical care; housing; farm and home financial planning; consumer education; parent education and family life were programs in which increased assistance was given to rural people in helping them to solve their problems of community welfare, and their responsibilities as citizens in regard to both national and international situations.

Members of Homemakers Clubs were encouraged to develop their own programs for the year with the assistance of the agents. In almost all instances part of the program time was given to the women themselves for the consideration of economic problems, current topics of national and international significance; cultural pursuits. A definite indication of the recognition, on the part of the homemakers of the responsibilities, needs and demands of people living together was continually evidenced during the year, as well as their increased appreciation of the cultural values, and of current economic trends and forces.

The labor situation was improved due to the return of men in the service and release of workers from War industries. In addition to more farm laborers being available, more women were available for cooking jobs which allowed the farm homemaker to have more time for other activities. The increased interest in work simplification methods was an outgrowth, in many instances, of the experiences of the homemaker during the war years.

Although the War has ended, many projects that were an outgrowth of the emergency were continued, emphasized and expanded. Food production and conservation; clothing conservation; repair and care of furnishings were programs which still were of major consideration. Home and farm management, home and yard improvement, gardens, family and community relationships were of concern to all groups.

Home demonstration agents continued to work with the women on fat salvage, clothing collection, Red Cross drives and sewing, bond committees, price control boards, USO, health clinics, Tuberculosis and cancer control programs.

The Assistant Director for Home Demonstration Work assisted the new agents in the organization of new homemakers' clubs, and in those communities that did not have a regular agent, gave demonstrations and met with the clubs. Six new homemakers' clubs were organized this year in two counties which previous to the Emergency Program did not have this service.

The expansion of the home demonstration program to reach more families in areas of the State not hitherto given assistance, both in adult and 4-H fields, was the major supervisory problem of the Assistant Director for Home Demonstration Work during the past year. Newly assigned agents needed assistance in many ways, and in addition it was necessary to create on the part of the people themselves an appreciation of what the Extension Program had to offer to them.

Agents were encouraged and assisted in obtaining and analyzing local factual data. Individual contacts were maintained as much as possible, and the agents not only contacted but became active members of various local groups and organizations. For instance, the agent in Washoe County is a member of the State Board of Directors for the Nevada Tuberculosis Association; the district agent for Ormsby, Douglas and Storey Counties is a member of the P.T.A. School Lunch Committee; the Elko County agent has served for a number of years as County Nutrition Chairman. Community contacts such as these have been an invaluable means of determining needs of the individual and the community.

Planning and advisory groups were used more extensively during the past year, and included 4-H councils as well as executive and advisory groups for homemakers' clubs. In one county an executive homemakers' committee, composed of the presidents of each homemakers' club, meets monthly for the purpose of program determination, community relationships, 4-H sponsorship and other problems that are of interest to the various clubs. As a result of the cooperation between these councils and the agents, closer integration of all programs designed for the farm family, i.e., home demonstration, agriculture and junior work, has resulted. Monthly and annual Farm Center and Farm Bureau meetings were planned to include something of interest from each program, goals as well as accomplishments.

2. Fields of Major Emphasis

<u>Foods and Nutrition</u>

Food production and preservation continued to receive special

emphasis throughout the year. Garden projects were greatly stressed and many rural families continued not only to supply food for themselves but in addition for the market. Many rural families also produced meat, eggs and poultry for their home use for the first time as a result of the scarcity and high prices of these foods. A greater interest in meal planning, consumer education, sugarless recipes, meat substitutes, etc. was also evidenced by urban as well as rural homemakers.

Food preservation, particularly freezing, continued to be a program of great interest to the homemakers. The Extension Nutritionist and one of the county home demonstration agents attended a training program arranged by the University of California Extension Division and then in turn presented the information gained to the other agents and staff members of Extension Service and University Home Economics Department during a conference held in Reno. While there are commercial locker plants in only four communities in the State, many farm families installed deep freeze units. Assistance was given in the selection and use of home freezing equipment.

The one full-time specialist attached to the State Staff is the Extension Nutritionist. She gave much assistance to the agents in the nutrition field, and conducted workshops and gave demonstrations in many localities where agents were not assigned. These included food preservation, work simplification, and time-saving cookery.

The nutritional consultant (who works 1/8 time) supervised publicity, and publication of subject matter and also worked with the Nutritionist in carrying on the follow-up statewide study of one-day food records that was undertaken in the Spring of 1946 by the State Food and Health Coordinating Committee, of which the Extension Service is an integral part. All agents cooperated extensively in this study. The Assistant Director for Home Demonstration Work is a member of the Executive Committee of the Nevada Food and Health Coordinating Committee, which is an outgrowth of the Nevada State Nutrition Council. The findings of these studies were brought to the attention of civic groups, parents, teachers, public health nurses, continually during the year by the Nutritional Consultant, the Extension Nutritionist and the Assistant Director for Home Demonstration Work. This was an effective means of implementing foods and nutrition work.

The Assistant Director and agents continued throughout the year to lend all possible assistance with school lunch projects. In some communities, homemakers' clubs actively sponsored the programs.

An increased interest was shown in tin cannery of foods. More chickens were canned this year due to the lack of chicken feed.

Home Management and Housing

The home management program continued to assist homemakers to utilize more efficiently their finances, time and labor. Housing improvement, and work simplification methods received much attention, as well as consumer education as to the selection of furnishings, equipment, etc. Kitchen improvement and refinishing and upholstering of furnishings were of interest to all groups. Work shops in upholstery ranging from one-week to four-week periods were conducted by all agents and also by the Extension Nutritionist and the Assistant Director for Home Demonstration Work.

It is hoped that, during the coming year, more work can be done in housing. Agents are in need of additional training in this field, and surveys need to be made before any effective program may be carried out. Research in this field, that is proposed, will be of unlimited assistance to the Extension workers.

Budgets and accounting studies carried on cooperatively by the Extension Service and the Experiment Station were of immeasurable help to farmers. Farm and family outlook material formed a basis of discussions at meetings. Definite types of record books were shown and explained to the end that more families were keeping farm and home accounts than ever before. In one county, Washoe, 268 families were assisted in making food budgets by the woman agent.

Money management and family relationship discussions were held at homemakers' and 4-H Club meetings. Families have more money to spend. Children are working and in some cases the mother. Guidance is needed in the spending of money.

Motion-studies on the preparation of various foods, meal preparation, use of equipment were carried on. Also discussions were held on the choice, use and care of new equipment available.

Yard improvement and home ground beautification was approached from both the point of safety and appearance. In one county, Churchill, approximately 90% of homes in the county carried on some phase of yard improvement work. Safety measures were an aid in building up community morale as well as improving the appearance of the farm home.

In those counties that did not have the services of a regular agent, the agent-at-large met a great demand for assistance with all phases of home improvement. In a period of two months, six workshops were carried on involving people from eleven communities in Eastern and Southern Nevada. In order that the work would be continued when the agent was not present, leaders were trained to carry on the work.

Clothing

Clothing selection, remodeling and conservation, and care and repair of sewing equipment formed the basis for the work done in the counties in this field. Clothing clinics were conducted throughout the State. Good grooming, clothing suited to the individual, remodeling of hats and furs and knitted garments, glove making, consumer education were all stressed. The clever and resourceful use of substitute materials such as feed sacks formed on the interesting demonstrations throughout the year, and this was one of the entries at the Nevada State Fair.

Family Life and Parent Education

As a result of the War and the many consequent adjustments of family life, many new requests for assistance were made of the agents. These included problems in parent education, family relationships, community relationships, child development and guidance. Some phase of this work was included in every homemakers' meeting. Special programs were designed to assist young homemakers, GI wives.

Health

In addition to the work that is done in health education such as sanitation, nutrition, production and proper utilization of adequate home food supplies, emphasis was directed, during the year, to assisting rural people to organize for group medical services. The agents assisted the women and 4-H youth to analyze their own health problems and to avail themselves of more adequate health facilities and services.

Continued cooperation with the State Department of Public Health was maintained, especially in the furtherance of good growth and development programs in rural schools.

Health and safety projects were conducted. In one county, each family was asked to make a check of fire and safety hazards in their home. 4-H members made a similar check in their homes. If there was more than one 4-H member in a home, one of the boys or girls would check a neighbor's home.

4-H Club Work

The Assistant Director for Home Demonstration Work supervised all 4-H Home Economics projects, supervised leadership training of leaders for these same clubs, and assisted the Assistant Director for Junior Extension Work in all joint undertakings that involved problems in the home economics field such as club camps and 4-H achievement days and contests.

4-H Foods and Home Improvement project record books were revised; the revision of the subject matter booklets for foods projects was

almost completed; and the Assistant Director for Home Demonstration Work is at present working on the revision of the clothing subject matter booklets.

The Assistant Director for Home Demonstration Work lent every effort to expanding the 4-H program. Leadership selection and training was emphasized. Organized training programs were innaugurated in all counties having agents.

4-H County Achievement programs were given more publicity and prestige, and again this year a State Achievement Day Program was conducted at the University of Nevada at which county winners competed for State honors. Entries in Style Dress Revue, Kerr Canning, Meal Preparation, Girls' Record, Clothing Achievement were judged in the morning of September 28 by the following judges: Miss Mildred Huber, State Supervisor Vocational Home Economics Education; Miss Joanna Chapman, Professor, Home Economics Education, University of Nevada; and Miss Genevieve Pohlman, Teacher of Home Economics, Reno High School. Entrants, agents, and leaders attended a luncheon at the El Cortez Hotel, at which time state winners were announced. Miss Patty Melendy, State Secretary of 4-H presided. Winners were interviewed over KOH Radio later in the afternoon.

The following girls were named State winners:

Food Preparation	First	- Phyllis Matteucci	Churchill County
	Second	- Dorothy Harmon	Douglas
	Third	- Olga Giovacchini	Lyon
Canning	First	- Lois Corkill	Churchill
	Second	- Margaret Cassaza	Washoe
Girls' Record	First	- Laura Mae Sauer	Washoe
	Second	- Anita Mussi	Churchill
	Third	- Anna Frehner	Clark
Clothing Achievement			
	First	- Nevalyn Berrum	Douglas
	Second	- Margaret Soares	Churchill
	Third	- Rena D'Andrea	Washoe
Syle Dress Revue	First	- Pauline Hall	Lyon
	Second	- Thelma Winkelman	Douglas
	Third	- Wilma Ginnochio	Washoe
	Fourth	- Mary Getto	Churchill
	Fifth	- Grace Camino	Elko

State winners, Phyllis Matteucci, Lois Corkill, Laura Mae Sauer, Nevalyn Berrum and Pauline Hall attended the National 4-H Congress

in Chicago. They were accompanied by Paul Lepori, State winner in Better Methods Electric Contest, Mrs. Olive McCracken, District Agent, Miss Ruth Felton and Mrs. Jack Cliff, 4-H leaders. Phyllis Matteucci of Fallon was one of the six girls that won a National place in the Food Preparation Contest, winning a $200.00 scholarship.

Efforts are being made to organize 4-H homemaking projects on a yearly basis, enrolling new members during February, March and April. Women agents have been successful in expanding the 4-H program in both the home economics and agricultural fields. The annual Junior Livestock Show, county and state achievement programs, exhibits at county and the State Fair have served as an impetus to the program. Also the close sponsorship of the 4-H program by the homemakers' clubs has been of great assistance in developing the junior work.

The older youth program has not developed in all parts of the State, but has been quite successfully organized in Washoe County. There are at present twenty-four young men and twenty-four young women members of this group which held thirteen meetings with an average attendance of from 25 to 31 since organizing in January 1946. The name selected by the members for this group is "Junior Agricultural Leaders." Most of the meetings have been recreational, but many of the meetings have included speakers on timely subjects. This club sent a delegate to the National Farm Bureau Convention in San Francisco in December, 1946. The home demonstration agent worked cooperatively with the agricultural agents in organizing and developing this group.

II. COOPERATION WITH OTHER AGENCIES

Close cooperative relations were maintained with all organizations and agencies that had to do with the problems of rural and urban people. Included among these are the Nevada Food and Health Coordinating Committee, State Department of Education, Department of Public Health, Red Cross, Child Welfare and Old Age Assistance Divisions, Farm Security Administration, Tuberculosis Association, Agricultural Adjustment Agency, Soil Conservation Service, Office of Price Administration, U. S. Employment Service, County Commissioners, Farm Credit Administration, Federal Land Bank, Indian Service, schools, churches, fraternal organizations, Maternal and Infant Care Program, and others.

Planning and guiding efforts in the solution of local and State problems constituted the major contribution of such cooperative relationships, as well as the avoidance of duplication and promotion of services. The small population of communities in Nevada has always made for a high degree of cooperation among agencies, and the fact that staffs of programs are limited in number has been a factor in this.

Throughout the history of home demonstration work in Nevada, the closest working relationships have been maintained with the Department

of Public Health. At present the nutritional studies conducted by the Nevada Health and Food Coordinating Committee are being actively carried on by public health nurses and women extension agents in cooperation with school officials. The chairmanship of the Nevada Health and Food Coordinating Committee rotates among representatives of the State Department of Public Instruction. State Department of Public Health and the Extension Service, the vice-chairmanship is held by one of the agencies, and that of past-chairman being the assignment of the other group.

The homemakers' clubs are continually becoming more active in community affairs. Many new activities originated during the War, have continued, and the assistance given to the Red Cross, Tuberculosis and Cancer Control Program is particularly noteworthy. The women have become more active in promoting the services of these agencies, and in creating an awareness among rural people of the advantages of the services which are provided. Similarly, throughout the State, the Extension Service continued to work with all interested groups and organizations in bringing assistance needed to make for a more correctly informed rural citizenry in regard to their social, economic, national, state and community affairs.

III. MAJOR DEVELOPMENTS CONTEMPLATED FOR 1947

1. Further expansion of the homemaking program to areas in State not now provided with this service.

   Although the home demonstration program has been extended to many areas that have not been receiving the services of a regularly assigned agent, further expansion is necessary in order to adequately serve all people in need of the Extension Service Program.

   The services of an agent-at-large in Eastern and Southern Nevada have made apparent the interest in, and definite need of, a broad homemaking program in those areas. It is advisable that one agent be assigned to the counties of White Pine and Eureka, and that one agent be assigned to Clark and Lincoln Counties. The extensive areas of the counties makes it inadvisable for agents to be assigned to more than this much territory. The agent-at-large, in a short time, has made a survey that indicates the needs of the people in the areas not having an agent, and has assisted them with their most pressing problems. It is well recognized that the home demonstration agents are very instrumental in expanding the 4-H Program as well as a program for homemakers.

2. Improved and increased leadership for adult and 4-H group.

   Leadership training on an improved scale is essential.

Agents need assistance in the selection of better leaders. It is hoped that more workshops, training conferences, and more opportunities for professional advancement may be provided during the coming year.

3. An effective sound program in homemaking education that will adequately meet the needs of homemakers and 4-H girls.

4. A more correctly informed rural citizenry in regard to their social, economic, national, state and community affairs.

5. The increased efficiency of homemaking methods in use by all homemakers within the State.

6. Further development of the neighborhood leadership technique.

7. Improvements in 4-H Home Economics Club work as follows:
   Increased club enrollment
   Increased project completion
   More and better trained leaders
   Increased participation on the local, county, and state levels in 4-H contest. Further development of the truly educational values of "contests."

8. The development and accomplishment of a sound and effective health program that will result in improved nutritional and all other health promotional activities on the part of both young people and adults.

9. Revision of subject-matter materials previously published by Nevada Extension Service, especially 4-H Home Economics Project subject matter.

10. A more adequate program of pre-service and in-service training for home demonstration agents.

11. To develop improved working relationships between staff members and cooperating groups and agencies.

12. To develop and expand programs with all cooperating groups that are concerned with solving post-war problems.

UNIVERSITY OF NEVADA

AGRICULTURAL EXTENSION DIVISION

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

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ANNUAL REPORT OF AGRICULTURAL EXTENSION NEWS SERVICE

FOR

1 9 4 6

BY

A. L. HIGGINBOTHAM, EXTENSION EDITOR

REPORT OF THE EXTENSION EDITOR
AGRICULTURAL EXTENSION DIVISION
UNIVERSITY OF NEVADA

For the Year 1946
By
A. L. Higginbotham

The fighting war is over. On the battlefronts, the conflicts have ceased.

On the food front, however, the battle continues on an emergency basis. For food and fiber are still needed in large quantities to feed a hungry, war debilitated world--U. S. service men and women at home and abroad, civilians, and hungry persons in foreign countries.

Food helped win the war. Food is now being asked to win the peace.

The food production emergency is still with us.

News Service Ready for Emergency

Into this situation, the news service of the University of Nev ada agricultural extension service has fitted efficiently.

In one of the greatest volumes of information issued by it in any of its nine-teen years, the news service has brought to every farmer and homemaker in the state who reads or listens to the importance of the peace food efforts and facts related to it which lead toward achievement of the goals which result from victory.

In fact, for the average farmer, it is probable that the news service has given the most frequent contact with the extension service during the year, except for 1944 and 1945.

Service is Prepared

The problem of conveying information to the people of the state as quickly and effectively as possible is one for which the news service was prepared with a background of nineteen years of practice.

It swung into the job as "natural" one for the news service, since post war information, dynamic and of the moment, is particularly adapted to handling as news.

THE NEWS SERVICE

In terms of practices adopted, which is the goal of extension work, the news story is, by all odds, the cheapest and most effective extension technique. This principle is not only well recognized, but it has been proven time and again by surveys of unquestioned accuracy.

The press and radio, in matters related with farming as well as in other fields, formed the chief media in passing on information and in keeping up effort on behalf of the nation in its post-war crisis.

News Reflects War Effort

The need for reaching rural people quickly with information which was news of the highest value was great. Through the press of the state, this goal could be realized.

The result was a steady flow of current, newsworthy, vital information to farmers and farm homemakers definitely related to their part in the national food effort.

News is Dynamic and of the Moment

A great deal of this effectiveness may be attributed to the fact that extension information in the form of news is far more dynamic than in the form of technical information.

Displayed in a local, thoroughly read newspaper with stories bright with the dynamic of the contemporary, extension news catches the urge to immediate action which stimulates activity on the farm or anywhere.

Extension news, moreover, is not read as one studies a textbook, but naturally, casually, as a farmer each day or each week takes times out to get acquainted with the changing nature of his cultural environment.

Read in Receptive Spirit

As such, it is accepted in a more receptive spirit than is the reading or studying of information which the farmer knows he ought to understand, but which is pretty hard work after a day following the plow or pitching hay. Extension news brings the information in homeopathic doses assimilated easily and without pain. In fact, it is even pleasantly taken.

News Story Chief Medium

This past war year, as during the war years which preceded it, found the old-line medium of the news story bearing the brunt of the burden. Not only is it the key to public opinion in Nevada at all times, and, therefore, should be stressed above all, it is especially vital in post-war times because it is the primary medium of post-war news.

Radio also, as one of the speedier methods, was stressed during the year, and a new farm program helped to get its stride.

No new bulletins were issued by the extension service during the year. Bulletins, in general, are less fitted than other commonly used media to the speed needed in emergencies. Moreover, during the war, Nevada extension workers were too busy to write bulletins.

Agents were so busy with post-war jobs that they had no time for instruction in the utilization of the various media of mass communication, so this phase of the extension editor's program received little emphasis, but a beginning was made, especially with the new agents.

Editor Handles War Board Information

In addition to his regular extension news service duties, the extension editor has the responsibility of handling the news and radio work for several other USDA agencies, a time-consuming addition to his other work.

When the USDA Defense Board was set up in the fall of 1941, the extension editor, as a sole information man working in the state of any of the cooperating agencies, was named defense board information man. When war came, he continued in the same capacity for the USDA War Board.

Thus the whole, or practically the whole responsibility for war board information work, was added to the regular extension duties, and with the nation seriously in need of increased food, the job became a big one. In 1945, however, the importance of the war board as such as a news source declined and most news came direct from the various agencies. The lineal successor of the War Board is the USDA Council, which occasionally produces good news stories.

PMA and SCS News Covered

The extension editor also handles the information work of the Nevada Production and Marketing Administration office, which is of considerable volume and the Nevada final preparation and distribution of Soil Conservation news originating in the regional office, as well as stories from the Nevada office.

During the year, a written agreement was entered into with the Nevada office of the PMA to govern the handling of PMA information. In the agreement, it was specified that PMA officers will work up the raw material for newspapers and radio which will then be turned over to the extension editor for use as he sees fit, and that PMA will not do any news work of its own.

Four-Point Theme Dominant Note

In the extension news service, with information for the newspapers, magazines, and radio coming from a variety of sources, a more or less unified information program related to the war was achieved. Nearly everything handled related to the war, and took the form of one of the following:

1. Stimulus toward increased production.
2. Methods of increased production.
3. Official regulations concerning agriculture and homemaking.
4. The efficient preservation and use of food.

Although the story with this four-note theme was not only evident, it was there throughout the year in nearly everything the news service handled, though somewhate irregularly as determined by the vagaries of the news.

Specialist Number Limited

Chief handicap of the news service during the year has been the limited number of specialists as sources of news.

If news is to be handled so as to have a personal appeal, it must be localized. Specialists for this function are not available in many important fields. Those available have worked with a will and done a good job. But much, if not most, of the copy used by the news service is stimulated by suggestions of the extension editor, who has even acted as an unofficial garden story source, although everything has been checked by quotable extension workers.

Moreover, specialists are not anywhere near equal in their cooperation with the news service in stories. During the 1946 report year, for example, various specialists in the state office (some of them with administrative duties) varied in news story representation from 2 to 14. And some of the lowest ranking specialists are in contact more frequently with material of news value than those ranking high. It's really a matter of interest and willingness to work.

I.Q. and Education are Index

The method of presenting farm and home information to any group of persons must depend to a very large degree upon their intelligence and ability to understand.

If these factors are of a low grade, material must be adapted to that kind of reader and listener. If, on the contrary, there is a high I.Q. and an extensive educational background, the appeal can be made at a much higher level.

The rural people of Nevada, to whom the extension service directs its information through various channels, are very much above the average in intelligence and in education.

Nevada Farmers Rate High

According to the 1940 census, the median number of school years of Nevada rural people, 25 years and older, was 8.4, a figure exceeded in only seven other states.

This figure includes Nevada's Indians, who have their own extension service. The major contact of the extension news service, however, is with native whites. Among these, the median number of school years completed is nine, a standing exceeded only by Utah and Massachusetts.

Many College Graduates

While most rural people are not college graduates, the percentage of this group among the farm population is a significant index of the general intelligence and background. Only two states in the union exceed Nevada in the number of rural farm people, 25 years and older, who have completed four or more years of college. In Nevada, the percentage is 9.5, again exceeded only by that of Utah and Massachusetts.

In brief, therefore, the appeal to Nevada farm people can be pitched at near the top level for farm people anywhere in the United States.

Map Shows Distances

A map issued by the national highway users conference during World War II indicates dramatically how dependent are Nevada rural people upon secondary contacts for their information and stimulus.

According to the map, there are three enormous areas in the United States which are 25 miles or more from any railroad line. Of these areas, two include large parts of Nevada. The third includes parts of New Mexico, Arizona, Utah, and Colorado.

Secondary Contacts Important

With so many of Nevada's rural people living in such an isolated area, the effectiveness of such secondary contact agencies as the newspaper, the magazine, the bulletin, the radio, and similar mass community methods is evident.

It is with such factors as these in mind that the University agricultural extension news service is operating.

Development is Reviewed

In 1946, the news service was conducted by the extension editor, A. L. Higginbotham, who also is professor of journalism in the University of Nevada. During the University year, about four-fifths of his time is devoted to resident teaching, but, during the summer recess, with the exception of a month's vacation, he devotes his entire time to extension editorial duties.

Thus the news service to newspapers and the radio service, which require regular attention, are maintained the year around.

The news service of the University of Nevada Agricultural Extension Service was inaugurated by Higginbotham in 1927 on a very small scale, and during the years since has been developed to its present status, which in general, is ample to carry the load of news and editorial work during the normal years. In time of emergency, additional, part-time help is needed, and it has not been available in 1946.

News is Concrete

Again, extension news, in contrast to general scientific information, is related intimately to the physical and social environment with which the farmer and farm housewife deal nearly every day.

It has, therefore, a reality, a concreteness, which is appealing to the practical man or woman.

Wholesome competition between neighbors arises and practices are adopted for social reasons which bear fruit in economic and general cultural terms.

Because of additional social and psychological factors, the news story is superior as a means of conveying extension information to the rural people of a state.

News is Cheap

But practices are adopted through news stories not only efficiently, but cheaply, as well.

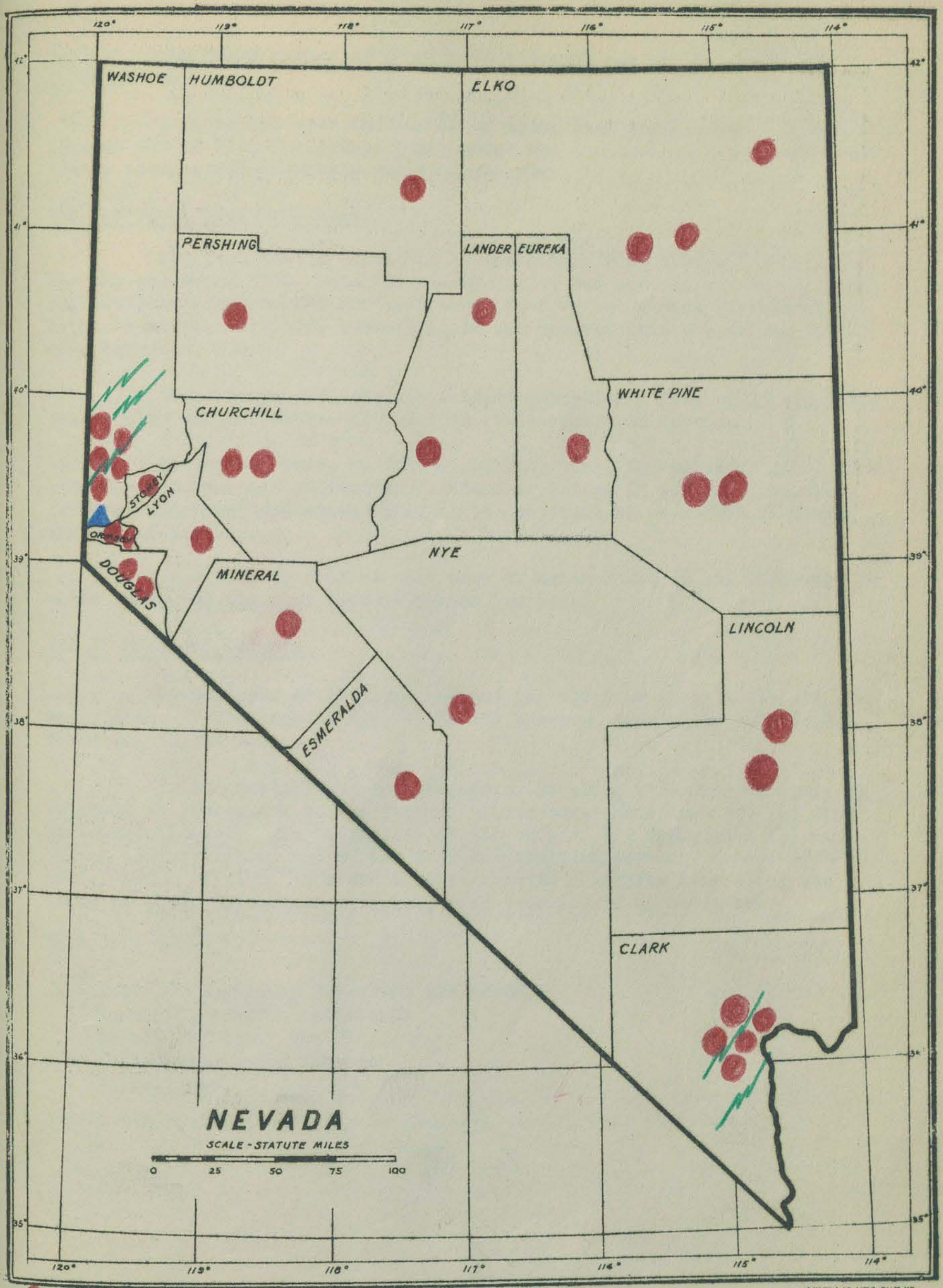
And the reason for that lies in the fact that the newspapers, in serving the interests of their readers, bear the major portion of the expense of the dissemination of this information in the form of news stories.

The average news story issued by the agricultural extension service of the University of Nevada reaches the people of the state in about seventy-thousand copies of printed newspapers.

Many of these people are not farmers, but they often are gardeners, homemakers, or persons deeply interested for patriotic, social, and economic reasons in the rural life of the state. And nearly all of them are both federal and state taxpayers and are the rightful recipients of the services of the agricultural extension service.

State Stories News Service Backbone

State-wide stories, the backbone of the news service, go to the entire state list and to Nevada radio stations, as well as to newspapers and farm journals, the press association, and feature services outside the state; in addition is the special news service to five or fewer publications and radio stations.



- Newspapers
- Radio Stations
- State Training School

The total number of stories thus issued ran to 156, expressed in 56,347 words.

In a normal year the number of state-wide stories should run between 100 to 150, the latter being about the top amount of copy which Nevada newspapers can wisely use in peace time.

War Increases Newsworthiness

The fact that a nation is at war alters this estimate somewhat and the volume of 1945, which is nearly double the minimum in normal timás, reflects the great market for such news, both by the papers themselves and by the readers. In 1946, therefore, it was natural that the volume should drop somewhat.

News always reflects the current situation. And, of course, this was so with subject matter of the 1946 state-wide news service.

During the year, as in the previous year, the color of the entire news story output was shifted to relate everything, if possible, to the farmers' and farm homemakers' part in the national peace effort following the end of the war.

It naturally follows that news of agriculture in the post-war world dominated the news service during the year.

One of Greatest Volumes

An analysis of the news service for the year reveals that it has reached one of the highest figures in its history, running to 156 stories, totalling 56,347 words.

In the table below is a breakdown of state-wide story numbers in relation to source and to the post-war emergency. Many more stories than indicated, however, are in support of the work of the Production and Marketing Administration and of the Soil Conservation Service, since, from a policy point of view, it often is desirable to originate copy along the lines of their objectives with extension specialists as educators.

	No. Stories
Post-War Emergency Extension Activities	16
Regular Extension Activities	62
Nevada Office of the PMA	11
Soil Conservation Service	8
Miscellaneous	59

No Pattern Followed

The idea throughout the year was to do everything in the news service to carry post-war vital information. No attempt was made, as might be the case in normal times, to follow any set pattern related to a desirable emphasis in relation to the improvement of farming, ranching, and homemaking in the state.

Chief Subject Matter Categories

	No. Stories
Food Preservation	10
Gardening	13
Nutrition	10
Postwar Regulations	3
Production	17
Salvage	3
Utilization of Food	9
Manpower	5
Loans and Insurance	3
Homemaking	5
Horticulture and Forestry	18
Personnel	1
Outlook	5
Engineering	1
General	50

Analysis of the state-wide news stories further shows that the great emphasis has been on agriculture, rather than on homemaking or on 4-H Club work.

This probably is a sound emphasis. Although homemaking stories run to only about one-third of the number of stories concerning agriculture, it is probable that that is a natural division in terms of news value. And, on account of the wartime emphasis on food and clothing, the number of home economics stories has increased in recent years.

Undoubtedly, there is room for many more 4-H Club stories, news copy of a high caliber.

	No. Stories
Agriculture	108
Homemaking	34
4-H Club Work	14

How is the news service servicing the various geographical groups in the state--farm people, non-farm rural people, and townspeople?

The table below tells the story.

While the number of stories of interest to rural people is many times that of interest to non-farm rural people and no stories were designed entirely for townspeople, it is encouraging to note that about one-third of the stories were applicable, in some form, to all three groups.

	No. Stories
Farmers and Farm Homemakers	95
Other Rural People	6
Townspeople	0
All three groups	55

Specialists Determine Pattern

While the extension editor exerts every effort to keep the emphasis on the most important projects and to produce a balanced service with variety and interest, much of the nature of stories in the news service is determined by the activities of the specialists in the state office.

The activities of each state specialist determine to a very large extent the nature of the information from which news service stories can be written. If for some reason a specialist emphasizes a certain phase of his work for a long period of time, that emphasis is inevitably reflected in the news service. No matter how many suggestions are made by the extension editor, if the specialist does not have time to work on them, they do not produce information which can be used as news for papers or radio.

State Policy is Factor

In like manner, emphasis throughout the state determines to a very large part the nature of the emphasis in the state-wide news service. If a certain goal is being sought by the entire service which requires an unusual amount of effort on the part of every member of the staff, whether in the counties or in the state office, it is obvious that some other things must be neglected.

With Nevada's small staff, it has been impossible for us to take on all of the obligations and to do all of them as thoroughly as we would like. The result has been that we have often devoted a major portion of our time to the things of the moment, rather than those which might be more important from the long point of view.

News Activity Varies

Great variation occurs in the number of stories originating from various members of the Nevada extension staff.

An analysis of the year 1946 reveals that one specialist was responsible for material for 14 state-wide stories, while another was authority for but 2.

Of course, the kind of material handled by various specialists and agents is a determining factor in news value but it does seem as though there should be less of a gap between the various workers in their news activities.

Cooperate With PMA and SCS

Every effort was made during the year to cooperate fully with the Nevada office of the Production and Marketing Administration and Soil Conservation Service in their Nevada activities.

Soil conservation news concerning Nevada's agriculture is handled by the extension editor through cooperation by the Nevada state office of the Soil Conservation Service.

Editor Handles PMA News

The extension editor continued during the year to handle news from the Nevada office of the Production and Marketing Administration.

A large portion of the total stories in the state-wide news service for the year dealt with PMA activities.

During the year, on suggestion from Washington, an agreement was entered into between the assistant director of the Nevada office of PMA, the extension director, and the extension editor, defining the duties and responsibilities of each in extension's handling of PMA information.

PMA will not do information work itself, but will work up the news information for the use of the extension editor in the regular state-wide news service.

Special Stories Written

Since approximately the same time is required to prepare a story for the papers of the state as for one or only a few publications, the state-wide story is and should be stressed.

Nonetheless, at certain times one strong publication or a group of smaller publications need and desire some special writing for them, and special stories are then prepared. In 1946, such stories were written in a total of several thousand words.

4-H Camp Special News Event

In 1946, the Nevada 4-H club camp resumed its annual sessions. This year, however, an entirely new program, with the chief emphasis on recreation, was developed. Activities of the camp were covered daily by the extension editor, but since the state-wide contests are no longer on the program, the volume of copy was much smaller than previous years.

Newspaper Circulation Grows But Slowly

The circulation of the papers as a whole continued to grow during 1946 in view of a sharp increase in state population--in percentage second greatest in the United States--despite the shortage of newsprint. Circulation would have been much greater had the normal supply of newsprint been available.

As a result of these factors, a greater number of Nevada citizens joined the newspaper audience and are among the readers of Extension Service news stories. Total circulation in 1946 was about 77,000 for a population of about 150,000.

The number of newspapers published in the state was maintained through the year without loss, and one additional daily was established.

As a result, the chief agency of publication open in the state came through another year although plagued by post-war problems, especially that of manpower.

Illustration Use Curtailed Somewhat

A number of stories, some illustrated, were worked up during the year for regional and national publication. The activity in this field, however, was considerably curtailed during the year on account of the necessary attention to news of the post-war effort on the farm and home front.

Most Stories Used By All

The play of Extension Service stories by the papers in the state probably reached a peacetime high point during the year. At no reasonably normal time in the history of the extension news service have so many extension stories been published.

Over the year the state's editors have continued to recognize that while mining is regarded as the state's primary industry, agriculture and stock raising is the industrial backbone of Nevada.

No very definite survey of the percentage of the Extension News Service stories used by the papers of the state was made during 1946, but it probably about equalled the percentage determined in previous surveys--about 80 percent of the average for all the papers of the state, although the volume increased greatly.

In comparison with Nevada's 80 percent, in some states a batting average of 20 percent is considered good.

Cordial Relationships Continue

As in previous years, the extension editor maintained cordial relationships with the newspapermen of the state. Through contacts over the years, both as Professor of Journalism in the University of Nevada and as extension editor, he is now acquainted personally with nearly all of the publishers, editors, and other newspapermen in the state.

This friendly acquaintanceship continued through 1946 through visits to many editors of the state in their own newspaper offices.

Chosen NSPA Officer

Early in the fall of 1943, the secretary-treasurer of the Nevada State Press Association joined the army, and the extension editor was asked to serve as secretary-treasurer until a successor is chosen, a post he held during 1946.

In this capacity the extension editor is in a position to work more closely than usual with the newspapermen of the state, and to ascertain their needs and develop their cooperation.

Many Journalism Graduates on State Papers

A large number of additional journalism graduates of the University joined the staffs of papers in the state, increasing the total of University of Nevada journalism graduates, trained by the extension editor as professor of journalism, at work in Nevada. Known personally through years of teacher-student contact, these young men and women are a vital factor in the success of the News Service.

Papers Read Regularly

One of the most important parts of the extension editor's work in connection with the News Service has been the regular reading of practically every newspaper published in this state. All but a few of the Nevada newspapers are sent direct to the extension editor as a gracious compliment in return for the agricultural news stories. From one-sixth to one-fifth of the total time of the extension editor, is spent reading and scanning these papers in an effort to keep him informed as to:

1. The use of Nevada agricultural extension service copy.
2. News stories originating with the various extension agents.
3. Agricultural news stories originating with the staff of the paper itself.
4. Editorial comment concerning Nevada's agriculture.
5. Changes in journalistic technique and the personnel of the various papers.
6. Other matters involving a sound conduct of an agricultural news service in this state.

THE COUNTY AGENT SERVICE

News with a local angle is the most avidly sought by newspapermen everywhere.

Especially, however, is this true of the community newspaper, which is mostly read by farmers and farm homemakers. And much news which is of great importance in one small community has little or no value in another. These principles apply to news of farming, ranching, and the farm home as well as to other kinds of local news.

Agents are Reporters

Realizing the importance of these laws in the dissemination of news of interest to farmers and farm homemakers, the extension editor through the years has encouraged and helped the agents in the various counties and districts of the state to serve as reporters of such news for the newspapers in their communities.

Beginning with some of the agents antagonistic to the idea, others lukewarm, and only a few convinced, the extension editor has, by repetition of the principles and by aid and suggestion, stuck with the idea, until in recent years and until the load of detail incidents the war effort bogged them down, most of the agents have been active and efficient in disseminating, through their local journals, news of agricultural and home activities in their own communities.

In 1946, for the first time in seven years, the average number of stories produced by the typical Nevada agent showed an appreciable increase, an important straw in the wind.

Figures Reveal Accomplishment

The figures tell the story of the development of this idea over the years.

In 1927, when the extension editor began the missionary work, the average production of each of the agents in the service during the year was 31.5 stories annually. Without interruption, the annual production of news stories by the average agent rose steadily for five years, being, in 1932, an average per agent of 76.3, well over twice the figure at the beginning.

During the emergency years, with each agent striving to learn the intricacies of much new work of a national nature, the production slumped, falling, at its lowest, to an annual average of 50.7 in 1936.

In 1937, however, the agents began to grasp the details of the emergency programs and to find in them a new source of news, with the result that the rise continued, and it was carried even higher in 1938, when a new high of 85 stories on the average was reached, approximately three times the production current when stimulation of this activity began about a decade before.

Decline Sets In

In 1939, a decline started in the number of stories produced by the agents, which reached its low point in 1941 with an annual average production of 71.2.

In 1942 a very slight rise occurred, reaching a peak of 71.5 news stories average annual agent production.

In 1943, however, the agents' news story production began a sharp drop which continued through 1944.

In 1943, the figure for the state was 58.9 stories and in 1944 the number plunged to 43.1, a figure as low as the production of any year except three in the history of the Extension News Service.

Figure Rises in 1945 and 1946

In 1945, for the first time in eight years, an increase in the average agent's annual production of news stories occurred, the figure rising from 43.1 in 1944 to 44.5. "So slight an increase may be meaningless," the editor said in his 1945 report. "It may indicate a reversal of the downward trend. It may mean only a pause. It may also reflect an increased effort on the part of the extension editor to interest the agents in extension work through news stories. The 1946 report will tell which."

And 1946 did tell something: for a second year the trend reversed and moved upward. The typical agent news story production rose to 48.8, an increase of almost 10 percent.

Agents Have Little Time For News Work

Why has this marked decline occurred since the beginning of the war?

The answer, the extension editor believes, is not difficult to discover. It lies not in lack of know-how, not in lack of initiative or energy, not in lack of news, but, on the contrary, in lack of time. This is the judgment not only of the extension editor but of the agents themselves.

The multiplicity of additional duties which have fallen on the shoulders of the extension agents throughout the state on account of the war effort has left them little or no time to devote to news story production.

That this analysis is a true reflection of the situation was borne out at a meeting recently when the extension editor asked the assembled agents to explain why the production volume had declined. Without exception, the agents stated that the reason was lack of time and that other factors were negligible.

Home Economics Volume Declines

That this is the case is found borne out also by the fact that, in 1943, for the first time in a number of years, the production of the women agents also showed a marked decline. Throughout the history of the Extension News Service, the women agents in the counties have been steady, regular, and effective producers of news copy. The drop continued in 1944 and 1945. In 1946 slight gain was registered--but it was very slight.

Ratio to State News not Explanation

The Extension Editor at first thought that possibly the great volume of state-wide news stories had had a tendency to reduce the production of the agents for their local newspapers.

A study of the figures during the last ten years, however, indicates that this is not the cause.

Although it is true that agent production reached a low figure of 43.1 in 1944 when the state story total reached its maximum of 245 stories, a high figure in both state and local stories occurred in several years simultaneously.

Table Reveals Relationship

The following table gives the figures for the last ten years in both locally produced and state-produced stories:

No. Produced Per Agent 10 years	No. State-Wide Stories Issued 10 years
1935 - 57.6	110
1936 - 50.7	112
1937 - 69.8	152
1938 - 85.0	134
1939 - 76.0	108
1940 - 72.7	134
1941 - 71.2	131
1942 - 71.5	193
1943 - 58.9	194
1944 - 43.1	245
1945 - 44.5	192
1946 - 48.8	153

The extension editor plans, however, to put more emphasis upon the training of the newer agents during the next year, as he did last, together with stimulus for the older agents. Plans have already been made to talk periodically at the regular monthly meetings of the women agents, and preparations have already been made for a news writing school at the 1947 state-wide extension conference. A state-wide competition among the agents may be adopted.

Agent Production Varies

During 1946, one of the home demonstration agents wrote, or was responsible for, 205 stories. Another home demonstration agent was responsible for 27. Opportunities for publication were almost identical.

This represents the variation in the use of news as an extension method between one agent and another.

The variation among the men agents was not so great but it also illustrates the same principle--that news story production depends to a very large extent upon the desire to use this proven and sound medium. One of the men agents was responsible for 153 stories. Another group of three agents for only 15.

Women Agents Beat Men

Again, in 1946, as for many years, the home demonstration agents outstripped the men agents by almost two to one news story production. This is in view of the fact that agricultural news is very much more easily handled than news of home economics.

Agent Experience Reveals Time Lack

An illustration of the time required to produce good news stories on the local level occurred in 1944 on the part of one of the agents.

In a talk with the extension editor, the agent explained that he had made a determination to produce one story for each of the two strong papers in his territory each week.

He started out to do this job magnificently, producing in the early stages a number of pieces of copy so good that with some changes they were suitable for rewriting for the state news service. They took, he found, however, a considerable amount of time, often consuming as much as a total day in the gathering and preparation of the material for one story.

An inevitable result was that he could not keep it up without neglecting other phases of his extension job, until now, several months after his beginning, stories appear only very sporadically.

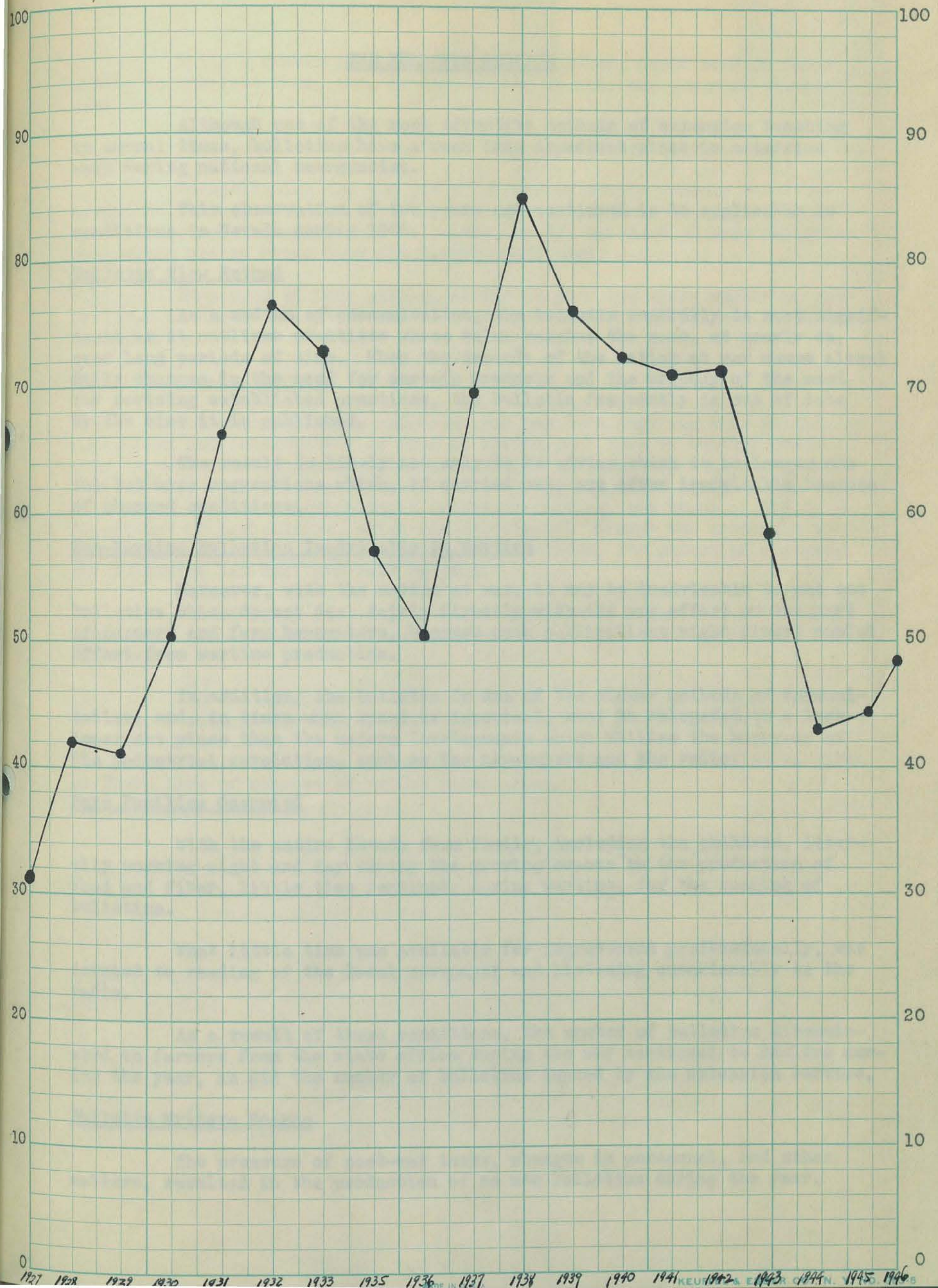
A similar occurrence in the summer of 1944 in another county in the state resulted in the starting of a weekly garden column which lasted about seven weeks until the agent lost interest in it or found the pressure of other duties so great that he could no longer continue his job as columnist.

When the confusion of the post-war period was over, with a stable personnel again in the field, it is likely, especially under stimulus by the extension editor, that news story production by Nevada agents will rise to its pre-war heights and what is admittedly the cheapest extension method will again come into its own.

NUMBER OF NEWS STORIES WRITTEN BY MEN AND WOMEN AGENTS
1927 1946

Date	Agents	Total Agents	No. News Stories	Average No. Stories By Men & Women	Total No. News Stories	Ave. No. Per Agent
1927	8 men	11	309	38.5	347	31.5
	3 women		39	13.0		
1928	8 men	11	384	40.8	463	42.0
	3 women		79	20.6		
1929	11 men	16	309	28.0	660	41.2
	5 women		351	70.2		
1930	11 men		556	50.5	806	50.3
	5 women	16	250	50.0		
1931	12 men	17	633	50.2	1125	66.1
	5 women		492	90.8		
1932	12 men	17	763	60.3	1300	76.3
	5 women		537	107.0		
1933	12 men	17	707	58.8	1242	73.0
	5 women		535	107.0		
1935	14 men	18	707*	50.1	1038*	57.6*
	4 women		336*	80.4		
1936	13 men	18	556	40.2	913	50.7
	5 women		557	111.2		
1937	11 men	16	842	70.6	1153	69.8
	5 women		294	50.8		
1938	13 men	18	1060	81.5	1531	85.0
	5 women		471	94.0		
1939	13 men	18	950	73.8	1368	76.0
	5 women		418	83.6		
1940	14 men	19	914	65.3	1382	72.7
	5 women		468	93.6		
1941	14 men	18	891	63.6	1282	71.2
	4 women		391	97.8		
1942	14 men	18	845	60.4	1287	71.5
	4 women		442	110.5		
1943	12 men	16	619	51.6	943	58.9
	4 women		324	81.0		
1944	13 men	17	419	32.2	733	43.1
	4 women		314	78.5		
1945	12 men	17	403	33.6	757	44.5
	5 women		354	71.0		
1946	17 men	25	637	37.4	1221	48.8
	8 women		584	73.0		

*Figures for 11 months only (Dec. 1934-Oct. 1935, inclusive). Adjusted to 12 month basis for comparison.


100
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1928
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1946

THE BULLETIN SERVICE

Although one of the most effective methods of extension teaching in normal times, bulletins have a much less important place in extension work during national emergencies.

This observation of two years ago continued to be applicable to conditions in Nevada during 1946.

Bulletin Slow Method

As a medium of communication, the bulletin generally is most significant as it outlines practices whose value remains the same, or nearly so, over long periods of time. When the demands of the nation at war cause almost daily changes in the need for certain products and the urgency of the need for revising established practices, the bulletin frequently is out of date by the time it is published.

The result is likely not only to be advice which is no longer useful but also suggestions which, if carried out, are often inadvisable because of changed conditions.

Non-Wartime Bulletins Inadvisable in Wartime

Moreover, with the nation at war, it may be inadvisable to put out bulletins which do not deal fairly directly with the war effort on the part of farmers and farm homemakers, because such publications might divert needed effort from wartime production.

In addition, the bulletin is one of the slower methods of communication, and, in times when speed is important, must be relegated to a less important place than the modern developments which utilize the hurry-up of the industrial revolution, such as the newspapers and the radio.

Farm Families Occupied

With the entire Nevada farm family, including the children, literally working night and day during the growing season in the production of food and fiber, little time remained, during wartime, for the reading of bulletins.

What little time was available for improvement professionally, was devoted to reading of the local newspaper and listening occasionally to the radio.

As a result of these conditions, the number of bulletins disseminated to farmers from the state office during the war continued to decline during the year, as did the number of bulletins issued by the extension service.

Bulletin Writers Scarce

The pressure of post-war tasks, changes in personnel, and other matters, resulted in the production of no new bulletins during the year.

While a number of bulletins were projected, staff members were unable to complete them, and, in some cases, to make any progress whatsoever.

This condition will continue unless steps are taken to correct it.

Possibilities are the hiring of non-extension persons to write needed bulletins, assignment of the time of certain extension agents and specialists for the writing of bulletins, or the purchase of some bulletins from other states where they fit Nevada conditions.

Even most of this will be difficult with the small number of specialists on the Nevada staff and with the great number of new staff members in the field.

Bulletin Requests Pick Up

The average farmer and homemaker has been much too busy in the production and conservation of food to devote much time to reading bulletins, except those directly related to the war effort. This attitude has been vividly reflected in the request for bulletins, both those of the University of Nevada agricultural extension service, and those of the U. S. Department of Agriculture, which are distributed through the extension service's state office. Beginning with the year 1942, the number of requests for bulletins had declined year by year.

During 1946, however, a slight increase in requests for bulletins developed, perhaps a return to the pre-war use of bulletins by farmers and homemakers.

But the development of new media of mass communication may have definitely reduced the comparative effectiveness of the bulletin.

Farmers surveyed in Eaton county, Michigan, placed bulletins fifth on their list of sources of useful information.

THE RADIO SERVICE

Newest medium of mass communication is radio.

In part because of its novelty, radio has become one of the most popular means of the dissemination of information.

Important everywhere, it is especially so in a sparsely populated state like Nevada. And it is ready-made outlet for extension information.

Nevada Farmers Lead Nation in Radios

Among the most avid newspaper readers in the nation, Nevada farmers and homemakers are also among the most avid radio listeners.

This fact has been made evident by previous surveys, but was substantiated in a recent survey made by the Joint Committee on Radio Research.

The study showed that in percentage of radio sets in rural homes, Nevada, along with Oregon, led the entire nation with 97 percent of the state's farm homes having radios.

Extension Early Cooperator With Radio

Since the early development of radio, the University of Nevada agricultural extension service has been active in the use of this new medium of mass communication.

Even before any stations existed in Nevada but during the period when stations in other states were receivable in Nevada, the extension editor began to cooperate with the western radio service of the U. S. Department of Agriculture which, in turn, provided agricultural copy for National Broadcasting Company stations in the Far West.

Nevada's First Station Assisted

Nevada's first station, KOH, Reno, eventually became affiliated with the National Broadcasting Company and provision of copy for broadcast through the western radio office of the USDA was accelerated in view of the fact that a Nevada station carried it.

Generous production of such copy continued by the Nevada extension service until the termination of the chain broadcasting of Western Agriculture in the west through the U. S. Department of Agriculture.

From the very beginning of KOH's development, various farm programs were broadcast and, in all of them, the U. of N. extension service lent a helping hand. In recent years, this has involved not only the supplying of local copy and the encouragement of local cooperation by extension personnel, but even the organization of the farm program.

Farm News Program Established

In 1945, the broadcasting of farm news by KOH became so important that a special farm editor was employed. At first, a 15-minute daily farm news program was given. The program was organized and arranged by the extension editor.

In the years between, this program developed until it is now broadcast twice a day, and an editor is devoting about half his time to this function.

One of the programs is put on early in the morning and the other during the noon hour.

On account of its limited power, KOH, at present, reaches only western Nevada, but an application has been made for the increase of power which would enable it to cover the entire state.

Radio station KOH is the only station in the state, at present, to have a complete farm program.

Other Stations Licensed

For many years, KOH was the only station in the state. A few years ago, however, another station, KENO, was established in Las Vegas.

The extension editor immediately made available to it the regular news stories of the University of Nevada agricultural extension service and also arranged for it to receive Farm Flashes, which were edited locally by the county agent whenever necessary.

KENO uses this copy as part of one of its regular news broadcasts, a spot probably even better than a regular farm period.

More New Stations Go On Air

This was the radio situation in Nevada up until the spring and summer of 1946. At that time, three new stations received licenses from the Federal Communications Commission and began to broadcast. One of these stations is in Boulder City and the other two in Reno. All have limited power.

Since the Boulder City area is adequately covered by KENO, Las Vegas, nothing was done about servicing there. Moreover, agriculture is exceedingly limited in the Boulder City area and information about it for radio broadcast would have to be handled by the agents in Clark county.

Both the new Reno stations, KOLO and KATO, are so concerned with getting started that, so far, they have shown little interest in farm news.

Moreover, both are predominantly appealing at the moment to the Reno and Sparks audiences.

In time, however, both these stations probably will wish to develop farm programs.

Two additional stations in the state may be established within the next year--one in Elko and one in Ely.

Nevada To Be Well Covered

When, therefore, all of the new stations, together with the old, are operating, the entire state of Nevada will be well covered by radio for the first time in its history. Whereas other nearby states with not much greater population have, for a long time, had complete radio coverage, Nevada has not.

This will bring about a new situation in the development of radio as an agency of extension communication.

New Approach Needed

It will involve a new approach on the part of the extension service.

Ideally, it should involve a special service, rather than a general newspaper-radio service for the stations. So far, all Nevada stations have been entirely satisfied with the general state-wide news service which both they and the newspapers receive.

It will also involve activity on the part of agents in the communities where these stations are located. So far, practically the only agents to take any part in radio broadcasting have been those in Reno and in connection with the KOH farm program.

With the manpower situation as it is, the state office is in no position to provide special service for radio stations.

Agents In Need of Training

In the field, agents, practically all of whom know little or nothing about radio broadcasting, are hesitant to undertake the use of this medium. Training through the extension editorial office is needed, just as it is needed in farm news writing for the newspapers.

The extension editor hopes to devote considerable time in the next year to developing at least an elementary approach to these skills.

Radio Survey Is Basis

In recent years, the extension service has made a number of careful surveys of rural listening habits to Nevada radio stations. Any radio program of the future will continue to be based upon the facts brought forth by these studies.

MISCELLANEOUS

While the News Service, the radio service, the bulletin service, and the county agent service are the extension editor's main responsibility, there is another on which only a general report can be given.

That is the position of one of the persons of the service who has had extensive experience in a variety of things closely related to many of the other activities in the extension service.

And rarely a day goes by during which the extension editor is not called upon for an expression of opinion, for information, or for help in connection with the public presenation of information or visual education.

Printing Is Handled

All of the printing of any kind used by the state office during the year was cleared through the extension editor. Arrangement, styling, paper stock, typography, estimates when done by private concerns, proofing, volume, etc., all were handled by the extension editor.

As a result of this plan, the style and typography of much of the printed matter was improved and made more appealing as well as being done by the least expensive and most efficient method.

He's Franking Privilege "Lawyer"

Over the years, the extension editor has been delegated the function of what might be called the services' "franking privilege lawyer".

Normally, the duties in connection with this function are not arduous but, during the last report year, many changes were made in the federal penalty privilege regulation concerning the extension services of the various states.

A great deal of detailed work in understanding and helping others understand and apply these regulations fell on the shoulders of the extension editor.

It is unfortunate that so much time by so many persons has to be devoted to these detailed matters, but, of course, the extension service must be governed by law.

Directory of Nevada Newspapers 1947

The Nevada State Press Association
OFFICE OF THE SECRETARY
DEPARTMENT OF JOURNALISM
UNIVERSITY OF NEVADA
RENO

1947--DIRECTORY OF NEV

City	Paper	County	City Population	County Population	Trad. Area Population	Days of Publication	Publisher
Fallon	Fallon Eagle	Churchill	2,450	5,700	7,400	Sat.	Mrs. D. E. W
Fallon	Fallon Standard	Churchill	2,450	5,700	7,400	Wed.	Claude Smit
Boulder City	Boulder City News	Clark	5,500	45,000	5,500	Mon.-Fri.	Robert Carte
Las Vegas	Las Vegas Age	Clark	25,000	45,000	50,000	Sun.	F. F. Garsid
Las Vegas	Las Vegas Evening Review-Journal	Clark	25,000	45,000	50,000	Mon.-Sat.	F. F. Garsid
Las Vegas	The Nevada Courier	Clark	25,000	45,000	50,000	Tues.-Sat.	James H. Do
Gardnerville	Record-Courier	Douglas	700	2,056	4,678	Fri.	John Suverk
Elko	Elko Daily Free Press	Elko	5,200	10,000	15,000	Mon.-Sat.	Chris H. She E. B. Stening
Elko	Elko Independent	Elko	5,200	10,000	15,000	Thurs.	Warren Mon
Wells	Wells Progress	Elko	1,000	10,000	3,000	Fri.	Charles Trip
Goldfield	Goldfield News	Esmeralda	500	1,500	5,000	Fri.	Robert A. Cr
Eureka	Eureka Sentinel	Eureka	800	1,400	1,400	Sat.	E. Moyle
Winnemucca	Humboldt Star	Humboldt	3,000	5,000	5,000	Mon.-Fri.	Avery Stitse
Battle Mountain	Battle Mountain Scout	Lander	700	2,000	1,000	Thurs.	Avery Stitse
Austin	Reese River Reveille	Lander	500	2,000	1,000	Sat.	W. M. Thac
Caliente	Caliente Herald	Lincoln	2,300	8,000	5,000	Thurs.	David S. Wi
Pioche	Pioche Record	Lincoln	7,500	8,000	5,000	Thurs.	E. L. Nores
Yerington	Mason Valley News	Lyon	1,100	3,500	2,500	Fri.	Walter Cox Jack Carpen
Hawthorne	Mineral County Independent-News	Mineral	5,200	7,000		Wed.	J. R. McClos J. W. Conno
Tonopah	Tonopah Times-Bonanza	Nye	2,500	3,700	12,000	Fri.	C. R. Terrel
Carson City	Carson City Chronicle	Ormsby	4,000	5,000	5,500	Fri.	W. L. Davis
Carson City	Carson City Nevada Appeal	Ormsby	4,000	5,000	5,500	Mon.-Fri.	Arthur N. S
Lovelock	Lovelock Review-Miner	Pershing	1,500	3,000	3,000	Thurs.	Paul K. Gar
Virginia City	Virginia City News	Storey		1,216		Mon.	W. L. Davis
Reno	Nevada State Labor News	Washoe	30,000	45,000	100,000	2nd, 4th Fri.	Peter Burke Paul Weaver
Reno	Nevada Register	Washoe	30,000	45,000	100,000	Sun.	Catholic Pre
Reno	Nevada State Journal	Washoe	30,000	45,000	100,000	Tues.-Sun.	Merritt Speic
Reno	Reno Evening Gazette	Washoe	30,000	45,000	100,000	Mon.-Sat.	Graham Dea
Reno	The Mining Press	Washoe	30,000	45,000	150,000	1st wk. month	R. L. Richie
Reno	U. of N. Sagebrush	Washoe	30,000	45,000	100,000	Fri.	Associated St University o
Sparks	Sparks Tribune	Washoe	7,000	45,000		Tues. & Fri.	E. C. Mulca
Ely	Ely Daily Times	White Pine	5,000	15,000	17,500	Mon.-Sat.	Vail Pittman
Ely	Ely Record	White Pine	5,000	15,000	17,500	Fri.	Vail Pittman

* Every Nevada Catholic family plus.
† Combination Gazette and Journal.

Population figures 1940 Census or publishers estimate.
Column width in picas.
Column depth in inches.

NEVADA NEWSPAPERS--1947

Publisher	Editor	Business or Advertising Manager	Circulation	ABC, Unver., or Sworn	Ann. Local Subscription Rate	Cols. to Page	Column Width-Depth		Basic Adv. Rate-Inch Local-Foreign		Mat Max. Size
Mrs. D. E. Williams	Robert H. Sanford	Mrs. D. E. Williams	973	Sworn	$ 2.50	7	13	21½	.30	.35	full page
Claude Smith	Claude Smith	Claude Smith	1,304	ABC	$ 3.00	7	13	21¾	.42	.42	full page
Robert Carter	Marvin E. Carter	Robert Carter	892	Sworn	$ 6.00	5	12	14½	.45	.49	full page
F. F. Garside	C. P. Squires	W. V. Wright	3,600	Sworn	$ 5.00	8	12	20½	.60	.60	full page
F. F. Garside	A. E. Cahlan	W. V. Wright	10,260	Sworn	$12.00	8	12	20½	.75	.91	full page
James H. Dooley	James H. Dooley	N. J. Bernier	2,500		$ 8.00	5	2⅜	16	.75	.84	10¼x16
John Suverkrup	John Suverkrup	Annette Suverkrup	554	ABC	$ 3.00	7	12	21½	.30	.30	5 column
Chris H. Sheerin E. B. Steninger	Chris Sheerin	Chris Sheerin	1,925	Sworn	$ 9.00	8	12	20	.40	.49	full page
Warren Monroe	Warren Monroe	Warren L. Monroe	1,200	Sworn	$ 2.50	8	12	20¾	.35	.42	full page
Charles Triplett	Charles Triplett	Charles Triplett	875	Sworn	$ 3.00	7	12	19¾	.42	.42	4x15 in.
Robert A. Crandall	Robert A. Crandall	Minette Crandall	460	Sworn	$ 2.00	6	12	19¾	.35	.40	
E. J. Moyle	E. J. Moyle	E. J. Moyle	400		$ 3.00	6	12	20	.35	.30	6x10 in.
Avery Stitser	William Friel	Toni G. Uren	2,800		$ 9.50	8	12	20	.42	.42	16x20 in.
Avery Stitser	Ethel Estes	Toni G. Uren	872		$ 2.50	8	12	20	.35	.35	8x20 in.
W. M. Thacher	W. M. Thacher		472	Sworn	$ 2.50	7	13	20	.30	.30	full page
David S. Williams	David S. Williams	David S. Williams	586	Sworn	$ 3.00	7	12	20	.35	.42	full page
E. L. Nores	E. L. Nores	E. L. Nores	1,200		$ 3.00	7	12	20	.35	.50	12x20 in.
Walter Cox and Jack Carpenter	Walter Cox	Jack Carpenter	785		$ 3.00	7	12	20	.35	.35	8x15 in.
J. R. McCloskey J. W. Connors	J. R. McCloskey	J. W. Connors	1,164		$ 3.00	6	13	20	.40	.56	12x20 in.
C. R. Terrell	C. R. Terrell	Starle Terrell	1,300	Sworn	$ 3.00	7	12	20½	.30	.35	full page
W. L. Davis, Jr.	W. L. Davis, Jr.	W. L. Davis, Jr.	875	Unver.	$ 2.50	7	12	20	.35	.42	full page
Arthur N. Suverkrup	Arthur N. Suverkrup	Ruby C. Suverkrup			$ 9.00	7	12	20	.35	.40	
Paul K. Gardner	Paul K. Gardner	Paul Gardner	800	Sworn	$ 2.50	8	12	22	.35	.35	12x20 in.
W. L. Davis, Jr.	W. L. Davis, Jr.	W. L. Davis, Jr.	400	Unver.	$ 2.50	7	12	20	1.00	1.00	full page
Peter Burke Paul Weaver, Sr.	Peter Burke	Peter A. Burke			$ 2.00	7	12	20	1.00	1.00	full page
Catholic Press Society	Rev. John T. Smith	Carl Gaertner	*		$ 1.00	8	12	20	1.00	1.00	full page
Merritt Speidel, Pres.	Joseph McDonald	Joe Melcher	9,144 11,508	ABC Sun. ABC	$13.00	8	12	20¾	1.00	1.68†	full page
Graham Dean	Merrill Gaffney	Lyle Harper	15,465	ABC	$13.00	8	12	20¾	1.25	1.68†	full page
R. L. Richie	R. L. Richie	R. L. Richie			$ 1.75	5	12	14	1.50	1.50	
Associated Students of the University of Nevada	Lloyd Rogers	Richard Rowley	1,700	Unver.	$ 1.50	7	12	20	.70	1.00	full. page
E. C. Mulcahy	E. C. Mulcahy	E. C. Mulcahy			$ 4.50	7	12	20	.35	.42	full page
Vail Pittman	Paul Leonard	Paul Leonard	1,802	Sworn	$10.00	8	12	20	.45	.49	12x20 in.
Vail Pittman	Maurya Wogan	Paul Leonard	1,825	Sworn	$ 2.50				.45	.45	

All figures, except as noted, are those submitted by publishers.
Publications in bold face type are members of The Nevada State Press Association.

NEVADA AGRICULTURAL EXTENSION SERVICE

II-C 4-H CLUB WORK

ANNUAL REPORT

FOR

CALENDAR YEAR

1946

BY

PAUL L. MALONEY, 4-H CLUB WORK

FOR THE PERIOD FROM

NOVEMBER 1, 1945 to OCTOBER 31, 1946

FOREWARD

Theodore Roosevelt is supposed to have stated "If you are going to do anything for a man you must start before he is a man, real constructive work lies with the boy and not with the man."

If the rural citizenry on our American farms and ranches is to be improved in its thinking and be made more capable, more efficient, more self-reliant, with more pride in its occupation the start must be made with our rural youth.

Every 4-H Club boy and girl should be looked upon as a possible future leader in their communities, therefore their training should be with the view of giving them the vision of greater appreciation of the privileges and of the opportunities of country life.

One of the main objectives of the 4-H Club work should, therefore be to adapt the teachings of the Extension Service Programs to the needs of rural boys and girls in order to prepare them to assume the leadership aspects as relates to the social, recreational, cultural and spiritual life as well as to the efficient production and operations of the farm units and homes in their communities.

It is the opinion of the writer of this report that M. L. Wilson Director of Extension Service at Washington, D. C. gave an excellent picture of the future needs of an extension program when he stated at the extension conference at Salt Lake City that "the day is passed when the county agent must concentrate on purely production problems, that farmers and their entire families must enjoy the cultural advantages of our modern world, and the successful county agent must have that vision and a willingness to carry out a program of human relationships."

1. A. Relation with counties.

2. Methods of creating favorable sentiment toward extension work.

It is the supervisors belief that one of the most certain ways of getting favorable sentiment toward extension work, and the principles being used, is to formulate such a strong, practical plan within the counties that the people of the county will know that the extension program is based on the needs of the ranchers within the district.

Adequate news stories are furnished the extension editor. These stories are informational as regards the 4-H Club members and their specific project work, and at the same time these articles were intended to create favorable sentiment toward the extension program.

County agents are requested to submit suitable newspaper articles at opportune times and on subjects related to the agricultural programs within the counties.

In our small communities of Nevada, the county agent has an opportunity of becoming a dependable leader within the civic life of these communities. It strengthens the extension program and creates favorable sentiment for the agents to assume their responsibilities toward the community in a capable willing manner.

Farmers and towns-people of Nevada are constantly reminded that the cost of doing the extension job is not half as expensive as the cost of not doing it.

It is believed that the problem of creating favorable sentiment for the extension program is a most important one, and county agents are constantly reminded that if we are going to preserve our extension service programs and make them valuable to the entire county that agents in each county must recognize his obligation to the scheme that makes it possible. The county agent must be an integrated worker in the modern society of his communities.

3. Describe briefly the work which the supervisor does with the people of the counties in furthering extension work.

While the supervisor of junior activities works through the county agents almost entirely, yet there are instances when it is permissible to meet with the people in a direct manner.

The supervisor appears at special meetings such as annual Farm Bureau meetings, Fourth of July celebrations, county-wide club meetings and presents the long-time 4-H club objectives. Appealing for adequate local leaders to conduct the work in a satisfactory manner.

County and community leadership training meetings are attended. At these meetings the principles of leadership training secured at the Salt Lake Extension Conference has been of inestimable value and are used to the fullest extent in training leaders in 4-H Club work for Nevada. The people of a county must be made to realize that they must back a program if it is to be successful, and without the willingness of adults to assist as leaders, a 4-H club program will not succeed in being the demonstration with the spread of influence for which it is intended.

It is important that those being trained for leadership thoroughly understand the broad educational program which acquaints children with the importance and the need of certain basic agricultural training.

The supervisor accepted invitations to judge agricultural and livestock exhibits at county and state fair during 1946. It is realized that when such invitations are accepted that no placings should be made without thorough knowledge of the items judged, for only in this way can the extension program be furthered and respected.

A 4-H Club program that is adapted to the district offers an educational demonstration to the people, and is the most forceful way of presenting an improved practice to adults as well as to the juniors. These demonstrations further extension work throughout the entire state.

B. Personnel Problems.

2. Induction training and apprenticeship of new agents.

With the termination of hostilities there has been a large turn-over of county agent personnel. This naturally creates a problem in supervision, making it desirable that newly appointed or transferred agents be visited in their counties at regular intervals.

The most important, yet the most difficult, is to get the newly appointed agent to be able to see the vision of the broad objectives of the junior programs. As a matter of fact, this problem applies to the agents who have a long service as well as to the newly appointed ones.

In the past, emphasis has been placed upon feeding a calf, pig or lamb and the club member and parents hope that the member will receive more than the going price for his animal. While it is colorful for a ten year old boy or girl to feed a 1000 pound calf and receive a high sympathy bid for the animal, yet, as a matter of fact, the feeding of the animals, and the making of a few dollars should be only a means to an end. The end is not the money as a final result; of more value will be whether or not the club member has been taught to think, to analyze situations, to know how to get along with his fellows better than before he or she joined the club.

Has the club member received sufficient inspiration from his project to challenge him to greater heights, or will he carry on for one or two years and drop out of club activities?

Do the agents realize that club members react differently at various ages, and make his plans to separate the groups according to their biological demands?

That is, do the agents realize that an average boy at 14 or older wishes large objectives, wishes to answer challenges, desires to actually own livestock or control a piece of ground as his, and that they can actually do a great deal more than the average adult gives them credit for?

Do the agents realize that boys and girls at an age of around 15 desire to be given an opportunity of expressing themselves in regards to community life, to make plans for their own future, and to be heard on many important questions?

These are some of the personnel problems which the supervisor in trying to instill into the county agents. Every county agent in the state has been visited during the year, the newly appointed or those who have been transferred, have been visited many times. These agents have been given encouragement and praise for the good features of their programs, at the same time they are encouraged to see the broad objectives of the possibilities of their work.

When it is realized that at least half of the present farm boys and girls will leave the farms for the cities, it can be seen that the actual production projects are less valuable than those which teach the members to be able to "get along with other people" and to think and analyze situations that arise.

One of the most difficult and discouraging problems confronted by our extension organization in the matter of personnel is the lack of experience, training, ability and personality of the new men secured as agents.

The newly appointed agent is given a few days in the Reno office to acquaint him with routine, he is given monthly and annual reports to study which will acquaint him with the general problems. This will give him an idea what he will be up against in a county of his own. He is taken to visit county offices where county agents can explain their office as well as field procedure.

After the agent has been in his county long enough to begin to ask himself questions, he is visited by the supervisor and subsequent visits are made often enough to give him the help and assistance needed.

Some agents catch the vision of their duties quickly while others never do.

Prospective agents graduating from agricultural college have not received any special training in youth work. Such training should be offered.

4. Improvement of working conditions to retain agents through increased salaries, retirement system, etc.

The only part of this heading coming under the authority of the supervisor is in regard to assistance being given on the county programs.

The supervisor tries to make his assistance so valuable that the agent can formulate a better, more workable program in the districts under his supervision. Thereby, making the individual agents more satisfied in their work.

C. Assisting county extension agents in determining agricultural, homemaking and 4-H programs for their counties.

1. Obtaining and analyzing local factual data.

Not having a general county agents conference or period of group instruction during the past year, the assistance has been given on an individual basis.

An effort has been made to encourage agents to analyze the needs of their individual districts and formulate certain basic projects on those needs.

War activities changed the thinking of many agents from the broad general principles of long-time outlook programs to one of immediate personal services performed for the individuals.

The problem, now seems to be to encourage the agents to analyze the local, factual needs of the changed economics of the times.

I again refer to the statement made by Director M. L. Wilson: "the day is passed when the county agent must concentrate on purely production problems, that farmers and their entire families must enjoy the cultural advantages of our modern world, and the successful county agent must have that vision and a willingness to carry out a program of human relationships."

This statement by Director Wilson is taken to the agents in the counties of Nevada. Agents are requested to study it and analyze their communities according to the valuable precepts which this statement enjoins.

An example of how the supervisor is analyzing the factual data of the communities and needs of the agents can be given in the feeding of baby beef calves for the junior livestock show: In one county farmers sell large quantities of hay each year, this hay is shipped to California by train loads. Adjoining counties produce large quantities of feeder cattle and lambs. Most of these animals pass through the hay producing county on the route to California for feeding and finishing.

Analyzing the situation causes one to determine that the hay could be fed to the Nevada cattle and sheep to better advantage than shipping it to California. A higher price would be secured for the hay and grain through feeding it on the ranch, and at the same time hundreds of tons of valuable fertilizer would be left on the ranch and available for the land.

A feeding project was undertaken in the 4-H Clubs of the county, an excellent job has been done, the champion steer of the 1946 show and the best group of steers was from this county. Yet, the ranchers have not received a demonstration whether or not they should sell their hay to California buyers or feed it out to livestock.

The 4-H Club feeding programs could determine this through their feeding records, as actual costs of producing a pound of gain is kept, together with the cost of hay and grain fed to the various calves.

The data does not apply to the ranchers demands for the reason that the dollar placed before the eye of the club member and parents blotted out the real purpose and far reaching results of these feeding demonstrations.

In the first place, calves were purchased from a purebred breeder when a month old at a cost of $125.00 to $150.00 each. The calves were not fed the same as the agent would have recommended the parent feed a carload. Oats, Barley, Wheat, ensilage and alfalfa hay are produced in this county, yet the calves were fed corn beet pulp and calf manna along with the grains grown in the district. The high price paid for the calves and the fact that grains were fed which were not grown in the district made the feeding demonstration impractical for the farmers in the area.

About the only thing that was secured from the results of the feeding demonstration was the fact that quality animals make best use of their feeds, however, one could not feed purebred calves at the prices paid. In other words, the hope of winning a prize defeated a valuable demonstration to the entire community.

The supervisor is trying to get the agent and parents to put their feeding operations on a practical basis for the best interest of the club members as well as the community. Through feeding the calves in car lots, just exactly the way the agent would recommend that the parents feed them; selling the calves on the open market, thereby, making a real valuable demonstration out of the club programs.

A check shows that these boys and girls were not called together for the purpose of analyzing the agricultural needs of the county, nor called together for the purpose of studying the community needs separate from agriculture, they were not given any opportunities to express themselves nor taught anything about the "human relationships" or "cultural advantages" so badly needed. The club members did not have an opportunity of developing their own meetings, they knew that they were not rendering a community service.

In other words, there was TOO MUCH PROJECT WORK.

The supervisor has explained this situation to the agent and has received a promise that the 4-H club programs in this county will be based on the practical approach adapted to the district.

2. Part committeemen, local leaders, club members and other people play in determining program.

A successful junior program depends to a great extent upon the type of local leaders heading the undertaking. Proper training for these leaders is a most difficult undertaking. It has been found that older club members, those who have graduated from club work, make very good leaders. Agents are encouraged to take advantage of this supply of leadership in formulating their plans.

An over-all adult leader gives proper direction to these younger leaders. At the same time the ambitious, young club graduate gives enthusiasm and can emphasize the recreational side of the programs to good advantage, they can also easily see the advantages of permitting the members the opportunity of formulating plans for their own meetings.

It is believed that the use of the junior leaders has certain advantages, such as: holding the interest of the older club members; develops other leaders from the membership; provides leadership assistance to the adult leaders; and eventually advances the junior leader to full leadership responsibilities.

In the leadership training groups attended the supervisor emphasized the need for encouraging the enthusiasm of youth, stabilized by the vision of a progressive adult leader. All junior leaders should go through an intensive training program to cause them to catch the vision of the bigger field of club work based on the philosophies of Director Wilson and Mr. Ingwalson.

At a meeting of the State Farm Bureau Board of Directors, the Supervisor presented a plan to have the Directors appoint a state committee responsible for the junior programs. This committee would function in the same way as the livestock department, crops department or dairy departments of the State Farm Bureau.

Club leaders are encouraged to meet with the club members and plan their programs as far in advance as possible, this gives each member a chance to look into the future and make plans, to use their imaginations and to think. It is believed that this planning encourages more completions and gives each member an opportunity of participating and knowing that each did have a part in the plans of the club.

The supervisor suggests that junior leaders be assigned certain jobs, and be given progressively more important jobs as the member portrays the ability to carry on with more responsibility. Not start a junior leader out with full leadership status, which might discourage the prospective good leader. As an example the first year the junior leader might be responsible for securing new members; helping to plan the club programs; assisting with club records or helping conduct club tours county camps etc.

Mr. Hochbaum recently made a statement that seems to apply to the heading being discussed, the statement is as follows: "We need a thorough overhauling of our whole program cancept from the college president and dean down to the assistant extension agents and the local leaders working with our agents."

The supervisor realizes his share of the responsibility in assisting the county agent, local leaders and others with the analysis of the problems and helping plan proper procedure.

3. Cooperation of specialists, county extension workers, state supervisors and leaders in planning and carrying out county extension programs.

The supervisor has received invaluable assistance from Mr. Jans, Field Agent, both through personal visit and correspondence.

County extension workers and the supervisor work closely together in presenting the program to local leaders and all work together on the programs for rural youth betterment.

While it is true that the supervisor has not been able to get all of the agents to see the vision of the broader field and demands for an enlarged program on the rural youth problems, nor any of the agents to see the complete picture, yet progress is being made in this respect and plans are for a continuation of efforts.

It is imperative that all workers concerned have confidence in each other and, with one aim in view, work for the very best interest of the whole department. The necessity for reaching the young people with vital issues and questions seems more important today than before the recent war. Youth seem to be more restless; this restlessness make for less stability, yet more stability is needed.

Dr. E. G. Kelly, Extension Entomologist, Kansas State College conducted a two day school of instruction relating to external insects of livestock. The school was held at Elko, Nevada and was attended by most all of the county agents. Dr. Kelly presented the subject matter in a forceful way. This was a most instructive period and extensive results should be secured for the livestock producers of the state. In the course of discussion of methods of presenting the problems to stockmen, Dr. Kelly stated that the 4-H Clubs of the state offers an excellent means of bringing the information to adults of the districts.

The plans of the agents are studied and discussed by the supervisor with each agent from the standpoint that the success of the extension job is in the manner in which it is conducted in each county and each district. These plans must be attainable, yet of sufficient scope to give permanence and be practical in their application, and this program must keep abreast of the broadening requirements of farm people.

4. Integration of agriculture, home demonstration, young adult, and 4-H Club programs from the standpoint of the farm family as a unit.

The county program is discussed with the county agricultural agent and home demonstration agent together, with emphasis being placed on a complete farm and home plan including the 4-H Club members with a long-time plan of projects based on progressive standards of increasing the value of the projects each year.

That this goal is being accomplished can be realized with the increased number of club members who are purchasing dairy heifers and stock cattle.

Club members are being encouraged to actually own all of the units involved in their club demonstration. Many of the agents see the value of this type of demonstration over the one where the member "claims" the animal for a short period of time and the animal going back to the parent.

It has been found that meeting with the parents and club members together, and formulating a long-time plan for the club member either for home improvement or livestock ownership creates good feelings between the parents and the county agents.

These joint meetings also cause the club members to take their work more seriously and to realize that they are now getting old enough to plan for the future. The club members like this planning period, they enjoy the goals held out to them and it proves to the parents that planning is necessary for a happy and successful farm life.

It has been found desirable to make plans for at least five years with progression shown for each year. This permits the club member and parents to visualize and end result. It is impossible to effectually put into affect a planned program on every farm, for some parents and club members do not have the capacity to visualize ahead, they make no plans for more than a day at a time. There is difficulty in getting the agents to put sufficient time to these kind of farmers to finally get them to realize the value of making plans. It is the usual characteristic of these individuals to think that they know most everything about their business that is to be known, and they do not take kindly to any one thinking that they need help or that anyone could give them help. They do not read farm magazines to improve themselves and are very self-satisfied. The agents are encouraged to let those kind of individuals get their ideas in the indirect method of hearing about the improvements from progressive neighbors with the hope that they will accept them as their own ideas.

The agents are encouraged to summarize each years 4-H Club program in the presence of the parents, pointing out where mistakes have been made with suggestions for strengthening the project for the coming year. Most parents enter into such plans and summary in a wholehearted way. It is in these summaries where the alert agent can bring out valuable suggestions for improvements when considering the results as they are and as they should be.

The supervisor realizes that the farm and home should be considered as a unit in making farm plans, and that the entire family, which includes the children, should participate. This type of plan takes time to properly present and work out in detail, and with the county agent busy on so many programs it is difficult to get them to agree to put on the individual planning program, they are encouraged by the supervisor to select a few families each year and formulate plans with these families, with special emphasis on the 4-H Club programs.

5. Determining adjustments and relationships of present program.

Through personal conversations with county and home demonstration agents and a study of their plans of work, their attitude toward the enlarged program is determined. Plans for adjustments in the programs and outlook are made.

Agents are encouraged to give more time and planning to the matter of training leaders and securing a closer relationship with leaders and the county agents and supervisors.

6. Establishing goals.

The supervisor emphasizes to county agents and leadership training groups that goals should be established, not only for increased numbers of 4-H Club members, but also and possibly more important, in the improvement of project work conducted.

The population of Nevada rural people is small and widely scattered over a large area. However, this is no excuse for not reaching those rural young people. In fact it is all the more reason why these boys and girls should be reached with our valuable extension program.

The goal established by the supervisor is, that wherever a boy or girl of eligible age is found on any ranch in Nevada, that boy or girl is entitled to come under the influence of our extension program and that farm or ranch should become a demonstration area for our service.

The goal for 1946 was taken to increase the membership in our county clubs, this was taken to the counties and as a result 1946 saw the largest 4-H Club membership since 1920.

County and home demonstration agents are encouraged to establish goals for the farm and home planning work, even if it is only five plans each year, but at least make a plan and work the plan. County personnel are impressed with this concept of extension making.

7. Meeting needs of all farm families.

In Nevada where there are few specialists and few assistant agents specializing on any specific work, the county agent must be rather diversified in his or her thinking and planning.

Agents are impressed to analyze the needs of the district the desires of each club member and endeavor to fit a constructive program according to the needs of the farm families by demonstrating practices accordingly. This takes analysis and planning with the families and leaders.

D. Assistance given agents in carrying out extension programs.
1. Choice and use of means and agencies.

The supervisor attended the Salt Lake City conference held in November 1946. A great deal of valuable facts and inspiration was secured from this conference.

No county agents conference was held in Nevada during 1946. The facts and inspiration secured from the Salt Lake City conference has been carried to the counties in personal conversations with agents and leaders and has encouraged youth work for every community of the state.

One of the most important factors in a successful 4-H Club program seems to be in being able to secure and properly train adequate leadership.

A survey of the counties early in 1946 proved that 4-H Club work has been weak in several of the counties. Therefore in order to balance the state program, special emphasis was placed on these weak counties and their program strengthened with many personal visits. Lincoln county was a good example of how the junior program was strengthened with emphasis being placed on Junior work.

County agents cannot be expected to carry on all of the various programs and do the leadership work with the junior groups. For this reason a good leader will increase the effectiveness of the county agent.

2. Selection, training and use of local leaders.

This heading is of such great importance to a county agents program of work that it has been discussed under various headings from different points of view.

It is the supervisors responsibility to assist county agents in securing and training leaders to successfully conduct the 4-H Club program.

Leaders do not feel sufficiently well versed themselves to take over the leadership of a club which wishes to base its regular meetings as discussion groups. The leader of such a group must be exceptionally well qualified in organization and subject matter.

The supervisor has suggested that a general leader be secured, and that this leader be responsible for the various subjects under discussion only to the extent of getting the support of subject matter leaders. Securing the assistance of some one to take the various meetings in hand at different meetings, probably a lawyer, doctor, school trustee, politician or some specialist in certain fields.

It is believed by the supervisor that local leader training schools should be held with the leader of the school well qualified to put over the important points involved. Mr. Ingwalson of the Washington office conducted such a training school in Nevada a few years ago and the results are still being followed by the leaders who attended.

It is the opinion of the supervisor that 1947 is an opportune time for another such leadership training school.

It is believed desirable to change the designation from "leader" to another name such as "councillor" for the specialized discussion group head.

It is difficult to over-emphasize the value of adequately trained leadership, as these leaders magnify many times the effectiveness of the full-time extension personnel.

5. Brief Summary of important accomplishments of county staff under your supervision.

There was secured in 1946, the largest enrollment of 4-H Club members since 1920, the date when official record keeping was instituted.

A larger number of club members are owning their livestock and crop projects than ever before. More and more plans are being made with the club members and parents, with the view of the club member getting into business for himself.

Club members are being encouraged more than ever before, to not only plan for himself, but for the betterment of the entire community. Groups are encouraged to take community projects in conjuntion with their individual project work.

The following counties sent state winners to the National Club Congress at Chicago in December 1946:

Churchill County, two delegates
Douglas County, two delegates
Washoe County, one delegate
Lyon County, one delegate

4-H Club members participated in county and state fairs in Elko County; Lyon County; Washoe County; Pershing County; Douglas County; Nye County; White Pine County; Clark County.

Achievement days were held in Lyon County; Churchill County; Washoe County; Clark County and Douglas County.

Radio broadcasts were prepared and given by club members from the following counties: Washoe; Lyon; Douglas; Churchill and Pershing.

Counties exhibiting livestock at state fairs and junior livestock show include: Washoe; Pershing; Elko; Churchill; Douglas; Nye; Lyon; Clark, and White Pine.

11. Work of supervisor with other agencies, State and Federal agencies.

The supervisor works closely with all agencies valuable assistance has been received from the Forest Service officials relative to 4-H Club demonstrations in water shed protection, range fire control and damage caused by uncontrolled fires. Forest rangers meet with club groups and outline plans for range conservation practices through deferred and controlled grazing.

The Fish and Wildlife service has rendered assistance with demonstrations on predatory control with educational discussions relating to the damaged caused by coyotes, rabbits, squirrels and gophers together with suggestions and demonstrations for their control.

The Chamber of Commerce in most all of the towns of Nevada work closely with the junior programs. Offering prizes for the most outstanding club members in the various areas.

The Nevada Bankers Association sponsor 4-H Club work throughout the state. Consideration is now being given by the Association relative to offering a $200 scholarship for the most outstanding boy or girl in range livestock.

KOH, local radio station at Reno is anxious to feature junior programs over their station at any time. This station is anxious to sponsor some kind of a prize for the most outstanding club member for 1947. Consideration is being given to scholarships and educational trips. The supervisor favors the educational trips in preference to the scholarship.

The State Fair Board encourages the 4-H department at the State Fair with premiums for various entries.

Civic Clubs such as the Lyons, Kiwanis and Rotary Clubs in many of the agricultural areas sponsor 4-H Club work with prizes for outstanding work and special emphasis being placed on the junior program at special meetings.

The Governor of the State of Nevada issued a proclamation designating 4-H Club week and encouraging every farm boy and girl in our state to take advantage of the valuable opportunities offered by the junior program.

The official cooperating organization in the counties is the Nevada State Farm Bureau. Closest cooperation has been secured from all of the State Directors. Extension workers would be greatly handicapped without the leadership and assistance of these capable and interested farm workers.

III. Evaluation of your accomplishments as a Supervisor or State Leader.

The year 1946 is the first opportunity the supervisor has had to try and work out a program on a state level. It did not require a year to realize that constant steps must be taken to improve ones effectiveness and procedure to present the goals and objectives to the agents.

Full recognition is given to the fact that results actually depend upon the county agent and leaders of the different counties for the achievements made.

Methods of making full use of the 10 guideposts has been outlined to agents and leaders.

The 4-H Club camp held at Lake Tahoe was operated on an entirely different basis during the past camp. In the past the county agent has been in charge of the various activities and each minute of the day was outlined for the club members attending. Believing that the main objective of a junior program is to cause the boys and girls to think for themselves and develop the leadership talents that they have, the running of the camp was turned over entirely to the senior club members. These senior members planned the days work and play periods together with evening programs. They were responsible for the dining hall, tent checking, demonstrations, and in fact all of the details that the county agents once took care of were given to the members. One of the most interesting features of the self-government plan was that there was not one violation of the rules relative to staying out after the bugle blew at bed time. They set their own rules, explained them to the group, got their sanction of the rules, understood why they were made and then followed them.

The following 4-H Club story is taken from the final report of Dorothy Grulli of Yerington:

"This was my first year in 4-H and I thought State 4-H Camp was swell and I really enjoyed it. We had our preference of cabin or tents to sleep in. I shared a cabin with my girl friend and two leaders, Mrs. Volin and Mrs. Carlos. You had to get up at six every morning in order to be ready for breakfast at 6:30. After breakfast we had 15 minutes to clean our cabins or tents. Then we had assembly. An officer of the day was appointed to keep order and to make all the announcements. Two inspectors were also appointed to inspect all cabins and tents to see if they were clean. The rest of the morning was usually spent on the projects you were taking such as charm, dancing, croquet, swimming, horseshoes, and table tennis.

We had different classes and teachers for each project, I took dancing, charm and swimming. In the afternoon at 2:30 we went down to the beach, the water was always cold so we didn't ever stay in very long. After dinner we usually went down to the amphitheater for a movie or some county's play. Every night there was a campfire which was always welcome cause it was quite cold. There was always a rush for mess hall when the gong rang everyone had an extra big appetite from so much exercise. Most of us got swell tans except for our poor faces which were freckled and peeling. We had to be in bed at nine every night. The food was swell. One night we had a watermelon bust, we had hot dogs, potato salad, pickles, olives, milk and plenty of watermelon. Everything was delicious. The last two days we had motor boat rides for $1.00, it was really thrilling, the night of the dance was the most fun, we danced to accordian music until 11:30. I had a swell time and I hope to go to camp again next year."

A few of the agents have seen the advantages of developing their 4-H Club programs on a long-time basis, others will ultimately catch this vision of the actual value of club work not only to the member but to the entire county. As an example the following is taken from a letter from County Agent, Ray K. Petersen of Las Vegas:

"Would you please send me a supply of 4-H enrollment cards. I believe I shall attempt to have the boys, enroll this fall instead of waiting until next spring. With the possible exception of the beef calves, the livestock projects are on a year round basis and: therefore, do not fit into seasonal meetings and seasonal record keeping. I will attempt to hold a meeting once a month throughout the year in order for the boys to round out their livestock projects in the proper manner."

Mr. Jans once stated: "Show me the agent with a mediocre 4-H Club program and I will show you an agent with a mediocre extension program, as 4-H Club work is an integral part of the extension agents work." This philosophy is repeated to the agents in an effort to get them to realize their responsibility to junior work.

Some have accepted the challenge to coordinate 4-H Club work and the adult programs in extension planning. As an example a 4-H Club program of range livestock improvement can be made to apply to the adults in every district of the state. Through teaching the club members the practices which are desired for the county, the adults will absorb these practices if proper publicity is given to the steps being carried out by the club members.

The extension editor was supplied with newspaper articles outlining the methods of feeding, finishing and managing calves for livestock shows. The Extsion editor also sent articles to all the state papers regarding 4-H Club Camp, National winners of State contests and other subjects time to get the best results for the junior programs.

UNIVERSITY OF NEVADA

AGRICULTURAL EXTENSION DIVISION

CECIL W. CREEL

DIRECTOR

Annual Report of Extension Work in Soil Conservation

For the Period
November 1, 1945 to October 31, 1946

Otto R. Schulz
Extension Soil Conservationist

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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION DIVISION
AND UNITED STATES DEPARTMENT OF AGRICULTURE
COOPERATING

I. NAME OF PROJECT III Extension Work in Soil Conservation

II. PERIOD COVERED November 1, 1945 to October 31, 1946

INTRODUCTION:

In accordance with a Memorandum of Understanding formulated between the Agricultural Extension Service and the Soil Conservation Service, an Extension Soil Conservationist was appointed on July 1, 1937. This Memorandum of Understanding provides for educational work through the State Extension Service in furtherance of soil conservation, on such areas and to such extent as may be mutually agreed upon by the state director of Extension and the state coordinator of the Soil Conservation Service; and, the encouragement of legally constituted soil conservation associations or districts so constituted by law to provide for general, effective, and permanent erosion control. It further provides through the office of the state coordinator for furthering unity for purpose among state agencies in all development of plans, cooperative arrangements, soil conservation legislation, and policies of soil conservation, to the end that a coordinated soil conservation program for the state may be effected.

The Soil Conservation Program, as formulated by the State Soil Conservation Advisory Committee and approved by the Soil Conservation Service, provides for project demonstration areas, CCC camps, soil conservation associations or districts, and general land-use and soil conservation practices to be followed in the development of the work in the state. The object of this program is to bring about a realization of the seriousness of losses due to erosion and to demonstrate the various practical measures of erosion control and practices for conserving soil and moisture through proper land utilization.

ORGANIZATION:

The Soil Conservation Service in this state functions under the supervision of J. H. Christ, Regional Conservator of Region Number 7, which includes the states of California, Nevada, Oregon, Washington, Idaho and Alaska and Hawaii, with the Regional office located at Portland, Oregon. The administration of all soil conservation service activities in Nevada centers in the state office located in Reno, with Mr. George Hardman as State Conservationist.

Within the state, the activities are centered in five district offices located at Yerington, Ely, Caliente and Elko, out of which supplemental technical services are supplied through the work units.

The major activities of the service were carried on through the nine organized soil conservation districts located in Lyon, Douglas, White Pine, Lincoln and Clark counties. During the year organization of three additional districts located in Elko and Humboldt counties have been completed. The Lovelock Valley district which was petitioned for in Pershing County was declared not practical and feasible by the state soil conservation committee after hearing of protests by farmers of the area. A petition was received for the organization of a district in Eureka county.

In other areas of the state the activities center around off-area demonstration farms, under cooperative arrangements between the Soil Conservation Service, and the Nevada Agricultural Extension Division of the University of Nevada.

OBJECTIVES:

The duties of the Extension Soil Conservationist, as outlined in the Plan of Work approved by the Extension Service and the Soil Conservation Service, are as follows:

1. It shall be the duty of this specialist to coordinate the activities of the Soil Conservation Service and the Agricultural Extension Service in the educational phases of the State Soil Conservation program.

2. The state soil conservationist, working through special agents or directly with county agents, will:

a. Assist county agents in:

   (1) Conducting soil conservation demonstrations with individual farmers.

   (2) Selecting soil conservation committees.

   (3) Organizing soil conservation associations.

   (4) Developing county or association soil conservation programs based on the State Soil Conservation Program.

b. Prepare subject matter information for 4-H Club members and vocational classes.

c. Set up exhibits for use at state and county fairs and such occasions in cooperation with the regional information office and state extension editor.

d. Conduct farm tours in cooperation with county agents for inspection of soil conservation demonstrations.

e. Address farmers meetings and other groups on need for the appropriate measures of erosion control and practices for conserving soil and moisture.

f. Secure services of subject-matter specialists of the Extension Service, Soil Conservation Service, and Experiment Station for assistance in the program as need arises.

g. Distribute information through method demonstrations, the press, film strips, and radio, in cooperation with the regional information office and state extension editor.

3. The state soil conservationist, working through the county extension agents, the Soil Conservation Service, or directly with the parties concerned, will:

a. Inform the state extension workers of the provisions of the State Soil Conservation Districts Law.

b. Conduct educational programs on provisions of the Act in areas selected by the State Soil Conservation Committee in which the first educational work should be started.

c. Assist the State Soil Conservation Committee in determining the need, economic advisability, and the correct size for administrative purposes of proposed districts, assist in preparing boundaries and legal descriptions of districts selection of supervisors, and otherwise assist in organizing districts.

d. Cooperate with the state coordinator and the district supervisors in formulating plans of operations for legally organized districts.

e. Assist in informing people of the districts of the plans formulated for the districts.

GOALS:

The specific goals as submitted in the Plan of Work for the year are as follows:

1. The State Soil Conservationist assists the State Soil Conservation Committee in the organization of Soil Conservation Districts, under the State Soil Conservation Districts Law.

2. Encourage and assist county agents and farmers to establish 10 additional off-area individual farm plans in cooperation with the Soil Conservation Service.

3. Cooperate with Nevada Experiment Station in conducting tests to determine the possibilities of use of commercial fertilizers in the Soil Conservation Farm Planning Program in Nevada.

4. Cooperate with the AAA by attending meetings of the State Technical Committee and formulating and encouraging the use of practices that will promote the conservation program in Nevada.

5. Stress the importance of using latest irrigation methods and practices to secure maximum benefits from use of irrigation water.

6. Meet with county agents, SCS Technicians and district supervisors to develop and forward the Soil Conservation Program.

METHODS AND ACCOMPLISHMENTS:

Soil Conservation programs have been stressed throughout the state and many conservation measures have been effectively carried out by farmers cooperating with federal agencies. Of the vast area of federal owned lands within the state, a major portion is now included either within national forests and administered by the Forest Service or is in grazing districts and administered by the Grazing Service.

On the privately owned lands, the Agricultural Adjustment Administration, the Soil Conservation Service, the Extension Service and other federal and state agencies are cooperating with farmers in promoting soil and water conservation practices and programs.

During the past year the work of the Soil Conservation Service has continued to extend from demonstration projects and areas within the districts to all sections of the state by conducting additional off-area demonstration farms in cooperation with the Nevada Extension Service. However, the most intensive work of the Soil Conservation Service was carried on in the areas included within the nine organized soil conservation districts.

The accomplishments on the specific goals as set out in the program of work for this year, are as follows:

1. District Organization.

The organization of the Owyhee Soil Conservation District, located in the northwestern part of Elko county was completed during the year. The two appointed supervisors and the state committee petitioned the Secretary of State for Certificate of Organization which was issued on February 26th. Nominating petitions were received by the State Committee in April for three additional Directors. The state committee set May 4th as the date for the election which resulted in Hugh Bienoth, Dan Williams and Howard Morse being elected. The appointed and elected directors then met and organized by electing their officers. The County Extension Agent was elected as secretary of the board.

The Star Valley Soil Conservation District located in the central part of Elko County completed its organization during the year. The formal hearing for this district was held on December 10, 1945. The state

committee declared the organization of the district practical and feasible and set January 7, 1946 as the date for the referendum which was favorable. Frank Winchell and Harvey Dahl were appointed supervisors, who with the state committee petitioned the Secretary of State for Certificate of Organization which was issued on February 26th. Nominating petitions for additional supervisors were received by the state committee and the election of three additional supervisors held on May 4th with H. H. Cazier, J. W. Helth and Oscar Goodale being duly elected. The appointed and elected supervisors then met and elected officers. The County Extension Agent was elected as secretary.

The Paradise Valley Soil Conservation District is located in the northeastern part of Humboldt County. The formal hearing was held on December 8, 1945. The state committee considered the results of the hearing and determined the organization of the district practical and feasible and set January 5, 1946 as the date for referendum which showed a favorable vote. On January 17th the state committee appointed Rudolph R. Schwartz and Robert J. Bankofier directors, who with the state committee petitioned the Secretary of State for a Certificate of Organization which was issued on February 26th. Nominating petitions were received by the state committee and election was held on June 8th, at which time George Miller, Harold Johnson and Elmer Cathcart were duly elected. The appointed and elected supervisors then met and elected officers. The County Extension Agent was elected secretary.

The Lovelock Valley Soil Conservation District included the Central portion of Pershing County. The formal hearing was held on December 13th, 1945. The referendum was held and followed by several groups of farmers appearing before the state committee requesting that the district not be completed at this time. After due consideration the state committee determined the district not feasible and practical and discontinued further organization.

The Eureka County Soil Conservation District includes all of Eureka County. The petition for this district was received by the state committee and a public hearing was held on September 26th, which due to small attendance was recessed until the annual county Farm Bureau meeting which will soon be held.

Educational activities were carried on in these areas by the County Extension Agents through use of off-area demonstration farms, farm center meetings, personal visits etc. George Hardman, State Conservationist and other soil conservation service personnel also actively participated in forwarding and explaining the organization procedure of these districts.

2. Off-Area Farm Plans:

Owing to the curtailment of funds by the Soil Conservation Service for technicians in charge of planning off-area demonstration farms, this program was not emphasized as much as in previous years, therefore a fewer number of off-area requests were made. Several of the requests made by the larger holdings have not been undertaken by the service as they would have been too costly. A larger area of the state is now included within districts which eliminates the need for further off-area planning in these areas.

The table on the following page gives the statistical data on the number of plans requested and completed during the year with totals up to the present time. This summary is analyzed by counties and shows the demonstrations are located in all the important agricultural counties of the state. These off-area demonstration farms have been a main factor in the increased interest in soil conservation districts according to reports from county extension agents. As new districts are organized in areas where the off-area plans are located they are transferred to district plans.

3. Fertilizer Tests:

The cooperative field test program was carried through on a somewhat curtailed basis again this year. Most of the writers time was taken up with the Farm Labor Program during the early spring when it was necessary to devote considerable time to this program and the Agricultural Experiment Station has not employed anyone to Mr. Willhite's position who cooperated with us on this program. However some increased participation was secured in the counties where plots were put out and checked by County Extension Agents. Arrangements were also made with Mr. M. R. Miller, Experiment Station Chemist to make analysis of grasses on fertilized plots in Elko County.

The fertilizer spreader which was purchased by this office for putting out small test plots was made available to the County Agents upon request for establishing test plots.

State-wide news stories were prepared by the writer and distributed through the Extension News Service emphasizing to farmers the need of securing fertilizer early and suggestions on proper storage of fertilizer on the farm. The proper use of fertilizer in areas where results are known and types of crops responding to fertilizer treatments were also stressed.

Several conferences have been held with County Extension Agents, and representatives of the Experiment Station on further expanding experimental work with commercial fertilizers on Nevada soils and it seems very promising that this program will receive considerable more emphasis next year.

STATUS OF OFF-AREA FARM PLANS
AS OF NOVEMBER 1, 1946

County	Number of Farm Plans As of November 1, 1945				Number of Farm Plans Nov. 1, 1945 to Nov. 1, 1946				Total of Farm Plans As of November 1, 1946			
	Requested	Acreage	Completed	Acreage	Requested	Acreage	Completed	Acreage	Requested	Acreage	Completed	Acreage
Churchill	14	2202	14	2202	0	0	0	0	14	2202	14	2202
Clark	13	1877	13	1877	2	230	2	230	15	2107	15	2107
Elko	15	19249	12	23845	0	0	0	0	15	19249	12	23845
Esmeralda	5	4740	3	4460	0	0	0	0	5	4740	3	4460
Eureka	3	5640	3	5640	0	0	0	0	3	5640	3	5640
Humboldt	10	58133	10	58133	0	0	0	0	10	58133	10	58133
Lyon	6	6840	6	6840	1	1000	0	0	7	7840	6	6840
Nye	3	12495	2	760	2	2350	2	2350	5	14845	4	3110
Ormsby	4	2962	4	2962	0	0	0	0	4	2962	4	2962
Pershing	1	3000	1	3000	0	0	0	0	1	3000	1	3000
Washoe	19	10073	18	8853	1	400	0	0	20	10473	18	8853
TOTAL	93	302211	86	118572	6	3980	4	2580	99	306191	96	121152

The use of DD as a soil treatment for the control of nematode on potatoes was again tested by several farmers cooperating with County Agents in Lyon and Washoe counties, assistance was given in checking results on some of these tests and indications are that this treatment may be effective in reducing nematode infestation when properly applied.

4. AAA Cooperation:

Meetings of the State Technical Committee of the Agricultural Adjustment Administration were attended at which the different practices of the program were discussed and suggestions made for changes, and consideration given to new practices to be added to the program.

The conservation practices of this program have been of assistance to farmers in meeting the expense of carrying out the work. Such practices as land leveling and construction of proper irrigation structures have been emphasized to the greatest extent.

5. Irrigation Practices.

The importance of irrigation practices were stressed during the year through the regular extension programs, Soil Conservation Service farm plans, and the AAA program. Payments made by the AAA for such practices as construction of check dams and drops, and reorganization of farm irrigation systems and land leveling, assisted the farmer in carrying out these improvement programs, which materially assisted in forwarding the program. In organized soil conservation districts, loan of equipment has been made available to assist farmers in leveling land in accordance with a complete farm plan. Engineering assistance provided by the Soil Conservation Service has assisted farmers in organized districts in carrying out this program.

Many contractors had heavy equipment which was idle due to curtailment of construction projects, and therefore they sough contracts on land leveling which materially increased the acreage of land leveled. This practice is of great importance to soil and water conservation and increased crop yields and the large acreage leveled the past year is most encouraging.

6. Meetings With County Agents, SCS Technicians etc.

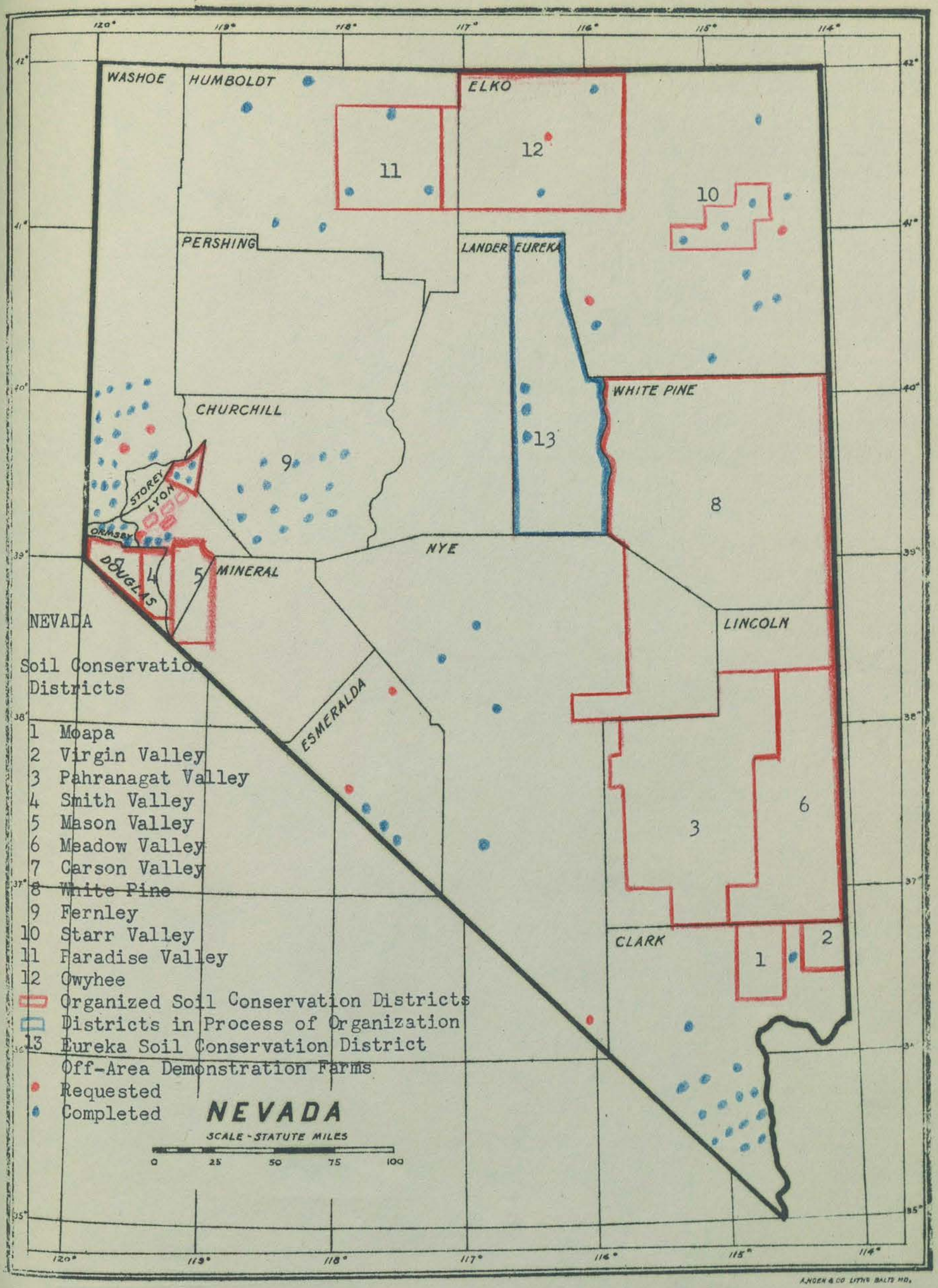
Several conferences were held with County Extension Agents and Soil Conservation Service Technicians at which time various phases of soil and water conservation practices were discussed also agency relationships and methods of improving programs. Meetings of the State Soil Conservation Committee were attended and many conferences held with George Hardman, State Conservationist at which various phases of the conservation program were discussed.

Mr. E. C. Hollinger, Extension Soil Conservation Service Conservationist from Washington discussed the soil conservation program at meetings with county extension agents and soil conservation service technicians. He also was taken on a tour of various projects to see the program in operation on the land. His suggestions on methods of forwarding the program were well received.

7. Outlook:

During the coming year farmers will be faced with the period of transition from heavy war-time production to that of a peace-time economy. Food conservation practices should be the basis for this long time adjustment. Many of the practices that could not be carried out in past years owing to shortage of equipment, materials and labor should be stressed as these items become available to the end that each farming unit will be well balanced and productive.

The map on the following page outlines the areas of Soil Conservation districts and gives locations of off-area demonstration farms.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WHITE PINE
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LYON
ORMSBY
DOUGLAS
MINERAL
NYE
LINCOLN
ESMERALDA
CLARK
NEVADA
11
12
10
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8
4
5
3
6
1
2
Soil Conservation Districts
1 Moapa
2 Virgin Valley
3 Pahranagat Valley
4 Smith Valley
5 Mason Valley
6 Meadow Valley
7 Carson Valley
8 White Pine
9 Fernley
10 Starr Valley
11 Paradise Valley
12 Owyhee
Organized Soil Conservation Districts
Districts in Process of Organization
13 Eureka Soil Conservation District
Off-Area Demonstration Farms
Requested
Completed
NEVADA
SCALE - STATUTE MILES
0 25 50 75 100
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UNIVERSITY OF NEVADA

AGRICULTURAL EXTENSION DIVISION

CECIL W. CREEL

DIRECTOR

Annual Report of Extension Work in Farm Labor

For the Period
January 1, 1946 to December 31, 1946

Otto R. Schulz
State Supervisor Farm Labor
And
William A. Goodale
Ass't State Supervisor Farm Labor

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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION DIVISION
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COOPERATING

I. NAME OF PROJECT — VII Extension Work in Farm Labor

II. PERIOD COVERED — January 1, 1946 to December 31, 1946

III. INTRODUCTION:

The Extension Farm Labor Program for 1946 was carried through under the direct supervision of the Director of Extension and with the help of the members of the State Farm Labor advisory committee as has been the procedure since the beginning of the program in 1943.

The problems which had to be met in 1946 were of a slightly different nature than those which confronted the program in previous years. This is because, as we pass through the reconversion period, no definite planning over any great period of time can be done, but a program of adjustment to meet changing conditions has had to be adapted. This is shown by the circumstances of the past year. Whereas farmers were asked for another year of record production and being faced, at the beginning of the year, with what appeared to be a labor demand and supply comparable to 1945, it appeared that it would again be very difficult to recruit sufficient labor. However, it developed that the supply of domestic labor increased to such an extent that orders for foreign workers had to be cancelled, there being about 46% of the 1945 number of Mexican Nationals imported, and local placement dropped to 67% of 1945. This showes that many workers were finding their own jobs, that farmers were able to more readily hire workers without aid and that workers were staying on the job a longer period of time. It also shows, as born out by County Agents Narrative Reports, that labor saving equipment is playing a larger and larger part in agriculture.

Since May 1, 1943 when the Extension Service was given the responsibility of this program, there has been 23,705 placement of agricultural workers. These placements by years, with the number of orders received and the number of farmers with whom workers were placed is shown below:

	No. of Orders	No. Placements	No. Farmers
1943	3206	5618	1143
1944	3250	6069	1321
1945	7236	7186	1359
1946	3667	4832	1200
1947	2730	4795	1058

IV. ORGANIZATION:

On May 10, 1943 the Agricultural Extension Service of the University of Nevada entered into an agreement with the Administrator of the War Food Administration whereby the Extension Service would assist in providing an adequate supply and distribution of farm workers in the State of Nevada for the production and harvesting

of agricultural commodities essential to the prosecution of the war, in accordance with the Federal Act of April 29, 1943, (Public Law Number 45). The Congress and President recognized the need for continuing this program during 1944 and thereby enacted similar legislation known as Public Law 229. In accord with this legislation, a supplemental agreement was signed between the War Food Administration and the University of Nevada continuing the aforementioned program in effect for the calendar year 1944. The continuation of the war and the ever diminishing supply of farm labor caused this procedure to be followed again for 1945. Requested high production of farm commodities to meet the threatening world famine following the war and a still very questionable labor supply caused the program to be carried on through 1946. and again in 1947 to Jan. 30, 1948

State Organization:

The above agreement entered into by the University of Nevada and the Secretary of Agriculture places the responsibility of the Farm Labor Program on the Director of Extension. Therefore, this program has been operated under the direct supervision of C. W. Creel, Director of Extension, who has taken an active part in promoting, establishing policies and forwarding all phases of the program.

The personnel on the state level consists of a State Supervisor and one Assistant State Supervisor. Arrangements were made with the Dean of the College of Agriculture for the part-time services of Mr. Titus, Agricultural Engineer, to stress labor utilization and conduct demonstrations on use of labor saving equipment and devises. During the peak seasons, two additional Assistant State Supervisors ~~are~~ were used - one on the Victory Farm Volunteer Program and the other on Housing and Transportation, and Foreign Labor Program.

The Assistant Director of Extension and State Extension Specialists have assisted in various phases of the program, such as determining needs, and developing full utilization and efficient use of labor, and conducting demonstrations with labor saving equipment.

The State News Editor was in charge of all State-wide publicity using regular educational channels, such as newspapers, radios, posters, and pamphlets. He also prepared material for use by County Extension Agents in the counties.

State Farm Labor Committee:

The State Farm Labor Committee appointed by the Extension Director at the beginning of the program in 1943 has served throughout ~~the four years of~~ the program. Its members represent all the sections of the State and major types of agriculture. The Committee functions in an advisory capacity on the farm labor program and assists in informing people within their areas of the labor problems and means of solution.

The names and addresses of this Committee are:

William B. Wright, Chairman, Deeth, Nevada
~~Pete Henrichs, Vice-Chairman, Yerington, Nevada~~
Edward A. Settlemeyer, Secretary, Reno, Nevada
Norman Annett, Member, Wellington, Nevada
Fred Dressler, Member, Minden, Nevada
Edwin C. Marshall, Member, Logandale, Nevada

Although it was not found necessary to hold a regular meeting of this committee during 1946, all its members were contacted numerous times for advice on problems of the program.

County Organization:

County Extension Agents were given the responsibility of the Farm Labor program in their respective counties. Twelve county Farm Labor Assistants were appointed for periods from three to six months to assist agents during the peak season and fourteen county clerks or clerical assistants were appointed on part-time basis according to need in the counties.

The County Extension Agents office was used as the center of the activities in all counties of the State. In one county, it was found necessary to rent additional office space for housing the Farm Labor activities during the peak season.

In Clark and Washoe Counties, recruiting centers were also established in the agents' offices for recruitment of workers for State-wide distribution. These locations are where most of the workers congregate and therefore provided sources from which labor could be drawn for other areas.

County Advisory Committee:

County Advisory Committees of from three to seven farmers representing the different communities of the counties and the various types of agriculture acted as advisory committees to the County Extension Agent in determining the policies and in assisting with the Farm Labor Program in the counties. These committees also acted as County Wage Boards in those counties where this was found to be necessary.

V. PROPOSED SOLUTION:

To assist farmers in meeting the critical labor problem, the Extension Service, in cooperation with the Farm Labor Advisory Committees, developed the following procedure:

1. Determination of farm labor requirements by counties for major enterprises and periods of need.

2. Complete mobilization of all available workers to be undertaken in every county, community and neighborhood.

3. Training programs to be provided in cooperation with the State Department of Education to give essential training to inexperienced workers.

4. Educational programs to be conducted with farmers to secure their utmost cooperation in the use of untrained workers. Farmers will be encouraged to increase the practice of exchanging labor between farms. The best methods developed for full utilization and most efficient use of labor will be stressed.

5. Providing intrastate transportation for workers when needed.

6. Programs developed by the Labor Branch, P.M.A., for recruiting workers from outside the state, will be discussed with farmers and assistance will be rendered agencies responsible for handling these programs.

VI. METHODS AND ACCOMPLISHMENTS:

1. Determination of Requirements.

The determination of requirements or need of workers is considered one of the most important factors relating to all phases of the Farm Labor Program; therefore, this was one of the first items undertaken early in 1943. During 1943 a very detailed survey of need was conducted by listing each farm with its labor requirements. During that year a close analysis of actual requirements were checked with the estimated need and through this experience and that of 1944 ~~and 1945~~ and with the changing labor supply in mind, estimates of requirements for 1945 were made. These estimates were made on the county level and after the need was determined, the County Agent and County Farm Labor Advisory Committees determined all the available labor supplies within the County and then forwarded a request to the state office for the labor needed from outside the county to fill their needs.

By this method of determining needs by individual farms, the information becomes very valuable in arranging for better utilization of labor and also the exchange of labor and equipment between farmers of the community.

The operations requiring important quantities of hired labor are the handling of range cattle and sheep, commercial dairy farms, haying, grain, ~~and~~ potato, onion, and truck crops and tomato plants. A considerable number of extra men are hired for miscellaneous tasks under the general heading of spring and fall work.

About 2,800 men are employed year-round as general farm or ranch hands. In the range country, most of these men will work as cow hands or on specialized jobs with sheep when extra work is to be done with the stock, as in lambing or the roundup. About 500 men are employed as year-round riders with cattle and 1,000 as sheepherders, camp tenders, etc. About 200 extra riders are employed in the spring and again in the fall. Around 2,000 extra men are used for lambing. Dairying is largely

a family enterprise in Nevada and only about 350 dairymen are hired.

Haying requires a relatively large amount of seasonal labor, most of it of a migratory type. A peak load of 6,200 men is reached at the height of the season. The requirements and timing of hay labor needs for the three areas of the state are quite different. Southern Nevada uses about 200 men more or less continuously in alfalfa harvest from May to October. Western Nevada uses about 2,500 for alfalfa and tame hay with the peak reached in late June, followed by a ~~sag~~ to about half that number through July and a slightly lower but broader peak about the first of August. Grain harvest blends in with the second crop of alfalfa but second crop hay and grain combined normally use somewhat fewer men than first crop hay. Third crop hay comes on in the last of September and used about half as many men as for other crops. The range country of the Northern and Eastern sections of the state starts haying in late June but does not get into full swing until July and continues at a declining rate into September on the larger ranches. The peak number of hay hands employed is about 3,500 and occurs in July.

Overlaps
A Potato harvest overlaps or closely follows third crop alfalfa, about the first of October and requires about 800 to 1000 workers.

In Southern Nevada, truck crops and tomato plants reach a peak labor requirement of about 300 workers in April and May.

2. Mobilization - Supply

Following the determination of need, it was necessary to mobilize all forces to see if the need could be supplied. The cooperation of various organizations were secured such as schools, Chamber of Commerce, Farm Bureaus, etc. to lend their assistance in interesting and listing people who would be available for farm work. Through this procedure, counties were able to determine fairly accurately what their needs would be from outside the county. While this phase of the program did not produce a large number of workers, it materially assisted in bringing to the attention of all people the need of agricultural workers. It did not get a large number of workers, as in our small populated areas there is not a very large number of people available who could leave their work for long enough periods to materially help the agricultural production program, except for the youth in which interest was considerably stimulated by this method.

The results of this program indicated that about 70% of the need for year-round workers and 40% of the seasonal workers could be secured from within the state. It also brought out that one of the most difficult factors to estimate was the movement of regular transit workers into the state and counties during seasonal operations. It was found during 1947 that this movement was greatly increased over the previous war years which made necessary an immediate adjustment of the estimated need for outside labor.

3. Training Programs:

Training programs developed in cooperation with the State Department of Education were limited mainly to High School youth volunteering for farm work. County Extension Agents and Vocational Agricultural instructors cooperated in providing necessary instructions. This training consisted mainly of giving boys and girls information on farm life and the conditions and type of work so that they would know what to expect when they got to the farm. The training for specific jobs was placed with the farmer for on-the-job training.

Training meetings were held with farmers, at which time they were given information on training methods and how to explain different jobs to the youth. After youths were placed on the farm, some follow-up visits were made to determine effectiveness of program and make further suggestions where necessary.

This same procedure was followed for all workers and Mexican Nationals.

The reports received from the follow-up visits were very gratifying as it was found that the farmers conducted some very good training programs and many of the inexperienced workers soon were found to be very good hands with horses and farm machinery.

4. Educational Programs With Farmers:

Educational Programs were conducted through regular extension methods such as Community Center meetings, newspapers, personal visits and local leaders for the purpose of securing most efficient utilization of all available labor. It was necessary to create attitudes among farmers favorable to using inexperienced workers and youth.

The exchange of labor between farmers was stressed and eight counties reported having organized programs for exchanging labor and equipment in nineteen communities. These programs were effective in reducing the total labor needs, as well as efficient use of equipment. In addition, reports show that in ~~thirteen~~ fifteen counties, ~~690~~ 767 farms were assisted in labor-saving methods, sharing labor and equipment, etc.

Some advancement has been made in bringing to farms the advantages to be gained by good housing for agricultural workers. This work has been carried on in only a few localities where housing is below the standard of the rest of the state. Little can be done along this line because most of the farms and ranches of Nevada are already equipped with houses and bunk house facilities to adequately take care of their workers.

State Extension Specialists have assisted by determining what labor-saving devices could be effectively employed and furnished information to County Agents for their use.

5. Labor Utilization and Work Simplifications

The Work Simplification Program in Nevada, while not showing anything new of a startling nature for 1946, when taken as an overall picture for the four years of the program, certainly shows some very satisfactory results. Through the efforts of County Agents and Farm Labor Associates many new and varied pieces of mechanized equipment have appeared on the farms and ranches of the state and are doing all sorts of labor saving jobs.

Power and Tractor hay mowers are used more extensively than any other piece of mechanized equipment. Many types of power buck rakes have come into use in recent years. These are both tractor mounted and truck or automobile mounted. A 24 foot hay rake is being used in several sections that cut raking time greatly. Pickup and automatic balers are handling much of the hay that was previously stacked by the old methods. Many balers are in custom use making it possible for the small farmer to get his hay baled without the expense of owning a machine. Hay choppers are becoming more popular for growers who carry on feeding operations. Storage and feeding barns are being developed along this line to save man power. One farmer uses a building 150' x 50' shoving the hay directly into the barn the full length. One man can feed 100 steers in this barn in record time. Combined harvesters, trailers for use behind pickup balers, trucks and jeeps for power for hay wagons and trailers, new type hay stackers and many other implements have come into use and are being developed.

Two pieces of equipment developed by the University of Nevada are having a profound effect upon labor requirements. These are the baled hay loader and the bale stacker. It began as a labor utilization project in 1944 by Thomas Buckman, Assistant Director, and Louis Titus, Professor of Farm Mechanics of the College of Agriculture, the baled hay loader, which originated in California, was developed to meet Nevada conditions. Demonstrated throughout the state the bale loader was immediately accepted by farmers and many have been built. In one county the agent reports that the labor necessary to load bales from the field onto trucks has been cut 75%.

Tha bale stacker was developed as a companion device for the bale loader. Also designed and built by Mr. Titus, the stacker is intended to reduce the time needed to unload the bales from the truck and to stack them. Composed of a 30 foot long bale shoot which can be raised and lowered, powered by a 1 1/2 H.P. engine, the stacker can handle bales as fast as two men can feed them onto the machine and stack them and will elevate them to a height of 12 to 14 bales. Built in 1945 and demonstrated the latter part of that year and in 1946 the stacker is not as yet as widely used as the loader. However, several have been built and growers who own both state they have a pair of labor savers of great value.

Insert B 1

Mr. V. E. Scott, Extension Economist, forwarded the work simplification phases of the program especially as it was adopted to the dairy industry and the following is an example of his activities:

During late 1945 ~~and through~~ + 1946 fifteen milking barns were built or remodelled in Western Nevada to conform to floor plans suggested by the work agent in 1945. No actual counts have been made on the amount of labor used or saved.

During the year a conference of farm engineers from the 11 western states was held at Berkeley, California, at which there was considerable discussion of simple adaptations to farm building plans to make work easier as well as to promote health of flocks and herds.

6. Transportation:

Nevada as the sixth largest state in area has the smallest population. Its agricultural centers are scattered over wide areas. About 85% of the farms depend upon hired labor for year-round and seasonal periods. It is estimated that approximately 2400 farms employ hired help. Past surveys indicate that there are about 2800 year-round workers required and approximately 6200 summer months and seasonal workers needed. About 70% of the former are recruited locally and 40% of the seasonal workers can be found locally.

This means that a large number of workers must be transported to meet area demands. It is estimated that 150 miles is about the average number of miles workers have to travel. Transportation is furnished from one county recruiting office to another county recruiting office.

To accomplish this the services of ten state and interstate stage lines are utilized as well as the vehicle services of Extension Agents and Emergency Farm Labor Supervisors.

Day hauls of V.F.V. were made in most cases by growers under the direction of Extension Agents and Farm Labor Assistants. Much of this adequate and safe transportation by the farmers was done in family cars and farm trucks.

All transported workers are sent and received by authorized agents - checking their departure and meeting them upon arrival.

A total of ~~914~~ 769 workers were transported under this program during the year. In some cases it was necessary to provide meals and a night's lodging for these workers while in the process of placement. When this was necessary, arrangements were made with local hotels and restaurants to provide this service and payment was made to them.

This program has worked very successful and made possible the greatest utilization of available workers and provided for proper distribution with minimum amount of loss of time in getting workers to the areas of need.

7. Housing:

In Nevada the Extension Service relies upon private housing to provide shelter for agricultural workers and does not operate any farm labor camps. In two areas within the state, Lovelock and Las Vegas, farmers cooperated and housed workers in a camp. Both camps were mainly used for housing and feeding Mexican Nationals who worked for various farmers within the area. All the responsibility of operation of the camps were handled by the farmers who cooperated on the program. The maximum did not at any time exceed seventy workers. County Extension

Agents and Emergency Farm Labor Supervisors have given the matter of housing first attention when placing workers.

Satisfactory housing is an important factor in attracting workers to an area of employment. Workers have not been assigned to private housing that did not meet approved sanitation and safety standards.

Educational programs stressing need of better housing have been stressed in the counties directed toward essential sanitary and housing facilities.

This program should be enlarged and well supervised in the future as there is still considerable improvement to be made on some farms.

All growers are required to furnish a cot and mattress. Workers are expected to provide their own bedding.

It is a pleasing fact that in the case of most V.F.V. a personal interest in the worker is quickly developed and the young boys are recipients of many family considerations.

8. Interstate Labor:

It was found again during 1946 that during certain sharp peak demands for labor, the Farm Labor recruiting offices could not meet the demand. These periods coincided with periods in our neighboring states of California ~~and Utah~~ when their requirements were somewhat reduced.

Through the splendid cooperation of the California ~~and Utah~~ Extension Services, ~~a plan was worked out with the Extension Service Farm Labor offices in Sacramento, Salt Lake City, and Ogden, whereby, workers were recruited in those cities and sent to Nevada to meet our labor peaks.~~

~~In this manner~~, 35 men were received from Sacramento in March, our first peak demand, to help clean irrigation ditches and canals in preparation for spring irrigation.

During April and May, ten men were transported from Ogden and 81 from Sacramento for spring work throughout the state.

Thirty-two men were brought in from Sacramento and nine from Utah for hay work in July in a few hot spots of the state.

An additional 30 men were needed to fill out a few potato digging crews in Western Nevada and they were brought in from Sacramento in October.

This portion of the 1947 program was made possible only through the hearty cooperation of the Extension Services of California, Utah, and the personnel of ~~the~~ Farm Labor offices.

9. Foreign Labor:

Due to the success experienced in previous years with the use of Mexican Nationals transported from Mexico, this labor source was again utilized in 1947 to augment the domestic supply.

Following the determination of need and the complete mobilization of workers within the county, Extension Agents certified to the State Director the number of workers needed to be imported into the county to meet the needs. These needs were accumulated on the state level and determinations made of the numbers that could be supplied from other counties in the State which left the number needed to be supplied from outside the state. On this basis, a certification of need was made to the Labor Branch, P.M.A. for foreign workers by the Extension Director, and cleared with the State Director of War Manpower Commission, who concurred in the certification of need.

This certification of need was revised from time to time as the changing supply of domestic labor changed the need for foreign workers.

To fill this need of foreign labor, workers were transported from Mexico under the supervision of the Labor Branch, Production and Marketing Administration.

Upon arrival at their destination within the State, County Extension Offices supervised their distribution to the farmers, and their transfer from one grower to another. The contracts, payrolls and medical care given these workers and their transportation was under the jurisdiction of Mr. Lee Perry, Area Representative of the Labor Branch, P.M.A., Owing to the well knit organization of County Extension Offices and their proximity to the growers many of these agents and farm labor assistants were consulted frequently by the growers and called upon to help the farmers transport the Mexican Nationals, to arrange for their reassignments and to supervise their needs and grievances.

The Mexican National Program grew from its beginning in 1943 when 551 Nationals were imported to a high in 1945. In 1946 the use of Mexicans took a sharp drop both in numbers imported and their placement.

665 Nationals imported in 1944 were placed with 10% of the farmers and ranchers in Nevada who hire labor. The placements of these men made up about 26% of the total state placements. In 1945, 871 Nationals were imported being placed with 11% of the growers and again making up 26% of all placements. For the past year, 1946, however, importation of only 406 Mexicans was made, they being placed with 8% of the growers hiring workers and making up 20% of all state placements. There are at the present time only about 90 Mexican Nationals left in the state.

Extension Farm Labor Supervisors worked diligently to improve inter-relations of farmers and workers in order to achieve maximum results. Growers were required to furnish standard housing and living conditions, to pay prevailing wages and to instruct new and untrained men in farming and ranching skills. This policy paid dividends as in almost every case the laborer responded satisfactorily.

As in 1944 and 1945 the Extension authorities promoted this common ground of understanding by distributing an English-Spanish Phrase Book for employers of Mexican Nationals in Nevada. It served well as a ready reference to assist the farmer and town merchants in their contacts with the Mexican Nationals.

10. Deferments of Agricultural Workers:

This year, as in past years, county agents and Farm Labor Assistants were given the responsibility of securing information for Selective Service Boards on agricultural workers subject to induction in cases where the Board deemed it necessary.

During the first part of the year this was a rather important part of the program taking up a considerable part of the agents time. Information was furnished Selective Service Boards on 77 cases.

VII. VICTORY FARM VOLUNTEERS:

The increased supply of adult workers had a profound effect upon the V.F.V. program in 1946. The number of youth available seemed to be about the same as in previous years but the opportunities of placing them were greatly decreased. Farmers and ranches prefer adults when they are available, for the heavy work which is necessary in Nevada agriculture.

Although placement of youths by the Extension Farm Labor Program fell to 139 this year, these were all town and city youths, and this does not take into consideration the large numbers of farm boys who work on their parents or neighbors farms. Neither is considered the large number of youths who find farm jobs through their own efforts, many of whom were placed in previous years through the V.F.V. Program.

Mr. Edwin Whitehead was again in charge of the V.F.V. Program as a part time Assistant State Farm Labor Supervisor. His report on the program is attached.

VIII. SUMMARY AND OUTLOOK:

The charts on the following pages present a fairly accurate summary of the highlights of the recruitment and placements of the Farm Labor Program for 1946 and for the entire four years of the program.

On Chart Number 1, the set of blue columns show the total number of workers which were placed in the State for each year of the program.

The other sets of columns on the chart show, for each year of the program, the source from which these placements were made. The red set represents local placements within the counties. The other four sets of columns represent the number of individuals placed of each type of worker as follows: green, V.F.V.; yellow, Mexican Nationals; purple, transported intra-state workers; and brown, inter-state workers.

Chart Number 2 shows the placement for year-round seasonal workers on a monthly basis. This chart indicates that the peak season of employment comes during the month of July. This is caused mainly by the large acreage of wild hay which usually comes on about the last part of June. The second peak occurs about in August when the second cutting of hay occurs and the other peaks come the latter part of September and October with the third crop alfalfa, onion and potato harvest demand. On this chart the red represents seasonal workers and the blue year-round workers.

Chart Number 3 shows the requests and placements by months. A study of this chart shows that requests for both seasonal and year-round workers have exceeded the placements but this is caused by a little lag of the placements and some reductions on farmers requests by cancelled orders using fewer men, working longer hours and exchanging labor so the requests were sufficiently filled and all crops harvested without loss.

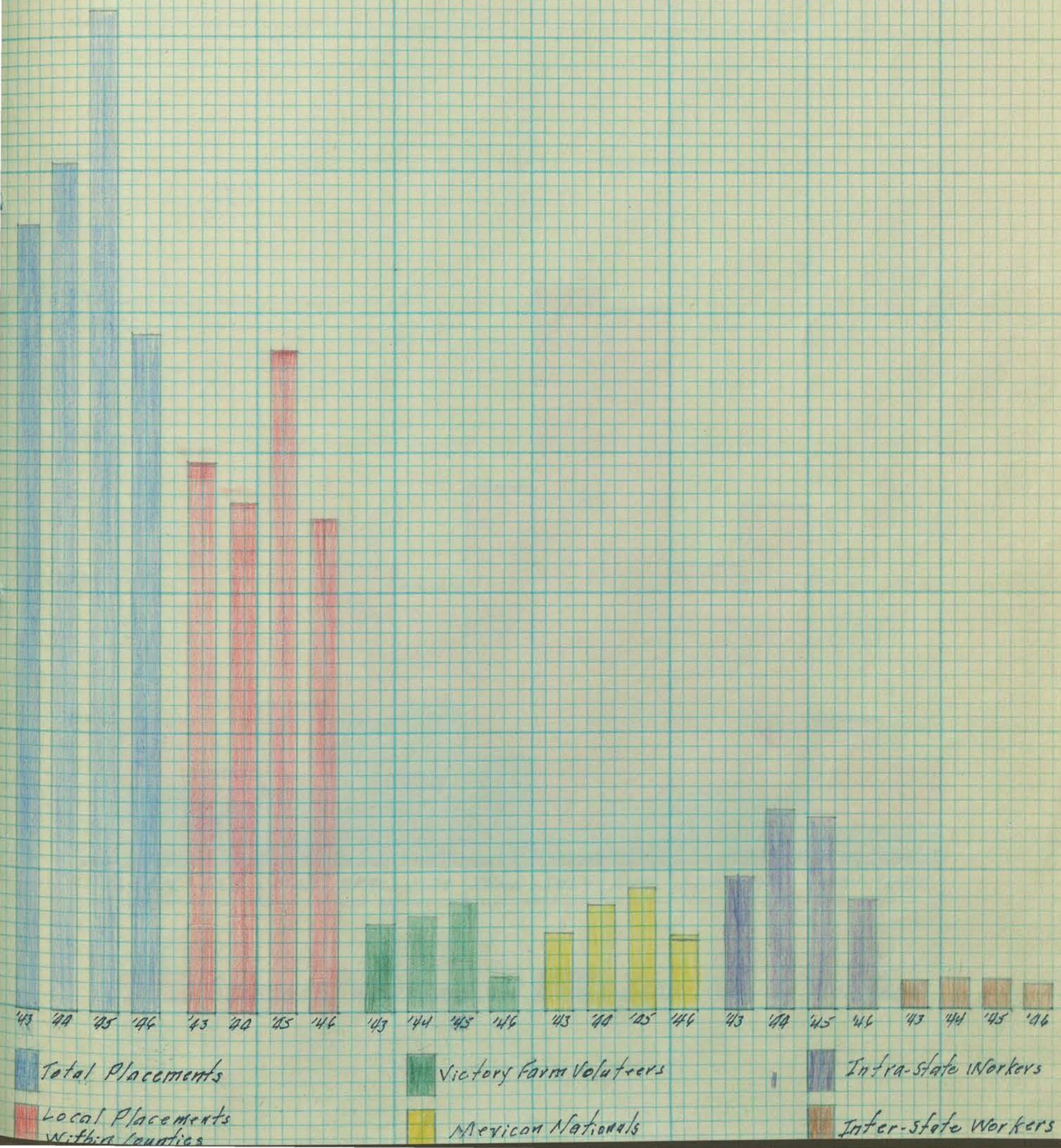
Chart Number 4 is a comparison of Mexican Nationals used in the years 1943, 1944, and 1945, and also 1946. The number of Nationals working in the state on the first of each month is shown for each of the four years.

In conclusion, it may be stated that the Farm Labor Program has completed another satisfactory year through the cooperation of farmers and all groups concerned. The farmers and ranchers are well pleased and realize that the aid given them in securing labor, in the use of labor saving machinery, and in the exchange of labor and machinery has helped materially in getting crops harvested.

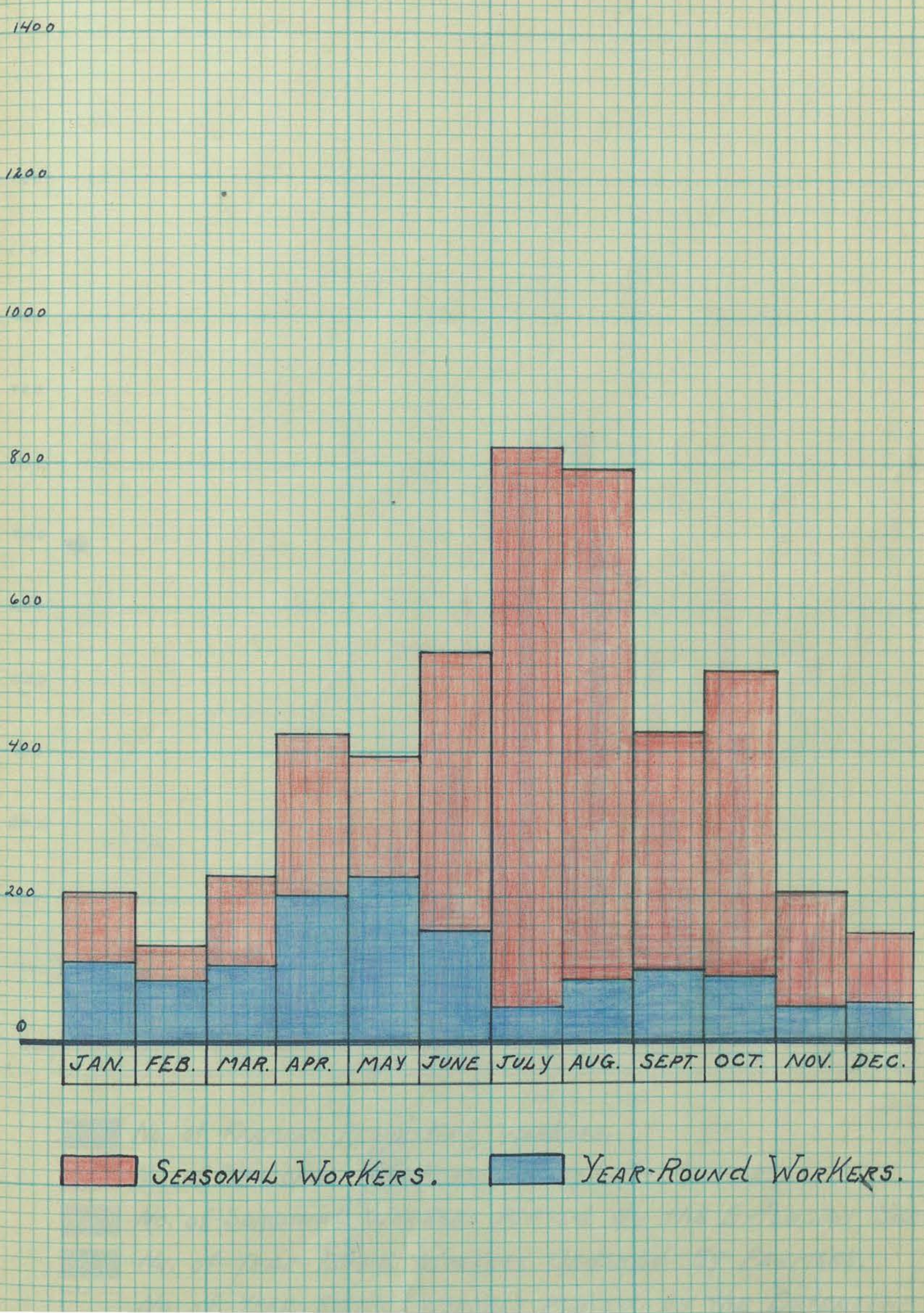
Although there has been an easing of the farm labor shortage during the past year, it is still too early to tell what the conditions of 1947 will be. If the present indications of an increased supply of domestic labor continue, it is believed that the planting of harvesting of crops in 1947 can be accomplished with the aid of but a few outside workers.

The 5 year overall picture of the accomplishments by the Extension Service of Nevada in the recruiting and distribution of farm labor is best summarized in the following editorial of the Reno Evening Gazette of Dec. 27, 1947.

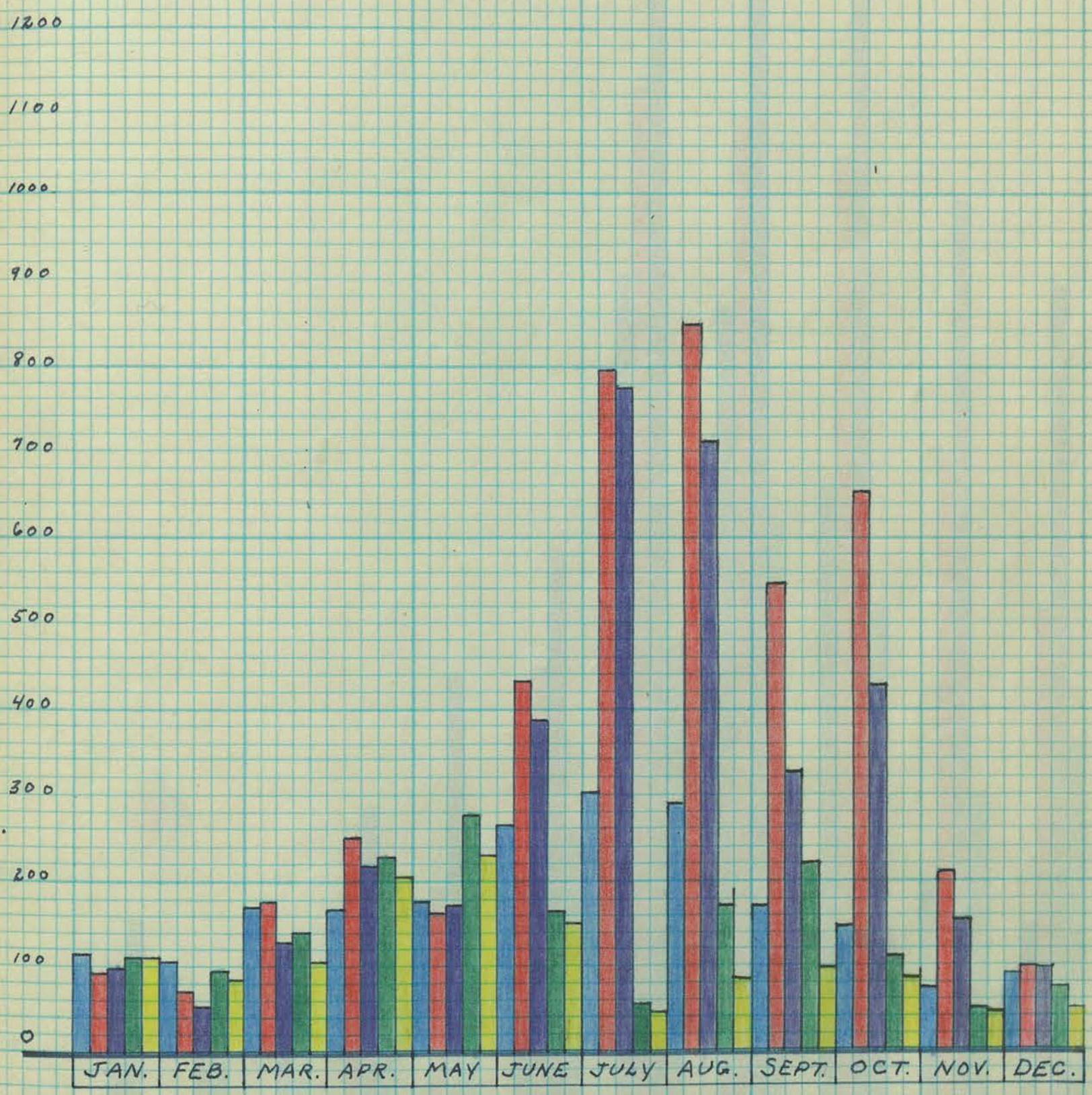
Number and Source of Workers Placed in the State
4 year Comparison.



Total Placements By Months of Seasonal and Year-Round Workers.

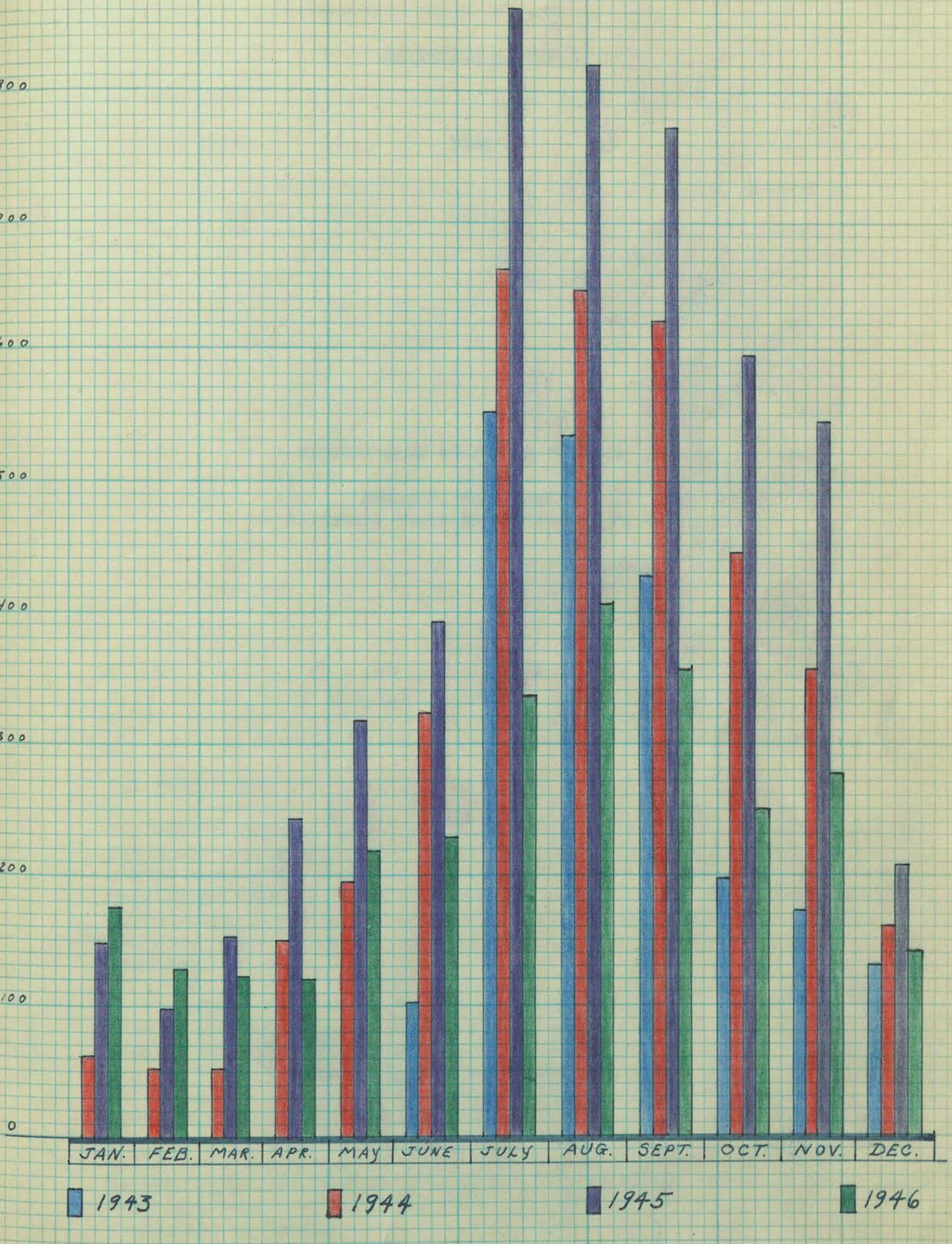


Farmer Requests For Workers Compared With Extension Placements 1946.



No. of Farmers Requesting Workers.
No. of Seasonal Workers Ordered By Farmers.
No. of Seasonal Workers Placed By the Extension Service.
No. of Year-Round Workers Ordered By Farmers.
No. of Year-Round Workers Placed By the Extension Service.

MEXICAN NATIONALS EMPLOYED BY MONTHS 1943-1946.



NARRATIVE REPORT

1946

VICTORY FARM VOLUNTEER PROGRAM

Edwin F. Whitehead
Assistant State Supervisor V. F. V.

January 1, 1946 - December 31, 1946

Victory Farm Volunteer Program 1946

I. ORGANIZATION - State and County Farm Labor Committees.

A. STATE

This committee was made up of the same original members of the 1943, 44 and 45 committees.
The members represented all the important agricultural sections of the state, were farm operators and had a clear picture of the farm labor problem. They functioned in an advisory capactity, working harmoniously with the county committees and the state office and resulting in a program working without friction or drawbacks.
The names and addresses of this committee are:

William B. Wright, Chairman,	Deeth, Nevada
Pete Henricks, Vice-Chairman,	Yerington, Nevada
Edward A. Settlemeyer, Secretary	Reno, Nevada
Fred Dressler, Member,	Minden, Nevada
Norman Annett, Member,	Wellington, Nevada
Edwin C. Marshall, Member,	Logandale, Nevada

During the peak months of June, July and August, the Assistant State Farm Labor Supervisor, in charge of Victory Farm Volunteers is employed on the project on a part time basis.

B. COUNTY

The problems in the counties concerning the Victory Farm Volunteer Program are handled by Advisory Committees of from three to seven members, cooperating with the County or District Extension Agents and the Farm Labor Assistants.

II. RECRUITMENT AND PLACEMENT.

The recruiting and signing up of youth labor was overly successful in the early part of June, due to the closing of school and desire for summer work by the youth of Nevada. Most of the youths having previous farm experience were readily placed and soon at work. In most farming communities jobs were lined up by the youths themselves before school was out. Each contacting the farmer or rancher he had worked for the previous summer.

Youths signing up at the County Labor Offices were generally those with no previous farm experience and were a majority of smaller and younger youths; averaging 14 and 15 years of age.

When the need for onion weeders was urgent, the local schools were contacted and the problem was met quite readily. Some of the onion growers of Washoe County would pick up as many as 35 boys and girls for Saturday and Sunday work weeding onions. These were all day-haul jobs and each youth brought his lunch and worked an eight hour day, receiving $4.00 for the work. The average age of these youths was 13 years.

Farmers requested larger and older boys for use in the hay harvest. These boys to buck bales and work on hay balers. Most of ths youths signing up were considered too small for this heavier type of work and few were placed. Many youths were placed on balers, tying wires, driving tractors and working on pick up balers and choppers.

III. TRANSPORTATION.

On day-haul jobs the youths were picked up by the farmers at the Labor Offices or local school buildings and transported by trucks or cars to the fields and then returned in the evening.

For long distance placements the youths were transported by bus companies to their destinations. The Pacific Greyhound, Virginia and Truckee Railroad, Las Vegas, Tonopah and Reno Bus, Hiskey Stages were among the companies that have given excellent service and cooperation in the transporting of farm labor about the state.

Under this program the youths were met at the buses and placed on the farms by the Farm Labor Assistant or the County Agent in their particular areas.

IV. SELECTION AND TRAINING.

Selection of youths for specific jobs, was made by the County Agents or Farm Labor Assistants. These selections were based mainly on experience, size and age of the youths. There being a surplus of recruits, it was in most cases easy to select the most fitted individuals for the jobs. In many cases the farmer interviewed the youth before accepting him. This allowed both parties to reach a mutual understanding as to the working conditions, pay, etc. and resulted in less trouble later.

Training of the youths was developed through cooperation of the State Department of Education and County Agents, cooperating with vocational agricultural instructors and was limited mainly to high school youths.

Volunteers were taken to the fields and under supervision of County Agents and the farmers were given necessary instruction in proper weeding and work methods.

Other types of training, such as use of power equipment, tractors, mowers, etc. was handled directly by the farmer in the field. The increased use of power machines by the Nevada farmers has greatly lessened the drudgery of farm labor and holds a definite appeal to the modern youth.

V. RESULTS

The need for youth workers in Nevada during the season of 1946 was not as great as during the war years because of the greater supply of adult workers made available by the return of veterans, slowing down of production of armaments and increased utilization of power machines and other labor saving devices.

Nevertheless the youth of Nevada formed a strong working nucleus for farm labor, particularly the farm family youth. The Nevada farms are all operated by family operators and without exception, their children have played an important part in the production picture. Youths from 10 to 18 years could be seen on any farm, performing an important function in the daily farm tasks.

The majority of the youths recruited from the larger towns of Nevada and transported to the farms proved satisfactory to the farmers using youth labor.

Approximately 234 youths were placed and transported by the Extension Service and Farm Labor Assistants. The majority of these were day-haul jobs and used principally on onion weeding jobs.

Including the onion and potato workers there were approximately 450 youths used in the farm work during 1946. This number being less than previous years is in proportion to the decrease in placements in all type of farm labor for 1946.

UNIVERSITY OF NEVADA

AGRICULTURAL EXTENSION DIVISION

CECIL W. CREEL

ANNUAL REPORT OF EXTENSION WORK IN AGRICULTURAL ECONOMICS

Project 6 - Sub-project D - Farm Management

1 9 4 6

General Farm Accounts,

Dairy Enterprise Studies, and

Dairy Herd Improvement Associations

Verner E. Scott

Extension Agricultural Economist

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ANNUAL REPORT OF EXTENSION AGRICULTURAL ECONOMIST

V. E. Scott

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PROJECT VI - Extension Work in Agricultural Economics

SUB-PROJECTS D - Farm Management

SUB-PROJECT PHASES - A General Farm Accounts

B Dairy Enterprise Studies

C Dairy Herd Improvement Associations

D Miscellaneous Extension Work

I. Name of Specialist and Division of Work

A. Name - V. E. Scott

Mabel Hartley (Station)

B. Division of Work

1. Field work in general farm accounts by both leaders.

2. Summary of accounts; farm phase by station, home phase by Extension, enterprises by both agencies.

3. Work in Dairy Enterprise, Dairy Herd Improvement, and miscellaneous Extension done by V. E. Scott cooperating with County and District Extension Agents.

II. Changes in Organization and in the Relation to Other Extension Projects and Teaching Work

A. General farm accounts - It was planned to drop this sub-project as an Extension project, but on September 1st, Mrs. Hartley, Experiment Station leader of the project resigned and no one was employed to take her place. Obligations to cooperating

farmers who depended on the service features of the project made it necessary for the Extension Service to carry on at least until the cooperators could adjust themselves to the change, hence this project was carried by the one field man.

B. Increased time spent on general farm accounts prevented the Extension specialist from working on the Dairy Enterprise phase.

C. With the opening of the fall semester, it was found that additional teaching force was needed in the College of Agriculture, hence resident teaching was added to the duties of the Extension specialist. Arrangements were made for the College to pay one fourth of the salary, however, committments required the same amount of field work as before, hence, summaries and reports were neglected. They may or may not be brought up to date, depending on developments during the second semester when the Extension specialist will be required to teach in the Agricultural College one half time.

III.a <u>Summary of Extension Work Done, by Sub-Project Phases</u>

A. Sub-project Phase - General Farm Accounts.

1. Variation from Plan of Work. The Plan of Work visualized closing Extension particip ation in this sub-project phase about the middle of the year. As explained in II this was not done, and much of the time of the specialist has been retained on this sub-project phase.

2. Adult and Junior phases of sub-projects. No junior accounts have been serviced during 1946.

a. Factors which determined inclusion in year's program.

(1) In the case of old cooperators, it was desired to keep the books as uniformly as possible for purposes of comparison.

(2) In the case of new cooperators it was desirable to teach the need of attention to detail. Farmers are notoriously prone to generalizations which when applied to bookkeeping destroys the value of the book.

(3) Most farmers keep some type of account, if no more than checkbook stub. In too many cases there is not enough data put down to enable any one to analyze farm operations or compare enterprises. The general farm account sub-project attempted to teach the need of exactness and attention to detail and to form good bookkeeping habits.

3. Ultimate Objectives.

a. To teach farmers to keep complete records of farm finance and operation.

b. To teach farmers to use records in planning farm operations and budgeting both time and money.

The above objectives have been accomplished to a great extent. After two to four years farmers have dropped the cooperative feature of this sub-project and have continued to keep accounts suited to their own needs.

4. Numerical Goals for 1946

	Goal	Results
a. Number of accounts to be encouraged	100	133
b. Number of farm people to be contacted	300	300
c. Number of farm books to be summarized	74	72
d. Number of mimeographed bulletins	2	2

5. Integration of this sub-project with subject matter of other projects - Summarized information obtained through this sub-project gives Extension Agents a fund of local agricultural and home information applicable to production and homemaking sub-projects.

The same applies to the work of other agencies such as Farm Security, Vocational Agriculture and Soil Conservation.

6. Activities and procedure.

a. Activities (1) visits to cooperators, (2) conferences with agents and cooperating agencies, (3) service to farmer and cooperators such as assistance with income tax reports, and credit statements.

b. Procedure (1) new accounts were started at the request of Extension Agents, individuals, vocational teachers and other agricultural agencies.

(2) Farm books audited by specialist.

(3) Analysis of individual accounts by letter and personal visit.

(4) Group analysis in mimeographed bulletins.

7. Explanations and reasons for differences in goals and accomplishments.

a. Number of accounts. The increase in the number of accounts was due to requests from vocational teachers who needed a method of accounting for G.I. students.

b. Goal and accomplishments identical.

c. Number of books summarized; one might expect from accomplishments under a, a larger number, under c however, all of the new accounts were started late in the year and cannot be summarized until 1947.

d. Mimeographed bulletins; the report above is not exactly true. One bulletin is published and will be used as an exhibit, the other is prepared but not mimeographed.

Reason - Efficient help is crowded with other work.

8. Exhibits

a. State map showing activities in each county.

b. News bulletin - Volume VII, No. 3.

c. Handbook for Nevada Agriculture

9. Outlook

There is a greater demand for farm account assistance than at any previous time since the sub-project was started.

Lack of personnel seems to indicate that the sub-project must be abandoned.

ANNUAL REPORT - SUB-PROJECTS

B - Dairy Enterprise Studies

C - Dairy Herd Improvement Associations

III b. Summary of Extension Work by Sub-project Phases

A. Sub-project B - Dairy Enterprise Studies as explained in II. This sub-project phase has not been touched during the year.

III c. Summary of Extension Work by Sub-project Phases

A. Sub-project C - Dairy Herd Improvement Associations

1. Variations from Plan of Work - The plan of work has been carried out with very little change as will be shown later.

2. Adult and Junior phases - Juniors were interested only in detail and comparisons of cows. The main work was with adults.

a. Factors which determined inclusion in year's program.

(1) Dairy herd testing has deteriorated during the war period, due to shortage of testers.

(2) Dairy cow numbers have decreased.

(3) Present status of young stock indicates possible increased interest in dairying.

(4) Shift from churning cream to whole milk production indicates need of more attention to quality milk production.

3. Ultimate Objective

a. Dairy Herd Improvement Associations in principal dairy counties.

b. Artificial insemination associations in principal dairy counties.

c. Improved sires.

d. Improved feeding practices

e. Culling of low producing cows.

4. Numerical goals for 1946.

a. Major teaching activities

	Goal	Accomplishments
(1) Meetings with agents to plan D.H.I.A.	6	7
(2) Number of agents to be assisted	4	3

b. Participation of farm people

(1) Number of adults to take part	50	46
(2) Number of adults to be reached through meetings and individual contact	150	100

c. Physical or material results

(1) Number of herds to be enrolled	50	37
(2) Number of cows to be tested	1400	740

5. Integration of this sub-project with subject matter of other projects.

In each county the D.H.I.A. will become the major dairy project. Breeding, culling and feeding will grow out of the activities of the association.

6. Activities and procedure

a. Activities

(1) Explain D.H.I.A.

(2) Sign up members

(3) Secure testers

(4) Routine testing

(5) Reports, monthly, 305 day annual.

b. Procedure

Associations were formed in 3 counties. In these counties the work had been done before and the need was for competent testers. Such testers were found in 2 counties but in the third and fourth counties no competent testers have as yet been secured.

7. Explanations and reasons for differences in goals and accomplishments.

There is not a great difference in goals and accomplishments. At the time the plan of work was made out there was evidence of an interest in testing work on the part of farmer testers. Arrangements were made for salary increases to compete with other positions, however, one county with probably 600 cows is still waiting for a tester.

8. Exhibits

a. State map showing number of active associations and number of cows tested.

b. Sample monthly county agent report on D.H.I.A.

c. Sample yearly report by Extension agent.

9. Outlook

The need for this type of work is recognized by Extension agents and farmers. Where personnel is sufficient, the work will go on smoothly. In other areas we must continue to seek competent testers.

ANNUAL REPORT

D - MISCELLANEOUS EXTENSION WORK

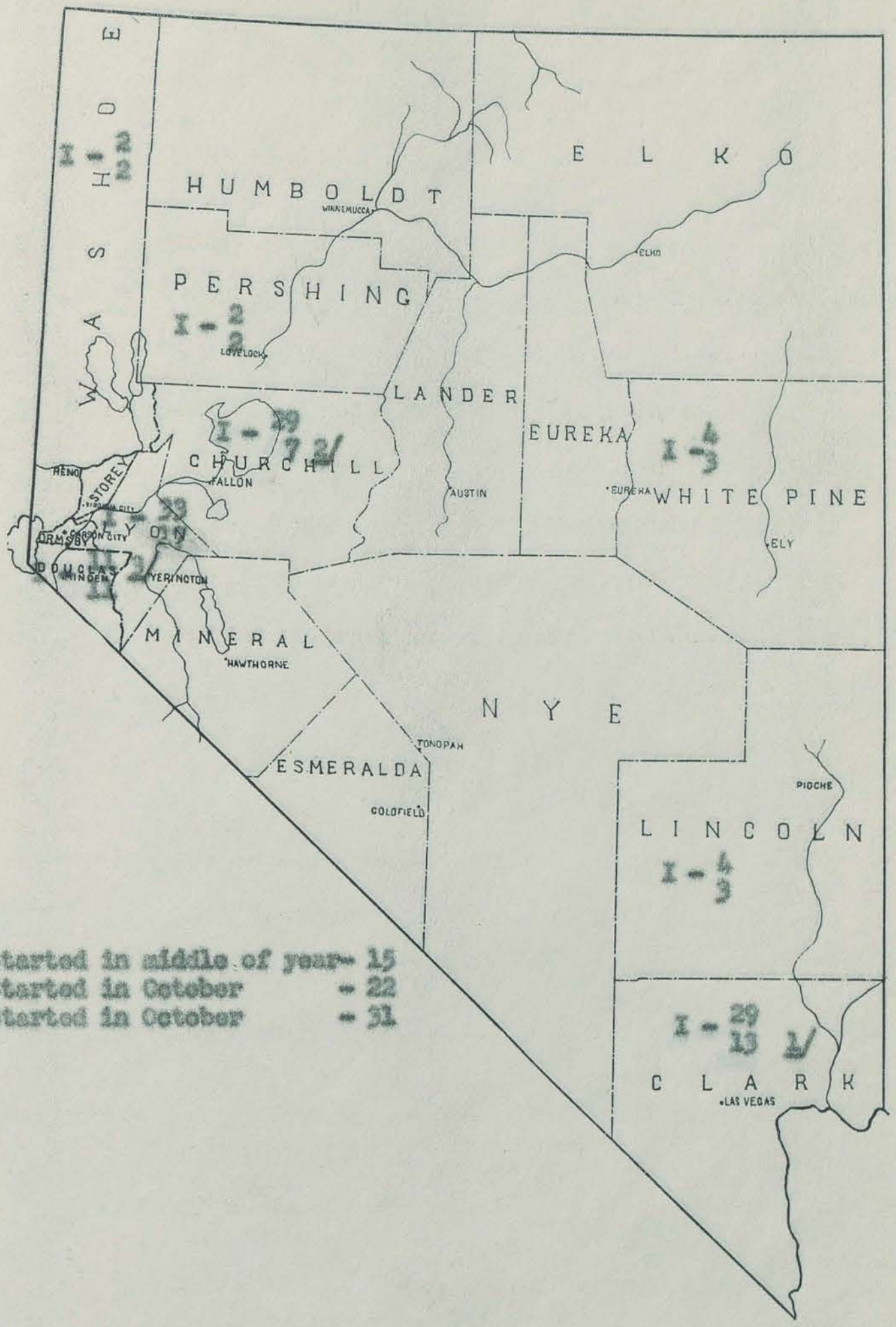
A. Miscellaneous Extension Work

While we do not make a sub-project for miscellaneous Extension work we know that it will be necessary for each Extension Specialist to do many types of work not specifically planned.

Among the unplanned activities for 1946 were:

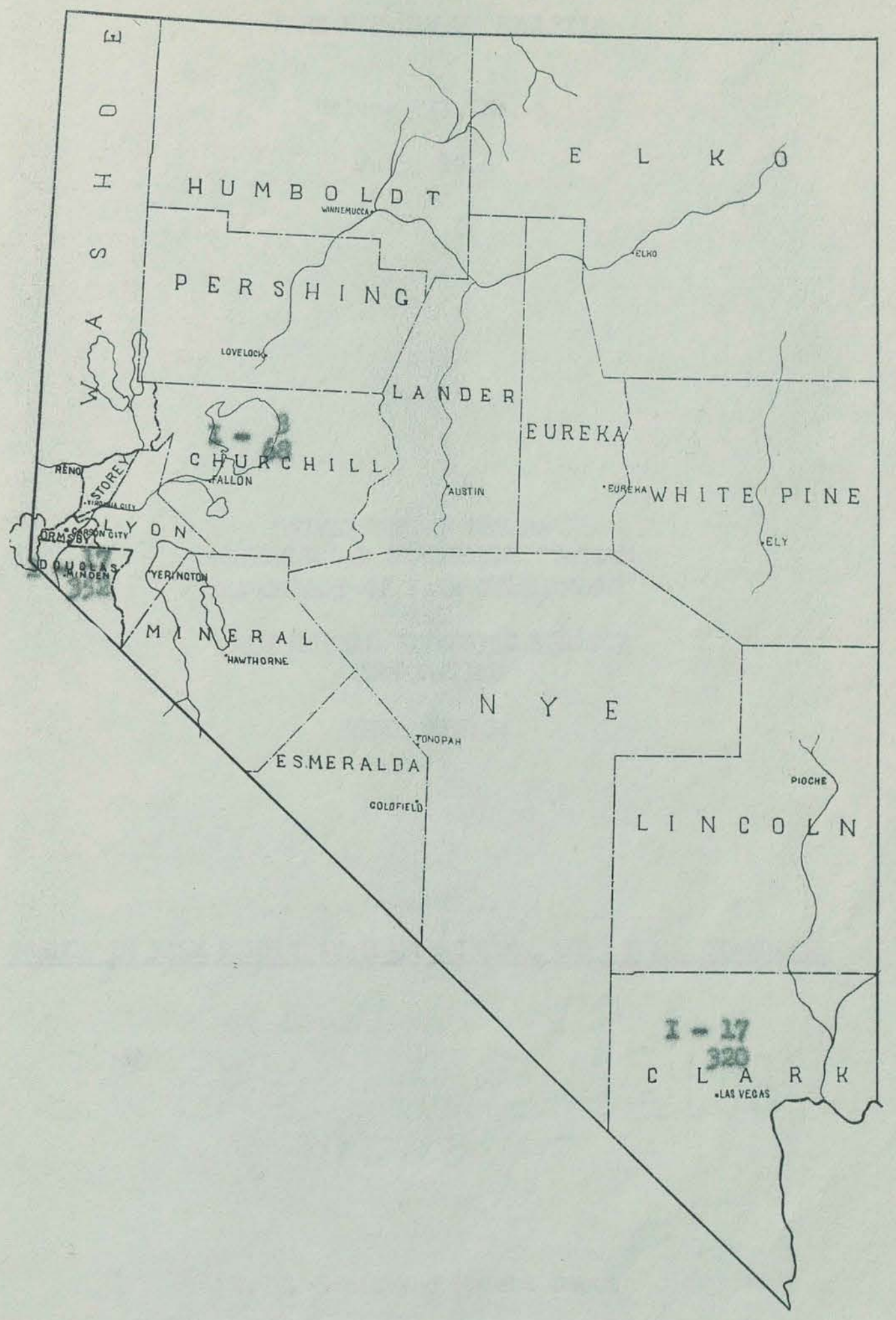
1. Judging at State Fair and at three county fairs.
2. Promoting the 8-point dairy program.
3. Assisted in promotion of Dairy Breed Associations.
4. Assisted 10 farmers with income tax reports.
5. Attended State Farm Bureau meeting and 3 county annual meetings.
6. Consulted with State P.M.A. and County A.C.A. on statistics for counties and state.
7. Cooperation with Agricultural Committee, Nevada Bankers Association. In this connection the handbook for Nevada Agriculture was prepared by this office and printed by the Banker's Agricultural Committee.
8. Agricultural News Service.

GENERAL FARM ACCOUNTS - I Started
Completed



1/ Started in middle of year- 15
2/ Started in October - 22
3/ Started in October - 31

DAIRY HERD IMPROVEMENT I - No. Herds No. Cows



I - 17
320

FARM MANAGEMENT BULLETIN

Volume VII, No. 3

July, 1946

UNIVERSITY OF NEVADA
AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF FARM DEVELOPMENT
AND
AGRICULTURAL EXTENSION SERVICE
COOPERATING

RENO, NEVADA

TRENDS IN FARM FAMILY AVAILABLE INCOME AND LIVING STANDARDS

by

V. E. Scott and Phoebe Swett

Introduction

Living standards are influenced by size of family, total income, net income, amounts of home produced foods, residual effects of past prosperity or hardship, size of debt, and other factors, such as individual tastes.

In order to show changes in standards as indicated by income, the available cash family income was used as an indicator. Families were divided into 3 groups according to the cash family income available in 1940 and the same grouping of families was used in each of the following years. Group 1 consisted of families whose available cash incomes were under $1,000; group 2 consisted of families whose available cash incomes were $1,001 to $2,000, and group 3 consisted of families whose available cash incomes were $2,001 and over.

Out of a total of 96 records there were 27 which were active throughout the period 1940 - 1944. These 27 records have been used to show trends in available family income and in family living standards.

Classification of Families

There was little change in the membership grouping of the families. The gradual shifting of children over 16 to the class "hired labor", and into military service, and their places being taken by advancement from the lower age group kept this group fairly even within each of the income groups throughout the 5 years.

In the class "children under 16", births gained a little over advancement to the next age class in groups 1 and 3, and lost a little in group 2.

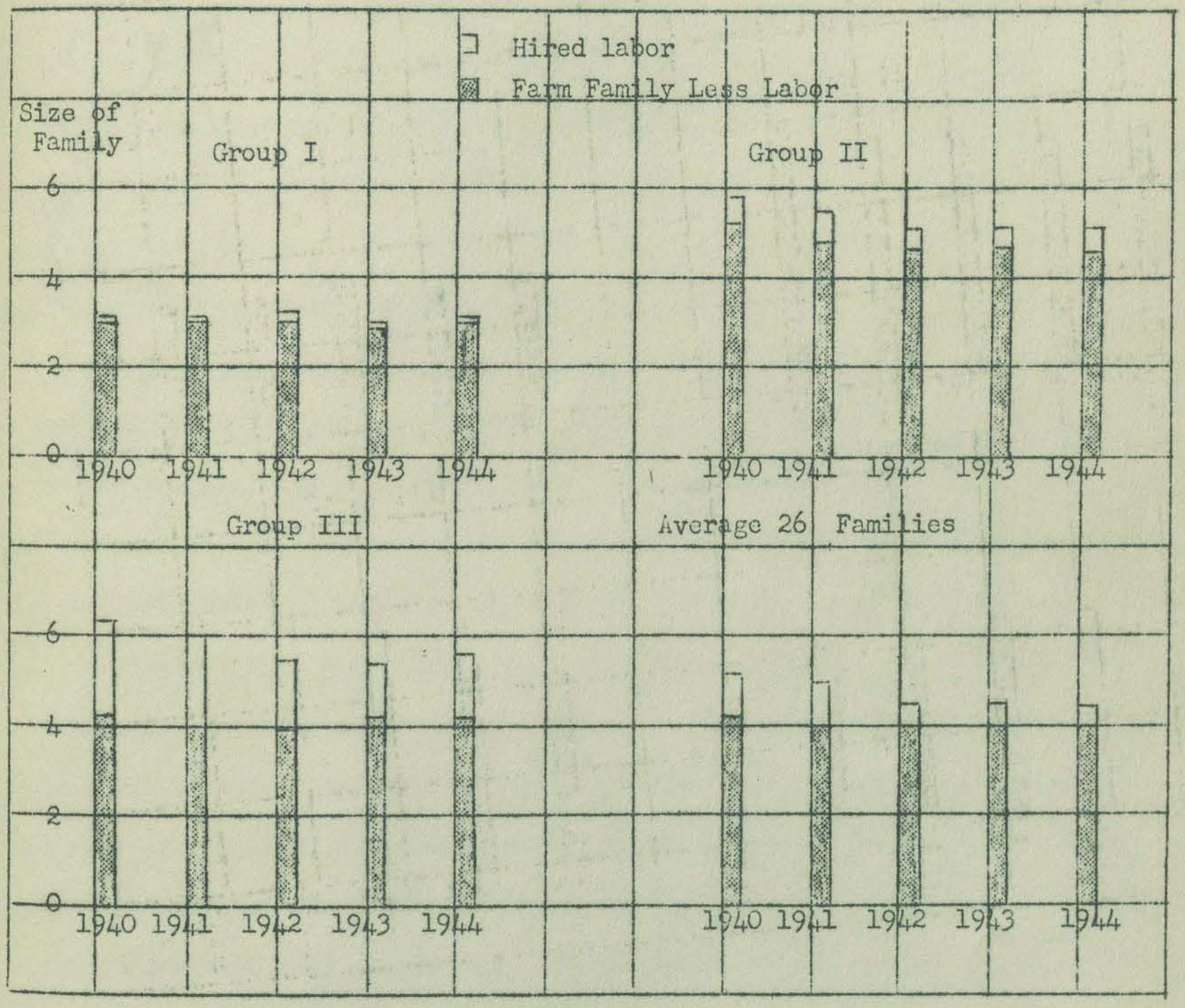
Table I

Relation of Size of Family to Income

	1940	1941	1942	1943	1944	5-year average
Families with income of $1,000 & under						
Adults	2.4	2.4	2.3	2.2	2.3	2.3
Children (over 16	.2	.1	.2	0	.1	.1
Children (under 16	.5	.5	.6	.7	.6	.6
Hired Labor	.2	.1	.1	.1	.1	.1
Total No. Persons	3.3	3.1	3.2	3.0	3.1	3.1
No. in Family Excluding Labor	3.1	3.0	3.1	2.9	3.0	3.0
Families with income $1,001 to $2,000						
Adults	2.2	2.1	2.0	2.1	2.2	2.2
Children (over 16	.7	.4	.5	.6	.8	.5
Children (under 16	2.3	2.3	2.2	2.0	1.6	2.1
Hired Labor	.6	.7	.4	.4	.5	.5
Total No. Persons	5.8	5.5	5.1	5.1	5.1	5.3
No. in Family Excluding Labor	5.2	4.8	4.7	4.7	4.6	4.8
Families with income $2,001 & over						
Adults	2.3	2.3	2.2	2.2	2.2	2.2
Children (over 16	.5	.2	.3	.5	.3	.5
Children (under 16	1.4	1.5	1.4	1.5	1.7	1.5
Hired Labor	2.1	2.0	1.6	1.2	1.4	1.6
Total No. Persons	6.3	6.0	5.5	5.4	5.6	5.8
No. in Family Excluding Labor	4.2	4.0	3.9	4.2	4.2	4.2

The trend of numbers of "hired labor" and the total number of persons in the family was downward in all groups, and therefore in the average of all groups.

Chart A



Available Cash Family Living

Sources of Income: A study of the cash balances for all cooperative accounts shows the following sources of income - (1) cash and bank balance on hand at the beginning of the year, (2) accounts receivable at the beginning of the year, (3) sales of farm produce, (4) borrowed capital, (5) income from non-farm activities (6) gifts and other miscellaneous sources. From the sum of these income sources there must be deducted all (receivables) at the close of the year, for such money was not "available" for that year.

Items of Disposition: The cash balances also show the following disposition of money - (1) accounts payable at the beginning of the year, (2) purchase of livestock, land and other capital goods, (3) current farm operations (4) household expense, (5) principal payments, (6) interest payments (7) purchase of bonds, stocks, etc., (8) cash on hand and bank balance. From the sum of these items must be subtracted accounts and bills payable at the close of the year.

Available cash for Family Living: Examination of paragraphs 1 and 2 above will show (1) payment of items in paragraph 2 must come out of the total shown in paragraph 1: (2) priorities of items of payment are a matter of judgment on the part of families involved, but after they have once been paid only the amount left can be allotted to anything else, (3) in order to maintain good credit and to continue farm operations, accounts payable, current operations, principal and interest payments must be made and usually are made to the fullest extent possible; (4) livestock and other capital purchases are usually paid out of "borrowed capital" if borrowing is necessary; (5) bonds and stocks are seldom purchased unless in the judgment of the family their purchase will not cause family hardships or interfere with farm operations. Money available for household expenses is what is left. The bank balance at the end of the year and the money spent for household expenses during the year constitutes the money available, however, this amount may be increased or decreased by the total amount of bills payable.

The average incomes of the two lower groups advanced to amounts equal to the next group after 1942.

Table II
Available Family Income

	1940	1941	1942	1943	1944	5-year average
Families with income of $1,000 & under						
Average Available Cash	552	675	981	1,305	1,415	1,163
Average non-cash:						
Rent of house	136	132	129	128	130	131
Farm produce	138	179	271	283	296	233
Total Available Income	826	986	1,381	1,716	1,841	1,517
Families with incomes of $1,001 to $2,000						
Average Available Cash	1,237	1,647	1,928	2,593	2,914	2,064
Average non-cash:						
Rent of house	160	155	228	194	188	185
Farm produce	299	342	405	414	505	393
Total Available Income	1,696	2,144	2,561	3,201	3,607	2,642
Families with income of $2,001 & over						
Average Available Cash	3,157	3,913	4,754	5,143	5,335	4,460
Average non-cash:						
Rent of house	479	401	497	499	484	490
Farm produce	407	392	713	731	817	611
Total Available Income	4,043	4,796	5,964	6,373	6,636	5,561
Average 26 families						
Average Available Cash	1,603	1,850	2,485	2,967	3,187	2,507
Average non-cash:						
Rent of house	247	248	278	264	259	259
Farm produce	283	308	457	469	536	411
Total Available Income	2,133	2,406	3,217	3,700	3,982	3,177

Table II is expressed graphically in Chart B. The trend was upward in both cash and non-cash income in all groups.

Chart B

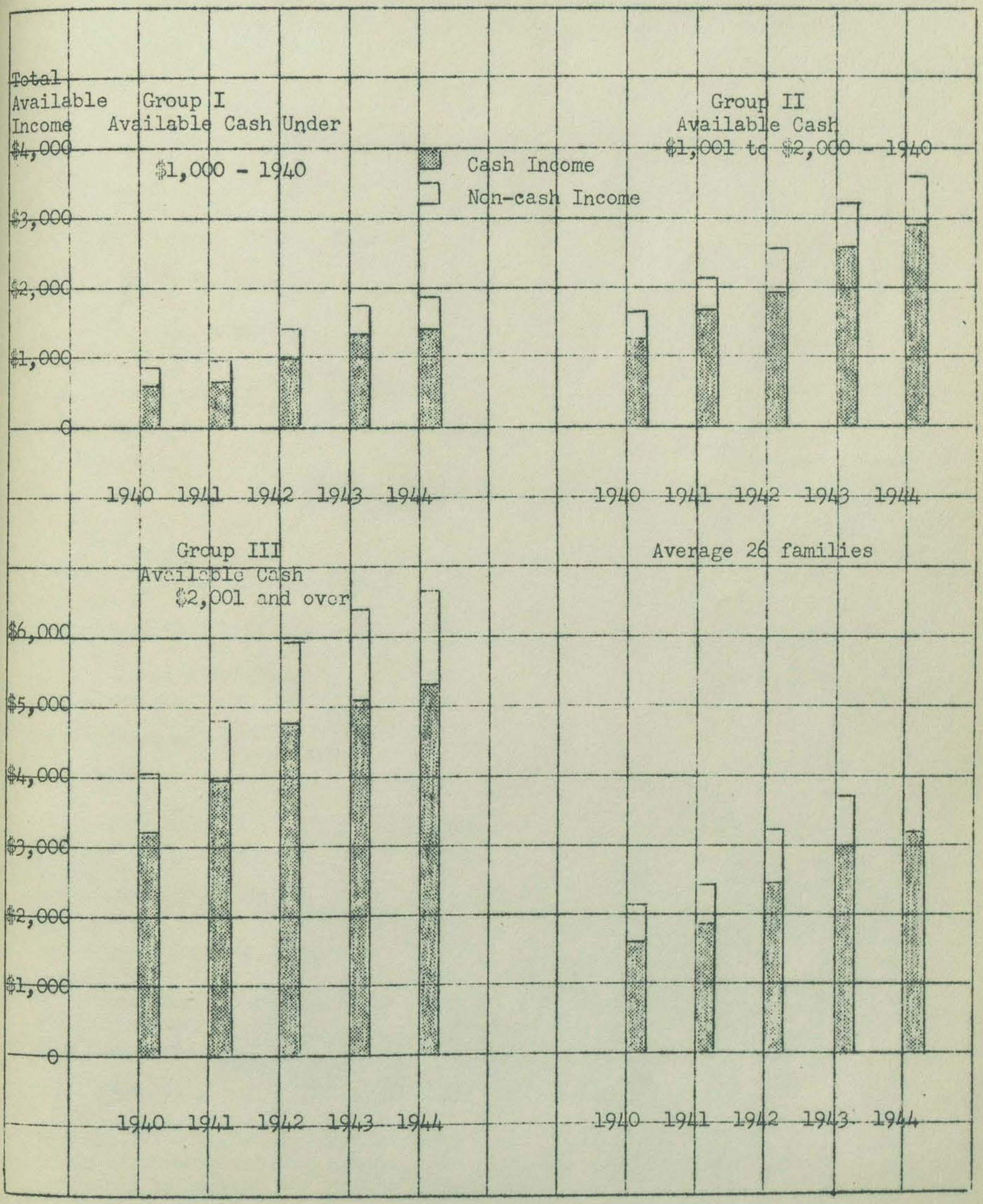

Total Available Income
Group I
Available Cash Under $1,000 - 1940
Group II
Available Cash $1,001 to $2,000 - 1940
Cash Income
Non-cash Income
$4,000
$3,000
$2,000
$1,000
0
1940 1941 1942 1943 1944
1940 1941 1942 1943 1944
Group III
Available Cash
$2,001 and over
Average 26 families
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
0
1940 1941 1942 1943 1944
1940 1941 1942 1943 1944

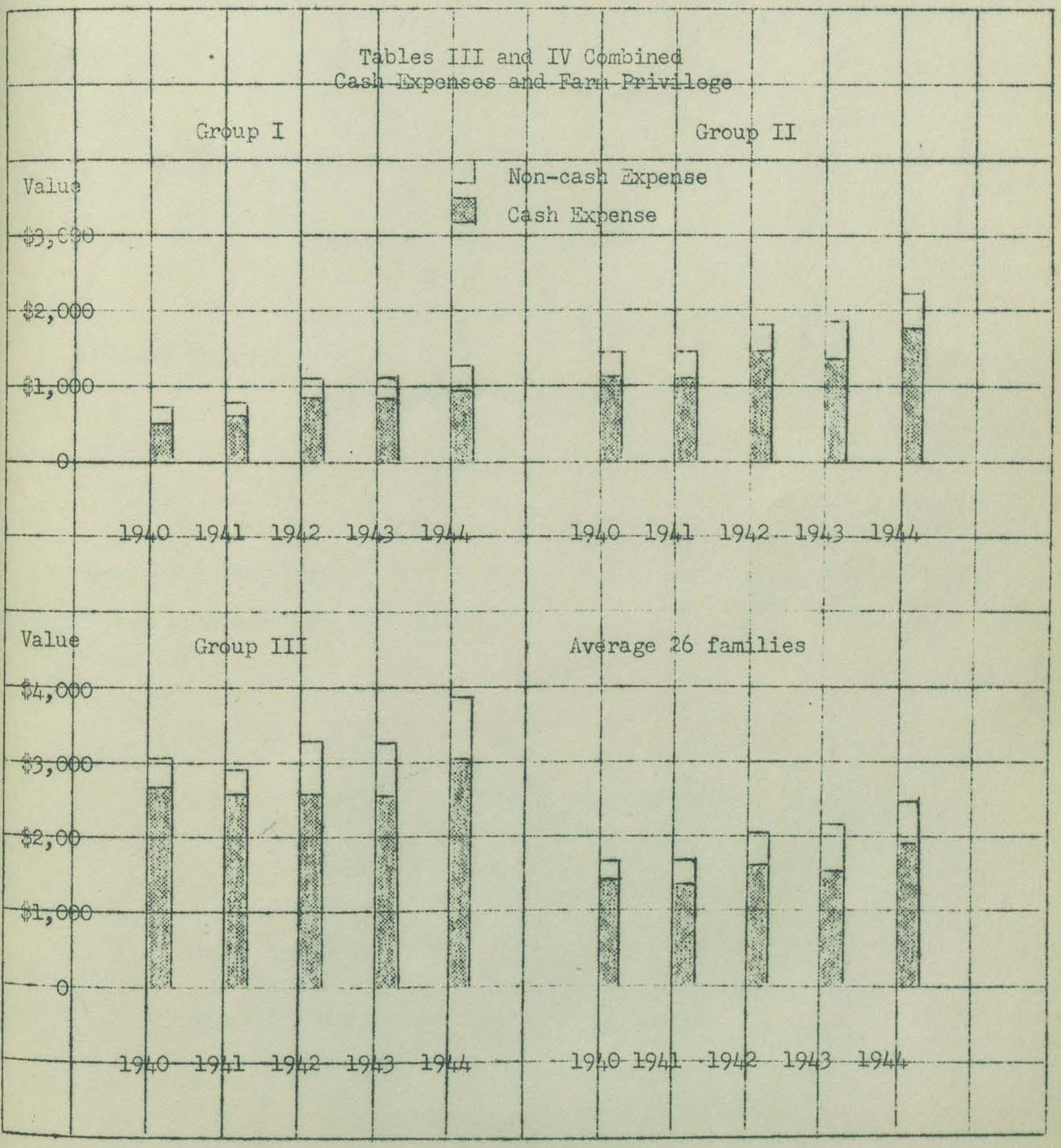
Table III
Living Expense

Table III shows the average cost per family of each item of cash expense for each of the years 1940 to 1944 inclusive; also, the average of each item for the 5 years.

	1940	1941	1942	1943	1944	5-year average
Families with income of $1,000 & under						
Food	198	220	265	257	331	254
Clothing	43	71	77	96	95	76
Operation (Supplies	20	18	24	14	44	24
Operation (Power, Light, Phone	48	44	37	41	45	43
Health	37	41	90	182	178	106
Development & Recreation	53	52	57	60	120	69
Personal	13	12	16	14	22	15
Life Insurauce & Savings	32	54	52	50	58	49
Miscellaneous	14	4	24	11	10	13
Home Investment (Furn. & Equip.	7	32	103	58	42	48
Home Investment (Home Impr.	13	17	61	24	10	25
TOTAL	478	565	806	807	955	722
Families with incomes of $1,001 to $2,000						
Food	309	268	318	324	363	317
Clothing	104	125	128	150	212	144
Operation (Supplies	33	48	45	32	57	43
Operation (Power, Light, Phone	58	35	47	45	57	48
Health	180	188	90	137	99	139
Development & Recreation	189	145	239	382	263	244
Personal	45	73	26	37	36	43
Life Insurance & Savings	95	82	99	101	206	117
Miscellaneous	71	32	37	8	58	41
Home Investment (Furn. & Equip.	23	91	155	56	149	95
Home Investment (Home Impr.	38	20	255	62	272	129
TOTAL	1,145	1,107	1,439	1,334	1,772	1,360
Families with income of $2,001 and over						
Food	395	490	479	460	594	483
Clothing	242	256	321	349	313	296
Operation (Supplies	138	102	82	99	79	99
Operation (Power, Light, Phone	119	72	70	73	75	82
Health	297	168	167	362	299	259
Development & Recreation	579	590	369	474	504	503
Personal	127	102	96	135	143	121
Life Insurance & Savings	245	211	207	217	568	290
Miscellaneous	98	23	144	34	74	75
Home Investment (Furn. & Equip.	83	194	341	194	172	197
Home Investment (Home Impr.	287	303	299	137	186	242
TOTAL	2,610	2,511	2,575	2,534	3,007	2,647
Average Cash expense all groups	1,411	1,394	1,605	1,558	1,911	1,576
Average non-cash exp.all groups	280	286	454	508	541	414
Total family expense all groups	1,691	1,680	2,059	2,166	2,442	1,990

Chart C combines the cash expense of Table III, and the non-cash expenses shown in Table IV. The trends of expense both cash and non-cash, are upward and are higher in the higher income groups.

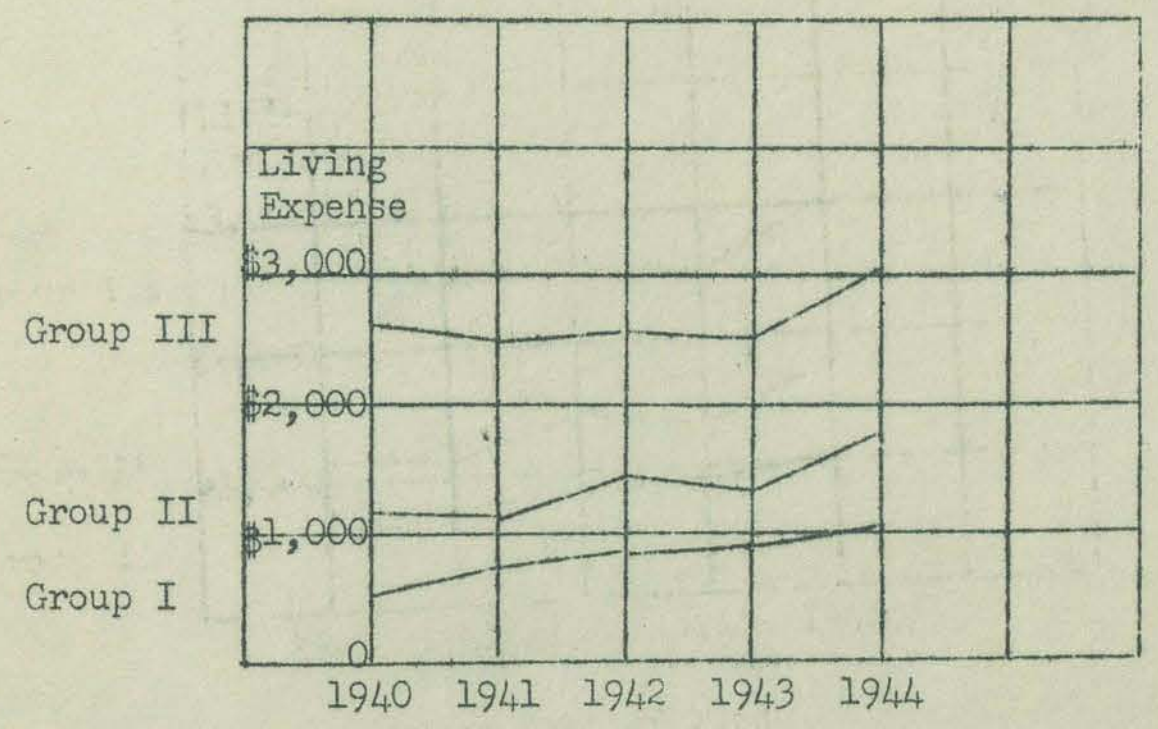
Chart C



Total Living Expense

Total living expenses increased from 1940 to 1944 in each group. In group 1 and 2, cash expenses increased throughout the period, but in 3 they remained at the 1940 level for four years then increased 16 percent in one year.

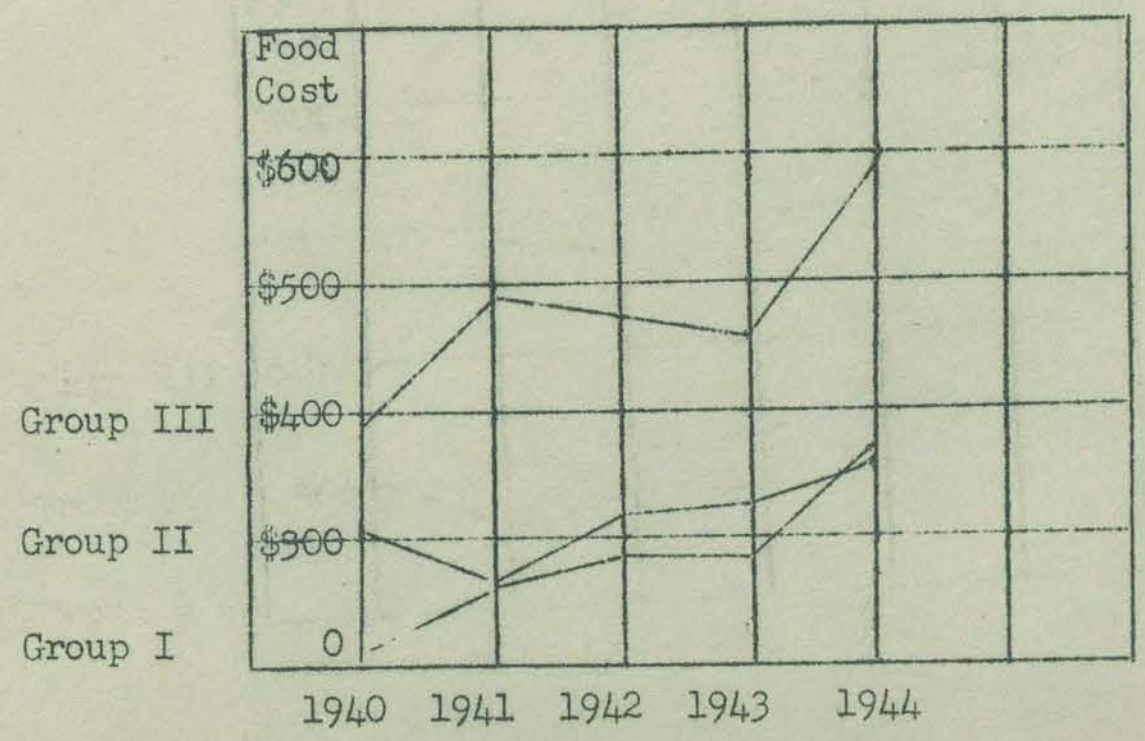
Chart D



Cash Cost of Food

Cash cost of food increased in all groups. The average increase of all groups was 39 percent. Changes were more uniform in the group having lowest income and smallest number of persons.

Chart E



All Other Cash Expenses

The average of all other cash expenses increased quite uniformly in groups 1 and 2, and in group 3 decreased for 4 years and then went up 20 percent.

Chart F

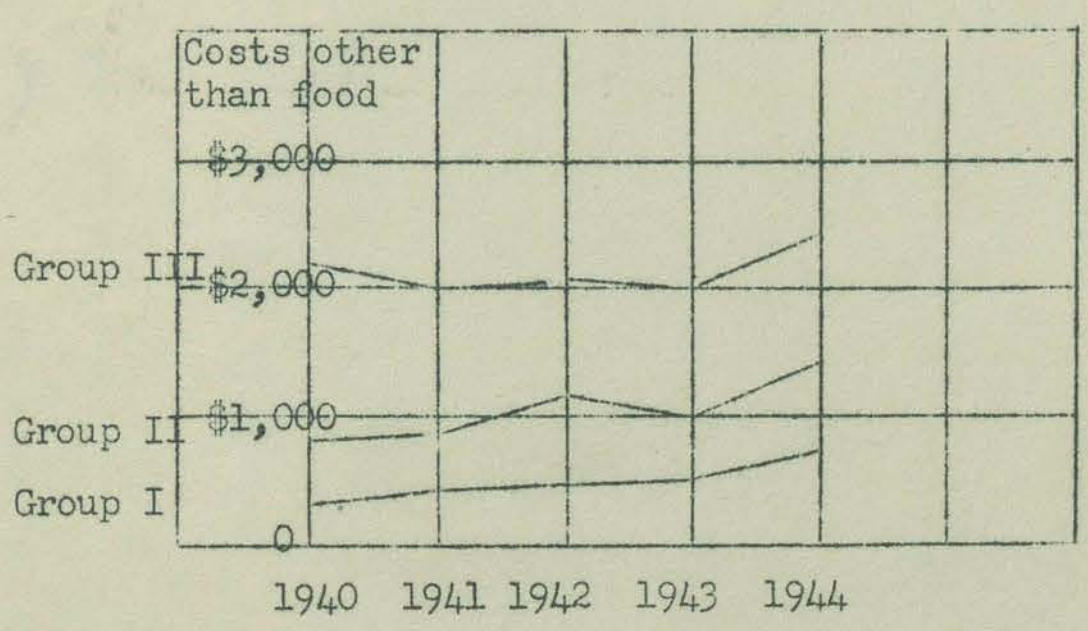


Table IV

Farm Produce Used in the Farm Home

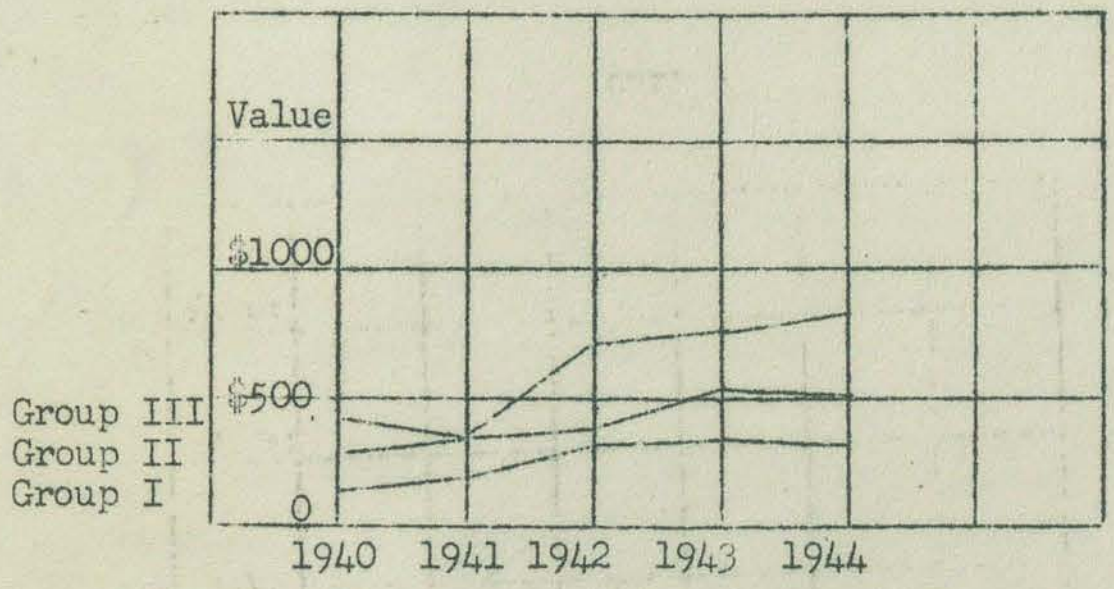
The average quantity of each item is listed for each of the 5 years for each income group. In the charts, milk, eggs and potatoes are treated separately and meats are all grouped together.

		1940	1941	1942	1943	1944	5-year average
Families with income of $1,000 & under							
Milk	Gal.	465	506	385	514	457	465
Eggs	Doz.	149	145	189	193	395	214
Poultry	Lbs.	74	87	87	89	91	86
Beef	Lbs.	0	35	15	1	150	42
Pork	Lbs.	145	99	87	213	205	150
Mutton	Lbs.	43	32	76	65	90	61
Potatoes	Lbs.	125	143	215	169	176	166
Vegetables	Value	21	27	49	33	45	36
Fruit	Value	0	0	0	1	1	0
Other	Value	6	14	15	6	0	8
TOTAL	Value	135	179	272	283	300	234
Families with income of $1,001 to $2,000							
Milk	Gal.	1,075	904	832	789	826	885
Eggs	Doz.	247	250	273	249	256	255
Poultry	Lbs.	84	95	118	122	110	106
Beef	Lbs.	63	62	34	100	93	70
Pork	Lbs.	512	314	396	454	479	431
Mutton	Lbs.	14	23	31	116	52	47
Potatoes	Lbs.	691	855	727	773	955	800
Vegetables	Value	43	44	47	59	66	52
Fruit	Value	0	0	0	71	59	26
Other	Value	24	51	26	2	7	22
TOTAL	Value	299	342	377	512	505	407
Families with income of $2,001 & over							
Milk	Gal.	1,016	900	889	933	859	919
Eggs	Doz.	430	271	316	320	357	339
Poultry	Lbs.	73	73	141	172	193	130
Beef	Lbs.	651	299	1,236	1,199	1,271	931
Pork	Lbs.	728	345	693	798	844	682
Mutton	Lbs.	64	21	87	60	3	47
Potatoes	Lbs.	850	688	1,125	1,125	500	908
Vegetables	Value	32	27	78	100	115	70
Fruit	Value	0	0	0	3	31	7
Other	Value	29	18	56	18	18	28
TOTAL	Value	407	338	713	730	817	601

Value of Home-produced Foods

With the exception of group 3 in 1941, the value of home produced foods used, increased each year. The total increase in value in 1944 over 1940, was 91 percent.

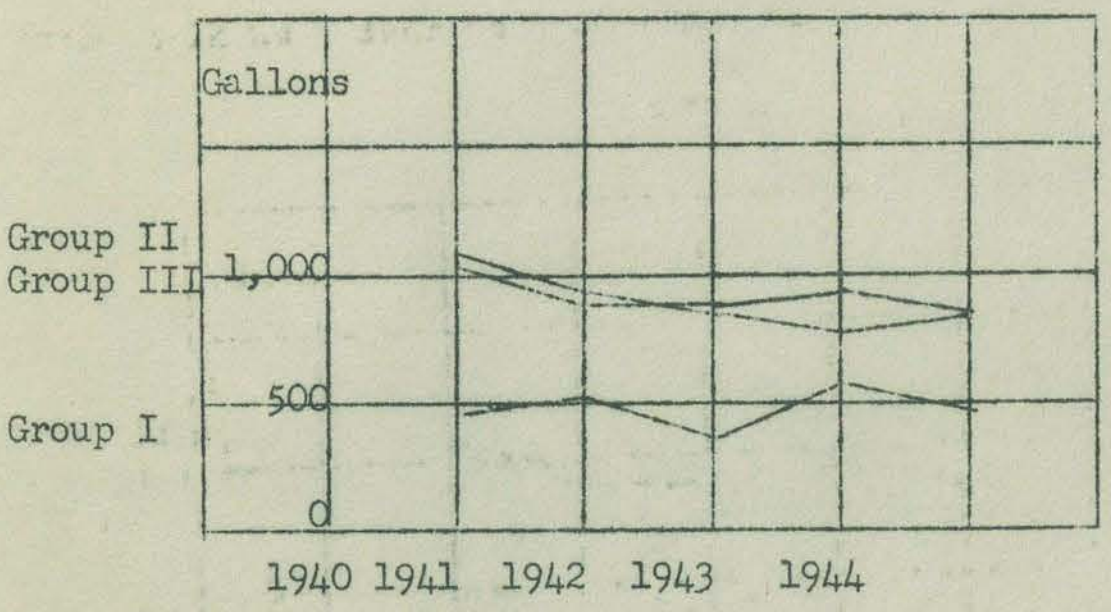
Chart G



Gallons of Milk per Family

In group 1 there was very little change in the amount of home produced milk used per family, during the 5-year period. In groups 2 and 3 the amount of home produced milk used decreased 20 percent.

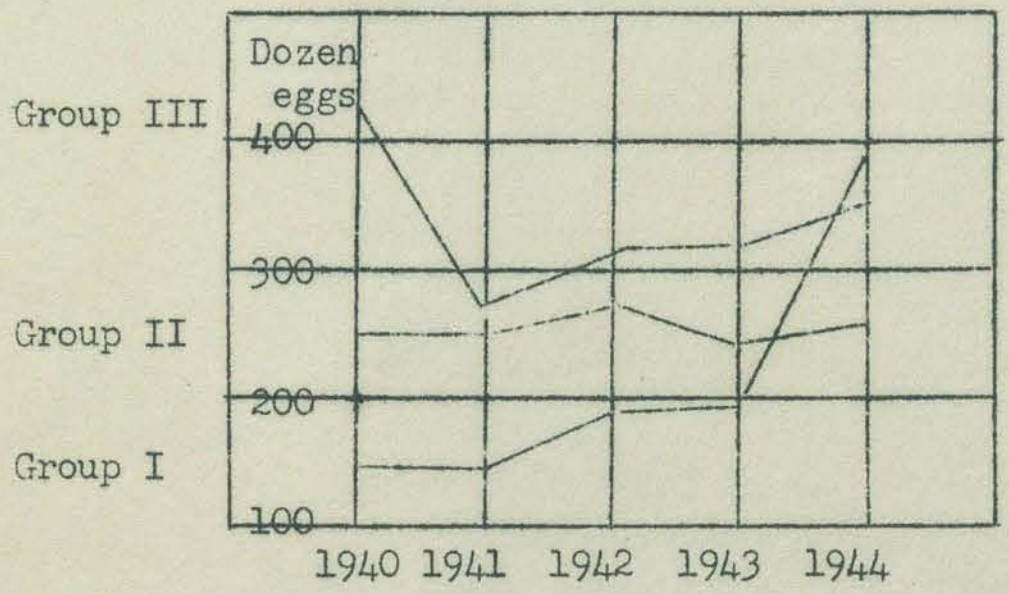
Chart H



Home Produced Eggs Used on the Farm

In group 1 the use of home produced eggs increased from 149 dozen per family in 1940 to 395 dozen per family in 1944. In group 2 the use of home produced eggs remained close to 250 dozen per family throughout the 5 years. In group 3 there was a drop of 139 dozen per family in the use of home produced eggs in 1941. In the next 3 years the use of eggs increased to 392 dozen per family.

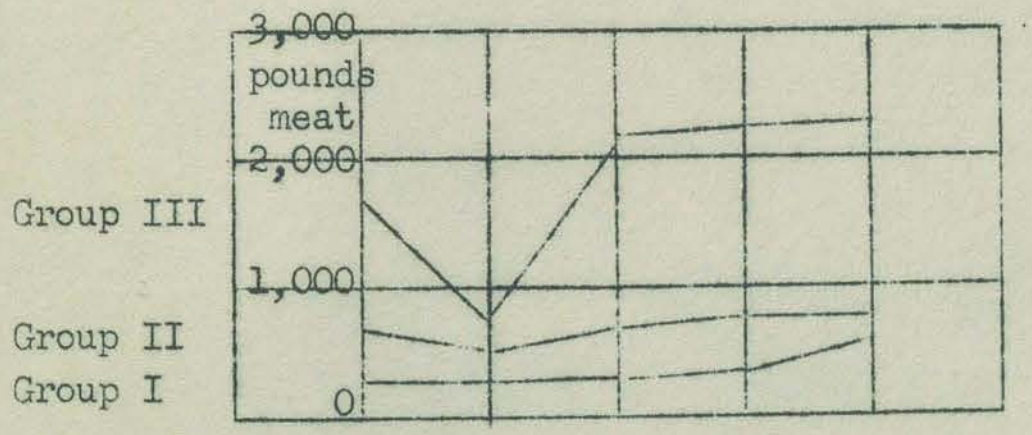
Chart I



Home Produced Meat Used on the Farm

With the exception of group 3 in 1941, there was a steady increase in total home produced meat used.

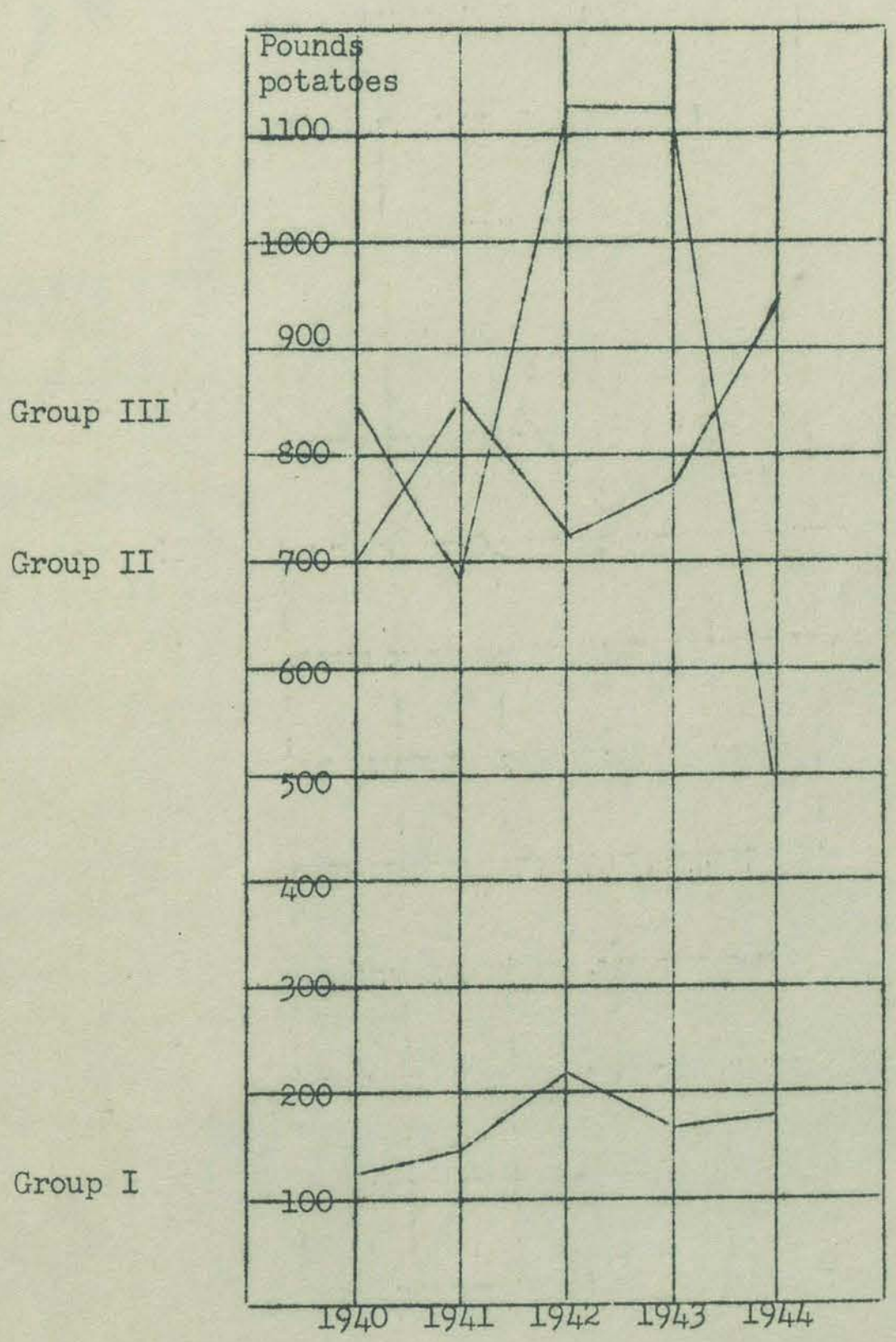
Chart J



Home Produced Potatoes Used on the Farm

In group 1 consumption of home produced potatoes increased from 125 pounds per family to 176 pounds during the 5-year period; in group 2 consumption increased from 700 pounds per family to 950 pounds during the second year and to over 1,100 pounds in 1942 and '43, then dropped to 500 pounds in 1944.

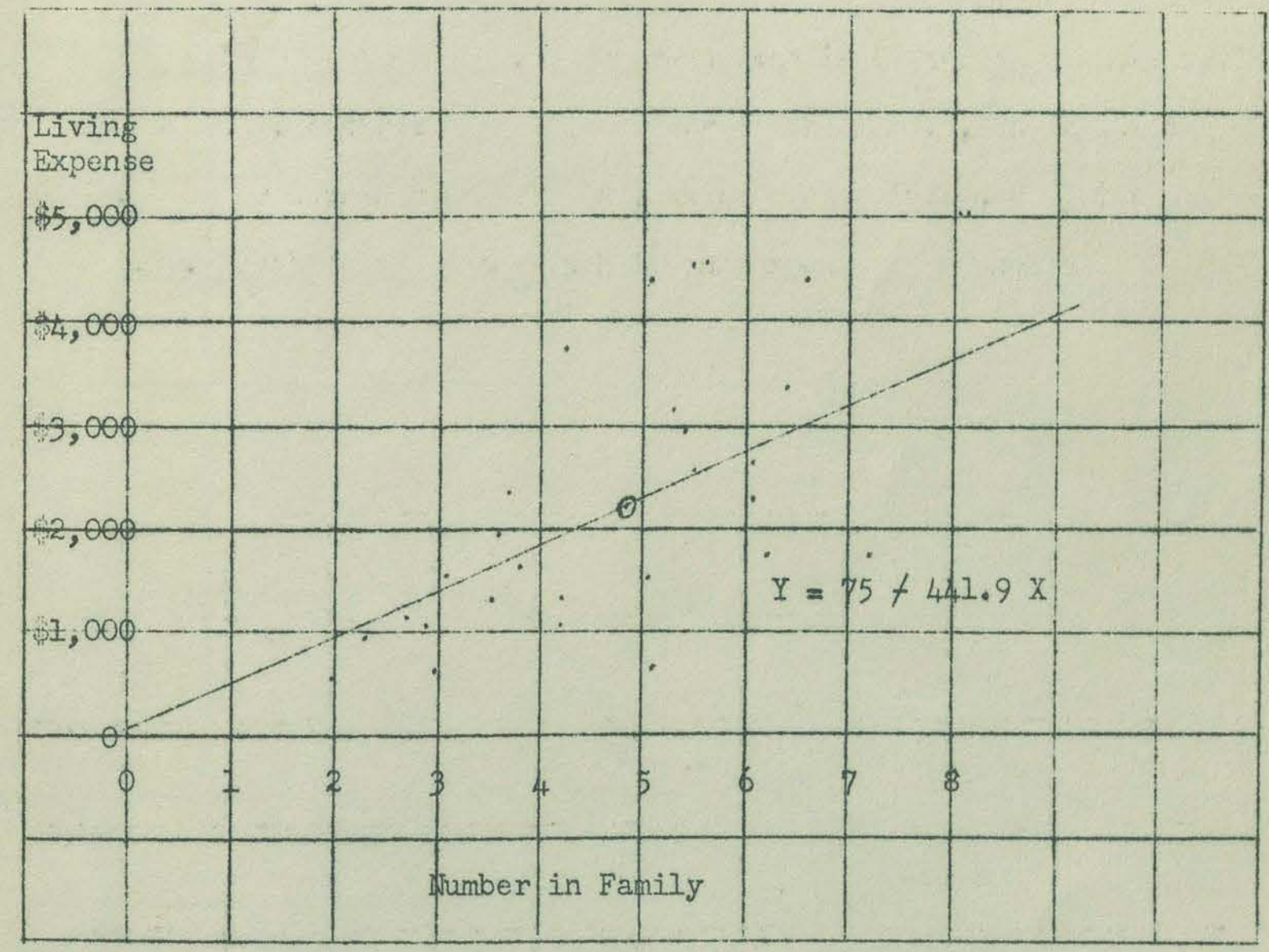
Chart K



Effect of Average Number in the Family on Living Costs

Each dot represents the 5-year average expenses of a family of a given size shown at the bottom of the chart. The trend line indicates that under living conditions 1940 to 1944, regardless of the number in the family, there was an expense of $75, and for each person increase, there was an increased living expense of $441.90. Both cash and non-cash living expense were included in this chart.

Chart L

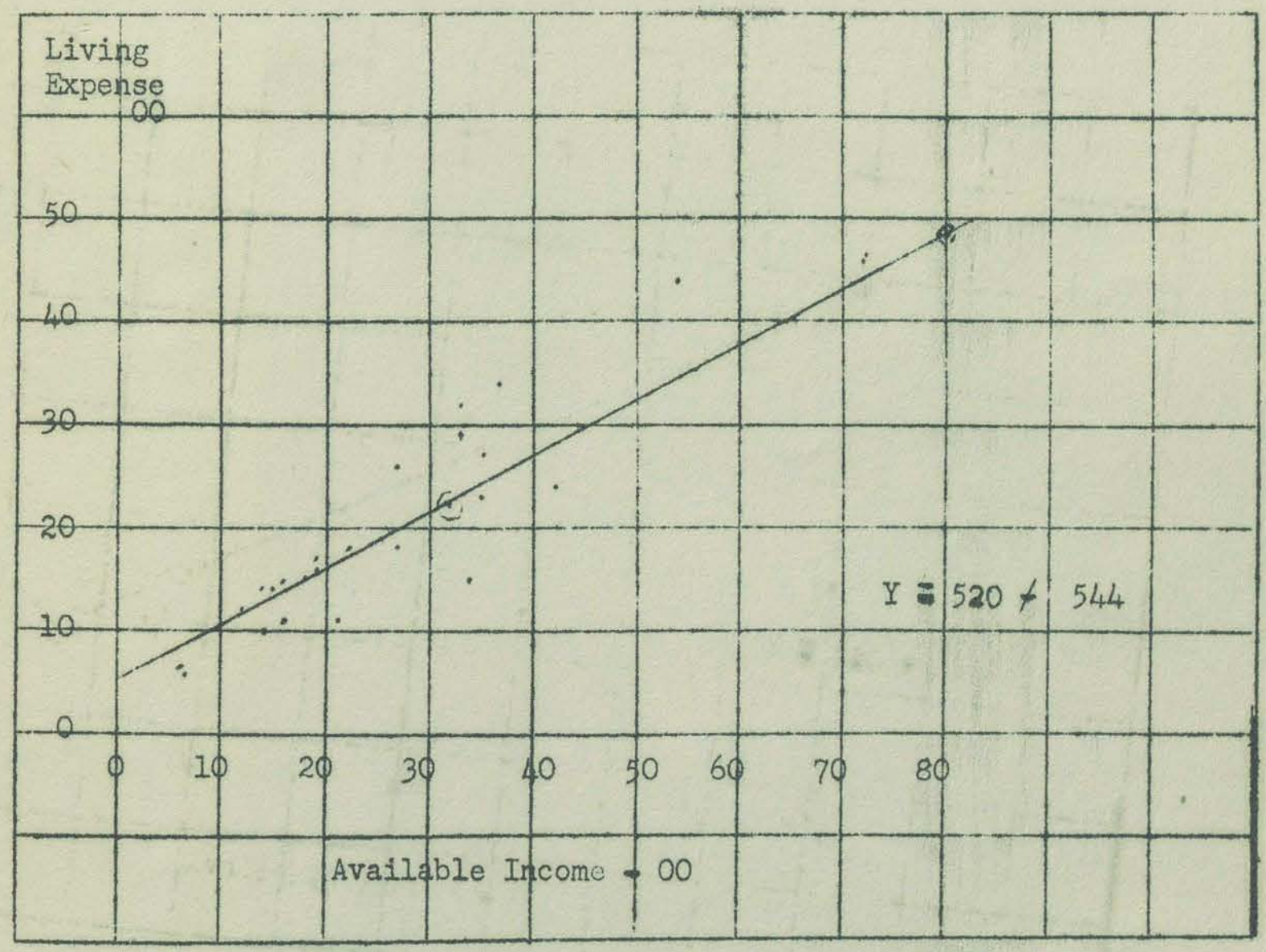


Relation of Available Income to Living Expenses

In this chart, cash and non-cash available income and living expenses were combined to make total available income and total living expenses.

The trend line indicates that with no income there would have been an expense of $520 per family per year, and that with each increase of $1,000 income there was an increase of $544 living expense.

Chart M



A HANDBOOK FOR
NEVADA AGRICULTURE

PUBLISHED BY

THE AGRICULTURAL COMMITTEE
NEVADA BANKERS' ASSOCIATION

Based on General Farm Information and on Data from:

THE UNIVERSITY OF NEVADA
AGRICULTURAL EXPERIMENT STATION
and
EXTENSION SERVICE

APRIL 1946

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A HANDBOOK OF NEVADA AGRICULTURE

INTRODUCTION

The present time (1946) is a very dynamic period in Nevada Agriculture. Many new families unfamiliar with conditions peculiar to Nevada, are trying to make this their homes. Many farms are changing ownership or operators. Other farm operators are faced with changes in organization to meet post-war conditions. Many are making these adjustments without much investigation or study of the factors which make for success or failure. Others are attempting to learn something about those factors before making costly commitments. This handbook was developed for the purpose of presenting some phases of agriculture peculiar to Nevada and at the same time, bringing together facts, tables and figures for handy reference.

NEVADA'S AGRICULTURE

Nevada's agriculture is primarily a livestock type, as evidenced by Table I, Cash Receipts from Farm Marketings, for the years 1924, 1934 and 1944. In all three of the years, sale of cattle, sheep and wool represented 60 percent to 69 percent of the agricultural income.

TABLE I

Cash Receipts from Farm Marketings, by Commodities *(1)

	1924		1934		1944	
	1,000 Dollars	Per Cent	1,000 Dollars	Per Cent	1,000 Dollars	Per Cent
LIVESTOCK AND PRODUCTS	17,246	86.1	7,122	86.2	20,327	81.4
Cattle, calves	7,520	37.6	2,690	32.3	10,459	42.0
Dairy products	1,874	9.4	1,241	15.2	2,824	28.2
Sheep, lambs	3,522	17.6	1,094	13.3	2,511	10.1
Wool	2,811	14.0	1,341	16.3	1,999	8.0
Eggs	532	2.6	333	4.0	1,089	4.3
Hogs	263	1.3	96	1.2	676	2.7
Other	724	3.6	327	3.9	776	3.1
CROPS	2,782	13.9	1,136	13.8	4,638	18.6
Field Crops						
Hay	1,553		634		2,290	
Potatoes	534		180		832	
Barley	130		62		582	
Other	472		210		816	
Fruit	66		34		51	
Other Products	27		16		67	
TOTAL CROPS AND LIVESTOCK	20,028		8,258		24,965	

*References are given on the last page and are indicated by numbers within the parenthesis ( ).

The 1940 census reported 1,229 farms, slightly over one-third of the number of farms in Nevada, which derived their major income, 76.5 percent, from the sale of livestock. Livestock products, principally wool, constituted 11.5 percent, and dairy products, poultry and eggs, crops and products used on farms made up the other 12 percent. On the other 2115 farms, income was divided as follows: livestock sales 11.6%, dairy products 28.9%, poultry and eggs 10.4%, other livestock products 1.3%, sale of crops 36.2% and farm products used by farm families 11.6%.

LAND OWNERSHIP IN NEVADA, 1944

Total Land Area—70,234,920 Acres

Ownership Classification—	Acres	
Privately owned	4,484,000	(2)
Railroad lands	3,543,221	(2)
State School lands	127,928	(3)
State parks	24,540	(3)
National Forest	4,985,791	(3)
Indian reservations	958,772	(3)
County tax lands	231,499	(3)
U. S. Biological Survey	2,842,970	(3)
Grazing Districts	32,142,260	(4)
Public Domain not in grazing districts	20,893,939	(4)

In Nevada, 93.6 percent of the land area is publicly owned. Crop land (20 year average) 391,202 acres, constitutes 8.7 percent of the privately owned land and is a little over half of 1 percent (.56%) of the total area.

ACRES AND PRODUCTION

The following table shows the distribution of crops by 5-year periods from 1924 to 1944, inclusive. (6)

Acres Devoted to Nevada Crops (5)

Kind	1924	1929	1934	1939	1944	Percent 1944
All Crops	362,552	397,504	272,463	435,855	487,634	100
Hay and Forage	332,682	362,960	245,382	394,984	432,842	88.8
Corn	1,725	1,651	1,145	3,878	2,159	.4
Oats	1,831	2,987	1,694	3,882	8,803	1.8
Wheat	13,862	13,529	12,162	12,403	15,290	3.1
Barley	5,819	4,440	5,668	14,717	21,117	4.4
Rye	196	401	366	203	646	.1
Potatoes	3,415	3,692	2,252	1,994	2,946	.6
Other	2,932	5,844	3,794	3,794*	3,831	.8
*Sugar Beets in Lovelock area				1,654		

Nearly 89 percent of the crop area in 1944 was in forage crops. Of this forage area, 62 percent was in wild or meadow hay, 25 percent of the acreage was in alfalfa, and 13 per cent in other tame hay.

CROP PRODUCTION (7)

Name of Crop	Production 1944 tons	Yields per acre 1944	
Corn	1,920	1,920	pounds
Oats	4,368	1,193	pounds
Barley	15,360	1,536	pounds
Wheat	11,640	1,452	pounds
Alfalfa	282,000	2.5	tons
Other Tame Hay	87,000	1.3	tons
Wild Hay	230,000	1.0	tons
Potatoes	14,622	5	tons (8)

FACTORS WHICH INFLUENCE NET INCOME FROM NEVADA FARMS

Net income (return to capital and family labor is the amount remaining after deducting cash operating expenses from cash receipts and adjusting for inventory changes.

The following are some of the factors which influence net income from Nevada farms:

1. Size of business as indicated by:
   a. Capital invested.
   b. No. crop acres.
   c. Number of animal units.
   d. Productive work units per man.

2. Efficient land use, depends on:
   a. Maintenance of fertility.
   b. Choice of crops and livestock, to secure greatest net income.

3. Efficient livestock production as indicated by:
   a. Production per animal unit.
   b. Intelligent feeding practices.
   c. Breeding efficient strains.

4. Productive work units per man depends on:
   a. Using efficient farm machinery and equipment.
   b. Efficient planning of fields and buildings.
   c. Efficient management of labor.

5. Relative price index as it affects:
   a. Total cash receipts.
   b. Cash available for living, interest and principal.

1. Size of business—(9).

In a study of 28 farms over a period of 4 war years, average net farm income was found to vary with some of the efficiency factors listed above, as follows:

1. Each additional dollar invested as capital investment brought 10.55 percent return on the investment.

2. Each additional acre in crops brought approximately $38 additional net income.

3. Net income increased $28.38 for each additional animal unit.

4. Net income increased $6.56 for each additional unit of productive work.

5. Net income increased on dairy farms as the number of cows increased as shown in the following table.

Relation of No. of dairy cows to net farm income (10).

No. Dairy Cows Group	Av. No.	No. of Farms	Net Farm Income
Under 17	12.8	38	$1,233
17 to 24	20.5	38	1,569
24 and over	30.6	38	2,131

All the relationships given above were obtained during a period of exceptionally high prices for farm products. A different price level would change the relationship. During the depression, 1932, 1933 and 1934, net income became a negative amount on many farms. However, during periods of normal prices net income does tend to increase with the size of business.

2. Efficient land use.

   a. Maintenance of fertility by rotation of crops, application of fertilizer, both natural and commercial, and by plowing under growing crops as green manure, both legume and non-legume.

   b. Choice of crops and livestock. Balance the number of livestock with the amount of roughage and pasture available, and purchase supplements in the form of concentrates.

3. Efficient livestock production.

   a. Relation of net income to butterfat production per cow (10).

Lbs. Butterfat per cow	Number herds	Average Number of Cows per Herd	Average Net Income
150-199	14	19.8	$ 790
200-249	39	23.0	1,380
250-299	43	18.9	1,520
300-349	14	18.2	2,680

   b. Relation of net income to return per $100 feed fed to productive livestock (10).

Return per $100 feed fed	No. of farms	Net Farm Income
Below $161	38	$ 873
$161 to $209	38	1,710
$209 to $499	38	2,351

   c. Breeding efficient strains.

   Inherited ability to make efficient use of feed by laying on flesh and producing in great quantity, are proven factors in all types of animal production.

4. Productive Work Units per Man.

   a. The practice of putting machinery, wagons, horses, fences, etc., into good condition during off seasons and off days makes it possible to work full time on productive jobs during the busy season.

   b. Planning irrigation systems and farm buildings so as to save steps increases the efficiency of labor.

   c. An efficient manager will accomplish more with his labor force by assigning men to jobs with which they are most familiar. With "green" labor, job demonstration increases labor efficiency.

5. Relation to Price Index (11).

Nevada Farm Price Index, Average Total Cash Receipts and Cash Available for Living, Interest and Principal by Years (11)

Year	Nevada Farm Price Index 1910—14 equals 100	Total Cash Receipts	Cash Available for Living, Interest and Principal
1929	162	$12,397	$7,134
1930	130	8,889	3,324
1931	90	7,554	3,544
1932	71	4,591	1,341
1933	71	4,973	2,203
1934	85	5,269	2,209
1935	107	6,777	2,429
1936	115	9,111	3,787
1937	126	9,611	3,567
1938	103	8,571	2,454
1939	110	8,521	2,640
Average	106	7,842	3,148

Total cash receipts rose and fell quite consistently with the Nevada farm price index as shown in the Table. The cash available for payment of living costs, interest and principal, however, dropped proportionately lower in periods of low price index than did the total cash receipts.

LABOR REQUIREMENTS

Average labor requirements of the major crops and livestock are shown in the following table. The average requirements are given in terms of the number of man work units 1/ required in a year for 1 acre of crop, or for one animal as the case may be.

Name of Crop or Animal	(Col. 1) No. of Acres or Animals on Your Farm	(Col. 2) Number of Work Units Required Per Acre or Per Animal	Total Man 2/ Days Required (Col. 1 x Col. 2)
Alfalfa		3.0	
Barley		3.3	
Wheat		3.3	
Grass Hay		1.1	
Oats		3.3	
Potatoes		14.3	
Onions		18.0	
Alfalfa Seed		3.3	
Garden		15.0	
Pasture (Grain)		1.8	
Pasture (Grass) Irrigated		.5	
Pasture (Grass) Non-Irrigated		.1	
Dairy, per Cow		16.0	
Cattle, per Animal Unit		1.2	
Hogs, per Hundred Pounds Produced		.45	
Sheep, per Ewe at Lambing		.56	
3/ Chickens, per Hen		.30	
Turkeys, per Bird Raised		.26	

1/ A work unit is one 9-hour day.

2/ To get the total requirement for any crop or animal, multiply the number in column 1 by the factor in column 2.

3/ Includes labor of raising replacements.

STANDARDS OF MEASURING THE FARM BUSINESS

	Production Based on Census and State Statistics	Standard for Most Successful Farms	Your Farm
Crop Yields—			
Alfalfa—tons per acre	2.54	4	
Barley—pounds per acre	1,715	2,800	
Oats—pounds per acre	1,344	2,000	
Wheat—pounds per acre	1,644	2,000	
Potatoes—tons per acre	5	7	
Livestock Yields—			
Cattle—pounds turn-off per head Jan. 1	236	300	
Cattle—percent calf crop	68	57- 80	
Sheep—percent of lambs	75	90-100	
Hogs—pigs saved per litter	6.3	8	
Dairy Cows—pounds butterfat per cow	217	300 and over	
Turkeys—percent raised	80	90	
Chickens—eggs per hen	92	150	

Feed Requirements for Livestock

For animals that live primarily on roughage, a good pasture is usually the best and cheapest source of feed. Supplementary feeding of hay and grain is advisable (1) at the beginning of the pasture season, (2) at any time when lack of irrigation water or other causes reduces the amount of grass (3) toward the end of the season when grass does not grow luxuriantly.

Assuming good pasture for 5 months, the following approximate amounts of feed are needed by different farm animals for one year.

Horse: 3 tons mixed hay or alfalfa hay, or ½ ton of grain and 3 tons of grass hay.

Dairy Cow producing 300 lbs. fat: 1,500 lbs. mixed dairy feed, 3 to 5 tons of alfalfa depending on weight of cow*. It takes about 3 acres of good crop land for each cow to supply enough feed for the cow and replacement.

Sow: 400 pounds grain plus 200 pounds 3rd crop alfalfa.

Pigs to 200 lbs. live weight: 700 lbs. grain, 50 lbs. meat scrap, 500 lbs. skim milk.

Turkeys: Av. weight—hens 16 lbs., toms 20 lbs.: 50 lbs. mash (18% protein) 60 lbs. mixed grain, wheat, barley, corn, etc.

Laying Hens: 40 lbs. mash (18% protein) 45 lbs. wheat or mixed grains.

Range sheep are on pasture or range about 11 months of the year. They are fed hay during lambing and at shearing time. Hay is also fed to bucks and hospital cases. Altogether the annual amount of hay fed per ewe is about 500 pounds.

Range cattle use range, pasture and grain and hay aftermath nine to ten months each year. Hand feeding of hay is practiced in much of the state for 2 to 3 months. The amount of hay required to "carry over" stock cattle is about 1 ton per head.

Weaners wintered on hay require 1 to 1¼ tons of alfalfa, or if they are fed grass hay, they will need in addition, about 150 pounds of protein supplement per head.

* A dairy cow will eat approximately her own weight in hay each month, when on straight hay feed.

Proper Choice and Combination of Crops and Livestock

On cattle, sheep and dairy ranches, forage is the main crop, grain is important only as a part of the rotation of crops to keep pastures and hay at top production. The production of feed and care of the stock requires 80 to 90 percent of the labor load. Minor enterprises, poultry, garden and hogs are produced primarily to provide the family table with food, if efficiently operated they may be a source of profit as well.

As a rule, crop farms which depend on the sale of hay and grain are in the lowest income bracket. This may be due to the fact that these crops do not provide a year around job. Such sales may be necessary while the farm is being deevloped and may be desirable when the farm is operated in connection with well-paid off farm work. Grain raising in Nevada serves as a means of fitting the soil for other crops and as a nurse crop for hay or pasture, but is not usually profitable as a cash crop. Hay is a paying cash crop only when the demand is abnormal. Successful crop farms have one or more specialties such as onions, potatoes, cantaloupes, tomato plants, beet seed, etc., which require high fertility and tilth. Rotation of these intensively fertilized and cultivated crops with ordinary field crops, usually results in higher yields for the field crop due to the residual effects of the intensive practices. Many successful crop farmers have a side-line of enough livestock to consume the ordinary field crops and aftermath.

Higher than average yields mark the most successful farmers. Knowledge of individual field needs is important; special cultivation, application of manure, application of commercial fertilizer to specific fields for specific crops makes for higher yields. High percentage of calf and lamb crop, high production of milk per cow, low mortality in chicks, high egg production per hen are all evidences of successful farming.

Pasture

The importance of good pasture (in a type of farming such as Nevada follows), can not be emphasized too strongly. One acre of good pasture properly managed will, with supplements, feed 2 cows for 5 to 6 months. The same acreage in good alfalfa will feed 1 cow for about the same time. The economic advantage of pasture is evident, the cows do the harvesting, but there are other advantages as well; the growing crop contains a higher percentage of available protein and active vitamins than the mature crop. The process of harvesting and storing hay, even under best conditions, entails losses of some of the protein and vitamin content.

The best results from pastures are obtained by having a sufficient number of pastures to use. This is chiefly due to the desirability of keeping stock off freshly irrigated ground. The stock may be turned on to each field when the grass and sod are in best condition. Production of pastures can usually be kept higher by frequent renewal because of the tendency of the higher yielding species to be displaced by weeds or less valuable species.

Crop Rotation with Pasture

Pasture	5 years
Grain	1 year
Row Crop	1 year
Reseed to pasture with grain nurse crop	1 year

Frequently the pasture is good enough at 4 or 5 years to warrant renovation and reseeding with desirable clovers and grasses.

The following grass and legume mixtures are recommended for areas which can be irrigated throughout the season.

	Number of pounds of seeds in mixture			
	1	2	3	4
Clovers:				
Ladino	3	2	2	2
Alsike		2	2	2
Yellow Sweet	2	2	2	
Grasses:				
Western Wheat			3	
Smooth Brome	8	6	4	5
Orchard		4		4
Tall Oat			3	4
Perennial Rye or Australian Rye	4	4	4	4
Tall Fescues	4			3
Total Pounds per Acre	21	20	20	24

The following mixtures are recommended for areas which have ample irrigation to secure a good annual start but have limited irrigation as the season advances.

	Number of pounds used in mixture			
	1	2	3	Wet Land Peaty Soils
Nevada Blue Grass	5			
Tall Fescues	5		6	
Timothy	3		4	
Orchard Grass	3		5	
White Dutch Clover	4			
Crested Wheat Grass		4		
Slender Wheat Grass		4		
Brome Grass		4		
Alfalfa			3	
Alsike			2	
Red Top				6
Mammoth Red Clover				6
Reed Canary				6
Total pounds of seed	20	12	20	18

It is usually best to have more than enough pasture to handle all the livestock and let the new seedings go for hay and graze only the aftermath the first season. It is also a good plan to let some of the older pasture go for hay during the flush season. This is because plants closely grazed do not make normal root development, and the chance to grow to full size and maturity rejuvinates the plant. If any of these mixtures will not shoot up and make a fair hay crop in June, it means that the field has been over grazed, the fertility is low, or some condition of the soil is faulty.

The formulae and practices given above are of necessity, general. Western soils are variable as to alkali content, physical textures, humus content and other conditions which make for good pasture land. The advice of some one who is familiar with the soils of a community is highly desirable and may prevent wasting money on varieties not suitable to the particular area.

GESTATION TABLE

Draw a ruler down over the page until the date when animal was served appears above the ruler in left hand column. The date showing above the ruler in proper column to the right will be the approximate date young may be expected.

Time of Service	Mares 340 Da.	Cows 283 Da.	Ewes 150 Da.	Sows 112 Da.
Jan. 1	Dec. 6	Oct. 10	May 30	April 22
Jan. 11	Dec. 16	Oct. 20	June 9	May 2
Jan. 21	Dec. 26	Oct. 30	June 19	May 12
Jan. 31	Jan. 5	Nov. 9	June 29	May 22
Feb. 10	Jan. 15	Nov. 19	July 9	June 1
Feb. 20	Jan. 25	Nov. 29	July 19	June 11
Mar. 2	Feb. 4	Dec. 9	July 29	June 21
Mar. 12	Feb. 14	Dec. 19	Aug. 8	July 1
Mar. 22	Feb. 24	Dec. 29	Aug. 18	July 11
Apr. 1	Mar. 6	Jan. 8	Aug. 28	July 21
Apr. 11	Mar. 16	Jan. 18	Sept. 7	July 31
Apr. 21	Mar. 26	Jan. 28	Sept. 17	Aug. 10
May 1	April 5	Feb. 7	Sept. 27	Aug. 20
May 11	April 15	Feb. 17	Oct. 7	Aug. 30
May 21	April 25	Feb. 27	Oct. 17	Sept. 9
May 31	May 5	Mar. 9	Oct. 27	Sept. 19
June 10	May 15	Mar. 19	Nov. 6	Sept. 29
June 20	May 25	Mar. 29	Nov. 16	Oct. 9
June 30	June 4	April 8	Nov. 26	Oct. 19
July 10	June 14	April 18	Dec. 6	Oct. 29
July 20	June 24	April 28	Dec. 16	Nov. 8
July 30	July 4	May 8	Dec. 26	Nov. 18
Aug. 9	July 14	May 18	Jan. 5	Nov. 28
Aug. 19	July 24	May 28	Jan. 15	Dec. 8
Aug. 29	Aug. 3	June 7	Jan. 25	Dec. 18
Sept. 8	Aug. 13	June 17	Feb. 4	Dec. 28
Sept. 18	Aug. 23	June 27	Feb. 14	Jan. 7
Sept. 28	Sept. 2	July 7	Feb. 24	Jan. 17
Oct. 8	Sept. 12	July 17	Mar. 6	Jan. 27
Oct. 18	Sept. 22	July 27	Mar. 16	Feb. 6
Oct. 28	Oct. 2	Aug. 6	Mar. 26	Feb. 16
Nov. 7	Oct. 12	Aug. 16	April 5	Feb. 26
Nov. 17	Oct. 22	Aug. 26	April 15	Mar. 8
Nov. 27	Nov. 1	Sept. 5	April 25	Mar. 18
Dec. 7	Nov. 11	Sept. 15	May 5	Mar. 28
Dec. 17	Nov. 21	Sept. 25	May 15	April 7
Dec. 27	Dec. 1	Oct. 5	May 25	April 17

ESTIMATING AMOUNTS OF FARM PRODUCTS IN BINS

To find the number of bushels of grain, shelled corn, or other commodities in a rectangular bin: multiply the length by the width by the depth (all in feet) and divide by 1.25 (the number of cubic feet per bushel).

For a round bin, multiply one-half the diameter by itself by the height by 3.14. Divide by 1.25.

To find the number of pounds of grain or other commodity in a rectangular bin: multiply the length by the width by the depth (all in feet). Multiply this product by the **weight** (in pounds) **per cubic foot** as given in the following table:

Commodity	Weight Per Bushel (Lbs.)	Weight Per Cu. Ft. (Lbs.)	Commodity	Weight Per Bushel (Lbs.)	Weight Per Cu. Ft. (Lbs.)
Alfalfa Seed	60	48.0	Grain Sorghum	56	44.8
Barley (common)	48	38.4	Oats	32	25.6
Barley (hulless)	60	48.0	Peas, Dry	60	48.0
Beans, Lima	56	44.8	Potatoes		
Beans, other	60	48.0	Irish	60	48.0
Clover	60	48.0	Sweet	55	44.0
Corn, Shelled	56	44.8	Rice, Rough	45	36.0
Corn, Dry Ear	70	56.0	Rye	56	44.8
Flax	56	44.8	Stock Beets	60	48.0
			Wheat	60	48.0

ESTIMATING TONNAGE IN HAY IN MOWS AND STACKS

1. To compute the tonnage of hay in **Mows** multiply the length by the width by the average height (all in feet) and divide by 400 to 500 for alfalfa hay or by 600 to 800 for grain or volunteer hay, depending upon the condition and length of time it has been in the mow.

2. To determine the tonnage of hay in rectangular type stacks:

Low Round Topped Stacks

$$\frac{[(.52 \times \text{over} - (.44 \times W)] \times (W \times L)}{\text{No. Cu. ft. per ton}}$$

High Round Topped Stacks

$$\frac{[(.52 \times 0) - (.46 \times W)] \times (W \times L)}{\text{No. Cu. ft. per ton}}$$

Square Flat Topped Stacks

$$\frac{[(.56 \times 0) - (.55 \times W)] \times (W \times L)}{\text{No. Cu. ft. per ton}}$$

For Round Stacks

$$\frac{(.04 \times 0 - (.012 \times \text{Cir. }) \times (\text{Cir. })^2}{\text{No. Cu. ft. per ton}}$$

AVERAGE CU. FT. PER TON ALFALFA IN STACK

1 Month	545	5 Months	486
2 Months	520	6 Months	478
3 Months	504	10 Months	455

WATER MEASUREMENT

To calculate the amount of irrigation water applied per acre, the following formulas may be used:

1. Cubic feet per second or second-feet:

$$\frac{\text{Number of second-feet x hours run}}{\text{Number Acres}} = \text{acre-inches per acre.}$$

2. Gallons per minute:

$$\frac{\text{Gallon per minute x hours run}}{\text{450 x Number Acres}} = \text{acre-inches per acre.}$$

3. Statutory miner's inch = 11¼ g.p.m. = 1/40 cu. ft. per second.

$$\frac{\text{Number miner's inches x hours run}}{\text{40 x Number Acres}} = \text{acre-inches per acre.}$$

USEFUL TABLES

Linear Measure

12 inches	1 foot
3 feet	1 yard
5½ yards	1 rod
320 rods	1 mile
5280 feet	1 mile

Dry Measure

2 pints	1 quart
8 quarts	1 peck
4 pecks	1 bushel
1 bushel (U. S.)	1¼ cu. ft.
1 heaped bu.	1¼ struck bu.

Square Neasure

144 sq. in.	1 sq. ft.
9 sq. ft.	1 sq. yd.
30¼ sq. yd.	1 sq. rd.
43.560 sq. ft.	1 acre
4,840 sq. yd.	1 acre
160 sq. rd.	1 acre
640 acres	1 sq. mile

Liquid Measure

4 fluid oz.	1 gill
4 gills	1 pint
2 pints	1 quart
4 quarts	1 gallon
7½ gallons	1 cu. ft.
30½ gallons	1 barrel
63 gallons	1 hogshead

Incubation Period for Farm Fowls

Duck	30 days
Goose	30 days
Guinea	26 days
Chicken	21 days
Turkey	28 days
Pigeon	14 days

REFERENCES

(1) Cash receipts from farm marketing 1924-44, pp. 146-147, Bureau of Agricultural Economics, January, 1946.

(2) Nevada Tax Commission 1944.

(3) Nevada's Agriculture and County Planning, p. 23, Agricultural Extension Service.

(4) Extension Bulletin 77, Setting up Taylor Grazing Districts.

(5) By difference.

(6) U. S. Census—1920, 1930, 1940, 1945.

(7) Crops and Markets, Vol. 23, No. 1 U. S. Department of Agriculture, B. A. E.

(8) U. S. Census for 1944 yields.

(9) Farm management Bulletin, (mimeographed) Vol. VI, No. 3. Farm account records of 28 farms for 4 years, 1941-1944 inclusive.

(10) Farm Management Bulletin (mimeographed) Vol. III, No. 3 Factors Affecting Dairy Farm Income.

(11) Farm Management Bulletin (mimeographed) Vol. II, No. 2.

(12) Nevada Experiment Station Bulletin No. 154, p. 22.

AGRICULTURAL NEWS SERVICE
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NEVADA FARMERS IN 8-POINT U.S. DAIRY PROGRAM

THE NATIONAL EIGHT-POINT DAIRY PROGRAM FOR 1946 APPLIES AS WELL IN NEVADA AS IN OTHER STATES, ACCORDING TO V. E. SCOTT OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

WHILE IMPROVEMENT IN DAIRYING MAY INCLUDE A GREAT NUMBER OF FACTORS, IN 1946 THE DAIRY INTERESTS OF THE NATION ARE CONCENTRATING ON EIGHT ITEMS OF DAIRY DEFICIENCY:

(1)--FEED EACH COW FOR ECONOMICAL PRODUCTION, (2)--IMPROVE GRASSLANDS TO SAVE MILK DOLLARS, (3)--USE BEST METHODS OF CURING ROUGHAGE TO RETAIN FEED VALUE, (4)--KEEP PRODUCTION RECORDS FOR BETTER HERD MANAGEMENT, (5)--BREED FOR IMPROVED HERD REPLACEMENTS, (6)--PRODUCE QUALITY MILK AND CREAM FOR GREATER RETURNS, (7)--PLAN LAY-OUTS, EQUIPMENT, AND METHODS TO CUT LABOR COSTS, (8)--MAINTAIN HERD HEALTH FOR MAXIMUM EFFICIENCY.

FEED AND FEEDING, EMPHASIZED IN POINTS 1, 2, AND 3, FORM THE GREATEST EXPENSE IN PRODUCTION OF MILK AND ALSO FURNISH THE GREATEST CHANCE FOR IMPROVEMENT, SCOTT SAID THIS WEEK.

DURING 1946, HE EXPLAINED, EFFORTS WILL BE MADE TO OBTAIN ECONOMICAL PRODUCTION BY FEEDING ACCORDING TO INDIVIDUAL COW CAPACITY, IMPROVEMENT OF PASTURE, AND EMPHASIZING BEST METHODS OF CURING ROUGHAGE SO AS TO PRESERVE THE NUTRIENT IN THE GREEN FORAGE.

MANY NEVADA DAIRYMEN ARE ALREADY EMPHASIZING POINT 7, AND ARE REARRANGING THEIR DAIRY BUILDINGS AND CONSTRUCTING NEW LAYOUTS IN ORDER TO DECREASE LABOR AND IMPROVE SANITARY FEATURES.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

"ALL OF THESE IMPORTANT ITEMS IN A DAIRY PROGRAM CULMINATE IN THE PRODUCTION OF HIGH QUALITY MILK AND CREAM", SCOTT SAID.

"THE PRODUCTION OF A QUALITY OF PRODUCT THAT WILL CREATE GREATER DEMAND WILL BE STRESSED BY ALL AGENCIES THAT HAVE ANY CONTACT WITH THE DAIRY INDUSTRY."

SOME OF THE NEVADA AGENCIES LISTED BY SCOTT WHICH WILL PROMOTE THE PROGRAM ARE THE STATE BOARD OF HEALTH, CITY AND COUNTY BOARDS OF HEALTH, DAIRY MANUFACTURERS, DISTRIBUTORS OF DAIRY PRODUCTS, BANKS, THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, COUNTY AGRICULTURAL EXTENSION SERVICES, STATE AND COUNTY FARM BUREAUS, AND DAIRY FARMERS AND THEIR ORGANIZATIONS.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-2-25-#18-B&AB-340- EXCLUSIVE IN YOUR CITY

CHICK SELECTION IMPORTANT, EXTENSION MAN SAYS

TO OBTAIN HIGH-GRADE PRODUCTION, NEVADA CHICKEN RAISERS WILL DO WELL TO PROCURE SUFFICIENT CHICKS EACH SPRING SO THAT HALF OR TWO-THIRDS OF THE FLOCK IN THE FALL WILL BE PULLETS; SAYS V. E. SCOTT OF THE AGRICULTURAL EXTENSION DIVISION OF THE UNIVERSITY OF NEVADA, IN URGING THE PURCHASE OF NEW STOCK AT THIS TIME.

ONLY CHICKS FROM FLOCKS THAT HAVE BEEN CULLED BY EXPERIENCED MEN AND SELECTED FOR TYPE, VIGOR AND PRODUCTION SHOULD BE BOUGHT IF THE CHICKEN-RAISER WISHES TO BE REASONABLY SURE OF HIGH-GRADE RESULTS, THE SPECIALIST EXPLAINED. ANY GRADE OF CHICK PURCHASED FROM AN ACCREDITED HATCHERY IS STOCK BRED FOR PRODUCTION, HE SAYS.

IF CHICKS HAVE BEEN PURCHASED FROM HATCHERIES WHOSE FLOCKS ARE GUARANTEED TO BE IN GENERAL GOOD HEALTH AND ARE SHIPPED IN SANITARY BOXES, THE CHICKS WILL REACH THE POULTRY MAN IN GOOD CONDITION. THEIR HEALTH, THEREAFTER, WILL DEPEND UPON THE CARE THEY RECEIVE.

TO ACHIEVE GOOD CARE, NEVADA POULTRYMEN WERE REMINDED BY SCOTT THAT SANITARY, WARM, AND DRY CONDITIONS, TOGETHER WITH SUFFICIENT ROOM, ARE NECESSARY FOR SUCCESS IN BROODING.

MOVING OF THE BROODER HOUSE TO CLEAN GROUNDS, IF THAT IS POSSIBLE, IS REGARDED AS A DESIRABLE PRACTICE. CLEAN GROUND, THAT WHICH HAS NOT BEEN USED BY CHICKENS OR TURKEYS FOR TWO YEARS, AND ITS USE, IS A PRECAUTION AGAINST TAPEWORM, COCCIDIOSIS, AND ROUNDWORM.

EVERYTHING SHOULD BE READY BY THE TIME THE CHICKS ARRIVE, SCOTT POINTED OUT, WITH HOUSES AND EQUIPMENT CLEANED AND DISINFECTED

(MORE)

FROM--UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

AND EXPOSED TO THE SUNSHINE FOR SEVERAL DAYS, IF POSSIBLE.

CONFINING OF THE CHICKS NEAR TO THE BROODER BY A GUARD RING DURING THE FIRST FEW DAYS IS DESIRABLE.

FOR EVERY 50 CHICKS, THERE SHOULD BE ONE WATER FOUNTAIN OF ONE-GALLON CAPACITY.

A CHICK FEEDER 4 FEET LONG AND OPEN ON BOTH SIDES IS NEEDED FOR EACH 100 CHICKS.

A BROODER STOVE SHOULD BE OF SUFFICIENT SIZE TO CARE FOR THE NUMBER OF CHICKS BEING RAISED.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-3-25-#28-B&AB-460- EXCLUSIVE IN YOUR CITY

METHODS OF MEETING FEED SHORTAGE TOLD POULTRYMEN

ALMOST NORMAL PURCHASE OF BABY CHICKS, TOGETHER WITH HEAVY CULLING OF HENS, WAS SUGGESTED THIS WEEK TO NEVADA POULTRYMEN BY V. E. SCOTT OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

IN THIS WAY, HE SAID, POULTRY RAISERS CAN MOST EFFECTIVELY MEET THE SHORTAGE OF WHEAT FEEDS THIS SPRING WHICH "HAS MADE SOME POULTRYMEN JITTERY."

IF SUCH A PRACTICE IS NOT ADOPTED, SCOTT POINTED OUT, "THE NATION WILL FACE AN EGG SHORTAGE NEXT FALL FAR GREATER THAN THE BUTTER SHORTAGE NOW GIVING DEALERS AND CONSUMERS SUCH HEADACHES."

THE U. S. SECRETARY OF AGRICULTURE HAS ASKED, IN VIEW OF THE FEED SHORTAGE, THAT CHICK ORDERS BE CUT ABOUT 15 PERCENT. BUT ACCORDING TO REPORTS REACHING SCOTT, NEVADA POULTRYMEN HAVE CANCELLED ORDERS MUCH HEAVIER THAN THIS, AND UNWISELY SO, IN HIS OPINION.

HERE'S WHY, THE EXTENSION MAN, SAID:

"IF POULTRYMEN WOULD TRIM THEIR ORDERS FOR CHICKS ABOUT 15 PERCENT AS REQUESTED BY THE SECRETARY, THE JOB OF PROVIDING WHEAT FOR NEEDY PEOPLE ABROAD WOULD BE ACCOMPLISHED WITHOUT HURTING OUR OWN PEOPLE TO ANY EXTENT.

"BE THAT AS IT MAY, POULTRYMEN HAVE CANCELLED OR REDUCED ORDERS FOR CHICKS AND THAT FACT CHANGES THE WHOLE POULTRY SET UP.

"NORMALLY, POULTRYMEN SHOULD CULL FROM ONE-THIRD TO ONE-HALF OF THE FLOCK SOON AFTER THE FLUSH OF PRODUCTION IS OVER IN MAY, JUNE, AND JULY, OR LATER IF PRODUCTION REMAINS HIGH. THE HENS CULLED AT THIS TIME ARE NOT LIKELY TO LAY PROFITABLY DURING THE SUMMER MONTHS.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

"WHILE NORMALLY IT IS RECOMMENDED THAT ONE-THIRD TO ONE-HALF OF THE FLOCK BE REPLACED WITH PULLETS, THE REDUCTION IN CHICK ORDERS INDICATES REPLACEMENTS OF FROM ONLY ONE-FOURTH TO ONE-THIRD OR LESS.

"IF POULTRYMEN CULL AS MANY HENS AS THEY NORMALLY SHOULD THEY WILL HAVE SMALLER FLOCKS AND LESS TOTAL PRODUCTION NEXT FALL. IF THEY CULL LIGHTLY AT THIS TIME, THEY ARE LIKELY TO HAVE LOWER PRODUCTION PER HEN NEXT FALL, BUT MAY HAVE GREATER TOTAL PRODUCTION WHEN PRICES ARE GOOD."

THE BEST METHOD OF SAVING FEED IN THE PRESENT EMERGENCY, WITHOUT INJURING THE FLOCK FOR NEXT FALL'S PRODUCTION IS TO CULL HEAVILY AS SOON AS PRODUCTION DROPS BELOW 45 TO 40 PERCENT (45 TO 40 EGGS A DAY PER 100 HENS), AND ORDER SUFFICIENT CHICKS TO OPERATE A BROODER AT NORMAL CAPACITY, THE U. N. EXTENSION MAN SAID.

THIS WILL ASSURE A FLOCK FOR NEXT FALL AND THE CHICKS WILL NEED MUCH LESS FEED DURING THE PERIOD APRIL THROUGH JULY THAN WILL THE SAME NUMBER OF HENS.

"ONE HUNDRED CHICKS WILL CONSUME 458 POUNDS OF FEED FROM APRIL 1 TO JULY 31, AND 100 WHITE LEGHORN HENS WILL CONSUME 2400 POUNDS OF FEED IN THE SAME TIME.

"IF YOU CULL HALF OF THE FLOCK OF HENS AND RAISE THE SAME NUMBER OF BABY PULLETS, YOU WILL SAVE 700 POUNDS OF FEED PER 100 HENS, AND AT THE SAME TIME ADJUST YOUR FLOCK SO YOU WILL HAVE A POULTRY BUSINESS NEXT FALL.

"WHEN EGG PRODUCTION DROPS TO 50 PERCENT, MANY OF THE POORER LAYERS CAN BE PICKED OUT BY THEIR GENERAL APPEARANCE. EYES AND COMB GET DULL, COMBS SHRINK, VENT AND ABDOMEN SHRINK, AND YELLOW COLOR BEGINS TO FORM AROUND THE VENT. THIS IS THE TIME TO CULL."

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-4-22-#38-B&AB-460- EXCLUSIVE IN YOUR CITY

MORE PASTURES PLANTED BY NEVADA DAIRYMEN

NEVADA DAIRYMEN ARE PRETTY WELL SOLD ON THE IDEA OF INCREASED USE OF PASTURES, IN THE OPINION OF V. E. SCOTT OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

IN KEEPING WITH THIS CONVICTION, THEY HAVE PLANTED INCREASED PASTURAGE DURING THE LAST FIVE YEARS TO TAKE CARE OF A LARGE PART OF THE SUMMER FEEDING, AND A BIG REDUCTION IN THE AMOUNT OF ALFALFA FEED PER COW HAS OCCURRED.

WHERE SUFFICIENT PERMANENT PASTURE HAS NOT BEEN PROVIDED, SCOTT SAID THAT NEVADA DAIRYMEN HAVE FOUND TEMPORARY PASTURE OF SMALL GRAINS OR SUDAN GRASS PROVIDES AN EXCELLENT SUBSTITUTE.

"MOST NEVADA DAIRYMEN HAVE LEARNED THAT A COW CAN HARVEST FORAGE MORE CHEAPLY AND WITH LESS LOSS OF PROTEIN AND VITAMINS THAN CAN MAN, EVEN WITH THE MOST MODERN HAYING EQUIPMENT," THE EXTENSION DAIRY SPECIALIST SAID.

"THEY HAVE ALSO LEARNED THAT, IN ORDER TO ACCOMPLISH THIS RESULT, A COW MUST BE PROVIDED WITH AN ABUNDANCE OF GREEN, LUSCIOUS GRASS."

GOOD MANAGEMENT OF PERMANENT PASTURES IS WHERE THE FARMER COMES IN, IN THIS CHEAPER AND BETTER METHOD OF HARVESTING.

"TWO, OR STILL BETTER, THREE PASTURE LOTS ROTATED SO THAT THE COWS ARE TURNED IN WHEN THE GRASS AND SOIL ARE RIGHT, "SCOTT STATED, "WILL PROVIDE MORE PASTURE THAN THE SAME AREA PASTURED AND IRRIGATED AT THE SAME TIME.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
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"IT IS SOMETIMES NECESSARY TO FOLLOW THE MILKING HERD WITH A GOOD SIZED BUNCH OF YOUNG STOCK IN ORDER TO CLEAN UP SOME OF THE LESS PALATABLE GRASSES.

"WHEN DRY AND YOUNG STOCK ARE NOT AVAILABLE OR WHEN WEEDS BEGIN TO FLOURISH, IT MAY BE NECESSARY TO CLIP THE PASTURE.

"INCREASED YIELDS AND MORE PALATABLE PASTURE ARE OBTAINED BY BREAKING UP THE DROPPINGS BY USE OF A FLOAT OR DRAG JUST BEFORE IRRIGATING. GOOD PASTURE MANAGEMENT ALSO INCLUDES THE USE OF COMMERCIAL FERTILIZER.

"DAIRYMEN HAVE FOUND THAT COMMERCIAL FERTILIZERS IMPROVE BOTH QUANTITY AND QUALITY OF THE FEED."

PASTURES, AS A MEANS OF IMPROVING FEED SUPPLY, ARE POINT NUMBER 2 IN THE NATIONAL 8-POINT DAIRY PROGRAM, WHICH IS BEING EMPHASIZED BY NEVADA DAIRYMEN.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-6-3-#56-B&AB-370- EXCLUSIVE IN YOUR CITY

PASTURE AND HAY SOURCES OF PROTEIN FEED

WITH HIGH PROTEIN CONCENTRATES IN SHORT SUPPLY FOR DAIRY COWS, V. E. SCOTT OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, THIS WEEK POINTED OUT THAT NEVADA DAIRYMEN MAY UTILIZE PASTURE, ALFALFA HAY, AND SILOS AS SOURCES OF PROTEIN FEED.

NEVADA PASTURE, HE SAID THIS WEEK, IS NOW NICELY STARTED AND THE GRASSES SUPPLY A PRETTY WELL BALANCED RATION.

IF KEPT IN A LUSH GROWING CONDITION, THEY WILL CONTINUE TO SUPPLY MOST OF A DAIRY COW'S NEEDS ALL THROUGH THE SUMMER AND EARLY FALL.

NEXT WINTER'S SUPPLY OF PROTEIN FEEDING, HOWEVER, MUST BE PREPARED THIS SPRING AND SUMMER, HE STATED.

ALFALFA CUT WHEN ONE-QUARTER IN BLOOM CONTAINS FROM 10 TO 15 PERCENT MORE PROTEIN THAN IF CUT WHEN THE PLANTS ARE IN LATE BLOOM.

GRASS HAY, SCOTT SAID, SHOULD BE CUT WHEN IN THE EARLY HEAD STAGE TO CAPTURE THE PROTEIN BEFORE IT GOES INTO THE SEED AND BACK TO THE ROOTS.

IF THE WEATHER INTERFERES WITH HAY CURING, SCOTT POINTED OUT THAT ALFALFA OR THE GRASSES CAN BE ENSILED, THEREBY SAVING THE FEEDING VALUE THAT IS INJURED BY POOR CURING.

"MAKING A HAY CROP INTO SILAGE PRODUCES A FEED NINE PERCENT RICHER IN PROTEIN THAN THE SAME CROP STORED AS HAY, BECAUSE SILAGE IS STORED GREEN," THE EXTENSION DAIRYMAN SAID.

"ANY SILO SUITABLE FOR STORING CORN IS SUITABLE FOR STORING HAY SILAGE. THE MOST POPULAR SILOS ARE THE MONOLYTHIC CONCRETE SILOS

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

FOR ABOVE-GROUND STORAGE AND THE TRENCH TYPE FOR UNDERGROUND STORAGE.

"THE TRENCH IS EASILY EXCAVATED BY A TEAM, OR TRACTOR, AND SCRAPER. SELECT A WELL DRAINED SOIL AND SCRAPE OUT A TRENCH 4 OR 5 FEET DEEP AND 12 FEET WIDE, HEAPING THE DIRT ALONG THE SIDES TO MAKE A TRENCH 7 OR 8 FEET IN TOTAL DEPTH."

SCOTT SAID THAT NOW IS A GOOD TIME FOR NEVADA DAIRYMEN TO PLAN CONSTRUCTION OF SILOS SO THAT THEY WILL BE READY FOR THE PLANNED CROP OF CORN OR GRAIN SILAGE AND ALSO FOR HAY SILAGE, IF THE WEATHER IS BAD AT HAYING TIME.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-6-17-#64-A&AB-130- EXCLUSIVE IN YOUR CITY

NEVADA FARMERS MECHANIZING HAYING OPERATIONS

FARMERS OF NEVADA ARE INCREASINLY MECHANIZING THEIR HAYING OPERATIONS IN THE OPINION OF THE COUNTY AND DISTRICT AGENTS OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

MECHANIZATION OF HAY HARVESTING INCREASED IN 1945, ABOUT 10 PERCENT OVER THE PREVIOUS YEAR, ACCORDING TO AGENTS' OBSERVATIONS TABULATED BY V. E. SCOTT OF THE EXTENSION SERVICE STATE OFFICE.

ABOUT 73 PERCENT OF THE HAY HARVESTED LAST YEAR WAS CUT BY TRACTOR-DRAWN MOWERS.

A SMALL NUMBER OF MECHANICAL BUCK RAKES WERE USED BY NEVADA FARMERS IN 1945.

SCOTT OBTAINED THE INFORMATION FROM AGENTS BY DISCUSSION AND LETTER.

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FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

AGRICULTURAL NEWS SERVICE

RELEASE UPON RECEIPT -1946-9-3-#99-A&AB-310- EXCLUSIVE IN YOUR CITY

REAL ESTATE VALUES OF NEVADA FARMS RISE MODERATELY

ADVANCE IN FARM REAL ESTATE VALUES IN NEVADA HAS BEEN CONSERVATIVE IN RECENT YEARS IN COMPARISON WITH THOSE IN MANY OTHER STATES, ACCORDING TO AN ANALYSIS OF U. S. BUREAU OF AGRICULTURAL ECONOMICS FIGURES BY V. E. SCOTT OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

IN THE COMEBACK FROM THE VALUES OF 1935-9, THE WEST COAST STATES, THE EAST FRINGE OF THE MOUNTAIN STATES, AND THE SOUTH ATLANTIC AND EAST SOUTH CENTRAL AREAS ALL HAVE EXCEEDED NEVADA, THE BAE FIGURES SHOW.

NEVADA'S INCREASE HAS BEEN 55 PERCENT. ABOUT HALF THE 48 STATES ALSO HAVE HAD CONSERVATIVE FARM REAL ESTATE VALUE GAINS FROM THE DEPRESSION LOWS RANGING UP TO 59 PERCENT.

WHILE IN MUCH OF THE COUNTRY, FARMERS SELLING LAND INDICATE THAT THEY INTEND TO CONTINUE FARMING WITH REDUCED HOLDINGS, THAT HAS NOT BEEN THE CASE IN NEVADA. IN THIS STATE, NOT ONLY HAVE FARMS NOT BEEN REDUCED IN SIZE BUT MANY PURCHASES HAVE BEEN TO CONSOLIDATE HOLDINGS RATHER THAN TO REDUCE THEM.

IN THE NATION AS A WHOLE, ONE-THIRD OF THE FARMERS SELLING LAND SAID THEY EXPECT TO CONTINUE FARMING, ONE-FIFTH PLAN TO RETIRE, AND ONE-TENTH TO ENTER OTHER OCCUPATIONS.

THE AVERAGE VALUE OF FARM REAL ESTATE IN THE COUNTRY, CONSIDERING LAND AND IMPROVEMENTS, HAS STEADILY INCREASED IN VALUE SINCE

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
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1939, SCOTT POINTED OUT. BY THAT TIME, 1920 BOOM VALUES HAD BEEN PRETTY WELL SQUEEZED OUT.

FARM REAL ESTATE INDEX NUMBERS, BASED ON 100 FOR THE YEARS 1912-14, WHICH HAD REACHED A HIGH OF 170 IN 1920, DROPPED TO 79 IN 1935, AND HAS RISEN TO 147 IN JULY OF THIS YEAR.

IN THE MOUNTAIN STATES, WHICH INCLUDE NEVADA, PEAK VALUES WERE REACHED IN 1920, WITH AN INDEX NUMBER OF 151, DROPPED TO 70 IN 1935, AND BUILT UP TO 139 THIS YEAR.

RESALE OF FARM PROPERTY AFTER BRIEF OWNERSHIP HAS BEEN FREQUENT IN THE NATION AS A WHOLE. ACCORDING TO THE BAE, ABOUT 64 PERCENT OF THE BUYERS HAVE BEEN ACTIVE FARMERS.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-9-3-#100-B&AB-540- EXCLUSIVE IN YOUR CITY

NEVADA'S GRAIN CROP QUARTER BIGGER THAN THAT OF 1945

PRODUCTION OF GRAIN OF ALL KINDS IN NEVADA THIS YEAR IS EXPECTED TO RANGE ABOUT ONE-QUARTER LARGER THAN THE 1945 CROP, ACCORDING TO ESTIMATES OF THE STATISTICIANS OF THE U. S. DEPARTMENT OF AGRICULTURE.

BOTH INCREASED ACREAGE AND INCREASED YIELD ARE EXPECTED TO ENTER INTO THE BUMPER CROP.

THE 1946 NEVADA GRAIN CROP IS ALSO EXPECTED TO BE SLIGHTLY GREATER THAN THE AVERAGE OF THE PAST TEN YEARS.

WHEAT, BARLEY, AND CORN CROPS, IT IS ANTICIPATED, WILL YIELD CONSIDERABLY ABOVE THOSE OF LAST YEAR, WHILE THE OATS CROP MAY BE SLIGHTLY LOWER THAN 1945 PRODUCTION.

THE LATEST ESTIMATES OF THE U. S. DEPARTMENT OF AGRICULTURE STATISTICIANS SHOW A 50 PERCENT PROBABLE INCREASE IN TOTAL YIELD IN THIS YEAR'S WHEAT CROP OVER THAT OF LAST YEAR, AND A 27 PERCENT INCREASE IN PRODUCTION OVER THE 10-YEAR AVERAGE.

BARLEY PRODUCTION FOR THIS YEAR, IT IS ANTICIPATED, WILL PRODUCE 15 PERCENT MORE THAN LAST YEAR AND 31 PERCENT OVER THE 10-YEAR AVERAGE.

CORN, WHICH IS NOT WIDELY GROWN IN NEVADA, IT IS ANTICIPATED WILL YIELD ABOUT 31 PERCENT OVER LAST YEAR, ALTHOUGH SLIGHTLY UNDER THE 10-YEAR FIGURE.

THE OATS CROP IS SLIGHTLY LESS THAN LAST YEAR BUT IS NEARLY ONE-THIRD GREATER THAN THE 10-YEAR AVERAGE.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

IN ANALYZING THE REPORT, L. E. CLINE, OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, SAID THAT INCREASES IN GRAIN PRODUCTION, TOGETHER WITH A SLIGHT REDUCTION IN NUMBER OF GRAIN CONSUMING ANIMALS, WHICH HAS BEEN NATIONAL IN SCOPE, SHOULD PLACE NEVADA LIVESTOCK IN A BETTER RELATIVE POSITION AS TO GRAIN SUPPLY THAN PREVAILED LAST YEAR.

NEVADA IS IN MUCH THE SAME POSITION AS THE NATION AS A WHOLE.

RECENT GOVERNMENT ESTIMATES PLACE NEVADA SHEEP NUMBERS AT 4 PERCENT LESS THAN A YEAR AGO, HOGS 20 PERCENT LESS, CHICKENS 15 PERCENT LESS, TURKEYS 20 PERCENT LESS, MILK COWS THE SAME, AND BEEF CATTLE 3 PERCENT MORE.

"REPORTS INDICATE", CLINE SAID, "THAT A PORTION OF THE WILD HAY, AS WELL AS ALFALFA HAY, LAND HAS BEEN TRANSFERRED TO GRAIN PRODUCTION SO THAT FOR THE STATE AS A WHOLE IT IS ESTIMATED THAT THERE IS 2 PERCENT LESS HAY ACREAGE, INCLUDING AN ESTIMATED 10 PERCENT LESS ALFALFA ACREAGE.

"NEVADA HAS ALWAYS BEEN AN IMPORT STATE FOR GRAINS AS WELL AS MIXED FEEDS, AND THE 1946-47 FEEDING SEASON WILL PROBABLY NOT BE MUCH DIFFERENT FROM THE PREVIOUS YEAR, SO FAR AS IMPORTS ARE CONCERNED IF GRAIN FEEDING IS TO BE CARRIED ON AS USUAL.

"THERE WAS LITTLE CARRY-OVER OF FEED GRAINS THIS YEAR FROM THE OLD GRAIN CROPS."

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-10-7-#111-A&AB-360- EXCLUSIVE IN YOUR CITY

NEVADA DAIRYMEN OBSERVE 8-POINT PROGRAM

NEVADA DAIRYMEN HAVE BEEN LIVING UP TO THE EIGHT-POINT NATIONAL DAIRY PROGRAM, ACCORDING TO V. E. SCOTT OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE.

ALL THROUGH THE SPRING AND SUMMER, HE SAID THIS WEEK, THEY HAVE BEEN EMPHASIZING CERTAIN OF THE POINTS DESIGNED TO PRODUCE MILK MORE EFFICIENTLY AND ECONOMICALLY.

THEY HAVE, SCOTT SAID, ROTATED PASTURES AND KEPT THEM GREEN BY FREQUENT IRRIGATION. THEY HAVE FED GRAIN TO COWS WHOSE PRODUCTION CAPACITY WARRANTED IT. THEY HAVE CONTROLLED FLIES BY KEEPING BARNS AND MILK ROOMS CLEAN. THEY HAVE COOLED MILK DOWN QUICKLY SO THAT IT IS IN THE BEST CONDITION FOR HUMAN CONSUMPTION.

WITH THE FALL SEASON NOW HERE, SCOTT SAID, THE PROGRAM IS STILL ALIVE AND THERE ARE PLENTY OF THINGS FOR FUTURE-LOOKING DAIRYMEN TO DO.

NOW IS THE TIME, HE SAID, TO LOOK INTO THE MATTER OF IMPROVED HERD STYLES,, ESPECIALLY WITH A LOT OF FINE ANIMALS AVAILABLE IN FALL SALES.

ANOTHER PROGRESSIVE STEP WHICH CAN BE TAKEN IN MANY DAIRYING COMMUNITIES IN NEVADA, HE BELIEVES, IS THE FORMATION OF A TESTING ASSOCIATION.

IN FACT, ACCORDING TO THE EXTENSION DAIRYMAN, THERE ARE PLENTY OF OPPORTUNITIES TO WORK ON IN ANY ONE OF THE EIGHT POINTS:

1. FEED EACH COW ACCORDING TO HER INDIVIDUAL NEEDS.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
COOPERATIVE AGRICULTURAL EXTENSION WORK, ACTS OF MAY AND JUNE, 1914.
CECIL W. CREEL, DIRECTOR . . . . . A. L. HIGGINBOTHAM, EDITOR.

2. IMPROVE PASTURES, KEEP THEM LUSH.

3. USE THE BEST METHODS OF CURING ROUGHAGE TO RETAIN FEED VALUE.

4. KEEP PRODUCTION RECORDS TO ASSIST YOU IN BETTER HERD MANAGEMENT.

5. BREED FOR IMPROVED HERD REPLACEMENTS.

6. PRODUCE HIGH QUALITY MILK AND CREAM TO INSURE A GOOD MARKET FOR YOUR PRODUCT.

7. PLAN YOUR BARNS, DAIRY ROOMS, YARDS, AND EQUIPMENT FOR GREATER CONVENIENCE AND LABOR SAVING.

8. MAINTAIN HERD HEALTH SO THE HERD WILL ALWAYS BE AT ITS MAXIMUM EFFICIENCY.

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AGRICULTURAL NEWS SERVICE
RELEASE UPON RECEIPT -1946-10-21-#117-B&AB-600- EXCLUSIVE IN YOUR CITY

FEED HENS MORE MASH,
GET MORE EGGS,
OCTOBER SUGGESTION

LAYING HENS IN NEVADA AT THIS TIME OF YEAR SHOULD BE ENCOURAGED TO EAT AS MUCH MASH AS THEY WILL TO FORCE EGG PRODUCTION.

V. E. SCOTT OF THE UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE SAID THIS WEEK THAT MOST DEVICES TO MAKE HENS LAY MORE ARE MERELY METHODS OF MAKING THEM EAT MORE MASH.

THREE WAYS TO STEP UP THE EATING OF MASH WERE OUTLINED BY SCOTT. FIRST, HE SAID, IS TO KEEP MASH BEFORE THE HENS ALL THE TIME. THE SECOND IS TO ENCOURAGE THE EATING OF MASH THROUGH ARTIFICIAL LIGHTING. THIRD IS THE FEEDING OF DAMP MASH .

"A GOOD WAY TO ENCOURAGE THE EATING OF MASH," THE EXTENSION WORKER STATED, "IS TO KEEP TROUGHS OR HOPPERS OF MASH BEFORE THE HENS AT ALL TIMES AND FEED 10 POUNDS OF SCRATCH FEED AT NIGHT TO EVERY 100 HENS.

"A SMALL AMOUNT OF THE GRAIN WILL BE IN THE LITTER IN THE MORNING AND THE HENS WILL GET A GOOD WORKOUT SCRATCHING IT, THEN WILL GO TO THE MASH TROUGHS.

"PLENTY OF FRESH WATER LOCATED NEAR THE MASH TROUGHS ALSO ENCOURAGES THE EATING OF MORE MASH."

ARTIFICIAL LIGHTING LENGTHENS FALL AND WINTER DAYS SO THAT THEY ARE LIKE SPRING DAYS, WHICH GIVES THE HENS MORE TIME TO EAT. SPECIAL LIGHTS LOCATED NEAR THE MASH HOPPER AND FOUNTAIN ENCOURAGE AN EVENING OR EARLY MORNING LUNCH.

(MORE)

FROM-UNIVERSITY OF NEVADA AGRICULTURAL EXTENSION SERVICE, RENO, NEV.
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SCOTT SAID THAT IT MAKES NO DIFFERENCE WHETHER THE DAY IS LENGTHENED BY TURNING ON LIGHTS IN THE EVENING OR IN THE MORNING, SO LONG AS THE HENS GET ABOUT 14 HOURS.

"RIGHT NOW, THE MIDDLE OF OCTOBER," SCOTT POINTED OUT, "NATURAL DAYLIGHT IS ABOUT 11 HOURS, SO THERE SHOULD BE ARTIFICIAL LIGHTS FOR ABOUT 3 HOURS. IF AN AUTOMATIC SWITCH IS USED, LIGHTS MAY BE TURNED ON AT 6 P.M., DIMMED AT 8:30 P.M., AND OFF AT 9 P.M., OR ON AT 3:30 A.M., AND OFF AT 5:30 A.M.

"IF THE SWITCH IS NOT AUTOMATIC, TWO STRINGS OF LIGHTS ARE DESIRABLE, ONE MADE UP OF 40-WATT GLOBES FOR BRIGHT LIGHT, AND ONE MADE UP OF 20-WATT GLOVES FOR DIM LIGHTS. THE DIM LIGHT IS NECESSARY FOR LIGHTING THE WAY TO THE ROOSTS. SOME POULTRYMEN PREFER TO LEAVE THE DIM LIGHT ON ALL NIGHT WITH A BRIGHT LIGHT REFLECTED ON THE MASH HOPPERS AND WATER FOUNTAINS. THIS PERMITS A LUNCH AT ALL HOURS. MORNING LIGHTING REQUIRES NO DIM LIGHTS FOR DAYLIGHT TAKES CARE OF THIS FACTOR."

WHERE ARTIFICIAL LIGHTING IS NOT USED, SCOTT SAYS THAT HENS MAY BE ENCOURAGED TO EAT MORE MASH BY ONE FEED A DAY OF DAMP MASH.

DRY MASH IS DAMPENED WITH EITHER WATER OR MILK. JUST ENOUGH WATER IS USED TO PUT IT IN A CRUMBLY CONDITION. IT MUST NOT BE SLOPPY.

A TEST OF THE DAMPNESS WAS GIVEN BY SCOTT THIS WEEK AS SQUEEZING A HANDFUL OF DAMP MASH. IT IS JUST RIGHT WHEN IT FORMS A COMPACT MASS AND WHEN OPENING OF THE HAND AND RELEASING OF THE PRESSURE CAUSES IT TO FALL APART.

THE EXTENSION MAN SAID THAT PULLETS AND OLD HENS SHOULD BE KEPT IN SEPARATE PENS SINCE OLD HENS SHOULD BE FORCED TO EAT MORE MASH THAN PULLETS.

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