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ANNUAL REPORT  
For  
ELKO COUNTY  
MARK W. MENKE  
COUNTY EXTENSION AGENT

1935

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A N N U A L N A R R A T I V E

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Statement of Agricultural Extension activities in Elko County, Nevada, with the assistance and efforts of representatives of the U. D. Department of Agriculture, University of Nevada, and Elko County Farm Bureau cooperating.

BY

MARK W. MENKE, COUNTY EXTENSION AGENT

FOR THE PERIOD FROM

NOVEMBER 1, 1934 to OCTOBER 31, 1935

ELKO, NEVADA

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## IV. STATUS OF FARM BUREAU ORGANIZATION

## 1. Form of Organization - Distinctive Features.

The Farm Bureau Organization is an association of farmers, stockmen and homemakers organized to cooperate with the Nevada Extension Service in formulating and carrying out agricultural policies. The organization is composed of individual farm families as the unit of membership with community, county, and state groups uniting in a national organization.

The Elko County Farm Bureau consists of five organized community centers: Elko, Lee, Lamaille, Starr Valley and Metropolis, with a director from each center on the County Board. Additional directors representing commodity groups are provided for. The Board of Directors are responsible for the policies of the organization. They work in cooperation with the Extension Service in employing extension and home demonstration agents to carry on the program of work throughout the county.

The County Extension Agent's work in cooperation with the Farm Bureau organization officials covers demonstrational and educational problems affecting livestock, horticulture, rodent and insect control, farm management, marketing, range improvement, boys and girls club work, home beautification, credit, crop production control under AAA, and various emergency and relief measures.

An annual meeting is held each year at which time the budget is adopted and a program of work is outlined. New directors are elected for the coming year. The officers for 1936 are: George Ogilvie, President; Donald Riddell, Vice-President; Mrs. John Patterson, Secretary-Treasurer; Leslie Carter, Livestock Section; Mrs. L. R. Duerloo, 4-H Club Department, Mrs. C. H. Reinken and Mrs. Eugene Drown.

Community center meetings are held whenever business or social programs are desirable.

## 2. Function of Members, Officers and Committees in developing Program of Work.

The committee and commodity group methods of developing the program of work are most efficient in all sections where great distances and small numbers of ranches is the rule. This is true of the entire County of Elko. There are only 592 farms in the county of which 135 are operated by Indians and similar types with whom extension work can not be conducted except in occasional cases. The average size of Elko County irrigated ranches is 2,885 acres and there are 6,537 miles of county road in Elko County. The county is 17,059 square miles in extent, contains 10,917,760 acres and has an average population of only six-tenths person per square mile.

Under such conditions, small groups and committees working in cooperation with extension agents offer the most effective means of developing and carrying on a program of work. The recommendations of these committees and commodity groups are considered by the County Board and are acted upon according to their merits.

3. General Policies Including Relationships with other Organizations.

The County Extension Organization cooperates with all civic bodies and state and local associations on projects of interest to the residents of the County or of importance to their welfare. The College of Agriculture, the United States Department of Agriculture, the Nevada Experiment Station, Elko County Fair Board, Elko Chamber of Commerce, the local press and other civic organizations all cooperate and give valuable assistance on such projects.

The Elko City Council, Park Commission, Rotary Club, Twentieth Century Club and Twenty-Thirty Club have cooperated with the Extension Agent in several city improvement projects, especially in regard to recreation and beautification projects.

V. COUNTY PROGRAM OF WORK, PROJECT ACTIVITIES AND RESULTS  
ACHIEVED.

1. Factors Determining Program.

The needs of individuals, families, communities and commodity groups in agricultural pursuit are the basic factors in determining the program of work. The Extension Program is divided into three broad groups with the Home Demonstration Agent, Livestock Specialist and County Agent dividing the work along project lines with some overlapping and on a cooperative basis.

The Agent does considerable work with non-agricultural groups as well, chiefly in connection with home beautification, landscaping of public grounds and control of insect pests and diseases of shade trees, ornamental-plants and flower and vegetable gardens.

Much of the burden of temporary agricultural relief, re-financing, agricultural adjustment administration policies, adjustment necessitated by the passage of the Taylor Range Bill and drought relief has been thrust upon the Extension Service and has almost doubled the work of this organization with no increase in personnel except stenographic assistance. The Extension Service has proven effective in handling emergency agricultural activities with little or no additional cost to the government.

Because of the high mountain ranges which frequently parallel each other with few roads crossing them, it is necessary to do much more traveling than would otherwise be necessary to reach ranchers in adjoining valleys. Approximately one thousand miles per month must be traveled.

2. Methods used in:

(C) Development of Demonstrations

Demonstration work has been developed by the Agent by working with families or small groups of individuals in showing correct practices and methods. This usually is done by culling a flock of poultry, pruning a fruit tree, shaping a shade tree, etc, with the family or group observing and then following the practice as demonstrated.

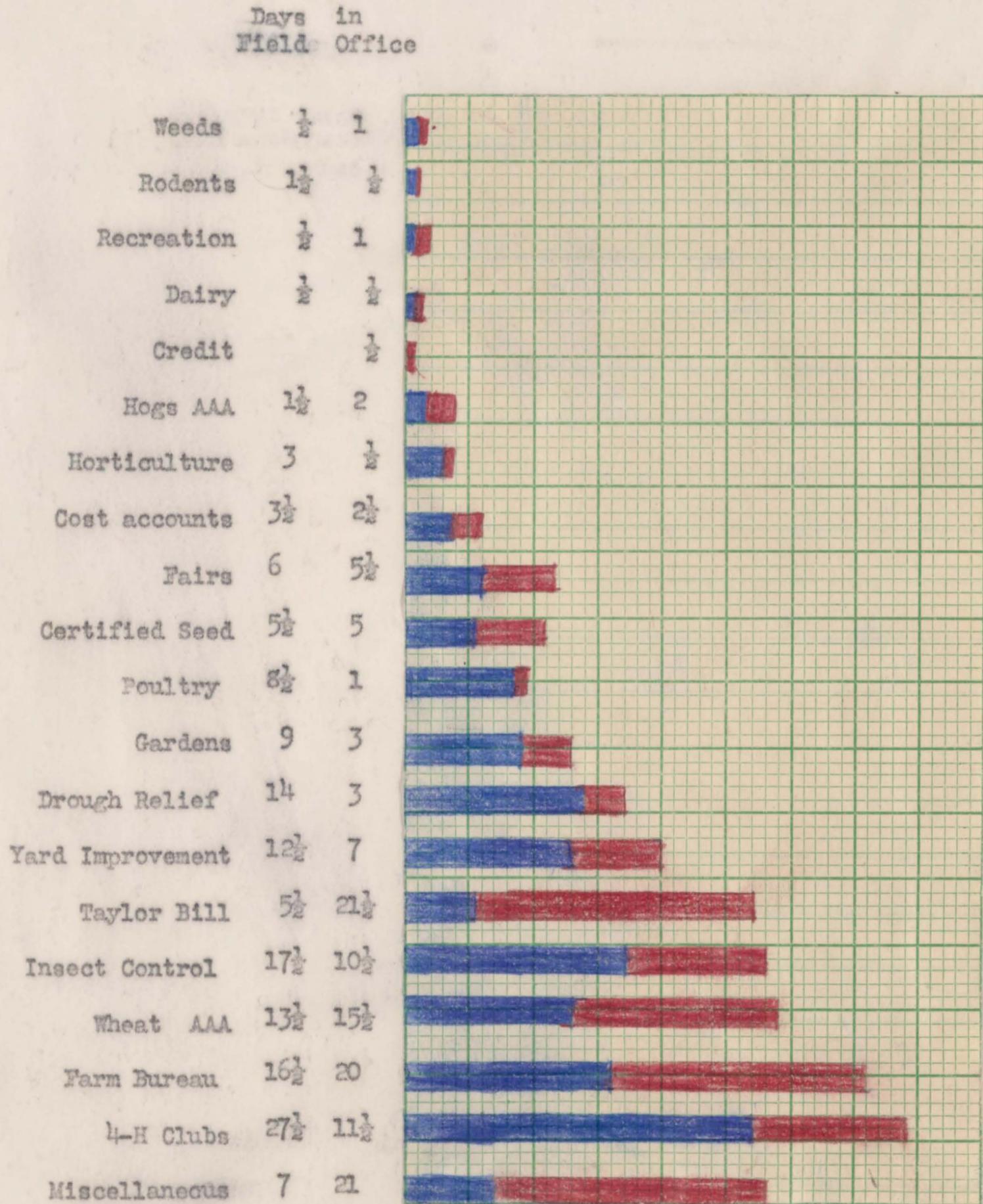
Very effective demonstration work has been done by having groups of six to twenty farmers present during mixing and spreading operations for control of grasshoppers with poisoned bran and control of jackrabbits with poisoned alfalfa leaves. Ranchers readily observed these practices and within a few days entire communities were readily controlling these pests. Farmers grasp ideas readily where they can see a practice carried out, whereas, merely reading about or listening to a talk on the same subject often fails to make a lasting impression.

V. COUNTY PROGRAM OF WORK, PROJECT ACTIVITIES AND RESULTS  
ACHIEVED (continued)

(D) Development of Project Leaders

Development of men project leaders has been difficult. More success has been attained in organization work than in any other field and several outstanding leaders have been developed. Unfortunately, when these leaders have been developed they have often been offered more attractive positions in other fields and have moved away. There is a decided lack of local project leaders in most communities and more effort must be expended in developing future leadership.

Chart Showing Division of Agents Time By Projects



Time in Field  
 Time in Office

\*Scale- each square = 1 Day

Scale

### 3. Dairying

#### (d) Feeds

Cooperative purchase of a carload of cottonseed pellets was arranged for by the Agent. Thirty ton was purchased.

#### (e) Purebred Sires

Assistance was given Mr. George Terry of Metropolis and Mr. Willie Lane, and George Glaser of Halleck in securing purebred dairy sires. One purchase and one trade of sires resulted.

#### 4. Poultry

##### (b) Culling, Sanitation and Housing

Production of poultry in Elko County has never been put on a commercial basis except by a very few small poultrymen. The County is on an importing basis except for a few months in the spring. Practicatlly all work done on poultry has been on ranch flocks which need much more attention than they usually receive.

Thirteen flocks were culled for egg production and the culls were sold for meat or used on the farm.

Six flocks were examined for disease and where symptoms were not clear, birds were sent to the State Veteranary Department at the university. Blackhead was found in one flock of turkeys.

Willie Lane of Starr Valley purchased baby chicks from two different hatcheries to demonstrate that there is a vast difference between chicks even at the same price. Under the same conditions one flock has developed into far superior pullets than the other. Mr. Lane has remodeled his poultry house by the addition of windows, dropping boards, and by raising the floor so it is now dry. It is now a model poultry house where before it was a damp, unsanitary, cold shed. The cost was only twenty-seven dollars and six days labor.

Two caponizing demonstrations were given. A good market for capons is available in Elko.

Ninety-four contacts on poultry problems have been made during the year including problems on brooding, housing, sanitation, disease, feeding, marketing, caponizing and culling.

## 5. Agronomy

## (b) Wheat Production Control A.A.A.

Compliance for the 1933-35 wheat contracts has all been completed. The field inspections and measurements were made by Max F. Uhlig.

All wheat checks which have been received have been distributed to the contract holders. Twenty-three checks have not been received and no reasons for failure to send them from Washington have been obtainable although correspondence was started two months ago on this matter.

Slightly over half of the 1933-35 contract signers have signed up for the 1936-39 contract. Practically all are of the opinion that the adjustment program is sound but have such small base wheat acres that it does not appear practical for them to continue with the contracts.

Under the old wheat organization with no budget or funds for committeemen practically all the work was left up to the County Agent and most of it had to be done by farm visits and much traveling. This has caused the number of days spent on this project to be unusually high for the number of contracts in the county. However, even by using the shortest possible routes it requires 540 miles travel to make one visit to each of the thirty-eight wheat contractors. All of this is on rough country lanes and roads. Under the old set-up two months were usually required before correspondence sent to Washington was satisfactorily answered.

It is hoped that the new 1936 type of organization will be much more satisfactory and will eliminate much of the present remote control and delayed action. A county budget with some expense money may also encourage the county committeemen who must travel a total of 205 miles on their own expense and time to attend meetings.

During the past year the agent has spent twenty-nine days on AAA wheat work, made seventy-one farm visits, answered eighty-four office calls, written ninety-one individual and eight circular letters, distributed ninety-nine bulletins, written six new articles and traveled eleven hundred miles.

One hundred and eighty-one wheat checks have been distributed to forty individuals for a total of seven thousand six hundred sixteen dollars and fifty-five cents. Checks are still due for approximately fifteen hundred dollars.

The sign up for the new wheat contracts has been almost completed.

## (f) Alfalfa

## (1) Variety Tests

Cossack alfalfa continues to be the favorite variety for this section, but the seed has been so much higher in price that most of the farmers are still using the common variety. No check was made on the yields of different varieties this year, but the cossack and grimm varieties with spreading root systems do not become injured from over grazing and freezing as much as the straight tap root varieties do.

## (3) Weevil Control

Alfalfa weevil, although present in several farming regions does not appear to be a serious threat to alfalfa growing because the weevil is unable to stand the hard winters and cold spring. The weevil infested areas have suffered weevil damage in only two years of the past five.

Thrips caused more damage to alfalfa this year than usual. Very little seed set because of stripping of the blooms due to thrip injury.

## (j) Potatoes

## (4) Certified Seeds

L. B. Jeanney of Deeth and Burt Holbrook of Metropolis continued their work on seed certification and are thoroughly convinced of the benefits of using good seed. Early in February, arrangements were made with Mr. Doten to have a tuber index plot at the Las Vegas Experiment Station in charge of Mr. George Hardman and Harry Jameson. Mr. Jeanney selected 350 tubers and Mr. Holbrook selected 500 tubers. Seed pieces cut from each tuber and wrapped separately, were sent to Las Vegas in March. After indexing, all tubers that had not produced thrifty plants were rejected and the remaining good tubers were planted for seed plots.

All certified seed grown in Elko County was sold in one lot to Lund and Preston Growers this spring. These growers were so pleased with the seed that they may contract this years crop. The quality and productivity of potatoes grown from the local certified seed is far above that of any other local seed. The only diseases found in the seed plots this year were mild types of spindle tuber and rhizoctonia.

## (1) Weeds

## (2) White Top

Eradication and control of whitetop is a problem that is forcing itself more and more upon the ranching conscience.

## (1) Weeds

## (2) White Top

No effective eradication methods are known that are not very costly. A few farmers with small areas of whitetop have been attempting control methods but otherwise the weed continues to spread.

The infestations on the Owyhee Indian Reservation scattered over about a thousand acres are being fought by the use of clean cultivation and carbon bisulphide with considerable success. The Indian Service realizes the importance of eliminating whitetop from the farming and grazing lands owned by the Indians.

The Agent has had several conferences with Mr. Middleton and the State Quarantine Department in regard to securing weed projects for CCC Camps, ECW Camps, FERA workers or by special appropriations, but no definite project has ever been approved although many have been promised by various departments.

The Elko County Board of Directors, Extension Agents and representatives of the Nevada FERA and State Quarantine Department met in Elko and all are attempting to cooperate in securing definite projects for whitetop control. These efforts will be continued until some means of control are finally found.

## 6. Agricultural Economics

### (a) Marketing

#### (11) Potatoes

The entire crop of certified seed grown by Burt Holbrook and L. B. Jeanney was marketed in Lund and Preston, Nevada, through the White Pine County Farm Bureau. Surplus wheat and barley seed was also marketed in this manner.

#### (13) Cattle

Information as to numbers, types and quality of cattle for market were made available to buyers in the Extension Office. Many buyers of small numbers of feeder cattle secured their feeders by use of this information.

#### (15) Buying

One carload of cottonseed pellets was purchased cooperatively by cattle feeders. Ranchers in Pine Valley purchased wheat and rye seed from local growers through contacts made by the Extension Agent.

### (b) Credit

#### (5) Debt Adjustment

Three applicants were assisted in applying for credit from the Nevada Production Credit Association, one in retiring a loan to the Regional Agricultural Credit Corporation and five were turned over to the Rural Rehabilitation Corporation for assistance. The Rural Rehabilitation Agent, Magnus Scherupp, works out of the Extension Office and has taken over all those cases of refinancing which can properly be handled by his department. This has greatly reduced the number of applications for credit which were formerly handled by the Extension Agents.

The credit problem is much less acute than it was a year ago due to better agricultural values and to reorganization of several government loaning agencies on a more liberal basis. Much revision is still needed however, especially, in the Federal Land-bank laws and regulations.

### (d) Farm Management

#### (9) General Farm Accounts

Two years of ranch cost account records were completed in May on the ranches of Don Riddell and Blaine Jeanney of Starr Valley, and F. A. Gerber and George Terry of Metropolis.

## (d) Farm Management

## (9) General Farm Accounts (continued)

It was felt by all cooperators that the method of reporting monthly, and of keeping the records in Reno, was too far removed from the ranch. Accordingly the new AAA wheat record book was adopted in place of the old monthly report system. This book is far too limited in size for efficient accounting of any kind. It was improved by Mr. V. E. Scott, by the addition of blank sheets and by including a record of bills payable and receivable.

These books were substituted for the old system and the records are now kept entirely by the ranch owners themselves. This was the original purpose of the cost accounting project and since the ranchers are keeping their own books this will be dropped as an active project in 1936.

The two greatest factors determining the relative success of the cooperators was the available water supply and the type of management of the ranches.

## 7. Animal Husbandry

## (d) Hogs

## (5) Production Control AAA

This project is in charge of Joseph Wilson and the Agent did not work on it except for three and a half days during the sign up campaign. Meetings held at Starr Valley and Lamoille were presided over by the Agents and fifteen hog producers signed Production Control Contracts as a result. All other work on this project has been attended to by Mr. Wilson and the Corn-Hog Control Committees.

## (h) Relationship of Public Domain to Range Industry

## (3) Taylor Grazing Act

The passage of the Taylor Bill caused a rush of stockmen to the Extension Office for information on the bill and its probable effect on the range livestock industry of Elko County. It was the policy of the Extension Agents to give all possible information on the Taylor Bill and to encourage attendance of stockmen at meetings called by the Department of Grazing.

Community meetings were held in Lamoille, Lee, Jiggs, Pine Valley, Ruby Valley, Clover Valley, Starr Valley, Independence Valley, North Fork, Rowland, Charleston and Metropolis to explain to stockmen how to make out grazing applications. Through FERA funds a map maker was made available to stockmen in the Extension Office to assist them in making range maps. The Agent spent twenty-seven days in the office and field on Taylor Bill matters. Department of Grazing officials were given free use of the Extension Office and much information in regard to local range customs and problems.

One hundred and fifty-five office and phone calls were given attention, mostly requests for help in filing applications. What the final effects of this bill will be on the range livestock industry is still the foremost question in the minds of most local stockmen. Since the formation of Nevada District No. 1 and the election of a local Advisory Committee much of this work has been removed from the Extension Office.

## 8. Club Work

### (a) Agriculture

#### (4) Swine

Two club members were enrolled in pig projects and both completed the projects and sold the fattened pigs in Ogden.

#### (5) Poultry

Seven white boys, eleven Indian boys and thirteen Indian girls were enrolled in poultry projects. The white members completed 100 per cent and the Indians completed 75 per cent.

Among the Indian Club Members at Owyhee, under the leadership of Mr. Ross Lyle, and later under Mr Charles Spencer, eighteen completions were secured or 75%. These Club Members each had three dozen chicks, one day old, supplied by the Indian Service. The chicks had to be transported over one-hundred miles by stage and they arrived in a snowstorm and were badly chilled. Heavy losses were sustained but the Club Members continued with the chicks they had saved. The changing of farm Agents in the middle of the season also hindered their progress somewhat.

#### (11) Home Garden

Six Club Members enrolled in home garden completed one hundred percent.

#### (15) Flower Gardens and Home Grounds

Eight members enrolled in home grounds improvement projects and seven or 87½ per cent completed.

The community flower and vegetable garden in Elko has been continued with water supplied by the City and ground by the Masonic Lodge, where Club Members without space at home can do some gardening. This has been a big help in holding interest of local citizens on Club Work and home beautifications.

#### (17) Range Management and Summary

Four members enrolled in this project completed or 100 per cent.

Seven Club Members attended the State 4-H Club Camp held at Lake Tahoe, where instructions, entertainments and contests were provided. These members took six prizes in plant identification and third place in the health contest.

During the summer the Agent held thirty-eight training and method demonstration meetings, made one-hundred and forty-eight farm visits, published nine news articles and received one-hundred and eighteen office calls.

## (a) Agricultural

## (17) Range Management and Summary (continued)

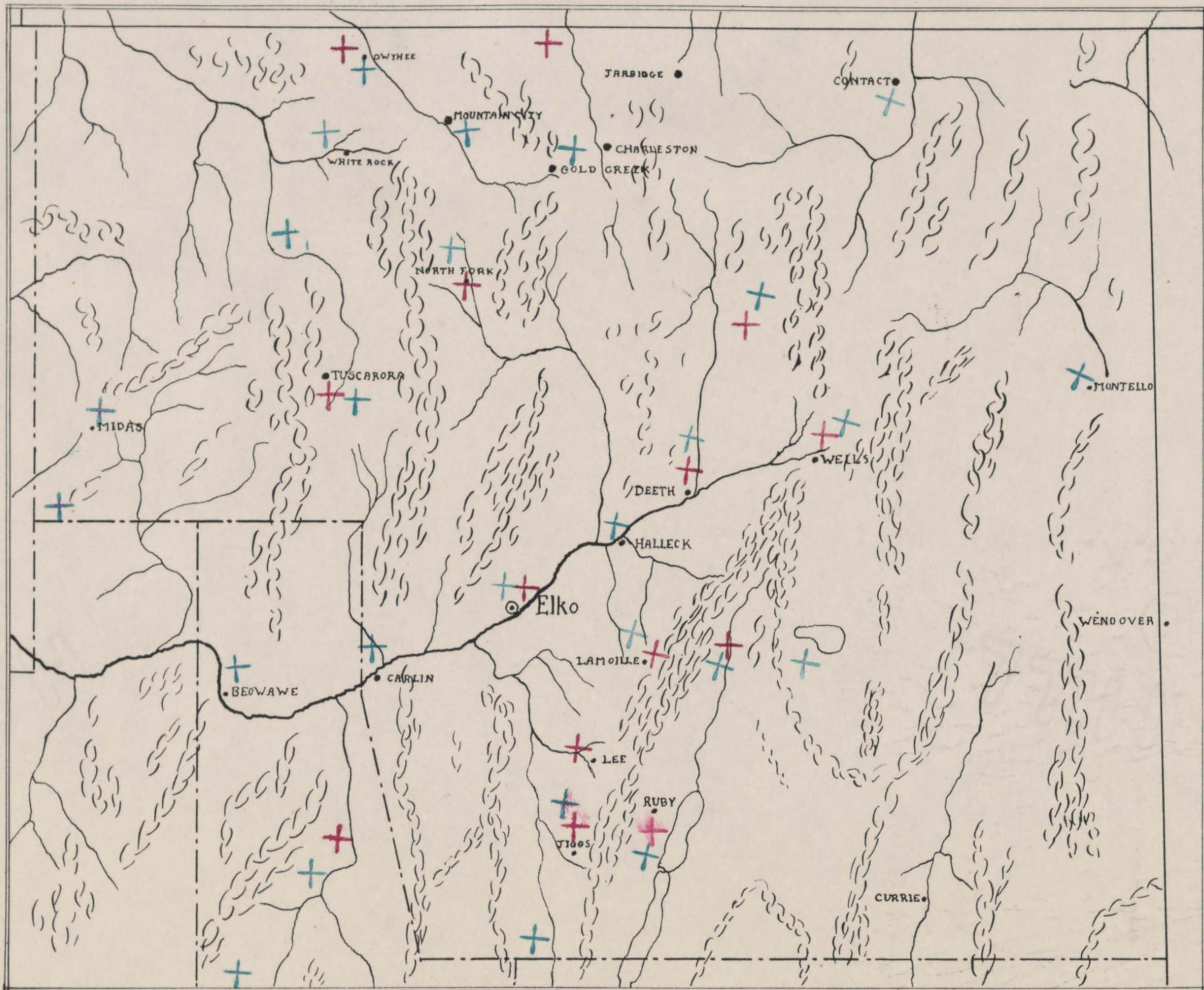
The chief drawbacks to more efficient club work are the large distances between communities and ranches, lack of local leaders and lack of effective subject matter for Nevada conditions.

Another serious and growing obstacle is the large sum of money needed to take Club Members to State Camp and the amount of time demanded of the Extension Agents to help raise this fund.

A series of six lessons written for Club Members and leaders alike on each major project would be a great help in Club Work.

The use of film strips where electric power is available has been a decided help in holding interest of club members in training meetings. The following film strips have been used by the Agent during the year:- Culling the Laying Flock, Grafting Fruit Trees, Cultivated Grasses, Eradication of Tuberculosis in cattle Breeds of Poultry, Structure of Insects and Growing Healthy Pullets.

All the club members are also given instruction in identification of common weeds, flowers, trees, native and ornamental shrubs and native birds.



+ Individual Contacts

+ Group Contacts

## 9. Community Activities

### (a) Farm Bureau Cooperation

The goal of one-hundred Farm Bureau memberships for Elko County in 1935 was reached in November. No membership drive was put on and most of the memberships were entirely voluntary.

The annual meeting was held on December fourteenth, and the livestock Department meeting was held on the sixteenth with one hundred stockmen in attendance. The new by-laws were adopted and the Elko County Farm Bureau has been operating under the new laws for the past year.

The annual Nevada State Farm Bureau meeting in Reno, was attended by the Elko Directors who were active in livestock and homemakers sections.

The Elko Farm Bureau Board of Directors studied the legislative bills of interest to farmers and ranchers and forwarded their recommendations on agricultural bills to the Elko Representatives at the Capitol. At least two bills harmful to stock growers were defeated and several of benefit to stockmen were passed.

The annual Elko County Farm Bureau picnic was held at Thomas Grove in the Lamaille Canyon on the new CCC Camp road. Five hundred Farm Bureau Members and friends were present for a program of songs, speeches and contests. The entertainments were in charge of the new Elko Recreational Council which was sponsored by the Farm Bureau Organization.

Elko County's Delegation at the district meeting held in Winnemucca, was one of the largest present. The message of Chester Grey, the American Farm Bureau Representative, was especially instructive on matters of national agricultural interest.

The Agent attended thirty meetings during the year on Farm Bureau Cooperation. The attendance at these meetings was sixteen hundred and sixty-seven. Thirty-six and a half days time was required in the field and office in connection with cooperative work of the Farm Bureau and Extension Service. Sixty-two farm visits were made and one-hundred and six office and phone calls were received.

### (d) Fairs and Exhibits

The Agent acted as superintendent of the farm crop sections of the Elko County Fair. The number of exhibitors was less than for several years and the number of exhibits was correspondingly less. The quality of the products shown was very good. Exhibitors are learning the correct methods of selecting and preparing specimens for exhibit with an improvement in the quality and attractiveness of the displays.

## 9. Community Activities

### (d) Fairs and Exhibits (continued)

The fair must be reorganized in some manner to encourage more agricultural and livestock exhibits or it will simply become a racing meet.

### (h) Drough Relief

Early in February the feed situation looked like a severe shortage would result if the spring feed was late in growing. A county wide survey of available feed was made by holding meetings in each community at which time the feed supply and probable run-off of irrigation water was discussed. A hay carryover of only ten percent of normal was determined for the county.

In April and May several heavy storms occurred which increased the prospective feed crop from around sixty percent to normal. The appearance of vast swarms of mormon crickets again threatened to destroy the crops and ranges but the crickets were controlled around intensive farming areas and on the range seemed to show a decided preference for weeds rather than the more palatable feeds.

By the middle of June it became evident that normal or better crops would be harvested and the drough relief work was discontinued as no longer necessary. Several cases for Rural Rehabilitation were found as a result of the drough relief survey and they were turned over to the Rehabilitation Authorities.

### (1) Recreation

A four day recreational school was held in Elko, January seventh to tenth, led by Mr. W. P. Jackson of the National Recreational Association. The sessions were held each afternoon and evening and were attended by sixty selected delegates from fraternal organizations and rural communities. The purpose of the school was to train leaders in rural and small town communities in organized recreational programs.

The Agent secured plans, costs and specifications for construction of three tennis courts as a recreational project for Elko. Cooperation of the Elko Park Commission, Elko Twentieth Century Club, Twenty-Thirty Club and City Council was secured and an FERA project was approved with the city to furnish the materials. The work on the courts is to begin in the spring of 1936.

## 10. Horticulture

## (a) Gardens

In May 1935 Mr. Frank Middleton asked the Agent to look for a ten acre tract of land with good soil and good water rights for a FERA garden project. The short supply of snow in the mountains made it difficult to find any available land with water and it was not until after May twenty-fifth that a tract was located at the Isaac Woodhouse ranch in Ruby Valley. A list of dependable vegetable crops for this area was prepared with early maturing, good keeping and eating qualities in mind.

Squash, potatoes, carrots, beets, parsnips, turnips, rutabagas and cabbage were planted. Relief labor was used to care for the garden. The Agent made ten trips to the project and advised in regard to cultivation, irrigation and control of insect pests. It was necessary to spray the cabbage and potatoes for worms, thrips and plant lice. The crop was harvested and sent to relief agencies in Elko, Reno and Ely. Eighty tons of vegetables were harvested from the garden.

Many calls are received at the Extension Office for information on identification, habits and control of various insects and bugs. During the past year the Agent had calls requiring information on the following: Insects and other insect-like bugs; wire-worms, cut-worms, army-worms, horn-worms, web-worms, imported cabbage worms, cabbage loopers, diamond back moth larvae, potato and cabbage flea, beetles, Say's plant bug, aphids, red spiders, leaf hoppers, grasshoppers, crickets, cicada, termites, thrips, sow bugs, alfalfa weevil, blister beetles, rose beetles, saw flies, slugs, granary weevil, angoumois grain moth, tree borers, cottony cushion scale, round scale, elm-scale, silverfish, sun scorpion, true scorpion, and black widow spiders. Several other specimens with which the Agent was not familiar were submitted for identification and forwarded to Washginton, D. C.

Plant diseases in trees and flowers are limited largely to fungous types for which no practical control is known. Western poplar canker kills many shade trees of the willow family. Preventative measures such as fertilizing the trees, pruning out diseased parts and giving an ample water supply have been recommended. Fusarium diseases of potatoes and several garden vegetables are commonly reported.



View of FERA garden in Ruby Valley in which eighty tons of parsnips, beets, carrots, rutabagas, turnips, cabbage, potatoes and squash were produced for relief purposes.

## 10. Horticulture

### (b) Family orchard improvement

The production of fruit in Elko County is limited to home orchards with very little fruit being sold. The construction of paved roads has increased the trucking of fruits and vegetables to such an extent that local markets are flooded with cheap, often second grade products from Idaho. The cheapness of these products together with the fact that local fruits are mainly of inferior variety and quality has caused the abandonment of most orchards. However, the best varieties are kept for home use.

The Agent has given eighteen method demonstrations on pruning of trees for proper shape and for control of diseases. Sixty three farm and home visits and office and phone calls have been made on orchard improvement and such related subjects as small fruits and berries. Information on spraying equipment and formulas for control of codling moth, grafting and budding methods and control of porcupines by poisoning has been supplied.

### (c) Control of Diseases and Insect Pests

#### (2) Trees

The Agent met with the Elko Park Commission and the Elko City Council and recommended a power sprayer machine for use on shade trees in Elko. The city purchased this machine at a cost of one hundred and ninety-five dollars. It is a very efficient and low priced power sprayer and is operated by one man. It is supplied by the City to home owners with the man and the spray material free of charge. This is done to encourage beautification of Elko homes and streets by the planting and care of shade trees.

Slime flux is killing parts of the upper branches of Chinese elm but no control for this disease is known.

The Agent spent 28 days on insect pests and disease control work, received 230 office and telephone calls, made 122 farm and home visits and wrote nine news articles.

### (d) Home Beautification

Interest in improvement of home grounds throughout Nevada is manifest throughout the entire year. Even in the long winters when there is no possibility of outdoor improvement work, there is much interest in growing of house plants. There are many fine collections of these plants, especially in farm homes.

Ninety-six office and phone calls have been received on questions on care of ornamental trees, flowers, shrubs and lawns. In most cases these calls mean follow up visits to make suggestions for yard improvements.

## 10. Horticulture

## (d) Home Beautification (continued)

Trees are of greatest interest because they are so difficult to grow in most Nevada towns. The short season, high altitude, poor soil, and water shortages all work against successful growing of all but the most hardy trees. A better understanding of tree growing, lower water rates and two mild winters have greatly added to the numbers of young shade trees growing in Elko.

Seventeen farmers have purchased trees from the U. S. Forest Nursery at Logan, Utah, for windbreak and shelterbelt purposes. Many purchases have been made from private nurseries by home owners.

Permanent plantings of shrubs, lawns, perennial borders and spring blooming bulbs are becoming more common and better planned each year.

The Agent judged the McGill yard improvement contest again this year. Two hundred and fifty yards were entered in the contest. Many permanent plantings of shrubs and trees are becoming established there. This is a most unusually well planted and attractive little place for a mining and smelter town. The Nevada Consolidated Copper Company has sponsored the contest by awarding prizes for the best yards and gardens and by supplying free water, fertilizer and by hauling in good soil from the mountains.

The Elko Federal Building, Elko County Court House and Elko County High School are three public buildings upon whose grounds permanent plantings have been improved upon during the past year. Trees for avenue planting in front of the Federal Building were purchased by the Elko Chamber of Commerce.

Five news stories on landscaping topics were prepared by the Agent and were given statewide circulation through the State Extension News Service.

Yard improvement seems to be a perpetual project since so many people know so little about proper planting and landscaping methods and even those who now have well landscaped yards are always looking for new plants and combinations to try out.

## 11. Control of Rodents and Other Pests

## (d) Gopher control and other rodents

Gophers have become the most serious rodent pest in Eastern Nevada due to the long series of dry years. Tularamia has greatly controlled the increases in the squirrel and rabbit population, but the gopher seems subject to very few diseases or natural enemies.

Instructions on control of rodent pests has been given to twenty-six ranchers. One thousand pounds of poisoned oats were distributed through the Biological Survey to ranches for rodent control. Poisoned carrots placed in runways by the probe method was used for gopher control.

Chipmunks have become a serious pest in the Lamaille section especially in grain fields and stacks. They remove the head from the straw and pack the grain into runways. In one case over fifty percent of the heads were removed from a ten acre rye field. No satisfactory control method has been found, but a spring poisoning campaign offers greatest hope of some control.

## (e) Grasshopper Control

Extensive grasshopper egg beds were found last fall in the Metropolis, Ruby Valley and Independence Valley areas, with counts running as high as twenty-five thousand eggs per square foot of sod. These egg beds were watched closely in the spring but the weather in April and May was so wet and cold that no emergence was evident. By the time the weather became warm enough to hatch eggs, the meadow grasses had grown tall enough to shade the ground and there was practically no hatch in many of the egg beds.

Infestations of a severe but small extent occurred in many communities. The only large area infested was the Independence Valley.

Following are individuals, by communities, and the amount of bran distributed for grasshopper control.

<u>NAME</u>	<u>ADDRESS</u>	<u>LBS OF DRY BRAN</u>
Ellison Ranching Co.	Midas, Nevada	3,000 lbs
Ellison Ranching Co.	Tuscarora, Nev.	6,000 lbs
J. B. Griffith	Tuscarora, Nev.	5,100 lbs
Tracy Fairchild	Tuscarora, Nev.	22,400 lbs
W. F. Behn	Tuscarora, Nev.	3,200 lbs
Pete Trento	Lamoille, Nev.	100 lbs
Domingo Orbe	Lamoille, Nev.	700 lbs
Frank Orbe	Lamoille, Nev.	700 lbs
A. L. Newman	Lamoille, Nev.	400 lbs
Ten Mile Association	Lamoille, Nev.	300 lbs

11. Control of Rodents and Other Pests

(e) Grasshopper Control (continued)

<u>NAME</u>	<u>ADDRESS</u>	<u>LBS OF DRY BRAN</u>
Joe Puett	Carlin, Nevada	800 lbs
Pete Chevalier	Ft. Halleck, Nevada	1,800 lbs
Max Uhlig	Metropolis, Nevada	2,500 lbs
W. D. Hill	Metropolis, Nevada	400 lbs
Harry Cazier	Wells, Nevada	500 lbs
Eddie Murphy	Secret Pass, Nevada	2,800 lbs
Harry Webb	Pine Valley, Nevada	500 lbs
Mrs. H. Carletti	Pine Valley, Nevada	1,000 lbs
Moderelli, Bros.,	Beowawe, Nevada	500 lbs

Total used 52,700 lbs

Bran remaining on hand, November 1, 1934 - - - - - 773 sacks  
 Bran used in 1935 - - - - - 533 "

Bran remaining on hand November 1, 1935 - - - - - 240 "

At Elko, George Schweiss - - - - - 49 "  
 At Deeth, William Wright - - - - - 91 "  
 At Deeth, C. H. Black - - - - - 18 "  
 At Deeth, Sol Smiley - - - - - 40 "  
 At Ruby Valley, Jack Sharp - - - - - 40 "  
 At Elko, Extension Service - - - - - 2 "

Total 240 sacks

It is significant to note that where well supervised community poisoning drives were put on last year there were practically no hoppers this year. This was especially true in Starr Valley and South Fork where no calls for hopper work were received this year.

(G) Mormon Crickets

The thick infestations of mormon crickets throughout all the mountainous regions of Elko County in 1934 had left extensive egg beds scattered around all the farming areas. The Agent had requested ranchers in many sections to be on the lookout for the first sign of young crickets in the spring of 1935.

During the past winter as a result of conference with Mr. Middleton, and FERA Project involving the use of fifty men for control of crickets and grasshoppers had been submitted and approved.

Early in April calls for aid in control of crickets became so numerous that it became evident that special assistance

## 11. Control of Rodents and Other Pests

## (g) Mormon Crickets (continued)

would be necessary. A conference with George Schweiss resulted in a request for a special appropriation of 10,000 dollars for cricket control. This request was forwarded to Senator McCarran by the State Quarantine Department and in June the appropriation was made available. The State Quarantine Department and the Elko FERA Administrator, Mr. Frank Middleton, were to have charge of the work, which was fortunate because the press of other work should have made it impossible for the Agent to have supervised this project.

The project was turned over to Mr. Lee Burge, who had a force of ninety-seven men in the field. The tin fence and pit trap method gave results that were more easily and readily seen. The effectiveness of the poison was questioned by many but this was no doubt due to a lack of understanding of the long time necessary for arsenic to kill and to the cannibalistic habits of the crickets. The healthy crickets ate the poisoned ones as soon as the poison began to act, and so it was difficult to find large numbers of dead crickets from poisoning.

Xerxes Martin of Lee reported irrigation ditches filled to a depth of several feet with poisoned crickets.

Unquestionably, many grain, hay and garden crops were saved by the cricket control crews, but the infestation was of such great size that control on the open ranges was impossible. Huge swarms of crickets came down from almost every mountain and by August many of the swarms had merged so that a person could ride a distance of twenty miles without finding an extensive area free of crickets.

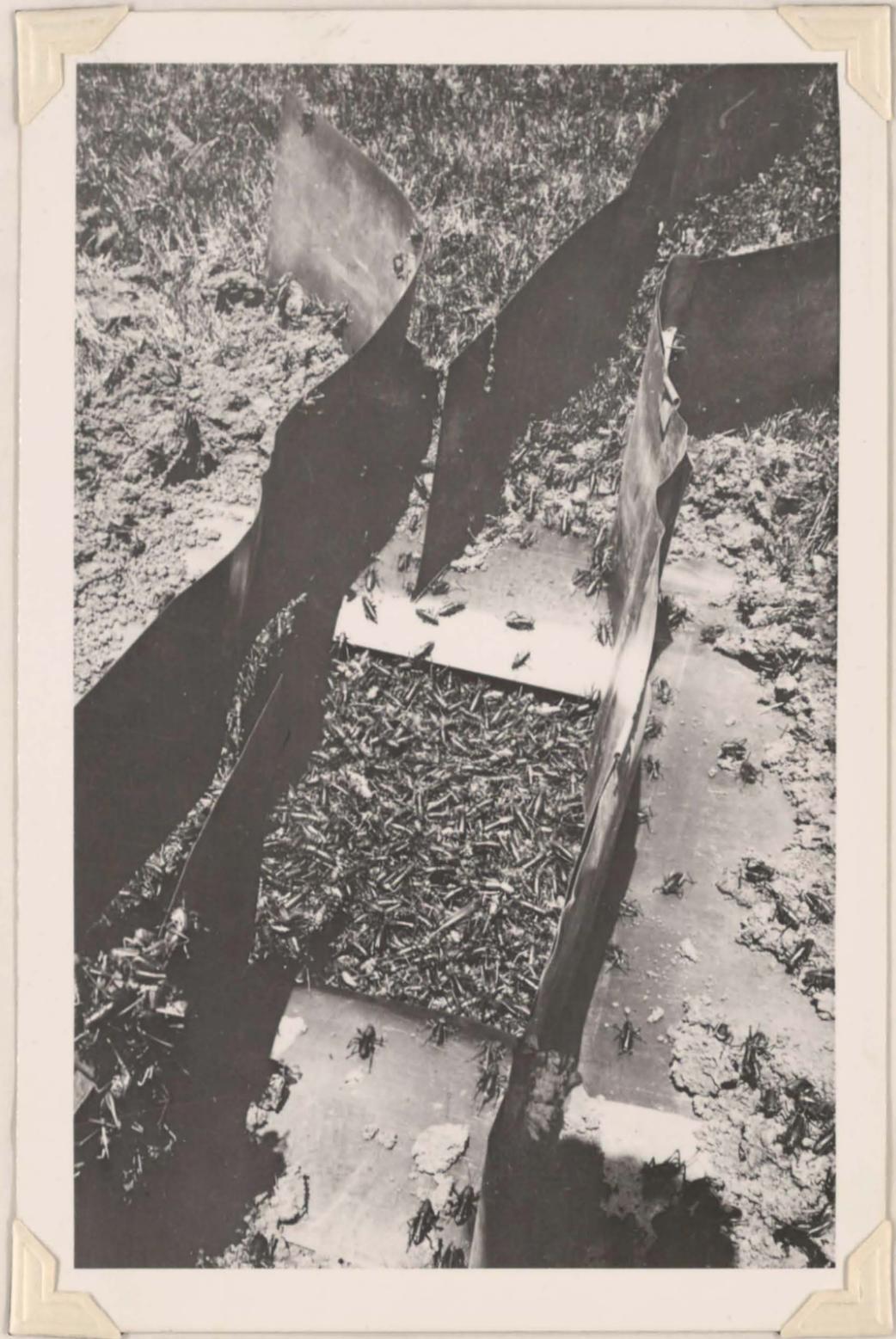
In the Ruby Mountains above Starr Valley, cattle came down off the ranges a month early because the crickets had eaten the feed. By September practically every part of Elko County had a liberal supply of cricket eggs laid for next year. The Agent observed crickets laying eggs in Secret Pass as late as October fifteenth.

No method has been found to forecast the percentage of eggs which will hatch and little seems to be known in regard to the effect of moisture, temperature and other factors on the hatchability of cricket eggs.

It is safe to say that if even an average normal hatch occurs next spring it will be impossible to prevent huge losses of crops and range feed due to the mormon crickets. On the other hand records show that after such a severe infestation as occurred this year, the crickets may not again appear for several years. This was the case with the years following the severe outbreaks of 1898 and 1906.



Tin fence used to divert crickets into  
traps in Independence Valley.



Close up view of trap containing crickets.  
Each pit held about forty cubic feet of  
crickets when full.

## 14. Publications

## (a) Agricultural News Writing

Excellent cooperation is given by the local Daily Free Press and the Independent newspapers in publishing news of interest to agricultural, and stock growing interests and other property owners. The State Extension News Service under A. L. Higgenbotham also contacts all newspapers in the state with news stories. During the past year the Agent has written the following number of news stories on the following projects: Farm Bureau Cooperation 11, Wheat Production Control 6, Insect Pests and Diseases 9, Taylor Bill 4, Yard Improvement 5, Drough Relief 3, Poultry 1, Potatoes 3, Fairs and Exhibits 4, Family Orchard Improvement 1, Community Recreation 5, Agricultural 4-H Clubs 9, and Miscellaneous 3, or a total of 64.

18. Character and Scope of Office and Field Work.

Office work required 133 days time or forty percent of the Agent's working time. Office work consists chiefly of attention to office and phone calls, writing circular and individual letters, news articles, reports and reading research material on agricultural subjects. During the year 892 office calls, 339 phone calls were received and 333 individual & 46 circular letters, and 64 news articles were written and 180 bulletins were distributed.

An extensive set of government and state publications are kept on hand for reference and free distribution.

Field work consists of farm and home visits meetings and method demonstrations on projects and problems which must be handled in the field. About fifteen percent of the time in the field is required in driving between ranches. During 1935, 154 days were required in the field, 978 farm and home visits were made, 49 method demonstrations given and 105 meetings held or attended by the Agent.

## VI. OUTLOOK AND RECOMMENDATIONS FOR 1936

The following projects are regular and should be continued in 1936.

1. Insect Pest Control. Seldom a year passes without serious damage to crops from some insect pest.
2. Agricultural 4-H Club Work will be continued.
3. Farm Bureau Cooperation should have more emphasis placed upon a regular program and more leadership training.
4. Wheat Production Control and other AAA Programs seem to have become permanent at least for the next four years and will be supervised by the Extension Agent.
5. Home beautification is a project of much interest every year.
6. Poultry information on all phases of production are needed every year.
7. Production of certified seed potatoes will be continued.
8. Community activities are of growing interest and should be encouraged along proper lines.
9. Control of rodents is becoming more necessary each year since the Biological Survey has ceased to be active in control programs.
10. Emergency work cannot be foretold, but it has been the lot of the Extension Service to handle many of the past emergency programs and there is no reason to believe that this will not be continued.

## VII. SUMMARY OF ACTIVITIES AND ACCOMPLISHMENTS.

1. Agricultural 4-H Club work was carried on in yard improvement, poultry raising, vegetable gardens, swine raising, and range improvement. From 24 Indian Club Members 75% completions were secured and from 26 white members 96% completions were secured on a County average of 86 per cent.
2. Control of grasshoppers was carried on in ten communities 52,700 pounds of bran were used. Control of Mormon Crickets was managed by the State Quarantine Department but the appropriation for the project and the project itself was secured cooperation of the Extension Service, Quarantine Department and WERA.
3. The usual number of calls was received for assistance in control of insect pests of flower and vegetable gardens, shade and fruit trees and field crops.
4. Wheat Production Control Contracts have had all compliance checked for the year and all but seventeen checks have been received and paid.
5. Tuber index and certified seed potato plots were grown and all seed was sold.
6. The Elko County Fair was successfully held this year. The Agent acted as superintendent of the farm crops and poultry sections.
7. Farm Bureau Cooperation was emphasized throughout the county. Twenty-nine meetings were held in relation to this project.
8. A four day recreational school for leadership training in rural recreation was held in Elko under the direction of the National Recreational Association.
9. Instruction on care of family orchards and planting and care of farm windbreaks and shelter belts has been provided to those interested.
10. Poultry sanitation, housing, disease prevention, treatment of parasites and culling for egg production have been stressed. Poultry growers are becoming more careful in selection of their poultry stock.
11. Home beautification has been encouraged through the County. Three public buildings have been improved by foundations plantings.
12. The enforcement of the Taylor Law caused a rush of stockmen to the Extension Office for information and assistance in filling out grazing applications. The Agent devoted a months time to this work.

## VII. SUMMARY OF ACTIVITIES AND ACCOMPLISHMENTS.

13. A county wide drought relief survey was made in the spring to determine available feed supplies and probable effect of the 1934 drought in the summer of 1935.

14. A ten acre FERA garden was grown by local relief officials. Eighty tons of vegetables were grown for relief purposes. The Agent gave advice on care of this project.