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COOPERATIVE EXTENSION SERVICE

ANNUAL REPORT 1961

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A BRIEF REPORT ON THE UNIVERSITY OF NEVADA COOPERATIVE EXTENSION
PROGRAMS AND ACTIVITIES
FISCAL YEAR 1961-1962

Formal education, regardless of level, does not mark the termination of educational growth but rather the beginning of a life-long process. Effective educational opportunities must be provided to convey the continuous advancement of research, new knowledge and new information so that people may keep abreast of the ever widening horizons of knowledge.

Individuals, as well as whole communities are experiencing a realized need for reliable information to keep up with the dynamic technical, social and economic changes of our society. This poses a real challenge to the resources of all educational institutes of higher learning. The University of Nevada shares this challenge and responsibility in providing opportunities for continuing education.

The University meets this challenge to a large degree through the efforts of the Cooperative Extension Service. The Cooperative Extension Service is an integral part of the University of Nevada. As such, it is the informal educational arm of the University which penetrates into the communities and homes of the people of Nevada. It is, and must be, a vital force in assisting the University in meeting its continuing educational responsibilities to the people of Nevada.

The Cooperative Extension Service wishes to express its sincere appreciation to the State Department of Agriculture, Bureau of Indian Affairs, Soil and Conservation Service, Nevada State Veterinarians Association, Nevada Cattlemens Association, Nevada Wool Growers Association, State Farm Bureau and other state and federal agencies that have worked closely in Extension programs during the past year.

Appreciation is also extended for the interest and efforts of other members of the University faculty as well as the voluntary Extension lay leaders for their assistance in developing and execution of Extension programs.

It is well known that Nevada is undergoing many changes. The rapid growth in population, increased urbanization, and an expanding agriculture, all pose challenges as well as opportunities to the Cooperative Extension Service. We are transmitting to you a brief report of the informal educational programs and the efforts of the Cooperative Extension Service for 1961 in meeting the responsibilities of the University to the people of Nevada.

During the past decade the dynamic changes occurring in the state have resulted in adjustments in Extension programs and activities. An indication of some changes in the activities of the County Extension staff member may be interpreted from the following table.

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COMPARISON OF SOME OF THE ACTIVITIES OF THE COUNTY STAFF MEMBERS
of the
UNIVERSITY OF NEVADA COOPERATIVE EXTENSION SERVICE 1950-1961.

	<u>1950</u>	<u>1961</u>	<u>% Change</u>
A. <u>INDIVIDUAL CONTACTS</u>			
Farm or home visits	12,300	12,176	-
Office Calls	14,601	20,577	41
Telephone Calls	16,297	33,048	102
B. <u>MASS MEDIA CONTACTS</u>			
Radio Programs	213	523	145
Bulletins Distributed	24,703	58,345	136
News Articles	1,269	1,554	23
Television	-	12	-
C. <u>GROUP MEETINGS HELD BY AGENTS</u>			
Number Held			
Youth	729	1,123	54
Adult	1,080	1,616	50
Total Attendance			
Youth	6,244	45,573	629
Adult	11,242	39,425	251
D. <u>TRAINING MEETINGS HELD FOR LOCAL LEADERS</u>			
Number Held			
Youth	168	263	57
Adult	69	381	452
Total Attendance			
Youth	730	4,493	502
Adult	361	7,143	1878

ADMINISTRATION AND MANAGEMENT:

The basic objective is to provide an environment conducive to maximum contributions by all staff members to Extension's educational leadership responsibilities in agriculture, home economics and other related areas to the people of Nevada.

Nevada is undergoing a rapid growth in population as well as being one of the few states in which agriculture is expanding. New people in new surroundings are increasing requests and demands for Extension programs and information.

Sixteen of the seventeen counties in the state have cooperative agreements with the Extension Service. These sixteen counties are being served from eleven county offices staffed by eleven county agents, thirteen assistant agents, eight home agents, and one assistant home agent. To implement and assist the county staff members the state staff consists of twelve specialists, five of whom are on split appointment with the Agricultural Experiment Station.

Major areas of program emphasis include livestock, farm management, agronomy, entomology, water and irrigation, range management, home economic programs, 4-H Club work and other youth activities, in addition to community improvement programs and public affairs. Extension programs are constantly becoming broader and deeper to meet the dynamic changes occurring in the state.

1. FINANCING EXTENSION PROGRAMS:

Funds in support of Extension work in Nevada are derived from four major sources. The Extension budgets for fiscal 1960-61 and 1961-62 are presented below:

<u>Source</u>	<u>1960-61</u>	<u>%</u>	<u>1961-62</u>	<u>%</u>
Federal Funds	183,872	32.3	182,569	29.3
State Funds	235,561	41.4	276,829	44.4
County Funds	104,081	18.4	117,632	18.8
BIA Funds	45,085	7.9	46,885	7.5

Under present conditions any significant increases in support of expanding Extension work is dependent on increasing state and county support monies. The budget requests of the Co-op Extension Service to the University administration and action by the State Legislature to the total University budget has received favorable treatment. The present formula used to distribute Federal funds to the various states to conduct Extension work limits any significant increase of Federal funds to Nevada.

The proportion of state and county funds to support Extension work has steadily increased, while the proportion of Federal funds to the total has diminished. As a result of the increase in state funds two new assistant agent positions were established to meet the expanding demands for Extension work.

The Bureau of Indian Affairs (BIA) has a yearly contractual arrangement with the Co-op. Extension Service for the equivalent of 5.5 man years to conduct intensive Extension work with the Nevada Indians.

2. ORGANIZATION AND PROCEDURES:

In view of the need to increase the depth and scope of Extension educational responsibilities a re-evaluation of the present organizational structure and operational procedures were studied.

Job descriptions and standard of performance for all Extension staff positions were undertaken. This is nearing completion.

Project Agreements with the Federal office were studied and revised to be consistent with existing conditions.

A team approach by specialists to implement programs in the counties was inaugurated. Such efforts are giving greater depth to programs and greater coordination of inter-discipline activities.

Improved procedures in office management established in 1961 include: inventory, control on all equipment, a card control on automobiles used to project future replacement needs, funds for publications appropriated to individual projects rather than the Dept. of Agriculture Information.

3. PROFESSIONAL IMPROVEMENT OF EXTENSION PERSONNEL:

Professional improvement of staff members is and must be a continuous process. A Training Committee was appointed and was very active in providing direction to training programs to meet staff needs. The committee placed major emphasis on the value and use of involving people in program planning and the implementation of other resources, people, groups and agencies in carrying out program objectives.

The annual conference and district conferences were devoted to this concept.

The in-service training program was based on the staffs expressed basic training needs. Subject matter workshops were conducted on an optional basis to staff members and included irrigation problems, soils and crops, entomology and clothing and management.

Five staff members during the past year took additional course work at various schools for professional improvement. We feel definite improvement has been achieved in training for professional improvement of Extension personnel.

4. COOPERATION AND WORKING RELATIONS WITH OTHER AGENCIES:

In view of the dynamic changes occurring in Nevada there is a need to establish close functional relationships with other agencies and organizations and mutually implement resources to better meet the needs of the people.

During the past year efforts in this direction have resulted in mutual understanding and closer working relationships with the Soil Conservation Service, State Dept. of Agriculture, Bureau of Indian Affairs, Nevada State Veterinarians Association, of Cattlemen and Nevada Sheep and Wool Association. As a result a higher degree of coordination of efforts on problems of mutual interest has been achieved throughout the state, and a number of joint publications were published.

In addition, progress has been made in further utilizing University personnel and resources in implementing Extension programs in the state. The Extension Service cooperating with a public utility comply provided the leadership for a successful water conservation program in western Nevada.

Extension has provided the leadership in the development of the Nevada Areas Development Program (NAD). A State Committee has been formed and three counties were active in this approach. The NAD concept is to provide an environment in which all interested agencies, organizations and individuals can meet and develop a coordinated and directed plan of action to solve economic and social problems that exist on a community, county and area basis in the state. Under the conditions in Nevada this approach can be very effective. An additional five counties are in the process of organizing local NAD committees.

II. EXTENSION INFORMATION.

- (1) To train other staff members in the use of communications tools;
- (2) Reporting Extension and research activities to the public;
- (3) Public Relations.

County staffs made significant improvement in the use of mass media to carry out Extension programs at the local level in most counties---others showed no change. In 1961, 1,411 news and subject matter articles were distributed from county offices; staffs in five offices now maintain regular radio programs; and 20 of the 31 county staff members make use of newsletters directed to specific audiences.

Numbers of news releases showed an increase over the previous year. There was no increase ;in counties using radio, but those using it improved the quality of the programs and the frequency.

All counties reported increased personal contacts resulting from the news program, particularly in home economics and 4-H. Much of the reliance of new land developers and new urban residents on Extension Service is traceable to the information effort.

The use of newsletters by county staffs showed significant increase in 1961. County workers report they reduce individual contacts, time, and travel needed to carry out a particular program.

A total of 353 news stories, 26 feature stories, 124 television programs, 44 publications, four issues of the Nevada Extension Record, 27 TV leaflets, and 35 miscellaneous printings were prepared and distributed through the Information office.

The news stories, feature stories and television programs were used mainly to report Extension activities, research and public affairs, and other aspects of farming and ranching and family living. News and feature stories were distributed to all news media in Nevada and those outside that serve Nevada residents. The TV programs were all presented over KOLO-TV in Reno.

Four issues of the Nevada Extension Record were distributed in 1961. The Record concentrates mainly on items of state-wide public interest. The four issues were devoted to Nevada's water shortage, new land developments, Extension planning including NAD, and federal farm programs.

Circulation has reached 6,000. It is mailed to Extension clientele, state officials, legislators, educators, businessmen, and officers of civic clubs throughout Nevada.

Public relations efforts included full cooperation of the Information Department with other agencies and interests in the water conservation efforts in 1961, assistance to various groups where information having implications for agriculture is developed; and special efforts to build closer working relationships with the state's news media.

III. AGRICULTURE PRODUCTION, MARKETING AND CONSERVATION OF NATURAL RESOURCES.

A. Farm Management

The objectives of the farm management program are:

1. Emphasize the application of physical data to farm management problems
2. To initiate youth programs in farm management work
3. To increase the use of outlook material in making farm, ranch, and home management decisions.

To meet these objectives, cost and return analysis work has been done in close cooperation with university research personnel and commodity groups involved. Extension staff members are assisted in understanding the basic issues of various government programs as they influence production, distribution, and consumption of farm commodities. Considerable progress was apparent in 1961. There was a significant increase in requests for information and assistance in farm management principles to ranchers, agencies, and others. Incomes have been raised by several commodity groups due to improved practices in spite of some adverse conditions.

Accomplishments can be measured under three classifications: farm management, farm and home development, and home money management program in urban areas. Farm and home development program involved developing a plan that could be used by Indians at Owyhee in justifying loans in connection with an Indian loan program. The program was relatively successful in its initial stages, however, final evaluation is not yet available.

Work in farm management was done in cooperation with other specialists. Much of the work related to collection of data in all commodity fields. These included cost enterprise budgets for dairy, beef, sheep, grain, forage crops, and desert land entry problems.

Dairy budgets were revised to assist operators in reducing the cost of production. Beef production cost studies were made with ranchers in Starr and Clover Valleys of Elko County. Sheep enterprises budgets were done in White Pine, Eureka and Elko counties.

Budgeting of crops according to major soil types was carried on in cooperation with Soil Conservation Service. Work in contracting was also continued in 1961. A labor contract was written for the vegetable producers in Moapa Valley and in cooperation with the Agricultural Experiment Station, a bulletin on livestock contracting was published and distributed to livestock feeders.

Considerable attention was devoted to new land development in Diamond Valley. The Extension economist took the lead in putting together an Extension team including an animal husbandman, an agronomist, an engineer, an information specialist, and a county agent to discuss the problems of development in Diamond Valley. The work plan was outlined with the local producers and a meeting was held after harvest to evaluate the program and the progress of the development. This work is still in progress.

Another phase of the economics project related to family money management. Four different publications were written dealing with money management. About 1,500 copies of each of the four leaflets were distributed.

Record keeping portion of the project was continued through 1961. About 400 farm and home record books were distributed through the First National Bank of Nevada. In addition many requests for record books and assistance developed from the home money management program. Sixteen major publications and articles were written by the production economist in 1961.

B. AGRONOMY

There are five divisions in the agronomy program: alfalfa production, seed production, grain production, cotton production, and horticulture.

The major objectives of the alfalfa program is to help farmers produce a maximum tonnage of the best quality alfalfa hay possible. In most counties test demonstrations are conducted to determine and demonstrate the value of various practices to the local community.

Fertilizer plots show that alfalfa production can be increased 20% to 50% in most areas by proper use of phosphate. Increased sales of phosphate fertilizer is a good indication that farmers are following recommendations of the Extension Service. The results of the program may also be shown by the good yields of alfalfa that have been secured during the past three years of drouth.

Lahontan and Moapa are the recommended varieties of alfalfa in the state. Both varieties were developed in Nevada specifically for Nevada conditions. Ninety percent of alfalfa seeded in northern Nevada is Lahontan and Moapa is the major variety in the southern part.

Use of adapted varieties and adequate fertilizer can increase the annual value of Nevada hay crop from \$7 million to more than \$10 million. New machines and proper timing of harvesting can assist materially in production of higher quality hay. Several equipment field days were held showing advantages of the new equipment. The equipment was furnished by dealers.

Seed production is becoming a more important part of Nevada agriculture. In 1961, 5,000 acres of alfalfa, clover, grass, grain, potatoes, peas, beans,

turnips, carrots seed were produced. The value of the alfalfa seed was 400,000 dollars and the other seed was more than \$100,000. The additional 3,000 acres that were planted for seed production in 1961 is expected to push the value of seed crops in 1962 to more than \$1 million.

The objectives of the seed production program were: (1) to inform new land developers of possibilities of seed production in Nevada; (2) to keep seed growers informed of the latest varieties that can be grown; (3) to provide information on the latest cultural and harvesting practices; (4) to supervise and distribute breeder seed to producers; (5) to encourage growers to enter the certification program; (6) and to assist growers in securing foundation seed from the National Foundation Seed Program.

Progress in production of seed in Nevada has been much greater than expected. In 1957, only 55 acres produced certified seed. By the end of 1961, 6,000 acres of alfalfa had been applied for certification. The Extension assisted in getting a seed cleaning plant built at Oravada in 1961 which will be a great help to the seed production industry.

While the drouth reduced the normal grain acreage in Nevada by about 60 percent, good progress was made in the adoption and use of good production practices. Practically 100 percent of the winter wheat planted and about 90 percent of the spring wheat planted was planted to the varieties recommended by the Extension Service. Trevi and Highland barley varieties, recommended by the Extension agronomist, accounted for approximately 70 percent of the barley and about 90 percent of the oat acreage was planted to Overland and Bannock which are the recommended varieties. The great proportion of the acreage planted this year was fertilized in order to make the best use of available water.

Cotton is one of the important crops in the southern part of this state. Twenty-four growers plant 3,522 acres of cotton. Test plots were established at the Brady Brothers ranch in Pahrump Valley to determine the value of nitrogen and phosphate fertilizers.

The results of the fertilizer tests gave reason to believe that high levels of phosphate are economically justified. They increased the yields and showed some indication that they produced more sturdy plants with slightly earlier maturity. Yields of cotton have not yet been calculated to determine the relative values of the nitrogen fertilizer and phosphate in this year's production.

However, since cotton was first grown in Nevada in 1956, the average per acre yield increased from 3/4 a bale to more than 2 bales per acre.

Horticultural crops returned about \$2½ million to Nevada producers in 1961.

Acreage devoted to horticultural crops were reduced from 50 to 100 percent in 1961 because of the drouth. On the acreage that was planted however, growers performed an excellent job in following recommendations to secure maximum yields with available water supplies.

All of the potato acreage was treated for nematode control and fertilized according to Extension recommendations. Generally Extension variety recommendations were followed and along with cultural practices to control weeds and produce a maximum yield.

C. RANGE MANAGEMENT.

During 1961, more than 600 individuals were assisted in securing information for the selection of a ranch, in securing forage for livestock, or in determining whether or not the range improvement would qualify for payment under drouth programs.

The objectives of the water development program were to assist all ranchers seeking information on improvement or development of springs or seeps.

It is estimated that about 60 percent of the ranchers in this state improved or developed range water during the past year. The average number of water improvements were 3 on each range. This enabled a better use of more than 19 million acres of range lands because of water improvements or developments during 1961.

Control of poison plants is an important phase of range management. It is estimated that chemical control measures as recommended by the Extension specialist and county agents have prevented the spread of Halogeton to 1,500,000 acres of range land.

In 1961 a bulletin, The 1961 Weed Control Recommendations, Circular 118 was published by the Extension Service. This was distributed to all county agents and to every rancher in many counties.

Three Extension result demonstrations in chemical weed control to control sagebrush were established in 1961. Each demonstration was six hundred acres or more in size. Results are not yet available.

In 1961 about 35,000 acres of sagebrush land were cleared and seeded to adapted grass species on public ranges and approximately 4,500 acres of privately owned ranges were cleared and seeded. In each instance the Extension Service assisted in the seedings on privately owned lands. The pounds of forage expected to be produced from these seedings will equal the forage produced by 158,000 acres of native rangeland.

Many phases of range management are ideally suited for 4-H Club projects for both rural and urban members. In 1961 the range management specialist prepared circulars and 4-H demonstrations material, held leader training meetings, workshops, and demonstrations to encourage more 4-H Club work and prepared the circular entitled "4-H Range Conservation Unit 1". In 1961, 19 members enrolled in range management, 11 in soil and water conservation, and 67 in forestry.

Meadows growing native grasses, shrubs and sedges, are important sources of hay and fall and winter pasture. Research in Nevada has demonstrated that one of the best uses of capital investment is the improvement of native meadows.

The basic objective of this program is to provide information to increase production of these meadows 200 to 300 percent through use of improved management and cultural practices.

In 1961, 12 pasture demonstrations were established. Because of a one-acre demonstration of N-K 37 Bermuda grass in 1960, 300 acres of Bermuda grass were planted in Pahrump Valley in 1961.

D. ANIMAL SCIENCE

Basically Nevada's agriculture is marketed through livestock and livestock products. Vast range lands are grazed by cattle and sheep with fertile valleys producing supplemental feed for the livestock industry.

Western population growth produces many opportunities for intensification of the livestock industry. Improvement of deeded range property, public domain and desert land irrigation projects are furnishing more feed for livestock production.

Intensification of beef management today is a very active program of ranchers working with the Cooperative Extension Service of the University of Nevada. Improvement of range management, nutritional supplements, bull management, breeding pastures and herd improvement and marketing and promotion are active programs of emphasis and participation.

Nevada Performance Testing

	No. of Herds	No. of Head
1960	25	12,600

Drouth the past few years has reduced the number of replacement cattle kept by ranchers; however, the number of herds participating in performance testing or heifer replacement has remained quite constant. Cooperative tests in winter feeding as well as feedlot operators has shown a great deal of interest. As of the end of 1961, 14 feedlot operators with a capacity of 20,000 cattle were receiving assistance in formulating rations and management problems in the Extension livestock program.

Beef Feedlots & Wintering Lots

	No. of Cooperatoaus	Est. No. of Cattle
1960	14	19,750

A new technique of marketing cattle was instituted in Elko County in the form of a special feeder calf sale. More than 1,000 feeder calves were sold at an average of 3 to 5 cents more per pound above current market price. This and other special feeder sales were used not only as a marketing tool but also as a means of promoting Nevada feeders. Cooperative tests are now underway in one of the large California feedlots to evaluate the rate and efficiency of gains of Nevada feeder cattle.

Approximately 25% of the Nevada sheep population is working cooperatively with the Extension Service relative to wool coring (test to estimate marketing value and breeding improvement), nutrition, disease and herd improvement. A total of 19 cooperators, running 85,000 sheep, last year not only provided information for their operations but also for others in the business.

More than 600 of Nevada youth participated and completed 4-H livestock projects in 1961. Of these 450 participated in a livestock show and 173 were involved in horsemanship shows. Such 44 programs do much to contribute self-reliance and leadership qualities to our Nevada youth.

In summary the Cooperative Extension Service livestock program is one that deals not only with production/^{of livestock} but also marketing and promotion of the products produced. It works very closely with all major livestock organizations in the State, including the Nevada Cattlemen s Assn., Cowbellees, Farm Bureau, Wool-growers Assn., Western Shoshone Indian Organization, Veterinary Assn., feed dealers, Nevada Junior Livestock Show, Nevada Junior Hereford Assn., Angus and Hereford Associations to provide leadership and organization in an united effort in working toward the common objective of improved production, marketing and promotion of Nevada livestock.

E. DAIRY

During 1961 there were 59 dairy herds representing an increase of 23% participating in testing and record keeping programs. About 25% of the total number of the state's dairy cows were on test. Two new DHIA Associations were initiated in the southern part of the state, increasing the herds on test in that area from 3 to 17 and the number of new herds :on DHIA in the state by 18.

Following a series of meetings explaining the centralized processing of dairy records, the number of herds using this new form of record keeping increased from 3 to 21, including all herds ;in the 2 new DHIA Associations. Preliminary figures

indicate that the average production for herds on DHIA will be about 11,296 pounds of milk and 418 pounds of butterfat, down slightly from last year, but considerably above the national average.

A total of 4,016 dairy cows, representing about 27% of the dairy cows in the state were bred artificially. This was an increase of 12% over the preceding year. One new artificial breeding association was initiated in the southern part of the state. Dairymen, following a recommended practice of buying artificially sired replacement heifers, have reported a marked decrease in the number of first calf heifers culled because of low production.

As a result of group cost studies, dairymen report annual savings in hundreds of dollars following changes in their operation. Cost studies have also been beneficial to the dairymen in presenting information to the Nevada State Dairy Commission for the purpose of determining producer milk pricing. The Agricultural Economics Department has been aided in the presentation and dissemination of information on alternative methods of pricing milk for Nevada.

The assistance provided the Nevada Dairy Producers Council in an advisory and educational capacity has been extremely beneficial in involving more dairymen in developing and carrying out programs designed to advance the dairy industry. The majority of the dairymen are now participating in the Association which has had a significant stabilizing effect on the entire industry.

The development and success of the cooperative mastitis testing program has been most gratifying. The State Diagnostic Laboratory has reported a marked increase in the use of its identification and sensitivity test services by both veterinarians and dairymen. Approximately 30% of the barns in the state have been checked for proper installation and operating of milking equipment. A number of dairymen have reported improved milking and a lower incidence of mastitis following equipment checks and adjustments. An increasing number of dairymen are using the California Mastitis Test as a preventive measure. As a result of the program equipment, dealers and veterinarians report that dairymen are more aware of the importance of properly operating equipment and the need to follow a herd health program, particularly with respect to proper treatment. However, perhaps an even more important result of this new program is the opportunity afforded to lead into other phases of improved dairy production.

F. ENGINEERING

Developing water resources is perhaps one of the most important areas of interest to the State of Nevada. Because of meetings held in Carson Valley to inform the people on the progress and program, a favorable reaction to the Washoe projects now exists. Considerable progress has been made in eastern Nevada by alerting the people to the benefits to be derived from the small watershed program which has been proposed for the area. This program is administered by the Soil Conservation Service.

The Extension Service played a significant role in both agricultural water usage and municipal water usage in Nevada last year. Even though water was lacking, crop production remained on a par with other years because of the interest placed on water conservation and efficient water use. The Cooperative Extension Service also took the lead in the inauguration of a drainage program affecting Reno, the local utility company, the University of Nevada, and other individuals.

Through a pump irrigation program and the pump efficiency tests conducted by the university, awareness of the problems of the ground water development was created. It is hoped that this will lead to more efficient pumping operations in the future.

This project also maintains an up to date building plan service to meet the needs of Nevada's farms and ranches and to disseminate such information as needed.

Major effort in the area of rural electrification was in setting up cooperatives and assistance in estimating power requirements for pump irrigation. It is anticipated that pump irrigation will require the greatest amount of electrical power.

Practically all efforts put forth in 4-H Club work were devoted to organizing leader training workshops for auto-tractor projects. Enrollment in the 4-H Club auto-tractor projects is low but the interest appears to be high. With the cooperation of the Humble Oil company, Nevada entered a contestant in the Western Regional Tractor Operators Contest in 1961 at Dallas, Texas. The contestant made a very respectable showing compared to participants from other western states.

G. ENTOMOLOGY

Since the entomology project was established in 1955, alfalfa weevil control has increased from nothing to between 75 and 90 percent of the total acreage grown in infested areas. In 1961 county agents estimated that more than sixty-two thousand acres were treated for both adult and weevil larvae control. Comparisons in White Pine County of treated and untreated plots indicate that the treatment on three thousand acres increased production by three thousand tons, or gave a net return of \$84,000 for the hay crop.

Working with the federal workers in biological control of the spotted alfalfa aphid, parasites of the aphid were distributed to agents in counties where the spotted alfalfa aphid had been found. This parasite has had a tremendous effect on keeping the spotted alfalfa aphid under control and has been beneficial in keeping necessity for chemical controls at a minimum.

Educational work in alfalfa seed production has enabled growers to increase seed production three fold from a given number of acres. The growers are now going outside the state to secure better polination services.

Considerable interest has been developed in cattle grub control because of a demonstration in 1961. Many requests were received by agents in this past winter on where to secure materials for grub control. Full benefits of the program could not be realized because of a company decision regarding distribution channels. The decision was made late and it was impossible to get information to producers until it was too late for the controls to be applied.

IV. MARKETING AND UTILIZATION

Major progress with marketing in 1961 was the addition of several new marketing agencies, the use of new marketing techniques by various commodity or rancher groups, and changes in marketing facilities. The marketing and utilization program is still in the infant stage and a more vigorous program must be established before the real needs of the agricultural industry are met.

This project is primarily concerned with two phases, the marketing of farm products from the farm and work with marketing firms. Personnel working this project cross lines of interest. The leader of the project is the Extension Production Economist, however, there is a need for a marketing specialist to do more work with the Production specialist and with the county agents who at this time are carrying a large share of the load in the field of marketing.

The objectives of the marketing program are to assemble, analyze and disseminate current economic information that will help farm people and related farm firms market farm product to a better advantage. This is done by educating

to help reduce the cost of marketing farm products, to assist in expanding markets for farm products, to promote a better understanding of the marketing system and to help improve the efficiency of firms supplying farmers with goods and services.

Teaching methods have been designed to fit the occasion and the job to be done under the problems of this project. These include the preparation and dissemination of printed material and visual aids, individual contacts with Extension personnel, producers and marketing agencies, meetings with producers, representatives from marketing agencies, the use of mass educational meetings, and special training conferences of Extension Personnel.

Since marketing is one of the larger of the agricultural problems in Nevada's agricultural industry, progress in this project can be measured by increase in farm income but also in the increase in general economic activity. Income has been added to the general economy with new marketing techniques, new marketing firms, marketing firm combinations and product promotion. The assistance given under this project have brought about marketing changes in almost every commodity produced in the state.

For the most part, the marketing and utilization program is still in the infancy stages. Greater accomplishments have been made in the past year than in previous years. Some of the accomplishments of this program are found in the outlook situation. A mid-year report dedicated to the livestock and beef situation and a year-end report covers the agricultural situation for the nation and the state. Emphasis in the outlook publication is placed in interpreting local statistics relative to state and national data so that local producers may use the material readily in making marketing and management decisions. Other big accomplishments in the marketing field this year were the establishment of a seed and clean plant in the Orovada area to assist in marketing certified seed in this part of the state. This brought to the state a new business investing approximately \$150,000.00. Already it has been determined that this plant is too small and must be expanded. Along this same line, another accomplishment was the assisting in the establishment of feeder calf sale day for northeastern Nevada sponsored by the Nevada Junior Hereford Association.

Further work has been done in southern Nevada in assisting the vegetable growers in Moapa Valley in better grading, packaging and marketing techniques to help solve some of their marketing problems. This work is still in process. The project also helped to determine the feasibility of a cooperative organization in the buying, feeding, and selling of feeder livestock with the southern Nevada group.

Persons concerned with marketing in the state attended meetings such as three of the specialists, including the Extension Economist, participated in a regional Extension marketing workshop for three days in Salt Lake City. The assistant agricultural agent in Washoe County started a program with older youths, under the 4-H phases of the Extension work, to educate and interest youth in agricultural marketing problems and to assist them in career exploration in this field. Possibilities were explored and some information disseminated to mass media on the possibility of expanding programs with marketing firms. Help was given from the Federal Extension Service in this area.

V. HOME ECONOMICS

During the past year, county-wide program planning has moved forward with nine counties making use of program planning committees of homemakers and other lay people for developing programs. These groups have planned programs that

include homemaker and other group interests, new methods for meeting special interests and leadership responsibility for group teaching.

Up to this year, only one lesson had been presented through leader training while in 1961 there were 15 lessons presented to county homemaker groups and many other participating groups by leaders who had been trained by specialists or home agents. A wider variation in program methods, yet closer coordination of programs in the county and a better balance of subject matter has made it possible to get agents and people of the counties to see continuity and need for long range program development. Agents' efforts and information from them are now reaching many more people and different groups than in the past. County agents other than the Home Agent and representatives of other related agencies of the counties are participating in the program planning and execution to a greater degree than before.

The Homemaker clubs in the state carrying the extension program number 63 with a membership of 1605 but the home agent program reaches many more groups of homemakers with certain phases of the extension programs.

The Home Economics Extension program in Nevada is reaching homemakers through organized groups such as homemaker clubs, civic, social and church organizations; special interest meetings open to the public and workshops consisting of series of meetings on a particular topic; newsletters, newspaper columns and special articles as well as other mass media methods. In addition to these methods during 1961 Home Agents made 1842 home visits, received or made 8441 telephone calls and received 4429 office callers in providing information. There were 23,340 bulletins distributed for use by homemakers of Nevada.

Since both the adult and youth programs are expanded by the use of volunteer leaders, they must be trained to be able to take this responsibility. Home Agents reported 353 training meetings held at which 5,583 leaders were trained to assist with program planning, organization or subject matter teaching. These leaders are trained for specific jobs they are to do, but in carrying out these responsibilities are also making personal leadership development. Much of the leadership development and training reported under the 4-H Club phase of the program is also a responsibility of the Home Agents. As leader training is increased and improved there are fewer and fewer dropping out of 4-H and adult leader responsibilities and the programs are reaching a greater number of people than in the past.

Programs in the counties are changing emphasis from the homemakers wanting only learning of skills to more management of time, money and energy. Program emphasis is broadening from problems relating to individuals and the family to include community and county needs as they affect the family and individual. Women are asking for information on mental health, social services, community recreation, juvenile delinquency and other public affairs topics in addition to home and family assistance and stress on consumer information.

All Home Agents were given specific training in management principles and techniques early in January. Throughout the year most lessons presented by them or leaders were given emphasis in management whether it was on clothing, foods, home furnishing or consumer information as related to family purchases.

After a series of three meetings on money management many homemakers started keeping records in Clark and Elko Counties. Following a series of similar meetings in Washoe County, a survey showed that 80 percent of homemakers in attendance are now keeping records. Demonstrations on quick meals emphasizing money management in food preparation with attention to cost was done with seven groups totaling

83 women in Douglas, Ormsby, and Storey counties. Fifty reported accepting and using the practices taught.

As a result of the attendance of a husband at a homemaker meeting for 24 women who studied step saving in the kitchen, the wife now has a completely remodeled kitchen. Ten of the 24 women are now reported using some of the methods of step saving demonstrated.

The Washoe County Home Agent presented information on money management and the importance of flexible money plans to each of the 13 homemaker clubs. The information was slanted to the needs of the individual club membership depending on their age span. Those in the older age group were given information and discussed need for supplementing social security and other retirement benefits while those in the younger age brackets were made aware of increased financial needs for college students and medical care of the family.

Improvements in quality of meal service and learning more about entertaining at home has shown good progress with the 4-H Club members. They have also given attention to shopping and cost of foods. Increase and improvement in preparation of project materials and leader training can be credited with this gain.

Clothing construction workshops given by Home Agents in five counties included the making of an average of three garments each by 186 participating women. Many of these women conducted workshops for other women in their area, but no count of this number can be had for this report. Through the use of evaluation sheets and verbal expressions the Home Agents indicate they feel this effort proved very successful and far reaching. More advanced work is requested for the coming year.

Several 4-H Club members and homemakers participated in various health drives in the counties in 1961. Three 4-H members erected safety exhibits at the annual Washoe County Fair. USDA's bulletin "Food Stockpile for Survival" was condensed and distributed for use until the second printing is available. Two counties have planned into their 1962 program leader training for organization representatives and two public meetings and three leader training meetings to inform women of the availability of civil defense education on home preparedness, protection of crops and livestock, and courses in home care of the sick and first aid.

One specific accomplishment was the success of an effort to encourage welfare recipients to use dry milk. In the past there have been reports of waste and dislike for it and that it had been used in a very limited way. Members from 85 families including 245 people came for this help. Because of this successful demonstration welfare supervisors request a similar demonstration on the use of dried eggs. Following the demonstration and the distribution of leaflets and other printed information 65 families representing 182 people were reported using dried eggs compared with six families who accepted them before the meeting.

VI. YOUTH WORK

The increase of non-farm youth, 71.4 percent of the 2903 members, in the 4-H Club program compared to 29.6 percent farm youth, is of increasing importance in planning the overall 4-H Club program. The program must be flexible in order to give urban boys and girls the opportunity for learning-by-doing experiences.

Among some of the activities conducted last year in the 4-H program were camps, livestock shows, horse shows, safety surveys, tractor driving contests, picnics, tours, car safety checks, parades, Rural Life Sunday programs, national 4-H Club week activities, March of Dimes program, clean-up campaigns and others. The Nevada reports show 1,885 club members presented demonstrations, 1,566 members participated in a safety activity, and 797 attended a 4-H Club camp in 1961. The more popular included field crops, gardens, range and pastures, soil and water conservation, forestry, beef, dairy, horses, sheep, swine, entomology, tractor, automotive care and safety, health, safety, electric, home grounds, clothing, foods, recreation and junior leadership.

The 4-H program is well accepted in most areas of the state and most counties have excellent support from civic and service organizations. Major supporters of 4-H Club work in Nevada include, Sears Roebuck Foundation, Standard Oil Company of California, Union Pacific Railroad, First National Bank of Nevada, Bank of Commerce, Circle L. Ranches, Kennecott Copper Corporation, and other local organizations and local businessmen.

One of the new endeavors of the Extension youth programs in 1961 was the Citizenship-Leadership camp held at the 4-H Club camp. Boys and girls representing 4-H Clubs, Future Farmers of America, Scouts, Campfire Girls and churches spent a week at the 4-H Club camp studying citizenship-leadership traits. Counties reported leadership and citizenship development of youth in many ways. However, mostly the reports can be boiled down to individual leadership development in terms of self confidence and self reliance.

One of the major problems in the 4-H program in Nevada is that the training of leaders has not kept pace with membership growth. At present 496 volunteer adult leaders assist in the 4-H program in the state. The recruitment, training and proper recognition of adults in leadership roles must be strengthened for a more successful program in the state.

VII. PUBLIC AFFAIRS

Most Cooperative Extension staff members were actively engaged in public affairs education in 1961. The areas of work for the most part were of mutual concern to the entire population and not restricted to farmers and ranchers. One such program was a study and the discussion of legislation and its effects on Humboldt County. This was conducted strictly as an education program and not a pressure group.

Additional programs were conducted regarding public policy, affairs of county, state and national interest. Most counties cooperated in farm-city week and special programs were conducted for improving farm-city relations. Radio and newspapers of the state cooperated and speakers were obtained for some meetings to discuss problems that affect families in communities and the relationship of agriculture to other segments of the economy, and strictly agricultural problems and policies.

Feature stories were prepared on specific adjustments programs that would provide additional impetus to the economy of the county while others seek to improve facilities for better family living. One county concentrated on dairy organization, cotton industry and Nevada Areas Development. Another county featured the dedication of the completed rural electrification project which means that 98 percent of the homes in the county are now electrified.

The outstanding community improvement program was perhaps completion of an REA line in Humboldt County. Elko and Eureka Counties have a similar program underway and Esmeralda County has completed their program. Cooperative Extension has taken a very active role in these programs. The Washoe County staff cooperated with the BIA, TCID and the Tribal Council in getting electricity and water into the homes on the Nixon Indian reservation. Other counties are involved in such community improvements as planting shrubs, improving curbs and gutters on the town's streets, relocating irrigation systems, elm leaf beetle control, home grounds beautification, beautification of community buildings and grounds.

Flood control and irrigation projects in cooperation with the Soil Conservation Service was also given considerable attention. Churchill, Clark, Elko and Washoe Counties have been quite active in this program. Also, rural fire protection districts have been improved and new districts organized during the year.

Through the Nevada Areas Development program and county advisory groups, some group techniques have been initiated. Some real progress was made in group technique leadership in 4-H club camps and citizenship leadership camps.

The Nevada Areas Development Program in Lincoln County has proven very effective in bringing the people of the county together in an effort to improve the lagging economy. Some objectives have been achieved but the area still has the most difficult task ahead. Land Development projects are becoming more prominent in more counties of the state. Humboldt, Esmeralda, and Eureka Counties have made excellent progress. The county and state Extension staff and representatives of other agencies are working closely with the ranchers and developers in these areas.

The Lincoln County NAD committee has tentatively established an industrial site between Caliente and Panaca. A bill has been introduced in Congress to establish this site. If passed it would turn 2,900 acres of Bureau of Land Management land over to the county for an industrial site. A number of projects were being investigated in 1961 that will be of economic value to the county. These include the Electro Nuclear Metals Corporation, Sierra Oxygen, a paint pigment manufacturing company, El Paso natural gas line, and a soil conditioner plant. Work was also conducted to stimulate mining interests and more interest in tourists.

VIII. ORGANIZATION AND SUPERVISION OF COUNTY EXTENSION PROGRAMS

The organization and development of local leadership has increased but still is a weak link in Cooperative Extension work in Nevada. Some counties have made good progress in organizing and training leadership in Home Economics and 4-H. Little effort has been made in other areas. A number of training meetings have been held for home economics leaders, and also for 4-H leaders. The primary objective of the Nevada 4-H leaders training conference is to train leaders who will return to their counties and train other leaders. Some counties make good use of this opportunity while others do not even participate. The specialists and program leaders assist in training programs in most counties.

There were 85 councils or committees with a membership of 975 persons

assisting in the Cooperative Extension planning in Nevada in 1961.

These councils or committees held 363 meetings. These meetings were held primarily for the purpose of determining the extension program in the county. An effort is being made to organize the councils and committees on a county-wide basis. But some staff members have been unable to see beyond the agriculture committee. Some progress is being made with additional emphasis on the Nevada Areas Development program.

The majority of the councils and committees now in operation are either 4-H, home economics or commodity groups. A few county-wide advisory committees are organized but do not meet often enough to be really effective.

Some counties have leaders who are very interested and active in planning and execution of the Extension program. In these counties the interest and support by county government, civic and service organizations, news media, business, rural and urban population is excellent.