

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

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PINAL COUNTY
AGRICULTURAL EXTENSION SERVICE

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COUNTY SITUATION

Pinal County, 1953 - 1959

Agricultural Extension Service

The land area of Pinal County is 5,373 square miles or 3,441,920 acres. The estimated population in 1957 was 63,000. The population has been increasing at the rate of about 50% every decade. The 1954 Census of Agriculture lists 1,047 farms; with 2,570,441 acres in farms.

All communities have grade schools. Maricopa, Casa Grande, Eloy, Coolidge, Florence, Superior, Ray and San Manuel, have high schools. College extension courses are offered at Casa Grande and have been offered in Coolidge. Higher education facilities are not available in Pinal County, but because of the fact that Pinal County is located almost equidistant between Phoenix and Tucson, the urban centers of south-central Arizona, the higher education facilities are not too unobtainable.

Basic economy is agriculture, with cotton the principal crop. Small grains and cattle raising contribute substantially to the agricultural income. Related industries such as cotton gins, cotton seed oil plants, fertilizer and agriculture chemical production, provide employment for many trades and crafts. Some supplementary manufacturing has come into the valley in the last few years. Mining is a substantial factor in Pinal County. Almost the entire Eastern half of the county is made up of ranches. The mining areas are in the mountainous areas within the general area covered by the range land. The principal towns located in the mining areas and ranching areas of Pinal County are Superior, located in the Northeast corner; Kearny, a new town being developed to take the place of Ray; Mammoth, a small ranching and mining community in Eastern Pinal County; and San Manuel, a mining community in Southeastern Pinal County.

The agriculture, other than ranching in Pinal County, is confined to the desert valley area. In this desert valley area, there are several towns, the principal one of which is Casa Grande. It is located just about 11 miles East of the geographic center of Pinal County. Population is estimated to be between 9,500 and 10,000 people in 1959. Coolidge, second in size, is about 6,500. Florence, the County seat, is about 2,000 population. Eloy, located in the southern and eastern section of Pinal County is about 4,500 in population. Maricopa, a small community, is in the western section of Pinal County; as is Stanfield, half way between Maricopa and Casa Grande.

Of increasing interest is the area around Apache Junction, west of Florence Junction. This is suburban area built up from Mesa, east. Very little agriculture is in this area. However, it's population is growing rapidly.

The estimated value of all products sold from Pinal County's 1,047 farms in 1958 was \$100,037,000.00, of which \$16,000,000.00 were in cattle and calves; \$62,400,000.00 in cotton and seed; and approximately \$700,000.00 in dairy products. This accounted for 25.8% of the county's income. Mining contributes 20.2%. The remaining 54.2% comes from industry and governmental organizations.

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Problems that face the people can be divided into two areas. The newcomers in a rapidly expanding population, are faced with assimilation in the culture that is now. There are few well defined lines, either among the present residents or the newcomers. A different land, a different climate, unfamiliar plants, trees, soils and even birds, all add to confusion.

To all, a changing economy, new communities, lack of local formal leadership is baffling. Even to the Extension Service, which has been classed with organizations having little local or county leadership and organization.

The changing economy is influenced by rising costs, falling water, mechanization of farms and governmental intervention, spending and payroll.

1952 Census lists 1,047 farms with 74 commercial farms; 2,540,441 acres in farms, of which 358,383 acres are irrigated. Currently this figure has dropped to less than 300,000. 597,378 acres are in three Indian Reservations in Pinal County--Maricopa, Gila River and Papago. These people are served by Indian Extension Agents. Most of the farm lands on the Maricopa Reservation are leased to white farmers. A large percent of the Gila River farming is done by loan foundations, some is leased, some is farmed by individuals. The Papago Reservation lands are broken up into about 80 acre tracts and farmed by individual Indian families.

Alfalfa will increase slightly from 1959's 35,000 acres. Upland cotton will decrease to a Plan A acreage of 123,000 acres. American-Egyptian acreage will decrease slightly from 1959. Barley and grain sorghams will increase strongly. Wheat acreage will decrease sharply to 9,500 acres from 24,384. Vegetable acreages are expected to drop slightly. Oil seed crops will enter the picture with 1,000 acres.

Livestock numbers will show gain while income will reflect market trends.

Dairy numbers will follow the present upward trend.

The poultry industry is headed upward.

The number one market for Pinal County fiber and grain crops is the C.C.C. The \$50,000.00 limit will tend to end the influence of the grain market. Patronage dividend minded marketing organizations will exert greater pressure on the cotton market. Livestock markets are generally available through Phoenix and Los Angeles. Local auctions handle small offerings. Dairy and poultry markets are available in the metropolitan centers of Phoenix and Tucson. Range cattle are largely disposed of by contract sales.

The principal crops in Pinal County are cotton, alfalfa, barley, grain, sorghams, wheat, with a few vegetables. Livestock enterprises include range cattle, feed lot cattle, dairy, sheep, poultry and hogs.

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Being a desert area, agriculture is dependent on a source of water for irrigation. All crops depend on irrigation for growth. There are two types of irrigation sources. The first one is wells. Commercial irrigation wells vary in size from a few hundred gallons per minute to as high as 3,500 gallons per minute. The depth of the wells vary considerably with the area where the well is located. The other source of water is the San Carlos Irrigation and Drainage District which provides water primarily from the stored water behind Coolidge Dam located at the northeast corner of Pinal County, and the Hayden Diversion Dam which diverts summer flow of water from the Santa Cruz River and the Gila River. This Diversion Dam is important, but not efficient. A great deal of the water during the stormy season of the summer is dissipated in the desert, past the Dam. Only a small portion can be diverted into the channels that will carry it to the farm land. Historically the project farmers are short of water during the summer months. The project was set up for 100,000 acres of which 50,000 was for the Indians and 50,000 for the non-Indians. The total project has never materialized and less than 20,000 acres of Indian land are farmed under Project water.

Diversification in agriculture started in 1955, with cutback in cotton allotments. The Pinal Extension program has been based on diversification since that date. This is borne out by trends in acreages and income for the four year period. Problems involved are production and management to increase or maintain farm income with crops of less value than cotton. This is complicated by lowered water tables and project water feast and famine cycles.

The total estimated (1957) county population is 63,000—40,000 rural, 23,000 urban. These 63,000 people are living in 15,000 family units—approximately 5,475 urban families, 9,525 rural. 1,017 farm families, many of whom live in urban centers. The average farm income is \$10,000.00, average mining income is \$7,500.00, average overall is \$4,800.00.

Major problems seem to be centered around:

1. The large population increase in recent years which has produced a strain on community resources, and for the new people moving into this area, a problem of adjustment to living conditions unique to Southern Arizona.
2. The migratory nature and low standard of living of unskilled labor, particularly farm labor, which makes up about 10% of our population.
3. The fact that the mining communities in the eastern part of the county are largely owned and controlled by the mining companies.

Looking at this situation, it would appear that the long-time improvements necessary in order to bring about the best type of living for families in this county are as follows:

1. Raising the standard of living of low income families.
2. Education of homemakers in general to get the best value for their money (with the eventual hope of raising the quality and increasing the variety of goods sold in local stores).
3. Education of homemakers to best manage the resources affecting their family.
4. Better service on household equipment to enable householders to get maximum benefit from it.
5. Development of greater interest among people with regard to their community responsibilities in order to bring about civic improvements and better relations within the community.
6. Reduction of both juvenile and adult delinquency.

Conditions which seem to be keeping people from bringing about the changes they desire (to a large extent the same conditions that created the problems to begin with).

1. Mobility of the population.
2. Scarcity of goods and services of high quality in some areas.
3. Extremes in income levels.
4. Differences in education levels.
5. The "melting pot" conditions of community settlement.

The enrollment of children in the schools of the County have not increased percentage wise the past 5 years as much as the increase in permanent residents. This is due to the decreased influx of migratory labor on a seasonal basis. The number of migrant laborers coming in has been dropping each year as a result of more mechanization in farming and the necessity of farmers to cut costs of production.

The data in this report concerning the number of youth of 4-H age, (10-21) in the County is based on enrollments in the schools. Approximately 74% of this total number of students are permanent, which is a more realistic figure as to the potential number of youth available for contact with youth programs.

Total number of school children (10-21) years of age in County - 1958-59 school year—12,643*.

Number of school children (10-21 years of age) considered permanent—74%—9,356*.

Number of 4-H members enrolled in 1958-59 in County - 460.

Number of youth (10-21 years of age) in other youth programs -

1. Future Farmers of America - 305**
2. Future Homemakers of America - 194**
3. Scouts - 603**
4. Rainbow Girls - 325**
5. Del'olay - 45**
6. Others - 270**

The educational level of the youth of the County is gradually rising, but estimates are that only 60% of the youth are graduating from high school.

The more heavily populated areas of the County tend to be so highly organized that competition for time and leaders is severe. All volunteer youth programs suffer for lack of adult leaders.

*Based on figures from the County School Superintendent's Office.

**Estimates.

1. AGRONOMIC

A. Crops

1. Small Grains

The large acreage of small grains in Pinal County tends to be a marginal return operation. The needs of growers for improved practices and varieties are evident. The 1959 fertilizer demonstration on the Wilbur Kuertz farm disappeared, when the entire field was turned over to a machinery company to test an experimental combine.

2. Sorghams

Cotton yields have declined drastically. Loss of organic content of soils has added to the complex causes of yield decline. Sorghams, both grain and forage, offer large quantities of crop residues for soil improvement plus a profitable net return. Two forage sorgham demonstrations were planted on key farms in the Coolidge and Stanfield areas. One grain variety and fertilizer demonstration was planted in cooperation with Dr. Tucker and Dr. Stith in the Green Reservoir area. A dual purpose sorgham demonstration was made in the Maricopa area. A double crop grain sorgham demonstration was held east of Casa Grande. Mass Media and a field day were used to give widespread coverage to the demonstrations. Basic reasoning for establishing sorgham demonstrations was fitting sorgham to cotton water use to provide demonstration area for cotton response.

PEARCE SORGHAM YIELDS

<u>Treatment</u>	<u>Means</u>				<u>All Varieties</u>
	<u>501</u>	<u>610</u>	<u>Plainman</u>	<u>660</u>	<u>Heen</u>
0 - 0	4062	3834	3895	3705	3874
60 - 0	4142 ✓	4233	4195 °	4256 ✓	4202 °
120 - 0	4119	4587 ✓	4218	4138	4123
240	4116	4803	3819	3990	4265
0 - 69	3766	3865	3815	3615	3815
60 - 69	4199	4188	3952	3895	4133
120 - 69	4104	4701	4302	4313	4130
240 - 69	4192	4564	4055	4241	4338
120 - 69 T.E.	4537	4366	4336	3962	4305
Var. Means	4304	4415	4072	4037	

With greater sorghum acreages reported, few acres were planted to non-adapted varieties.

Combine efficiency was checked out on first and second cuttings of sorghums. From excessive loss to efficient operation was noted. Personal contacts and mass media were employed to extend this information.

Six row equipment made it's debut commercially and has been accepted as a further step in farm operation efficiency. Costs are near the excessive point.

3. Alfalfa

Alfalfa harvest and drying time was studied as a clue to quality hay production. Rough results were given to cooperators to assist them in immediate application. The use of hay conditioners will have more acceptance, especially so with windrowers.

4. Weed Control

Control of ditch bank weeds by chemicals was demonstrated on the Wayne Wurtz farm. Shortly after the initial application of Dalapon and C-56 the ditch was dried up for the season. Immediate knock down of grassy weeds was noted but no regrowth.

5. Cotton Fertilization

The use of fertilizer has been increasing. The complex nature of fertilization, how much of what and when applied, has made accurate information imperative. Cooperation with Dr. Curt Tucker of the Experiment Station Staff, County Staff and Mr. John Singh was achieved. This Experimental work was used in a demonstration manner this year and will become a basis for next years demonstrations. This work was different from that of previous years. More factors, such as tissue analysis and plant characteristics and responses, were noted. This was in contrast to demonstration type research carried on for the past two years.

The competitive position of fertilizers has also increased pressure for accurate fertilizer information. At least three fertilizer cooperatives were formed this year. Prices were much lower on both fertilizer and insecticides.

The specific objective was to correlate soil tests, tissue tests and plant response characteristics to fertilizer programs. This is important to farmers to tell what kind of fertilizer, when to apply and rates to use. The plant responses were the outstanding characteristics during the growing season. Many growers were amazed at the variation caused by different fertilizer practices. Variations in height, fruiting, shedding and yield were pronounced. Commitments have already been made by growers to try the best programs on a larger scale next year. Mass media, personal contact and farmer interest, were the means used to create interest so that farmers will be in a position to profit from this work.

See sorgham variety trials for crop residue work.

Much interest has been shown by growers in tissue analysis in relation to fertilizer requirements. Information by way of Mass Media and personal contact was distributed explaining the delicate nature of tissue testing and the need for determining levels of nutrient need. Definite progress was made as indicated by grower response. A program of sound fertilizer practices based upon cropping history, soil productivity levels and organic matter was used to help show the correct use of tissue analysis and prevent wasteful fertilizer practices.

Time of application and placement recommendations were given by personal contact and mass media. Methods of application, water vs injection of NH_3 , for example, were discussed fully by the means mentioned above. Cautions on the placement of fertilizer were aired. Yet trouble shooting calls were required to correct ill-timed and poorly placed fertilizer. Progress was made, however, as evidenced by the care the majority of growers used in fertilizing cotton; also by the thought given to the use of N. on crop residues to be turned under and care in planning the use of fertilizers.

6. Smith-Doney Report

The membership list of the Pinal County Farm Bureau Upland Cotton Improvement Association and the Pinal County Farm Bureau American Egyptian Cotton Improvement Association was prepared and sent to the Classing Office in Phoenix. The County Farm Bureau is the sponsoring organization for these two Cotton Improvement Associations. This is done as a service to all farmers regardless of membership in the Farm Bureau. Mr. Wayne Wuerz and Mr. Robert Turner signed as the Farm Bureau representatives.

7. Cotton Quality

An intensive program relating cotton varieties and quality was carried on prior to planting by Dr. Howard Ray and the County staff. The objective was to discourage the planting of D. & P. L. cotton. The quality of D. & P. L. is lower than that of the Acalas. The fiber is weaker and shorter. This is thought to be detrimental to our market that has been built over the past seven years upon the strength and length of staple. The success of this program was shown by the small plantings of D. & P. L. However, small plantings were made. The yields from these plots were decidedly better than our Acala varieties. This is contrary to research data. We also stated that D. & P. L. market potential was so poor that it would not sell. This was based on reports of reputable buyers. However, D. & P. L. did sell in Imperial County, California. Efforts are being made to ascertain the market potential for cotton of the quality characteristics of D. & P. L.

Talks at Rotary Club and Lions Club meetings, mass media and personal contact were used to promote this program.

More reliable data will be required to meet the challenge presented next year. Variety demonstrations are planned.

8. Cotton Harvesting

The staff cooperated with Mr. Sam Stapley of the Casa Grande O. S. Stapley store and Harley Hilgeman of the Coolidge store in conducting two picker schools. Mass media and personal contact were also used to promote this portion of our program. Good picking practices are very important for several reasons. Cotton profits have been declining, making it necessary to get the largest possible gross return. The spread in quality can amount to as much as forty dollars per acre. This can mean the difference between profit and loss. This year the average grades of machine picked cotton have been middling plus. Another indication of progress is the quotation of Mr. Jack Wright, "It sure pays not to trap trailers."

Harvesting efficiency measurements were made on the farms of Mr. Jim White and Mr. Jack Wright. These checks showed a loss of less than 300 pounds of seed cotton per acre. This is another indication of the efficiency of growers in the use of cotton pickers.

A meeting with the Farm Bureau was held in which classification of cotton was explained and actual classing done. Many growers are dissatisfied with the present system of classification of cotton by the U. S. Classing Office. There is too much variation and no recognition of quality factors in the pricing system. The problems involved in improving cotton classing were explained. Cotton quality from the classification standpoint should be fully explored and information given to Extension Agent for distribution.

9. Weed Control in Cotton

Mass media and personal contact were the methods used to disseminate weed control information. Chemical control was the most active phase. Monuron and Diuron were the two chemicals used most extensively. The rapid advance of morning glory and water grass has prompted the interest in chemical control. These weeds can cost from \$150.00 down to \$10.00 per acre from decreased yields and lower quality. Recommended rates and other cautions in the use of these chemicals have been followed closely. This is evidenced by the total lack of damaged cotton because of misuse of these chemicals.

Mechanical control of weeds is still a very important cultural practice. Last year farmers were cutting costs and weeds were more of a problem. Mr. George Ziegler states that weeds must be controlled. Mr. Orville Bingham, ginner at the I. D. Gin, commented on the prevalence of night shades in the cotton this year. Other ginners have made the same comments. This slip in recommended practices last year should impress the importance of weed control on many growers next year.

10. Plant Pathology

The County Agent staff cooperated with Dr. Briggs of the Experiment Station in the conduction of three crazy top variety experiments. These were held on Dunn Brothers, Smith & Enke, and Milton P. Smith ranches. The results verified that all varieties will go crazy.

Mass media and personal contact were used in the presentation of characteristics of diseases and recommended control. Verticillium wilt is causing many thousands of dollars damage but farmers are complacent. We are emphasizing this disease because of the extensive damage done. Some results have been obtained as shown by the large number of farmers using rotations for disease control.

Nematodes can be a problem in some areas of the County. This phase of our program has been emphasized for three years. Mass media and personal contact were used last year to give characteristics and controls of Nematodes. Many growers are using rotation and summer fallow as recommended by the County Extension Service.

11. Entomology

Four insecticide trials were run in cooperation with Dr. George Wene of the Experiment Station. These were held on Anderson Brothers, Walt Ritchey, Stan Snitzer and Producers Foundation farms. These experimental trials were used in a demonstration manner and next years demonstration will be based on these results.

Insect identification meetings were held. Dr. J. W. Roney gave the recommended controls and the best methods of estimating damage. Insect cost from $1/4$ to $1\frac{1}{2}$ bales per acre or about \$40.00 to \$225.00 per acre. There has been a marked increase in insects and damage in the past four years. The cost of insect control has risen to \$35.00 to \$50.00 per acre which represents a large share of the budget. Advancement in this phase of the program is shown by the successful control of insects generally.

An insect report was given weekly. During the first part of the season this was done by circular letter. Radio was used in the latter part of the season because growers requested more speed. We plan to use radio again next year to get insect information to growers as soon as possible.

Mass media, personal contact and meetings were used to distribute control recommendations and other useful data on insect control.

12. Horticulture

a. Commercial Vegetables

Poor keeping qualities of potatoes grown in most of Pinal County has been a serious problem of the growers.

In an attempt to find a solution to this problem, a fertilizer trial was run on the Santa Cruz Farm by Dr. Fred Turner, Dr. W. D. Pew, Dr. Paul Bossey and the Pinal County Agents cooperating. The results of one year's trial failed to show any connection between the fertilizer program and poor keeping qualities.

b. Cantaloupes

Melon quality and crown blight are the major production problems of cantaloupe growers. To aid in finding better adapted varieties, two variety trials were planted in cooperation with Dr. Robert Foster of the Experiment Station and cooperators.

Plantings were made on Sunshine Ranches, Ilroy; and the Phil Thompson ranch, Red Rock.

c. Watermelons

To assist in finding better adapted varieties of watermelons resistant to rind rot, and less subject to white heart, a variety trial was planted on the Y. F. Aguirre ranch, Red Rock, by Dr. Robert Foster, of the Experiment Station and the Pinal County Agents.

d. Home Beautification

Rose and grape and fruit tree pruning demonstrations were given by Agents in Coolidge, Superior and San Manuel.

The Senior Vocational Agriculture class at Coolidge High School was given a pruning demonstration on grapes and fruit trees.

To aid homeowners in learning to recognize and control insects and pests around the home, radio programs and news stories were prepared. Home visits, office calls and telephone calls also were part of the program.

e. Landscaping

Programs were presented on landscaping and rose growing to garden clubs in Casa Grande, San Manuel and Kearny and Farm Bureau at Maricopa.

These programs were presented at the request of clubs involved and were very timely due to the number of new homes in the areas.

Trouble shooting requires considerable time and in effort to reduce this type of work, radio programs and news stories, on lawn care, planting and caring for roses, and others were prepared.

Interest in these subjects was indicated by the requests for bulletins offered on radio programs.

f. Miscellaneous

With the reduction of cotton acreages by government acreage control, new crops are in demand. Trial plantings of hops were made to determine if they will produce a profitable crop in the county and if so add another source of income.

Late cluster and early cluster varieties were planted on the Producer Foundation Farm, south of Toltec and 50 late cluster roots were planted in the garden plot of the Coolidge High School Vocational Agriculture Department.

The plants showed a good growth at the Producers Foundation Farm. The plants at Coolidge did not receive the care necessary for good growth.

B. Livestock:

1. Dairy

a. Herd Improvement

1. Organization

Pima-Pinal D.H.I.A., Inc., Directors, Alvin Kampton, President (Pinal); Dick Westerfield, Vice-President (Pima); H. M. Martin, Secretary-Treasurer (Pinal); O. W. Rugg (Pinal); A. Bruce Knapp (Pima); Supervisor, Bernard Law.

All county dairymen but H. & S. Dairy are on D.H.I.A. test. W. A. Combs, Queen Creek, is a member of the Maricopa D.H.I.A. Average Pinal County production D.H.I.A. herds increased to 10,771 lbs. milk, 388 lbs. butter fat per cow. Average size of herd on test is 103 cows during October, 1959.

b. Breeding

1. A. I.

Most of the year, Eads Cattle Breeding service met the needs of Pinal County dairymen. During the fall months several farmers organized the Pinal County Artificial Insemination Association. The group requested and received organization and technical assistance from the County Agent. The need was for a more efficient conception rate. Mr. Eads will discontinue operation in Pinal County, because of problems involved in getting and keeping a competent technician. Pinal County A. I. will pick up the program. The Extension program has been aimed at informing dairymen about estrus cycle to improve conception rates.

c. Replacements

Assistance was given dairymen in locating and importing quality replacements for their herds.

1. Feeding

a. Food Production.

b. Procurement - Assistance given seller and buyer on hay marketing.

c. Storage.

d. Utilization.

A high fat feed test was run on the J. W. Rugg Dairy. From this demonstration two dairymen were assisted in improving concentrate rations for their herd. Others were influenced to a lesser but important degree.

A high-low fiber trial was begun at the Arizona State Prison in May—because of lack of control the test was dropped in September. Dr. Stott, University of Arizona Dairy Department, worked with the County Agent's office.

d. Diseases and Parasite Control Work

1. Disease

a. T. B.

Area test was completed during December, 1958, in cooperation with the Disease Eradication Branch, A.R.S., U.S.D.A.

b. Brucellosis

Recommended vaccination program in popular use.

c. Mastitis

Recommendations and demonstrations on Mastitis control were an important part of dairy work through newsletters, personal contact, newspapers and radio.

d. Sterility

Sterility work was combined with A. I. work because of the close association. Farmers were instructed in identifying, understanding and treatment of breeding problems.

e. Calf Loss

Information on sanitation and feeding practices to prevent calf losses were put out through all media. We do not have the answer.

f. Sanitation

Ropy milk precautions were given all dairy farmers in controlling "ropy milk." Program satisfactory.

e. Parasites

1. Flies

Control measures were given to farmers through all media.

2. Screwworms

Survey started with dairy farmers (see livestock section) treatment and cautions were explained through customary teaching methods.

f. Facilities and Operation

1. Dairy corrals and buildings

Arizona State Prison, George Ziegler, V. & W. Dairy were assisted by the County office personnel and Extension Engineer Welchert.

g. Marketing

1. Federal Marketing Order

Meetings were held and newsletters were sent to dairymen informing them of F. M. O. stipulations. Regulatory steps were made known to A. D. L. members in Pinal County.

2. Beef Cattle

a. Range

1. Screwworm Survey

This office cooperated with the Federal Veterinarian by conducting a screwworm survey each month in the range area. Screwworms are one of the major livestock pests that plague the stockmen. During certain times of the year, every new-born calf and every wound of any type, is a potential screwworm infestation. It is also a possibility that if a calf with screwworms is not treated in ten days, he may be lost. Members of the Stockmen Protective Association were used in a survey. These members pretty well cover the eastern half of the County.

2. Livestock Insect Control Demonstrations

Co-Ral dust, a systemic insecticide, was given to several ranchers for use in treating wounds infested with screwworms. They were asked to compare this material with whatever material they were regularly using. The ranchers who cooperated in this trial were: Boyd Wilson, Oracle Jct.; Wallace Opie, south of Oracle on the Mt. Lemmon Road; A. V. Kroc, Mammoth. The general feeling was that the Co-Ral dust was as good or maybe a little better than what they had been using.

Korlan Smear and Karlan dust were also given out to be tried and compared, but the results were not obtained.

3. Information and News

Information concerning control and treatment of this and other livestock parasites was disseminated through radio, and news articles.

General livestock production information was also distributed by a weekly radio program on two stations and by newspaper articles.

4. Cooperation with Other Agencies

Agents Keith G. Jones, J. W. Little and F. Van Wilson were licensed by the Arizona Game and Fish Department as all qualified instructors of the Firearms Hunter Safety Course. Approximately eighty people have taken the course. One point that has been stressed in addition to safety is Rancher-sportsman relations.

Last May a range management workshop was attended in Kingman. This workshop was conducted by the S.C.S. The representative from this office who attended, has a lot greater knowledge of how the S.C.S. range technician operates and what is involved in their site and condition survey.

Time was spent with the S.C.S. range technician and a B.L.M. range technician in developing a site and condition survey on the Charlie Whitlow ranch and Ray Murphree's ranch east of Florence.

Preliminary studies were made for a range re-seeding demonstration. S.C.S. technicians and plant specialists cooperated with the Extension service in locating and planning the plots on a Florence ranch. The area selected has been dry farmed in years gone by. Recently it has been growing coarse annual weeds.

This office assisted with the grading of the registered cattle on the San Carlos Indian Reservation. This is a very intensive beef cattle improvement program, with the Animal Science Department, University of Arizona, the Extension Service and the San Carlos Indians cooperating.

The range grass bulletin 293 was distributed to interested persons by a bulletin board at the Court House in Florence and by personal contact.

b. Feedlot

1. Livestock Parasite Control Demonstration

Two livestock control demonstrations were

conducted at the Benedict Feeding Company yards. These demonstrations were to control the cattle grub and internal parasites in cattle. The cattle grub costs the cattlemen millions of dollars each year and in trim loss and hide damages. The materials used were systemic insecticides, Co-Fal, Trolene and Ecolane. These materials kill the cattle grub before it does any damage. One of the demonstrations was started last October, 1958, and finished in January, 1959. The other was started in October, 1959, and will be completed the end of December, 1959. As a result of the first demonstration the Benedict Feeding Company sprayed over 2500 to 3000 head of cattle this fall.

Information concerning the control of internal and external livestock parasites was mass media and personal contacts.

2. Youth Work

The 4-H livestock project members were assisted in developing a stall card for the 4-H Fair. The stall card was so designed that it gave a summary of the job of feeding the member did, how the animal performed and how much it cost the club member to put a pound of gain on his animal.

3. Sheep

4. Swine

Assistance was given Joe and Forrest Cooper, north of Florence in setting up layout, rations, and management of their swine operation.

5. Poultry

Pinal County poultry men were urged to attend the annual Poultry Field Day at the University of Arizona to gain first hand information of poultry experimentation. The new poultry diseases circular was distributed to all growers. A new operator was given assistance in design and layout of his plant. Mass media was used to acquaint the county with the importance of poultry products to the economy of the area.

C. Miscellaneous

1. Information and News

Surveying the mass media outlets brought the following listeners: 9,500 at Agent broadcast time. Newspaper circulation totals, 8,500 in the Casa Grande Valley. Continuing in-service-training sparked by cooperating newspapers and radio stations has been carried out.

2. Farm Safety Week

Farm Safety Week was publicized with a series of mailing, followed by farm machinery dealer interviews for radio programs and news articles.

II. 4-H

A. Situation

Although the number of 4-H members in Pinal County is increasing, we are still reaching a very small percent of our potential. 4-H enrollment in 1958-59 was 460 and there are approximately 9,356 children, those considered permanent residents, of 4-H age in the County. All volunteer youth programs combined, only reach about 2,000 boys and girls. This indicates a great need for an expanded 4-H and other youth programs.

The number one problem is leadership. If enough adult leaders can be recruited, it will be very easy to reach many more youth than we are at present. Boys and girls are wanting to learn. They want to be challenged. They want leadership. To create an awareness and an active interest in this fact on the part of the general public, should be our goal.

There are five communities not being reached by 4-H Clubs.

They are Stanfield, Maricopa, San Manuel, Marroth and Apache Junction.

One of our big problems is the short tenure of membership. We have too many who stay in 4-H one, two or three years and then drop out. In August of 1959, the Junior Leaders met and decided to become more active as a County group. They have been meeting every other month since and have a definite program. This should help to hold interest of older members.

We lose too many leaders after one year of service and this also contributes to the members dropping out. Competition is strong for time of adults in this heavily organized society. Lack of training is also a factor in the loss of leaders. At the leader training meetings held, attendance has been low. Lack of parent cooperation, in many cases, discourage the leaders.

B. Administration and Extension Organization

The 4-H Leaders' Council is the basic organization of the 4-H phase of the County program. It is composed of all active 4-H leaders in the County.

This Council met twice during the year. One meeting was after the Fair to evaluate and plan the next year's events. This meeting was well attended and very productive of sound program planning. The last meeting of the Council was in November. The primary purpose was to elect members to the Board of Directors and to discuss 4-H events and activities with the leaders.

The administration of Pinal County 4-H Clubs as to County events, is the responsibility of the 4-H Board of Directors. Members of this Board are 4-H leaders who are elected by the Council to serve for a three-year term. Their terms are staggered. At present the members of the Board are:

<u>Name</u>	<u>Address</u>	<u>Term Expires</u>
Bob Davis	Box 6, Dod Rock	1960
Mrs. Robert Cookrill	Rt. 1, Box 76, Casa Grande	1962
Mrs. Chester Carter	Rt. 1, Box 21, Coolidge	1961
Mrs. Phil Thompson	Box 737, Eloy	1960
Mr. James Benedict	Box 1926, Casa Grande	1962
Mrs. Keith Carlton,	Box 56, Casa Grande	1961
Stan Smitser, Jr.(Jr.Ldr)	Rt. 1, Doull, Casa Grande	1960

The Board of Directors met once each month to conduct the business of the organization. The Agents in charge of 4-H attended these meetings. The following standing committees, appointed by the Board, were active this past year: Building and Grounds Committee, Cafeteria Committee, Awards Committee and Livestock Committee.

The standing committees bring more people into our County program and thus more is accomplished. Additional committees have been appointed for this coming year. They are Home Economics, Agriculture, Electro-Mechanical, Recreation and Demonstration and Judging committee. Each Committee has from four to eight adults and one Junior Leader.

C. Projects

The increase in enrollments have been largely in Home Economics projects and Electrical, Firearms Safety, Handicraft and Photography, rather than in Livestock projects. This reflects the fact that the percentage of 4-H'ers from farm families is becoming smaller each year. Our urban and rural non-farm families are becoming more interested in 4-H since a greater variety of projects have been offered. We still need more printed material in the way of project guides for Firearms Safety, Handicraft, Home Beautification, Photography, Rocks and Minerals and the Large Plants projects.

1953-1959 4-H Year

Number of boys and girls enrolled in 4-H - - - - -	160
Number of boys and girls completing projects - - - - -	271
Number of projects started - - - - -	676
Number of projects completed - - - - -	156

In most cases, lack of completion of projects can be traced to inactive leadership. Certain Clubs and project groups were very inactive as groups and this is where most of the incompletions were found.

D. 4-H Club Fair

The 4-H Fair was held April 24 and 25. The Home Economics' exhibits were entered Wednesday, April 23, the judging was done the 24th. There were 766 Home Economics exhibits at the Fair. These included: 331 in Clothing; 356 in Food Preparation and Preservation; and 79 in Room Improvement.

The best exhibitor in each division was selected on the basis of number of entries and the quality of the exhibits. Rosettes were presented to the best exhibitors.

The Favorite Food Show was held Saturday morning. There were 32 participants in the Favorite Food Show. Party-two Home Economics Demonstrations were presented during the afternoon.

The Dress Revue was held after the Barbecue, Saturday evening. There were 99 girls participating in the Dress Revue. Charlotte Thompson was selected Junior Dress Revue girl and Sonia Stevenson was selected Senior Dress Revue girl. There were four girls selected to represent Pinal County in the State Dress Revue at Roundup. Beside Sonia, the other girls selected were Bonny Snyder, Margaret Manuel and Judy Hansen.

Training sessions were held just previous to the Fair for livestock project members. These sessions were on fitting and showing and judging practice. The participation was good and these events provide a greater variety of learning experiences.

The quality of the fat livestock shown at the Fair was disappointing, except for a few animals. The cost of grain was too high in most cases. Members carrying livestock projects should have closer supervision as to feeding practices, if we really want to teach these 4-H'ers what it takes to succeed. Feed record cards were set up to indicate efficiency of gain, and this, we feel, was educational to the members. Statements made by members indicated that the Fair enabled them to see their mistakes in carrying on their projects. This then, is one important value of a Fair.

The dairy projects were of very good quality this year. All animals exhibited were awarded blue ribbons.

The entire Extension Staff cooperated in planning and carrying out the 4-H Fair.

4-H FAIR
April - 1959

<u>Projects</u>	<u>No. of Exhibits</u>	<u>Activities</u>	<u>No. of 4-H'ers Involved</u>
Clothing	332	Dress Revue	99
Food Preparation	326	Favorite Food Show	32
Food Preservation	30	Demonstrations	70
Room Improvement	79	Showmanship	64
Electrical	60	Livestock Judging	39
Beef	32	Total	304
Sheep	21		
Swine	6		
Dairy	14		
Poultry	20		
Rabbits	21		
Insects	4		
Tractor	2		
Horse	16		
Goat	1		
Crops	1		
Miscellaneous	27		
Total	992		

E. Junior Leader's Laboratory

Keith Jones, Agent in charge of 4-H, and six junior leaders attended the Junior Leader Laboratory at Prescott. Jones served as a Staff member and conducted a class on Photography. The six junior leaders have made use of their training and are more active in a leadership role.

F. Tri-County 4-H Summer Camp

Thirty-nine 4-H members and leaders from Pinal County attended the 3rd Annual Tri-County 4-H Summer Camp. It was held June 21-27 at the Pine Canyon Camp in the Chiricahua Mountains.

The 4-Hers took part in the classes, crafts and recreation. The classes included 4-H Wisdom, 4-H Getting Along, Photography, Gun Safety, Know Arizona and Nature Hikes. The crafts including copper tooling and enameling, wood craft, leather tooling, plaster of paris molds, and plastic lacing.

The group was divided into four Indian tribes—Hopi, Navajo, Apache and Yaqui. All the duties were done by the different tribes and the responsibilities were rotated each day.

There were 105 Campers and leaders from all three counties—Pima, Pinal and Santa Cruz.

The Extension Staff, after evaluating the camp, felt that a one-county camp may be more successful. The Leaders' Council has okayed this, so we are planning accordingly. This will give more 4-H members the opportunity of a camping experience.

G. Round-up

Twenty-five 4-H members and four adult leaders and two Agents attended Round-up from Pinal County. Our delegation gave 10 demonstrations, receiving 7 blue and 3 red ribbons. One earned a "Clover and Shield" award. This award was given to Phyllis Antone of the Santan Club.

Our concentration on demonstrations in the County showed good results. However, we did not fare so well in the judging field, and we plan to give more time to practice judging this coming year.

H. Talent and Public Speaking Event

There were several 4-Hers who participated in the 4-H Talent and Public Speaking Contest. From this group selections were made to represent Pinal County at 4-H Round-up.

Kelly Dryce, Picacho 4-H Club, and Robert Jones, Casa Grande 4-H Club, represented Pinal County at the Public Speaking Contest at Round-up. Judy Hansen, Sabra Woodruff and Frances Daniels represented Pinal County in the Talent Contest at Round-up.

I. Judging

1. Livestock

There were 39 members taking part in Livestock Judging activities and 64 taking part in Showmanship. One practice judging session was held for each class of livestock—beef, sheep, swine and dairy. Judging contests were held during the 4-H Fair and the teams selected to represent the County at Round-up. Livestock and dairy judging teams competed at Round-up.

2. 4-H Home Economics

Forty-nine girls took part in the Home Economics judging in foods, clothing and room improvement.

The girls in foods judged these classes: sugar cookies, muffins, table settings, equipment for making yeast rolls, clover-leaf rolls and menus.

The girls who judged clothing, judged the following classes: aprons, skirts, blouses, readymade dresses and a wardrobe plan.

The classes judged in room improvement were room arrangements, drapery findings, color harmony and dusting mitts.

The girls gave oral reasons on one ring and placed each of the classes. Girls who received highest scores in each division represented Pinal County at State 4-H Roundup. The girls in the Junior Division who had top scores were awarded scholarships to the Tri-County 4-H Camp.

3. Miscellaneous

The Assistant Home Agent served as one of the judges of the 4-H exhibits at the Yuma County Fair, April 6-9. This was a very worthwhile experience.

The Home Agent helped with the judging of Clothing exhibits at the Maricopa County 4-H Fair, April 7-10 and the Favorite Food Show and Foods Demonstrations at the Pinal County 4-H Fair, April 25th.

The Home Agent assisted with the judging of 4-H contests held in connection with the New Mexico State 4-H Camp at Las Cruces, August 3-7. The particular assignment was to help with clothing demonstrations and clothing judging contests. All four of us on this assignment were very impressed with the well organized program conducted by the New Mexico staff (everything was run off like clock work) and with the maturity and interest shown by the youngsters attending.

Two 4-H Club leaders from Pinal County and the Assistant Home Agent participated in the Coconino County Fair, September 3-5. Mrs. Glen Carter, Advanced Foods Leader of the Kenilworth Club and Mrs. P. S. Thompson, Clothing Leader of Eloy, gave a judging demonstration. Mrs. Carter worked with open classes and 4-H Club Foods and Mrs. Thompson and the Assistant Home Agent worked with the Clothing and Textiles articles. The leaders felt they learned a great deal from this experience that will help them in their own Club work.

J. Leader Training

1. Regional Leader's Conference

The Regional 4-H Leaders' Conference was held September 18-20 at Rancho Santa Cruz in Santa Cruz County. About 70 leaders from Pima, Pinal and Santa Cruz Counties attended some portion and/or all of the Conference.

Leaders received instructions in program planning, judging, demonstrations, parliamentary procedure, simple visual aids and getting parent cooperation.

The role of the local 4-H Club leader was portrayed in a skit by leaders from Pima County. There was a panel discussion on "Individual 4-H Opportunities" by Santa Cruz County leaders.

The Pinal County leaders were in charge of the worship service Sunday morning. Those participating were: Mrs. Chester Carter, Mrs. Charles Figgins and Mr. John Marshall. Other Pinal County leaders who attended the Conference were: Mr. and Mrs. Horace Knowles, Mrs. Charles Doremus, Mrs. Dale Davis, Mrs. Lirna Pierce, Mrs. Ruth Doinee, Mrs. John Marshall, Mr. and Mrs. Bob Davis, Mr. and Mrs. Ray Blakeman, Mrs. Gertrude Williams, Mrs. Lilla Hyrtin, Dula Enos, Ventura Thomas, Max Morris, Mrs. Glen Carter, Mrs. Stan Snitzer, Mrs. J. H. Terry, Jr., and Mrs. P. S. Thompson.

2. Agricultural Leader Training

An Electrical leader training meeting was held at the Public Service Auditorium in Casa Grande. Attendance was light. Also, an Entomology leader training meeting was held during the summer. Most of the training of leaders of Agricultural Projects was on an individual basis.

Three Agents gave considerable off-duty time to leader training for the Firearms Safety project.

3. Home Economics Leader Training

The Clothing leaders of the Superior groups met at the home of Mrs. Zepeda, December 4.

The first year Clothing leaders worked on the draw-string purses, second year leaders worked on the blouses, third year leaders worked on zipper and fourth year leaders worked on bound buttonholes.

A Foods project leader training meeting was held February 24. June Gibbs, Extension Nutritionist, presented the training meeting. The leaders were shown how to teach nutrition to their 4-H members. June Gibbs discussed all the projects in foods and nutrition which are available to the 4-H members enrolled in foods work.

The leaders had the opportunity to judge a ring of table settings and to observe demonstrations. All the leaders were very much interested in the entire lesson. They felt it was a fine presentation and got many answers to the questions about Foods projects. There were thirteen food project leaders in attendance.

K. Awards

Last March, the Awards Committee and the Agents working primarily with 4-H, met to establish a future policy for awards in the County. Mr. Graham Wright, State 4-H Leader, attended this meeting. In the past, trophies for project awards and various items of merchandise, donated by merchants, were presented to 4-H'ers who placed first in various projects or events.

It was decided that the type of awards should be more uniform and more consistent with our goals. The Committee voted to canvass businesses for contributions to a 4-H Awards Fund. Approximately \$950.00 was raised in 1959 for this fund.

Four trophies were purchased to present to the outstanding Junior boy and girl and outstanding Senior boy and girl, for all around 4-H achievement. Also, rosette type ribbons were presented to best exhibitor in each project. Scholarships were given (\$10.00) to Camp for Blue Ribbon demonstrations at County 4-H Fair. Expenses of 4-H'ers attending Round-up were also paid out of this fund.

III. HOME ECONOMICS

A. Extension Organization And Planning

The adult homemaking program in this county is determined by the Program Planning Committee of the Pinal County Council of Homemakers Clubs, and is based on suggestions offered by the membership of the various clubs. The planning committee met twice in the fall of '58 to work on the '59 program. Their final meeting was held early in December.

It was on the basis of the work of this committee that the plan of work was prepared by the Home Agents to cover the adult and 4-H homemaking program for 1959.

The objectives outlined in this plan of work are reviewed briefly below. Two of these objectives appear under the heading Extension Organization and Planning, the rest are covered in the various project fields.

The first of these objectives was the development of leadership through the use of well trained officers and project leaders, and well informed local people to plan and guide the extension program.

The County Council is looked upon as the coordinator and guide for all of the programs carried out through the Homemakers Clubs.

This Council held four meetings during the year. The first meeting, in January, was for the express purpose of training Homemaking Club officers and project leaders. The training was given by Extension Service personnel, a newspaper woman and the President of the Council. Miss Jean Stewart, State Leader, Home Economics met with the President and Vice-presidents of the clubs; Shirley Weik, Home Agent, with project leaders; Lorraine Kalgari, Assistant Home Agent with Secretary-Treasurers; Mrs. Charles Duster, wife of the editor of the San Manuel Miner, with club reporters; and Mrs. Weldon Jones, President of the Council, with Council delegates. All clubs were represented though the total attendance (36) was only about 30% of those invited. Though it would have undoubtedly been wise to do so, no further attempts were made to reach those not attending this meeting.

The second objective was the expansion of the program to reach more people by extending into areas not now included in organized group work, increasing membership (if feasible) in existing groups, keeping the general public supplied with up-to-date information on Home Economics subject matter concerning everyday living.

Radio, newspapers, a quarterly newsletter, and local businesses were used as media for distributing Home Economics information in addition to the organized Homemakers Clubs. Two 5 minute radio programs were presented daily during this past year. The radio stations claim a combined listening audience of 11,750 people. Weekly newstories were sent to 6 different newspapers covering the county, though in only 3 of these (those papers covering the Coolidge, Eloy and Casa Grande areas) did they appear at all regularly. The newsletter had a

mailing list of 179, 4-H Club leaders and Homemakers Club members. During the last 4 months of this year, on a trial basis only, some of Home Economics bulletins were distributed through 3 selected local businesses - a grocery store, a meat market, and a bank. The three places were selected because all had an interest in and a good general knowledge of the Extension Service. It was hoped this would help to promote the Extension Service as well as get needed information out to the people. No conclusions have been drawn from the experiment yet.

B. House and Surroundings - Furnishings and Equipment

The objective of the work in this area was to help people improve their homes and surroundings through increased knowledge of the selection and use of wood furniture, the refinishing of wood furniture, and through 4-H home improvement project work.

Methods used to reach this objective and the results obtained are reported below.

A leader training meeting on "Selection of Wood Furniture" was held in the auditorium of the Arizona Public Service in Casa Grande on January 6th. Two project leaders from each of the Homemakers Clubs attended. The meeting was conducted by the Home Agents and included the following:

1. A discussion of points to look for in selecting furniture based on samples of woods and wood finishes, models of joinings, upholstery materials, and diagrams showing construction features.
2. A tour of two furniture stores to examine pieces of furniture.
3. A lecture on decorating given by two representatives of Lou Registers, in Phoenix.
4. Preparation of a leaders' guide by those attending to help them in presenting the information to their club groups.

Local meetings on this topic were held, during the months of January, February, and June with a combined attendance at these meetings of 112.

Reference materials on recognizing furniture styles, identifying woods, knowing construction details which determine quality, and relative costs were distributed to all those attending these meetings.

To supplement this program, a number of the clubs took field trips to the decorators' shop in Phoenix to examine furniture pieces and see how they were used in model homes.

The objectives of this lesson were to increase people's knowledge of points to be considered in the selection of wood furniture; to help them in recognizing different styles; to identify different types of wood; to know construction details which determine quality and cost; and to increase their skill in effectively combining different woods and styles.

No one reported buying new furniture during the year and putting this information to use in that way. All clubs reported having become better acquainted with pieces of furniture they now own. (Most members reported this as the biggest satisfaction they got from this lesson). Most still have doubts about effectively combining pieces in decorating and have asked for further information on decorating in next years program.

Three furniture refinishing workshops for leaders were held during the month of October. 21 people were trained in these workshops - 6 in San Manuel area; 8 in the Coolidge, Casa Grande area; and 7 in the Ray, Superior area.

These workshops were held in a series of 3 meetings outline as follows:

1st meeting	Cleaning wood furniture. Reviewing refinishing procedure. Setting standards. Checking necessary supplies. Making repairs - gluing, bracing, etc. Removing old finish.
2nd meeting	Treating dents and scratches. Filling. Bleaching. Staining.
3rd meeting	Final sanding. Applying new finish.

Three local clubs held workshops similar to those in which the leaders were trained. The rest of the clubs had single lessons in which the refinishing procedure was reviewed and demonstrations on cleaning wood furniture were given. Among this latter group two leaders also reported helping individual members refinish pieces in their own homes.

Objectives for this lesson were: (1) to increase knowledge of different types of finishes and appropriateness for use and type of wood; (2) to increase knowledge of and skills in the techniques of refinishing furniture.

Results of the refinishing training cannot be satisfactorily determined since many of the pieces have not yet been completely finished, (some pieces require 6-10 coats of new finish). A great deal of interest was expressed in the local meeting through which 91 people were reached. Clubs report their greatest satisfactions have been in learning how to clean wood furniture, (this was taught as a preliminary step to refinishing), and how to recognize different types of finishes since this determines the type of care they require.

There were 47 4-Hers enrolled in the room improvement project, several of these were boys. Seventy-five per cent were in the first year project.

The members learn basic colors, lighting, and how to make room furnishings in the first year project. Each successive year they learn more skills and techniques in each of these areas.

No leader training meetings were held. However, home visits were made to the leaders to explain project requirements and assist with construction techniques. Also the kit of illustrative material from the state office was used at several local club meetings. Everyone gained much information from these illustrations.

A total of seventy-nine exhibits was shown at the 4-H Fair. Participation in judging and demonstrations in this area was very small but it is hoped there will be more participation this next year. One of the girls enrolled in advanced room improvement showed a sketch of her room and some of the articles she had made in a display at the 4-H Fair. This was an example of what can be done in advanced room improvement.

C. Home Management

All of the work in this field was done through mass media. Radio and newspaper articles were devoted to buymanship, use and care of many types of household articles. Particular emphasis was put on laundering, understanding fabric finishes, and explanation of new items on the market. There has been little response from the use of mass media so it is difficult to measure how effective this work is.

D. Foods and Nutrition

The main objective of the foods and nutrition work this year was to help people plan economical and nutritious meals, through the study of less expensive cuts of meat and basic freezing, as well as through 4-H project work.

A leader training meeting on "Preparation and Use of Inexpensive Cuts of Meat" was held in February. The training for this project was given by Miss June Gibbs, Extension Nutritionist. Two leaders from each of the Homemakers Clubs attended, also two 4-H Club leaders. Objectives for this meeting were: (1) to help people to learn to identify the cheaper cuts of meat and prepare them so they can be used for nutritious and attractive meals; (2) to teach effective nutrition.

The lesson included preparation of a round-bone roast, swiss steak, and stew from one cut of meat, flank steak, and chicken in corn bread ring; discussion of the four basic food groups and the place of meat in the diet.

As a follow-up of the training session, the Home Agent attended two of the club meetings at which the leaders brought back this information to their own club groups. This was done in order to enable her to see how well the leaders were able to present the lesson and to help in planning future training meetings and in preparing leaders' guides. The two lessons were presented quite differently, the leaders making adaptations to suit their own particular situations.

The food preparation in both groups was excellent. The leaders of both clubs apparently felt, however, that the nutrition information could best be obtained by the club members through reading it in the nutrition leaflets that were distributed at the meetings. Approximately 400 printed references were distributed to 100 different people at these meetings all together.

Many of the daily radio broadcasts and the newspaper articles during February were on this topic. Much of the information for these came from "Beef in the Family Menu" and "Good Nutrition for a Happier You", prepared by Miss Gibbs. Also, throughout the year, regular reports were given on "best buys" for the month; and, the new developments in foods based on USDA food and home notes.

Leader training on "Freezing Fruits and Vegetables" was held April 2, 10:00 A.M. - 2:30 P.M., at the Southwest Gas Company, in Casa Grande. At least two representatives from each of the Homemakers Clubs attended. No 4-H Club leaders were present. This was a workshop type of meeting and those present were each given an opportunity to prepare for freezing one vegetable and one fruit, and to do one type of package wrapping. The foods used were for the most part ones that people had indicated in a preliminary survey that they wanted help with. These included corn, spinach, peas, beans, cauliflower, and asparagus for the vegetables; peaches, strawberries, apples, pears and grapefruit for the fruits; bread, rolls, sandwiches, chops, a chicken cut for frying, and a chicken dressed for roasting for the wrapped packages. (It was found to be a little too much for one meeting!)

Supplies for the workshop (containers and wrapping papers) were received in generous quantities from numerous manufacturing concerns in the area.

Kits of freezing supplies, charts illustrating the principles of freezing different types of foods, and bulletins, as follows; USDA #10, #15, #40, #321, and University of Arizona #267, plus a specially-prepared supplementary mimeo, were supplied to each leader for use in their club training meetings.

Several radio broadcasts and one news story on this topic supplemented the training meeting.

In March, the County office was asked to help with an educational program of some sort for the people receiving welfare food supplies at the 11-Mile Corner. It was thought that many of the people receiving the foodstuffs would not know how to make the best use of them, so some easy recipes were assembled for dried milk powder, beans, and corn meal which are the products given out in the largest quantity by the Welfare Board. These were made available to Mrs. Myra Kolter, working with the Migrant Ministry, to use as she saw fit.

The field of nutrition is a very broad and rather poorly understood one. A good deal of work yet remains to be done, and this has been selected as one of the major areas of work for the next 2-3 years.

The 4-H foods projects are set up so the girls learn the basic skills in food preparation and entertaining in the first four projects. The advanced foods projects include more entertaining for teenagers and more advanced skills. Advanced 4-Hers also have the opportunity to learn foreign food cookery.

Local leaders supervise the projects and they receive assistance from the Home Agents. Leaders and members determine when the project groups will meet. Some groups meet once a week, others meet twice a month.

The foods leader training meeting was held in February. This lesson was on interpretation of the 4-H foods projects and activities such as judging, demonstrations and the Favorite Food Show. This training was given by Miss June Gibbs, State Extension Nutritionist and the Assistant Home Agent.

The newest activity in 4-H was the Favorite Food Show. Thirty-two 4-Hers (17%) of the 4-Hers enrolled in foods participated in this activity which was held in connection with the 4-H Fair. It is a showmanship type of activity where the members prepare their favorite food and show it using the appropriate table settings. They show their skills and knowledge in food preparation, table appointments and entertaining.

The exhibit of foods at the 4-H Fair was the largest in number of the Home Economics Projects. There was a total of 353 exhibits in food preparation and preservation. There were 21 demonstrations presented at the 4-H Fair in the foods area. About 30 girls participated in the foods judging activity. Judging and demonstration should be used more as learning techniques in the project groups rather than merely a contest for county competition.

E. Clothing

The objective of the work in this field was to help people to be well dressed through an increased knowledge of how to buy ready-to-wear, how to make alterations, and through improved skills and techniques in sewing.

Three training meetings for leaders on "Alteration of Ready-To-Wear Clothing" were held - in Coolidge, Casa Grande, and Superior - with a total attendance of 27 (including 4-H and Homemakers Club leaders).

Plans for this lesson were worked out with Miss Church to include (1) buymanship, (2) fitting and, (3) workshop experience in making alterations. Preparations for this lesson included working up a score card to be used by women in buying ready-made dresses, writing a supplementary leaflet to explain the various points covered in the score card, working out directions for various types of alterations based on materials written by Miss Church and Miss Edna Sommerfield, UCDA, and purchasing a ready-made dress (of good quality material but poor quality construction) on which numerous alterations were made to show what changes could be made at home to increase wearability and becomingness. The film "Truly Yours - The Dress That Fits" was used in connection with this lesson.

The lessons as presented included (1) a review of possible alterations affecting wear, fit and style, (2) a review of the score card for ready-to-wear dresses, (3) the showing of the film on altering to fit, followed by a demonstration on the same subject (4) workshops on altering garments brought in by leaders taking the lesson.

27 leaders were trained in this project. The information was passed on by these leaders to 116 members of Homemakers Clubs and the L.D.S. Relief Society in Superior.

Objectives for this lesson were: (1) to increase buymanship skills through knowledge of what alterations and adjustments can be easily made at home, and, (2) to enable people to take advantage of good buys by knowing how to make alterations.

Since the score card is something that people can take with them when they shop, the first objective has probably been adequately fulfilled through it. However, club members report still feeling insecure about making major alterations - perhaps too much was attempted for one time. Though no further work is planned in this subject for another year.

A special program on wardrobe planning was given by the Home Agent to the Sun Valley Homemakers Club in Coolidge and the Casa Grande Evening Homemakers Club in Casa Grande. This wardrobe planning was based on coordination of texture groupings in fabrics and accessories. All 24 members attending these meetings participated in selecting various ensembles as part of this training session.

A series of special interest meetings in "Advanced Dressmaking" were held in the fall. These meetings were scheduled as follows:

11-Mile Corner	Nov. 3, 17, Dec. 1.
San Manuel	Nov. 5, 19, Dec. 3.
Casa Grande	Nov. 6, 20, Dec. 4.
Ray	Nov. 10, 24, Dec. 8.

The meetings included (1) a review of the equipment and supplies, selection of pattern and materials, checking measurements and pattern alteration, shrinking, cutting, stay stitching, (2) location of fitting points, adjusting sewing machines for different weights and types of fabrics, clipping, pressing, (3) setting in sleeves, attaching bodice and skirt, hemming, belts and fastenings, selecting accessories to make a complete outfit.

References used - Know Your Pattern Size, Measurements, Pattern Alterations, Stay Stitching, Making Bound Buttonholes, and Easy Sewing Skills.

A total of 76 persons were enrolled from 10 different communities including the Gila River Indian Reservation. Each was required to make a dress.

Objectives for the lessons were: (1) to increase knowledge and skills in clothing construction details which help to give a professional finish to garments, (2) to increase knowledge of fabrics and characteristics which affect construction.

Since most of the garments were not yet completed when the year ended the results of the workshop cannot be properly evaluated yet, but it was felt that many of those attending were not ready for an advanced class. A style show is planned in January of next year to enable everyone to see what has been accomplished. Interest in clothing construction is high and additional work is being planned for next year.

"Learning to Sew" is the beginning 4-H Club project in Clothing. Each succeeding project - "Making a Skirt and Blouse" and "Let's Make A Dress" - teaches progressive steps in learning basic sewing techniques and care of clothing and good grooming. The project "Be Smart In a Semi-Tailored Garment" teaches clothing construction in a fabric which is a little more difficult to handle. The girls in advanced clothing had a choice of nine units to complete. The older girls work more independently and have less leader supervision than the first three projects.

Enrollments in the clothing projects showed that over half (53%) of the girls were enrolled in first year clothing. About 20% of the enrollment was in the second year clothing project and the other 22% in the 3rd, 4th, and advanced projects. There is a need for getting the 4-Hers to stay on in the clothing projects rather than having half drop out after the first year.

There were 17 clothing demonstrations presented at the 4-H Fair. There were 332 clothing exhibits at the Fair, the larger portion was in the first three projects. About half of the girls enrolled in clothing participated in the Dress Revue. About 25 girls participated in the clothing judging. This should be used more as a learning technique for the girls in the project clubs rather than a contest for competition. This will receive more emphasis during the next year.

Local leaders supervise the projects. Some of the project groups meet once a week and other groups meet twice a month. The leaders and girls decide the meeting dates and times.

There was no leader training set up for the leaders this past year. The leaders from one of the clubs requested help on some construction techniques so a workshop was set up for that group. In November, a leader training meeting was held for all clothing leaders. This was mainly project interpretation and learning judging and demonstration techniques. Also the 4-H leader training lesson "Getting The Most Out of Your Sewing Machine" was presented to four leaders. Special workshops may be held again this year when requested.

F. Health

The objective of the work in this area was to provide wholesome sex education for children by helping parents to learn how to intelligently answer children's questions regarding sex.

Information on "Sex Education for Children" was presented at a training session for leaders held at the Southwest Gas Company Auditorium in Coolidge, on March 10th. Arrangements were made for a panel for this meeting made up of Miss Mary O'Brien, the County Superintendent of Schools; Dr. Robert Perry, School Psychologist at the Arizona Children's Colony; and Keith G. Jones, County 4-H Club worker; to discuss what it is that children need to know about sex and how and when they should be given this information. Unfortunately, Miss O'Brien was unable to attend at the last minute, but information on what has been done, and is being done, on sex education in the schools was provided by those attending from the different areas. The panel report was supplemented by a

recording, prepared by the Christopher organization, on how to talk with children at the various stages in their development, and with a brief summary of books available for parents and children on sex education. These latter two were available for the various club meetings and the recording especially made an important contribution to the effectiveness of this particular lesson. Two copies of the recording are still being circulated around the county for use with P.T.A.'s and other organizations (both men's and women's groups) in addition to the regular Homemakers Clubs. Based on numerous reports given, it would seem that this was one of our most successful meetings for this year. A rough estimate indicates that well over 200 persons were given help on this particular subject.

G. Safety

A special lesson on "Desert Survival" was arranged by leaders of the three Homemakers Clubs in Coolidge for everyone in town who might be interested. The lesson was presented by Mrs. Jane Cornell and Mrs. Helen Lochner, of Tucson, members of the Cactus Wrens Club, on April 6th at the Casa Grande Ruins. Thirteen women attended. Reference information on "Desert Survival", written by Barry Freeman for the Pima County Homemakers, was used as a supplement to this meeting. Since so few people attended, it is hoped that there might be a follow-up on this meeting sometime later.

An illustrated talk on traffic safety was presented by the Home Agent at the April meeting of the Casa Grande Women's Club. The topic was considered from the point of view that Highway Safety begins at home; that adequate childhood training and proper consideration for physical and emotional handicaps can go a long way toward preventing accidents on the highway. Highway Safety is a major problem not only in this county, but in this state. It was a topic selected for special consideration by the Womens' Clubs this past year.

H. Family Life

Reading, for family recreation and education, was stressed during the week of April 13th, National Library Week. Radio programs during this week were devoted to discussions of various books and a recommended reading list provided by Mrs. Jane Peters, of the Casa Grande Library. Several of the Homemakers Clubs included book reviews in their programs during this month and, in Coolidge members were encouraged to attend the regular reviews scheduled by the Library Association.

Also in connection with family life, numerous radio talks, were presented on working wives, careers for girls and women (based on USDA surveys), family life in preparation for living in a democracy, learning to take positions of leadership.

One of the big needs expressed by the program planning group this fall, was the need for people to accept leadership responsibilities in their communities to make these communities better places in which to live.