

ANNUAL NARRATIVE REPORT

STATE: ARIZONA

COUNTY: YAVAPAI

REPORT OF:

ALVIN ALLEN

FROM: DECEMBER 1, 1955 to

NOVEMBER 30, 1956

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HIGHLIGHTS:

County Situation

Yavapai County has a land area of 5,178,240 acres. Of this area, 5,150,000 acres are devoted to range cattle production. About two hundred and thirty cattlemen utilize this grazing area. There are an estimated 17,000 acres of irrigated crop land in the county. Practically no dryland farming (except a few acres of fall-planted rye for pasture and cover crop) is attempted. Our low annual rainfall (twelve to seventeen inches) and dry spring weather prohibit dryland farming. We have two main farming areas, Chino and Verde Valleys. These are about fifty miles apart and are separated by the Mingus Mountains. Some new land has been put under pump irrigation, especially in Big Chino Valley, within the last five or six years. Major crops are alfalfa and corn. Pinto beans are no longer a major crop.

Yavapai County was declared a drouth disaster county in 1956 by the United States Department of Agriculture for the second consecutive year.

Four-H Club Work

Yavapai County had two winners of State Awards in the National Awards Contests in 1956. One was a trip to 4-H Club Congress. Twelve clubs enrolled a total of one hundred and ninety-four members and completed one hundred. Interest in club work is very good. Bagdad community had almost a complete failure on completions, accounting for the low completion percentage. Plans are now being considered for a 1957 spring 4-H Livestock Show and Sale.

Horticulture

The agent assisted orchardists, gardeners, and home-owners by advising on production and marketing problems through field visits, personal letters, telephone calls, office visits, circular letters, four method demonstrations by specialists, thirty result demonstrations, two pruning demonstrations by the agent, twenty news articles.

Special projects in this field were:

- a. Control of Orchard and Garden Insects.
- b. Disease Control.
- c. Pruning fruit trees and vineyards.
- d. Floriculture and Home Grounds Beautification.
- e. Fruit variety study.
- f. Orchard Management.
- g. Vegetable Variety Trials.

Livestock

Production of feeder calves on native ranges is our most important single agricultural industry. Both purebred and commercial breeders make up the industry. Purebred breeders have earned a nationwide reputation for quality of breeding stock. The agent completed three years of production testing with one cooperator. Projects covered were:

- a. Range Management.
 - 1. Brush Burning and Range Reseeding.
 - 2. Range Fertilization.
 - 3. Cooperative Range Project.
- b. Insect Control.
- c. Production Testing of Beef Cattle.
- d. Yavapai Calf Sale.
- e. Drouth Feed Program.
- f. Dwarfism in Beef Cattle.
- g. Miscellaneous Cattle Projects.
- h. Hog Production.

Dairy

Three new dairy herds with about two hundred cows have moved into Chino Valley in 1956. These sell milk in Phoenix. Interest in Chino Valley and in Verde Valley as a dairy production area increased in 1956. Three county dairies produce milk for sale in Prescott. Eight dairies produce milk for Phoenix and two send milk to Flagstaff. Three dairymen are on I. B. M. system of D. H. I. and two are on standard D. H. I. test. Projects covered in 1956 were:

- a. Dairy Herd Improvement.
- b. Brucellosis and Tuberculosis Control.

Poultry

Yavapai County is well-suited climate-wise to poultry laying plants. Prices for eggs have not been attractive in 1956. Feed costs rose slightly. Egg-feed ratio is 10.5 to 1. There are two commercial fryer producers in the county. Fryer production is not profitable. One marketing co-op owned by growers, is processing and marketing eggs. Projects were:

- a. Marketing.
- b. Yavapai County Poultry Producers.
- c. Poultry Housing.
- d. Disease Control.
- e. Cost Records.

Agronomy

The agent completed two corn variety tests, started one more; completed one alfalfa variety test; persuaded ten farmers to plant Ranger alfalfa in place of Chilean Common; assisted in establishment of one safflower test; established two hybrid sorghum plantings; secured seed of new barley variety for increase; worked with growers of new crops such as soybeans and sunflowers.

Alfalfa and corn are major crops. Projects covered were:

- a. Alfalfa
 - 1. Variety Testing
 - 2. Insect Control
 - 3. Hay Analysis
 - 4. Disease Control

- c. Corn
 - 1. Varieties
 - 2. Insect Control

- d. Small Grains
 - 1. Variety tests of wheat, barley and sorghums

- e. Miscellaneous Agronomic Work
 - 1. Soil Moisture Probe
 - 2. Soybeans
 - 3. Sunflowers
 - 4. Safflower

AGRICULTURAL SITUATION:

Yavapai County has a land area of 5,178,240 acres. Of this area, 5,150,000 acres are devoted to range cattle production. About two hundred and thirty cattlemen utilize this grazing area.

There are about 55,000 head of mature cattle in the county according to the 1954 census. This compares to 36,000 head in 1950. However, breeding stock was reduced by an estimated 15% in 1956 due to the worst drouth in many years. Cattlemen are importing bermuda grass hay from Yuma, cotton gin trash from Salt River Valley, and are using any kind of roughage that they can buy. Yavapai County was declared a drouth disaster county by the United States Department of Agriculture for the second consecutive year. Cow prices in 1956 ranged from a low of four cents to a high of eight cents per pound during the fall season. The 1956 calf crop moved on a slow market at 15½¢ to 17¢ for heifers and 17¢ to 19¢ for steers. Cattlemen are using recommended practices in insect control. Interest in buying herd bulls that carry both large size and inherited gaining ability is on the increase. The greatest opportunity for increased efficiency in ranching in Yavapai County lies in breed improvement, culling late breeders, more pasture fences to allow better range utilization, performance testing, and range improvement through cedar eradication, brush burning and re-seeding.

Sheep numbers have declined steadily in recent years with approximately 7,866 head in the county by 1954 census figures. This compared with 17,000 in 1940 and 10,394 in 1950. The chief reason for this decline has been the lack of skilled herders. Farm flocks are holding their own in numbers at present.

Cultivated farming as a means of supplementing ranch feed supplies continues to interest more ranchers. The 1956 corn acreage was equally as large as 1955 but about 50% of the 1956 crop was ensiled compared to 35% in 1955. The first killing frost in 1956 fell on October 12 compared to September 19 in 1955. Corn yields were lower than they should be, a condition characteristic of most of Arizona's 1956 crop.

Alfalfa production is still the leading crop in the county but growers were plagued for the second consecutive year by spotted alfalfa aphid. Dusting with BHC or Malathion has given control when applied properly.

All of our cropland (with a few, small exceptions)

is irrigated, comprising about 17,000 acres as compared to 11,000 acres in 1940. Approximately 7,000 acres are pump irrigated with 7,500 acres watered from small river diversions. Also, 2,500 acres in Chino Valley has water rights under the Watson Lake Reservoir. By November 1956, Lake Watson was dry, for all practical purposes.

Major crops are alfalfa, corn and small grains. The 1956 pinto bean crop was twenty acres compared to five hundred acres in 1955 and twelve hundred acres in 1954. Deciduous fruits and truck crops account for a small acreage. There is need for more data on fertilizers for alfalfa, corn and small grains, blight control on pinto beans, planting dates for lettuce, carrots and cantaloupes in Chino Valley. Varieties of corn and small grains need more study. Also, scientific growth trials of the hybrid sorghums for this area would be useful.

Dairying has assumed a more important role in Yavapai agriculture in 1956. Three new herds have moved into Chino Valley and two new herds in Verde Valley. Outlook is for a steady growth of this industry in Yavapai County. Three dairies are on D. H. I. A. test compared to two in 1955. Carnation Milk Company, Phoenix, now buys milk from two Chino herds and five Verde Valley herds. There is one distributor, Prescott Farms Dairy, in Prescott who uses locally produced milk. One other Phoenix distributor operates a bulk plant here. Hay prices are currently \$40 per ton delivered.

Poultry production has remained stable in 1956. There is only one commercial broiler grower in the county. He markets twelve hundred birds per week. The price of eggs has not been attractive for the last three years but there was some improvement in 1956. A marketing organization, Highland Poultry Products, Inc., Prescott was formed in July 1954. It was liquidated in 1956 because of lack of support from producers. The company is now privately operated by two producers who also take production from three other producers. Size of poultry flocks is still too small for economical units. There are an estimated seventeen thousand layers in the county in commercial flocks.

ORGANIZATION:

A. Extension

The agent attended the annual Extension Conference at Tucson from December 12 to 16. This conference was highlighted by some fine talks by specialists. Also, the exhibit and discussion of visual aids was exceptional. It does seem, in the opinion of this agent, that the gentleman who arranged this fine exhibit should have been given more opportunity to talk. As a suggestion for next year's conference, it might be well to plan a session on operation and care of motion picture projectors.

In-Service Training

The agent attended an In-Service Training Conference on Four-H Club Work in Tucson March 6 - 10.

This conference was quite good in that it provided opportunity for group discussion and sharing of ideas to improve 4-H club work. The other contribution was the chance for extension agents to "learn by doing." I have reference to the sheep blocking and fitting demonstration by Mr. Lane and the poultry fitting by Mr. Van Sant.

District Agents Conference

The agent attended a two-day conference of County Agents from high-elevation counties at Flagstaff in August. This conference covered new ideas in Dairy Herd Improvement; Soil Bank explanation; news writing workmanship; Instructions from Mr. Baker on federal insurance and extension policy.

It was agreed by all agents in attendance that we should have at least four such district conferences each year. They help to keep us up with a changing agriculture.

Office Administration

Two improvements were made in the County Extension office administration in 1956.

The agent installed a new type of office bulletin display rack as a result of ideas gained at the 1955 annual Extension Conference. This is a pegboard rack with metal

fixtures. These fixtures are adjustable to different size bulletins and can be moved to a different location on the board if necessary. This board will display seventy-eight bulletins and circulars. A smaller board is used for the Home Agent's bulletins, holding fifty-five bulletins. This new display rack makes the educational materials more attractive and more accessible.

A supply of return-address stamped envelopes has speeded up mailing of material requiring a stamp.

The agent suggests that a petty cash fund for the County Extension Office would be very worthwhile if this arrangement could be worked out with the University of Arizona's Business Office.

B. Farm Groups

Farm Bureau

The agent met with this group four times during the year in an advisory capacity. One meeting called for the agent to sit on a panel of representatives of Federal farm agencies to answer questions.

The Farm Bureau bought two hundred pounds of Certified Cordova barley for testing in a field trial in Chino. The agent located seed and arranged for a cooperating farmer. This crop was a failure because of water troubles and rain that kept combines out of the field.

Mr. John Edge, Camp Verde, is the new president of Yavapai County Farm Bureaus.

Yavapai Cattle Growers

This group met eight times in 1956. Their membership is about one hundred and ninety members. Most of their problems have been with marketing and big game control. The agent worked with the group in planning and conducting their annual calf sale. Seventy calves, weighing an average of 358 pounds were sold to a California buyer at 20.8¢ per pound, 2.9¢/pound under the 1955 sale.

The agent cooperated with the Cattle Growers in

keeping membership records and mimeographing notices of meetings. Also, the agent secured cooperation of the group in 4-H club work.

Yavapai Poultry Producers' Association

This group has greatly deteriorated in 1956. There are no longer any regular meetings but the price quotations committee still functions. The agent has cooperated in four meetings in 1956. Reactivation of this group will be done in December, 1956.

Yavapai County Fair Commission

The extension agent worked closely with this group in revising the Fair Premium Catalog by planning exhibit space, arranging for judges, assisting in payment of premiums, etc.

Yavapai County A. S. C. Election Board

The agent, as chairman of the Agricultural Stabilization Committee's County Election Board, called a board meeting on October 29 to select the members of the Agricultural Stabilization Committee Community Election Board. This was done and the County Agricultural Stabilization Committee office manager was notified of the names of these members.

Future Farmers of America

The agent was official judge at the annual F. F. A. Livestock Show at Cottonwood on May 21.

Other Organizations

Joint Agency Meeting

The agent attended a meeting of Federal Agencies

of the Department of Agriculture on July 16. Three ranchers attended and their ranches will be used as pilot ranches under a joint-agency project to develop overall range management plans for each ranch. The agent has asked Mr. Al Lane to sit in on the first meeting with a rancher in order to help in planning. The Soil Conservation Districts are now completing arrangements to sign a memorandum of understanding with the Prescott National Forest Supervisor. Until this has been done the meetings with the ranchers on their own ranches have been delayed.

A. S. C. Meeting

The agent advised the County A. S. C. committee on recommendations for the 1957 A. S. C. Handbook of Approved Practices at a meeting held July 25. The committee voted to ask for an increase from \$5.00 to \$7.50 per acre as the Federal Government's share of cost in establishing permanent pastures. No major changes in the Handbook were requested for 1957.

The agent cooperated with the U. S. Fish and Wildlife Service, U. S. Weather Bureau, and other agencies of the United States Department of Agriculture.

The agent judged poultry, rabbit and field crops exhibits at the Coconino County Fair on September 7 in Flagstaff.

PROGRAM PLANNING:

The agent held no program planning meetings on a community basis. However, the agent met with Extension Specialists and planned the county program in each subject matter field.

The agent conferred with the President of Yavapai Cattle Growers to get his reaction to organization of a County Extension Advisory Committee. This rancher expressed a willingness to cooperate and he assured the agent that the Cattle Growers would be ready to appoint representatives from their own group when called upon.

INFORMATION PROGRAM:

The agent prepared ninety articles for use in local newspapers. One feature article appeared in "The Arizona Cattlelog." Four articles were a series on planting tulips and they appeared in both the daily and weekly newspapers. About forty percent of these ninety articles originated in the office of the State Extension Information Specialist.

Circular Letters

Four thousand nine hundred and forty-eight copies of thirty-two circular letters on farm and ranch topics (including 4-H) reached farmers and ranchers of Yavapai County from the Extension office in 1956.

State and Federal Bulletins

The agent distributed approximately two thousand nine hundred bulletins, state and federal, to Yavapai County farmers and ranchers in 1956.

Visual Aids

The agent showed colored slides to twenty-five people; used motion film to present educational material to three hundred and forty people at seven meetings. The agent presented two method demonstrations using diagrams and actual material.

Letters to Farm People

The agent wrote approximately one thousand one hundred and thirty-five letters. About one-half were to rural people and one-half to urban people who had asked for agricultural information.

Other Information Contacts

The agent advised county residents on farm and home problems by means of one thousand and fifty three office calls and eight hundred and forty-four telephone calls. Also, he made three hundred and nineteen farm visits. The agent attended forty-three adult meetings with six thousand seven hundred persons attending.

PROJECT NO. 3 - HORTICULTURE

Weather conditions in Yavapai County were more favorable to fruit production in 1956 than in 1955. However the twenty days of freezing temperatures in March and sixteen in April were enough to get many of the peaches and practically all of the apricots. Peaches and apricots bloomed in Verde Valley and Oak Creek about March 18 to 22. Apples had not begun to bloom but a few pears were in partial bloom on March 22 on lower Oak Creek. Peaches, apricots and plums bloomed in Prescott and Chino Valley during the week of March 19 - 24. A good apple crop was harvested this year.

The county acreage of commercial orchards is on the decline. This land is being subdivided for residences at a price too great for orchardists to compete.

A. Control of Orchard and Garden Insects

Peach Borer Control - the agent arranged for Dr. J. N. Roney, Extension Entomologist to present a demonstration on control of peach borer. This meeting in Prescott reached only nine people because of bad weather. The agent distributed twenty-five bulletins on control of this insect in 1956. Peach borer is the most serious pest of peaches in Yavapai County. For some reason it is not a problem in the Verde Valley.

New Dormant Spray Recommended

The agent mailed one hundred copies of a circular letter to orchardists in December. This letter introduced a new recommendation on dormant spraying of fruit trees. The new spray is a polysulphide compound which will reduce costs of dormant spraying by 50%. It replaces the lime-sulphur mixture for dormant spraying of fruit trees to control spider mites, San Jose scale and certain fungus diseases. Several inquiries, as a result of this circular letter, have reached the agent for information on where to buy the polysulphide. This indicates the eagerness with which people will now accept new ideas.

Bark Beetles Invade Prescott Pines

The agent received a number of calls in August from Prescott residents reporting pine trees that were dying. The agent investigated and found evidence of bark beetles in every case. These are very difficult, if not impossible, to control. The agent contacted the Extension Entomologist for advice. Dr. Roney advised a chlordane paint but felt that drouth was the primary trouble with the pines.

B. Disease Control

Nematode Control

The agent and Dr. Ivan Shields, Extension Plant Pathologist, conducted one method demonstration in April and a result demonstration in October on control of nematodes. Both meetings were conducted on the F. E. Snider farm, Bridgeport. A total of fifty persons attended these meetings. As a result, fifteen people treated gardens and others plan to treat their soil this fall. These demonstrations showed that the fumigun treatment with Dow W-40 is superior to the trench method. Dr. Harold Reynolds, U. S. D. A. Nematologist, assisted with the result meeting on October 1. Because of these meetings, there is now a rental fumigun available in Cottonwood.

Rhizoctonia Rot Control

The agent has advised homeowners in Prescott to spray their lawns at intervals of ten to fourteen days beginning in mid-July to control "brown patch" caused by rhizoctonia rot fungus. The recommended spray is Tersan and results have been very promising in lawns where this schedule has been followed.

Rhizoctonia also is the major disease of strawberries in this area. The agent has arranged for trials of two fungicides, "Sunox" and "Citrox" to begin next spring. These will be used as soil drenches to combat this disease problem.

Orchard Disease

The agent called Dr. Ivan Shields, Extension Plant Pathologist for the University of Arizona, to assist with a puzzling condition in a young apple orchard. This orchard was planted in March of 1956 on the Nick Duncan Ranch, Red Rock. The varieties were Golden Delicious, Jonathans and Double Red Delicious.

Many of these trees failed to break buds but only a few actually died. Others started some growth but only about 50% or less of normal.

Dr. Shields theorized that the trees did not receive enough chilling weather in the nursery to fulfill their dormant requirement. The agent later wrote to the nursery for further light on this problem. The nursery replied that the Red Delicious trees were from a Midwestern Nursery, since a severe freeze in Oregon lasting eight continuous days from November 11 - 18, 1955, had killed many thousands of trees, both in the nurseries and in older orchards. To date, this problem remains unsolved.

The agent visited a commercial apple and peach orchard in Red Rock in January. The agent discovered a heavy spider mite egg count and advised dormant sprays. Also, the agent advised the owner not to replant peach trees on land recently taken out of peaches. This ground had a very heavy infestation of crown gall, making it inadvisable to plant trees there. The agent recommended, instead, that the present apple orchard be extended in an adjoining field that had never been in trees.

C. Pruning Fruit Trees and Vineyards

The agent conducted two method demonstrations on pruning fruit trees in January. Stormy weather prevented a large turnout. The total attendance was twenty-five people. The F. E. Snider orchard, Bridgeport, and G. L. Sarrick orchard, Peeples Valley, were scenes of these two demonstrations.

There are enough new residents coming into the county to warrant continued pruning demonstrations. However, the agent currently follows the practice of conducting demonstrations in any particular community only on alternate years.

D. Floriculture and Home Grounds Beautification

The agent enlisted the aid of three local gardeners in reading the manuscript of Mr. Tate's newest bulletin on flowers. These three ladies made a few minor suggestions and the agent returned the manuscript to Mr. Tate.

Mr. H. F. Tate, Extension Horticulturist, talked to twenty-eight members of the Verde Valley Garden Club on February 20 in Clarkdale.

Mr. Tate used colored slides to illustrate the types of plants suitable for home grounds in the Verde Valley. This was a very interesting meeting.

Specialist Demonstrates

Mr. H. F. Tate, Extension Horticulturist, gave two fine demonstrations in Prescott during April. The agent sent notices also to Chino Valley and Dewey, both communities sending representatives.

He demonstrated pruning of roses on April 3 and landscaping a home on April 4.

The landscaping meeting was a new type of demonstration meeting for this area. The agent arranged to hold the meeting at a new home in Prescott Heights. This area has about one hundred new homes, most of which need landscaping. Also, the agent arranged for specimen plants (on a loan basis) from a local nursery. The specialist placed the "potted" or "canned" plants at locations along the house to best advantage. He discussed good points and faults of each type of plant. Most of these plants are evergreens.

As a result of this meeting several plants rather new to Prescott were planted by local gardeners and home owners. These include Burford Holly, Abelia, Flowering Quince, Nandina, wax-leaf privet and French Lilac.

Tulip Varieties

The agent arranged for seven cooperative tulip variety trials that were planted in October and November of 1956. There are sixteen varieties in these trials.

The agent is of the opinion that more tulips could be used in home grounds beautification in this area to good advantage. Definite data on tulip types and varieties will help to standardize growing practices in the area. The agent wrote four articles on growing tulips. These articles appeared in both the daily and weekly newspapers.

E. Fruit Variety Study

Strawberries

The agent arranged for eighteen cooperative strawberry variety trials in April, 1956.

The following farm news story prepared by the County Agent for use in his regular column describes a project that has taken a lot of planning.

"Several Yavapai County gardens will have a number of new strawberry varieties this year.

This is another example of cooperative effort between your County Agricultural Extension Service for the University of Arizona and local folks who want to know more answers to our agricultural problems. Strawberries can be a welcome addition to any family's garden. There is a problem, however, of finding varieties that are comparatively long-lived and produce heavily.

Mr. and Mrs. Monroe E. Bechtel, Dewey, will have the largest cooperative planting. This will consist of one thousand plants using six main-crop varieties. Two early, two mid-season and two late varieties will go into the test planting. Premier and Dunlap are the early season varieties. Pocahontas and Albritton are classed as mid-season varieties. Armored and Tennessee Beauty are the late varieties. These plants are virus-free and nematode-free stock.

Other cooperators with strawberry test plantings are George and Martha Clark, Skull Valley (Dunlap variety); Neil and Frances Hampton, Kirkland (Pocahontas, Tennessee Beauty, Klondike, Armored, and Florida 90); Jake and Eleanor Jacobs, Yava (Pocahontas, Florida 90, Tennessee Beauty, and Klondike); Mr. and Mrs. C. F. Jernigan, Cherry, and W. F. Heisterman, Prescott, (both with Pocahontas, Dunlap, and

Tennessee Beauty).

In Chino Valley, Mr. and Mrs. Tom Roden will plant Albritton and Tennessee Beauty; Mr. and Mrs. Dick Burton will grow Dunlap and Pocahontas."

F. Orchard Management

We are greatly in need of an Arizona publication covering this field of horticulture. Yavapai residents come to the County Extension Office with many problems on orchard management. The agent visited orchards to give first-hand information to the owners. Also, he used newspaper articles, bulletins and telephone and office contacts to distribute information.

G. Vegetable Variety Trials

Tomatoes

The agent arranged for three plantings of tomato varieties in May. Six varieties planted were: Improved Pearson, Burpeeana Early Hybrid, Burpee's Big Early Hybrid, Marglobe Supreme, and Pritchard. One planting of about sixty plants of each variety was made on May 23 by Calvin Sherwood in Chino Valley and another was planted May 28 by George Clark in Skull Valley (twelve plants of each variety). Joe Kremer, Prescott, planted eight plants of each variety on May 28.

Results of the George Clark test are typical of the 1956 tomato variety trials in Yavapai County since response was similar in each test. This is shown below.

TOMATO VARIETY TEST RESULTS

George Clark - Skull Valley - Elevation 4270 Feet.

Ten plants each of six varieties were transplanted on May 28, 1956. Plants were grown in the greenhouse by Mr. Floyd Plagge, Prescott. Records of all yields were made until date of October 9th. The following was recorded by Mr. Clark:

<u>Variety</u>	<u>No. Plants Surviving</u>	<u>Yield Per Plant</u>	<u>Remarks</u>
Burpee's Big Early Hybrid	7	12.7 lbs.	Largest fruit, some misshapen fruits.
Burpeeana Early Hybrid	10	8.7 lbs.	First ripe fruits (five pounds) harvested August 25, 1956
Burpee's Hybrid	9	9.1 lbs.	18 ounce of ripe fruit harvested August 27, 1956
Improved Pearson	7	6.6 lbs.	Second largest fruit size, best shape. Preferred by Mr. Clark
Marglobe Supreme	1	5 lbs.	Curly top, blight hit this variety very hard
Pritchard	5	8.2 lbs.	

This is the second consecutive year that Burpee's Big Early Hybrid has led all varieties in yield. If this variety were more reasonable in price of the seed it could become widely grown in this area. The Improved Pearson, long the standard garden and commercial variety in Arizona, still holds its appeal to gardeners. It is a very thrifty plant but in this test did not yield as well as it has in other years.

Sweet Corn

The agent arranged two trials of four sweet corn varieties. These varieties were Prosperity, Sweetangold, RVF 465, and Tempo. Ratings given by cooperators by observation only were as follows: Mr. Joe Edwards, Chino Valley rated Prosperity tops, followed by Sweetangold, RVF 465 and Tempo in that order. Mr. Monroe Bechtel, Dewey, favored Tempo and Sweetangold but his results were erratic because of soil and water differences in the plots. Mr. Harvey Tate, Extension Horticulturist arranged for the seed of these varieties.

Lettuce and Carrots

Two plantings of lettuce and carrots on commercial scale were made in Chino Valley in 1956. Growers from Salt River Valley are interested in finding best dates for planting these crops in Chino Valley. Quality of lettuce and carrots in these plantings were excellent. Problems in harvest labor and in cultural practices have to be solved but growers are optimistic about the future of vegetables as a commercial venture in Chino Valley.

H. Miscellaneous

Skunks caused damage to several lawns around Prescott in September. The agent suggested that homeowners try sprinkling naphthalene flakes on the grass to discourage the skunks.

I. Information Program

The agent prepared a total of twenty-one articles including six provided by Mr. Harvey F. Tate, Extension Horticulturist) that were published in county newspapers.

These covered such subjects as: Dormant Sprays on Fruit Trees, Pruning Grapes, Planting Roses, Killing Tree Stumps, Strawberry Diseases, Crown Gall of Fruit Trees, Fruit Varieties, Peach Borer Control, Pruning Roses, Sweet Corn and Tomato Varieties, Garden Fertilizers, Flower Bulletin, Red Spider Mites, Lettuce Production, Planting Sweet Peas, Nematode Control and Planting Tulips.

PROJECT NO. 4 - LIVESTOCK

A. Range Management

Brush Burning and Range Reseeding

The agent assisted on June 19, at request of the Forest Service, with a controlled brush burning experiment on Perry Henderson's Ranch, east of Dewey. Dr. Robert Humphrey, University of Arizona, was in charge of this demonstration.

Unfortunately, the fire jumped fire lanes under pressure of its own wind draft created by the intense heat. The resulting escaped fire burned several thousand acres of brush and some timber on Forest Service lands. This was a major fire that has brought considerable unfavorable publicity for both the University of Arizona and the Forest Service.

The entire area of an estimated 14,000 acres has since been reseeded by the Forest Service to Weeping Lovegrass and Crested Wheatgrass. These were the only two varieties of which seed in great quantities were available on such short notice. Rains were so light as to make germination conditions unfavorable.

The agent attended a field hearing conducted by the U. S. Forest Service on September 17, 1956, to determine cause of the fire's escape. It appeared from available evidence that a draft created by the fire's own heat caused the flames to leap the fire lane with such force as to make it impossible to stop the spread of the fire onto Forest Service lands.

Public reaction to the fire was mixed. The uninformed public (and especially the sportsmen groups) were very bitter about the incident. However, ranchers and farmers were of the opinion that, while the escape of the fire was unfortunate, controlled burning has such value as to make continued experiments worthwhile.

RANGE FERTILIZER TEST - COOPERATIVE EXTENSION PROJECT

June 28, 1956

Deep Well Ranch, 10 miles north of Prescott

Harold James, owner-cooperator

Six plots 1/4 mile long applied by airplane by Marsh Aviation Company, Phoenix. The plots are 125 feet from center to center with approximately 42 foot-wide treatments and 83 feet untreated between plots. Fertilizer was supplied by Mathison Chemical Company, Phoenix, (Warren Cordes, Chino Valley, Distributor for Northern Arizona). Soil Conservation Service personnel cooperated in staking and flagging the plots and in making density and composition of cover study prior to fertilizing.

Plot Diagram

	<u>East</u>				
#1	#2	#3	#4	#5	#6
Urea 50#/acre (22½#N)	18-9-0 121#/Ac	16-20-0 128#/Ac	Urea 100#/Ac (45# N)	18-9-0 242#/Ac*	16-20-0 256#/Ac
	(21.8# N)	(20.5# N)		(43.6# N)	(41# N)
	plus	plus		plus	plus
	(10.9# P)	(24# B)		(21.8# P)	(48# P)

*Note: Plot No. 5 has only 1/2 as much fertilizer on the east 1/3 as on other 2/3.

Average ground cover density was 20%.

Average Composition of Ground Cover:

Black Grama	38%
Blue Grama	26%
Ring Muhly	20%
3-Awns	9%
Eriogonum (Buckwheat)	4%
Annual Grasses	2%
Sand Dropseed	1%
Cactus (Opuntia)	Trace

Reseeding of a 12 foot strip, 1/4 mile long was done with a cyclone seeder, criss-crossing the entire experimental plot area. Also, a 12-foot strip outside of the fertilized area was made as a check. Grasses and legumes in the seeding were supplied by Northrup King and Company. These species were reseeded:

Black Medic Clover	4 parts
Weeping Lovegrass	4 "
Perennial rye	5 "
Blue Panicum	4 "

Seeding rate on the strip running northeast to southwest was about 15 pounds per acre. The strip running Northwest to southeast was seeded at rate of 20 pounds per acre. (These rates are probably higher than they should have been by quite a bit). The seed was all treated with Arasan dust.

This test has had so little rainfall since it was applied that it has shown no results. However, it is still possible that there will be a carryover into next summer if we should get a favorable rainfall.

Cooperative Range Project Planned

The agent met with members of federal agencies (Soil Conservation Service, Forest Service, Farmers Home Administration and Agricultural Stabilization Committee) in April to plan a joint action range program.

The group toured the cedar eradication projects near Drake and decided to use this as the principle basis for a joint effort.

At present, the Farmers Home Administration cannot assist ranchers who have Forest Service lands and/or state lands with very little patented land for security. Joint action on applications of ranchers will be instituted by the five agencies to see if greater help can be given to ranchers with cedar problems through joint agency effort.

A local committee of representatives from each agency was appointed to continue with follow-up on the project. The Prescott Forest Supervisor is chairman of the committee.

B. Insect Control

Grasshoppers

Grasshoppers caused severe damage to Yavapai County Ranges and to croplands in September.

The agent organized a range grasshopper cooperative control project in late August and September. Mr. John Thompson, Williamson Valley rancher, was elected chairman of the committee. Mr. William Chinn, U.S.D.A., was assigned here to supervise the program. A total of 23,200 acres was sprayed with aldrin with excellent results. Other areas were bothered by hoppers later in September but it was felt that only local, field-size control measures were warranted at such a late date.

The cost to the ranchers in the control program was 17.4¢ per acre. A 95% kill was obtained.

Juniper Beetles

The agent and the Extension Plant Pathologist investigated during August a report that natural enemies were killing junipers on the Long Meadow Ranch.

The tips of the needles were injured by what appeared to be a rust. However, laboratory examination led the University of Arizona pathologists to believe that beetles may have been the cause of the injury. There is evidence that a canker type of rust may also be responsible for the injury to stems. The University of Arizona has not satisfactorily solved the problem. Ranchers are very interested in seeing this matter investigated thoroughly, since it could be an inexpensive means of ridding range-lands of the junipers.

C. Production Testing of Beef Cattle

The agent worked with Mr. Ted Liese, local rancher, in an effort to solve identification problems related to the performance testing of beef cattle. A special eye for marking the calves was tried but it lasted only until the winter

coat of hair was shed. Also, a fish-hook type of hog ring was used to attach a light weight, metal, numbered tag to the ear of each calf. The tags still came off in the brush. Mr. Liese feels that next year he should use the flat metal eartag that was used in 1954. While it is more difficult to read, it is also less likely to drop off.

The agent secured a dozen alathon plastic neck straps to use in identifying the cows. This is working very well but it remains to be seen just how long they will last in brushy country.

Mr. Albert Lane, Extension Livestock Specialist, has assisted in this project. Also, Mr. Robert Hutchinson, former Assistant Extension Information Specialist, took pictures and notes which the agent later used in preparing an article on production testing. This article was printed in the August, 1956, issue of the "Arizona Cattlelog," official publication of the Arizona Cattle Growers Association.

D. Yavapai Calf Sale

The agent acted as weigh master at the Annual Yavapai Calf Sale on September 21. Seventy calves, weighing an average of 358 pounds were sold to a California buyer at 20.8¢ per pound (\$74.00 per head). An estimated 1000 people attended.

The average weight of these steer calves was fifty-four pounds under the 1955 average. This is a reflection of effect of the severe drouth that has hit Arizona ranges for almost two years.

E. Drouth Feed Program

The severe drouth continued in Yavapai County in October. There was one good rain of about one inch in the area of Stewarts' Ranch on October 23rd. Selling of

breeding stock continued on about sixty percent of our ranches. A few ranchers have sold as high as eighty percent of the cows. The effect of the long drouth on next year's calf crop is expected to be serious. The agent released a list of emergency drouth feeds to cattle growers in October after consulting with Mr. Albert Lane, Extension Livestock Specialist. This list could have been more effective if recommended amounts of the roughage were included for each class of cattle.

F. Dwarfism in Beef Cattle

The agent distributed three hundred and twenty-five copies of the new University of Arizona Bulletin #268, "Dwarfism in Beef Cattle" to Yavapai ranchers. Reaction of ranchers to this bulletin has been very gratifying. Several ranchers have personally thanked the agent for sending them the bulletin. They say that it is one of the best things that the University of Arizona has done for cattlemen in a long time. One rancher told this agent that after reading this bulletin he could see some serious mistakes he had made in his own breeding program.

G. Miscellaneous Cattle Projects

Stock Water Tanks

The agent cooperated with Mr. Brad Stewart, President of Yavapai Cattle Growers, in trials of experimental plastic water tank linings. It was hoped that this would be an economical means of putting portable water tanks into high, inaccessible range lands. A 20-mm. thickness plastic tank was fabricated by Bakelite Corporation and their fabricator, Biltnor Corporation of New York. This tank was set in a log enclosure for protection. Unfortunately, a cow climbed into the tank and destroyed the lining.

An interesting off-shoot of this effort was the discovery that plastic sheets may have another use for the

rancher. A thin (8 mm) sheet of plastic film was spread on the surface of the water in a concrete stock tank. Not only did this prevent growth of algae but also it kept the water cool on the hottest days. The cattle drank by pressing down on top of the plastic which was trimmed slightly smaller than the tank. Further trials are planned with another plastic film that is black on one side and white on the other. This should work even better than the film used in 1956.

H. Hog Production

Hog production is not a major enterprise in Yavapai County. However, Mr. Jack Morgan, Camp Wood Route, continues to feed from one hundred and fifty to six hundred head of hogs the year around. This project is conducted by this rancher who does not grow any of his feed. He does buy wisely, however. The agent has assisted farmers with plans for farrowing crates and advised on parasite control.

I. Information Program

The agent distributed to ranchers three hundred copies of a circular letter on emergency drouth feeds; three hundred and twenty-five copies of University of Arizona Bulletin #268 "Dwarfism in Beef Cattle;" wrote news articles on hog farrowing crates, poisonous plants, performance testing of beef cattle, Bull selection, brush burning and Nutrition of grasses and browse.

PROJECT NO. 5 - DAIRY

The Situation

Three new dairy herds with about two hundred cows have moved into Chino Valley in 1956. Two new barns, one a 4-stall walk-through and the other a 24-stall flat milk barn, were built in Chino. These dairies are selling to Carnation Milk Company in Phoenix.

The following news item sums up the dairy situation at the close of the 1955-56 year.

"Chino Dairy Confab

Thirty-five Chino and Verde Valley farmers and friends met at Chino Valley School on August 6 for a Dairy Conference sponsored by the County Agricultural Extension Office.

County Agent Alvin Allen conducted the meeting for the purpose of acquainting the public with the future of dairy farming in Chino and Verde Valleys. Currently there is high interest in dairying in these areas. Sherwood Brothers have started a dairy of about one hundred and fifty cows. Todd Boren, who recently sold his dairy in California, has begun work on his new dairy barn on the old Lewis Hoskins place.

Wayne Hardick, field man for Carnation Milk Company, was present to invite new producers to market their milk with his company. All milk produced in this area and marketed in Salt River Valley is regulated by the Federal Milk Marketing Order now in effect. A 2500 gallon tanker-truck is now hauling milk from Chino and Verde Valleys to the Carnation Milk Plant in Phoenix. Charges of twelve cents per pound butterfat are made for this hauling service. This is equivalent to forty-two cents per cwt. for 3.5% fat milk.

Vic Swanson, Valley National Bank, explained that his company will finance purchase of dairy cows to responsible dairymen at the rate of sixty percent of appraised value up to a maximum of \$120-\$125 per cow. Also, the bank can finance purchase of milking machines, equipment, etc. on installment loans with up to thirty-six months to pay.

Leonard Johnson, Farm Home Administration supervisor, said that the F. H. A. can make dairy loans

to \$7000 for purchase of cows, feed, etc. An additional \$3000 loan can be made later in case of an emergency requiring finances. He noted, however, that he is now looking for new orders from his superiors on this type loan. He expects the amount to be increased very shortly. F. H. A. can also make loans to finance housing, dairy barns, etc., if needed. He stressed the point that all F. H. A. loans are based on soundness of the enterprise.

Alvin Allen briefly mentioned the requirements for importing dairy cows into Arizona from other states. Mr. Ralph Archer, County Sanitarian, insists that all imported dairy animals in this county show a clean test on T. B. and Bangs.

Quirico Rezzonico and Stephen Sherwood, Chino dairymen, expressed optimism for dairying in this county where good management is practiced. Todd Boren, now starting a dairy in Chino, said that production costs are higher here than in California, but our market is better than before."

A. Dairy Herd Improvement

There are three new Yavapai dairy herds on D. H. I. test using the I. B. M. system and two herds on standard D. H. I. test. Larry Ramsey, Camp Verde, is the test supervisor for herds on I. B. M. and the two herds on standard D. H. I. test are tested by a Maricopa County supervisor. The agent trained Larry Ramsey.

The I. B. M. testing costs about ten cents more per cow than standard testing and for this reason, is slow in expanding.

The agent has planned a campaign to interest dairymen in the Weigh-a-Day-a-Month program in December. It is hoped that this program will bring in more dairymen who are not now under any form of D. H. I. testing.

Dairy Herd Analysis

The agent was assisted by Mr. Ralph Van Sant on September 25 and 26 to prepare a record analysis of the

E. J. Schilleman herd in Camp Verde. In addition, the specialist, demonstrated an analysis of dairy type in this herd. Mr. Schilleman was shown how to eartag his best heifer calves for replacements, his brood cows were identified, and his breeding, freshening, and drying records were improved. He was shown how to set up his records so as to cull cows at the proper times. Mr. Schilleman expressed sincere appreciation for this assistance.

The agent is grateful for the assistance of Mr. Van Sant, Extension Dairy Specialist, for the University of Arizona, in training the agent for this work. As a result of this training the agent arranged to analyze another Verde Valley herd without Mr. Van Sant's assistance.

B. Brucellosis and Tuberculosis Control

The agent arranged for a meeting of the State Brucellosis committee representatives with representatives of some county groups. These county representatives were: Jack Thompson, Yavapai Cattle Growers; R. M. Allen, Prescott Council of P. T. A.; Jack Fletcher, Arizona Cattle Growers and Veterinarians; Adolph Mongini, dairy farmers of Yavapai County; Ralph Archer, City and County Sanitarian.

The agent showed a film provided by the Federal Veterinarian's office, called "Triple Threat."

While the brucellosis problem was discussed at some length, there was really very little accomplished, in the opinion of this agent.

All dairy herds in Yavapai County are now T. B. and Bangs tested.

C. Information Program

The agent released six articles on dairy management to local newspapers for publication. He visited every

dairy in the county at least once during the year and oftener when necessary. He also distributed a plan for building a cattle stock to use in trimming hooves, treating sick animals, etc.

PROJECT NO. 6 - POULTRY

The Situation

Egg prices in 1956 have not been attractive enough to lure new producers into poultry production. Feed costs dropped somewhat below 1955 but during the last quarter of 1956 showed a slight increase in price. In November of 1956 a poultryman had to sell 10.5 dozen medium "AA" eggs uncandled and ungraded at wholesale to buy one hundred pounds of laying mash. (Egg-feed ratio of 10.5 to 1).

One fryer producer in the county produces and sells (dressed) 1200 fryers per week. He is one of two commercial fryer producers in the county. Currently fryers are selling at retail in chain stores at 29¢ and 33¢ per pound, whole, eviscerated. This is below cost of production.

A. Marketing

Highlands Poultry Products, Inc.

The agent conferred during August with Mr. George Buchanan, President of the Yavapai County Poultry Association. Mr. Buchanan has taken over the Highlands Poultry Products Company, which was organized as a co-operative marketing effort in July, 1954. The stockholders agreed to liquidate their assets and turned over the marketing set-up to Mr. Buchanan along with the company name. He is now marketing eggs for himself and two other commercial producers. He charges 6¢/dozen for candling, grading, and marketing.

B. Yavapai County Poultry Producers

This association is headed by George Buchanan. The group has been less active in 1956 than in 1955 due to bickering among some members. However, Mr. Buchanan plans to re-activate the group shortly. Many of the producers have felt

that certain of the feed dealers have assumed too much of a role in management of the association's business. Re-organization plans call for exclusion of all non-producers.

The agent showed a film to this group on the complicated breeding behind Hyline chicks. The agent has also advised the group on plans for educational programs. Mr. Van Sant, Extension Poultry Specialist, spoke to the association in January, 1956, describing work of the University of Arizona's Poultry Department.

C. Poultry Housing

The agent and Mr. Ted Welchert, Extension Agricultural Engineer, visited local poultrymen in April, 1956, to study design of poultry housing. Mr. Welchert has produced plans on poultry housing for Southern Arizona and is working on plans for Northern Arizona poultry housing designs.

D. Disease of Poultry

The agent mailed fifty-five copies of the new U. S. D. A. Leaflet #402, "Control Intestinal Coccidiosis in Poultry," to Yavapai Poultrymen.

There were no major disease outbreaks in poultry flocks in Yavapai County in 1956.

E. Poultry Management and Miscellaneous Poultry Work

Cost Records

The agent advised leaders of the L. D. S. Church on plans for a Welfare Project consisting of one thousand

laying hens in Chino Valley. These are to be expanded to 2500 layers in 1957. The agent provided data on construction of nests and roosts, water and feed equipment, housing, litter, etc. The agent will have access to all cost records on this project. This should be valuable information for use in advising other poultrymen.

The agent and Mr. Van Sant did some program projection on January 20. Also, they visited the Pratt Poultry farm in Peeples Valley. This project is described in the accompanying news story prepared by the County Agent for release in the weekly newspaper, "The Messenger."

"Poultry Industry in Peeples Valley

New landmarks in Peeples Valley are the two huge poultry houses owned by Pratt Feed & Supply Company, Phoenix. These buildings are each 41 feet by 210 feet. One now houses about 6000 baby chicks which will become the breeding flock. The other is a brooding and growing house for 8000 chicks that will be sold as fryers. The fryers are a Cornish-New Hampshire cross, one of the outstanding crosses produced especially for the broiler and fryer trade.

H. L. Lamb, formerly of Glendale, is manager of this budding poultry industry in Peeples Valley. He and his boss, E. M. Pratt, plan to spread this project over most of the 70-acres of ground. Construction of portable range houses for the growing pullets is about completed. They can be moved about on the range with a tractor, since they are mounted on skids. Lamb agrees with Alvin Allen, County Agricultural Agent, for the University of Arizona, that they'll probably have quite a coyote and bobcat problem. If necessary they may use ground fencing to protect their birds from prowling 'varmints.'

H. L. Lamb, Peeples Valley, shows the Community-type nests to Ralph Van Sant, Poultry and Dairy Specialist for the University of Arizona. These nests enable the poultryman to gather eggs without entering the poultry house."

F. Information Program

The agent distributed fifty-five copies of U.S.D.A. Leaflet #402, "Control Intestinal Coccidiosis

in Poultry," to Yavapai poultrymen.

Also, the agent released to newspapers five articles covering Brooding of Baby Chicks, Pratt Poultry Farm in Peeples Valley, Layer Management, Culling Layers and Control of Poultry Insects.

PROJECT NO. 7 - AGRONOMY

A. Alfalfa

1. Variety Test

Mr. Leo Ramsey, Camp Verde, provided the following 1956 data for the 1st, 2nd and 4th cutting of the variety test that was planted on this farm in September, 1953.

<u>Variety</u>	<u>Cutting May 21</u>	<u>Cutting June 19</u>	<u>Cutting Sept. 23</u>	<u>Total lbs/ac</u>	<u>Rank</u>
Chilean(West)	----	1739	1488	3227	--
Cal-Verde	3305	1624	1745	6674	5
Buffalo	3434	1932	1923	7289	3
Ranger	3710	2106	2266	8082	2
African	5127	2316	2977	10420	1
Chilean(East)	3345	1630	2283	7258	4

This pattern of rank in yield is typical of the 1954 and 1955 production. This is the last year that records will be taken on this test since the field of Chilean 21-5 is so thin that the entire field will be plowed up this winter. Also, this test has already convinced Verde Valley growers that African is the best variety for them to plant.

2. Insect Control

For the second consecutive year the spotted alfalfa aphid was the number one pest of alfalfa in Yavapai County. An estimated two thousand acres of alfalfa was dusted or sprayed from one to three times with Ben-Hex or Malathion.

The agent arranged for Dr. J. N. Roney, Extension Entomologist, to conduct a field meeting in Chino Valley on October 3rd. Two fields had previously been dusted with 3% B. H. C. dust with no control of the alfalfa aphid. After examining the duster, Dr. Roney felt that faulty application was the cause of failure to control the insects. One farmer who used the duster to do his own dusting secured excellent control with 10-12 pounds of 3% dust per acre.

Ladybird beetles controlled the aphid on some farms. One grower in Chino Valley bought two gallons of ladybird

beetles and released them in his alfalfa. However, they did not stay long enough to be of much help, according to reports.

3. Hay Analysis Study

The agent conferred with Dr. McAlister, Head of the Agronomy Department at the University of Arizona in August. He has, as a result of this conference, agreed to cooperate in a study of the cause of alfalfa bloat in Chino Valley. Many dairymen insist that Chino Valley alfalfa hay will cause bloat when hays from other areas will not. Dr. McAlister will send any samples that are suspected of causing bloat in cattle to a cooperating regional laboratory. There the samples will be analyzed for saponin and will undergo other tests.

The agent mailed circular letters to about one hundred and twenty farmers in Chino Valley in October. This letter called for their cooperation in sending in hay samples that may have caused bloat in cattle. Purpose of this project was to prove or disprove whether there is really anything in Chino Valley alfalfa hay that could cause it to be more "bloaty" than hay from other areas.

4. Diseases

The agent was trained by Dr. Ivan Shields, Extension Plant Pathologist, in recognition of bacterial wilt of alfalfa in the field. The agent has advised farmers to plant Ranger alfalfa to overcome bacterial wilt.

B. Pinto Beans

Total acreage of Pinto Beans in Yavapai County was twenty-two acres compared to about five hundred acres in 1955 and twelve hundred acres in 1954. Low yields due to bacterial bean blight, coupled with low prices, account for the drop in acreage.

The agent did no organized work with Pinto Beans in 1956 because of lack of grower interest in the crop.

C. Corn

1. Varieties

The agent completed test results on two corn variety tests in December 1955. He mailed one hundred and seventy-five copies of two circular letters reporting results of these tests to Yavapai farmers. Copies of these letters are attached. The corn crop in Chino Valley averaged about 2000-2500 pounds of shelled corn per acre. This was probably 1000 pounds per acre below the expectation for a normal crop. The September frost was responsible for this drop. There was considerable damage to the corn from smut and from fall armyworms and corn earworms.

The 1956 season was not too good for corn and yields were rather modest. About 50% of the acreage was ensiled. Corn ensilage sold for \$5/ton in the field. However, ensilage yields were only about 85% of normal.

The 1956 variety tests have not been completed at this time. Results will be reported in the agent's December monthly report.

First killing frosts occurred on October 12, 1956.

2. Insect Control

Corn Seed Maggots

The agent prepared in April a circular letter to advise corn growers of how to treat the seed for control of seed corn maggots. This was mailed to higher elevation communities, reaching one hundred farmers. A copy of this letter is attached.

Corn Root Worm

This insect ruined twenty acres of corn in Chino Valley in 1956. This will be one of our 1957 projects, to acquaint farmers with control measures of this pest.

D. Small Grains

1. Variety Tests

a. Wheat

The agent observed a trial planting of Awned Onas and Ramona wheat on the Floyd Hadlock farm, Chino Valley. The agent was instrumental in Mr. Hadlock's planting only half as much Ramona as he had planned. As it happened, the Ramona, true to the agent's prediction, yielded only about one-half as much as the Awned Onas. Salt River Valley feed mills discounted purchases of Awned Onas as much as 30¢/cwt., yet this variety was more profitable than Ramona, in demand as a flour wheat.

The agent has assisted several growers in locating good seed of Wichita Winter wheat for planting in fall of 1956. This variety made excellent yields in Big Chino Valley from a planting made in December, 1955. This was in spite of late harvesting and rain damage. It yielded around forty bushels per acre.

b. Barley

The agent arranged a pure seed project for Chino Valley in January. The Farm Bureau Research Committee backed the project financially. Mr. Joe Edwards, Chino Valley was the cooperator. The agent ordered two hundred pounds of certified Cordova barley seed from Denton, Texas. Mr. Edwards planted this seed in a separate plot for seed increase. He was to replace the two sacks with three sacks of good seed.

This project would have made available seed of an adapted variety (unless it proved otherwise) for local distribution. Cordova should do well since it is a cross of Wintex, the standard variety planted in Chino for the last twenty years. Pure Wintex is no longer available and Cordova outyields Wintex in Texas trials.

Unfortunately, irrigation and harvesting difficulties were such that the crop was a failure.

c. Sorghums

The agent arranged two farmer cooperative tests of hybrid sorghums in 1956. One test was in Chino Valley and

the other in Dewey. No yield data was taken because of bird damage. Both varieties looked good in both communities. However, small fields are subject to very high bird damage in this area.

E. Miscellaneous Agronomic Work

Soil Moisture Probe

The agent was assisted by Mr. Lyman Amburgey, Extension Soils Specialist, in evaluating the use of the new soil moisture probe developed by Mr. Middleton, former Extension Irrigation Specialist. Also, Mr. Amburgey made several good suggestions on the use of fertilizer for range trials.

The agent and specialist are in agreement that the use of the soil moisture probe should be one of the major extension programs in Yavapai County.

Soybeans in Chino

The agent observed two soybean varieties planted in Chino Valley in early July 1956. This is a new crop to Chino and it was planted much later than it should be. Lyle Trimble has two hundred acres on his farm. The Haresoy variety reached only 15" high because of water stress. It fruited heavily but had very little foliage. The Lee variety was planted about July 15, two weeks later than the Haresoy. The Lee beans blossomed heavily but set no beans before frost. Plant size was about 36", however.

Safflower in Verde Valley

The agent assisted Dr. David Rubis, W. S. D. A. in arranging a safflower variety trial on the farm of H. C. Gambee, Camp Verde. The agent has no data on Dr. Rubis' results, however.

Sunflowers in Chino Valley

The agent observed a two acre planting of sunflowers in Chino on Gil Bisjak's farm. This planting was the result of the agent's variety trial of sunflowers on this farm in 1955. The 1956 planting was harvested by hand with two men standing on a trailer drawn by a tractor. It was then threshed in a bean combine. Mr. Bisjak feels that the crop would be profitable, although he feels it was planted too thick this year.

F. Information Program

The agent released ten news articles on agronomic subjects of interest to farmers. These included corn varieties, wheat varieties, alfalfa aphid control, seed corn maggots, soybeans, soil moisture probe and new crops.

Also the agent prepared and distributed four circular letters for a total of six hundred and fifty copies that reached four hundred farmers and ranchers.

The agent made approximately two hundred and fifty farm and ranch visits to advise on agronomic problems.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF ARIZONA
P. O. BOX 388
PRESCOTT

UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE
U. S. DEPARTMENT OF AGRICULTURE
AND YAVAPAI COUNTY COOPERATING

AGRICULTURAL EXTENSION SERVICE
HOME DEMONSTRATION WORK
COUNTY AGENT WORK

May 1, 1956

MEMO TO: ALL HIGH-ELEVATION CORN GROWERS
SUBJECT: CONTROL OF SEED CORN MAGGOTS

Why not use a little inexpensive insurance when you plant your corn crop?

Last year several fields in Chino Valley had reduced stands of corn because of the seed corn maggot.

These tiny maggots enter the corn plant shortly after it germinates. They eat their way into the center of the stem. The corn begins to wilt over a few days after it comes through the ground. A slice through the stem of the plant reveals the maggot in the center with a brown, decaying area of the corn stem.

Control is easy and inexpensive. Treatment of seed with either of the following insecticides is very effective.

No. 1 - 2.66 oz. Lindane (75% wettable powder) to 100 lbs. seed.

No. 2 - .5 lbs. Heptachlor to 100 lbs. seed

Make a thin water slurry with the insecticide and mix with the corn seed shortly before planting. You can also use these materials as a dust on dry or damp seed but it is less effective than the slurry treatment.

Early planting while the soil is cool encourages the seed corn maggot; so control measures are important since early planting is a must for higher elevations.

Sincerely yours,



Alvin Allen
COUNTY AGRICULTURAL AGENT

AA:P

c. 100

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF ARIZONA
P. O. BOX 388
PRESCOTT

UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE
U. S. DEPARTMENT OF AGRICULTURE
AND YAVAPAI COUNTY COOPERATING

AGRICULTURAL EXTENSION SERVICE
HOME DEMONSTRATION WORK
COUNTY AGENT WORK

December 8, 1955

CORN VARIETY TEST - 1955 - BISJAK FARM, CHINO VALLEY
Elevation - 4650 feet. Planted - May 25, 1955. Harvested -
November 28, 1955 with Minneapolis-Moline Picker-Sheller. One row
1296 feet long (40" between rows) harvested of each variety planted
side by side. (10.3 rows equals one acre). Moisture samples taken
immediately, sealed in pliofilm bags and moisture tests run December 1
at University of Arizona, Tucson. All yields in pounds.

Variety	Field Wt. l row	% Moist	Yield/row 13% Moist.	Yield(Lbs) per acre	Yield under Top Var.	Rank
Pfister 403	520	12.62	522	5378		1
Pfister 303	500	13.09	499	5145	233	2
DeKalb 860	490	13.68	487	5015	363	3
Pfister 383	470	12.45	473	4868	510	4
Funk's G-134	460	15.46	449	4622	756	5
Pfister 244	440	12.50	442	4555	823	6
Funk's G-91	420	15.29	410	4223	1155	7
Pfister 347	400	12.72	401	4171	1207	8
Funk's G-99	410	14.62	403	4151	1227	9
Funk's G-711	410	24.15	364	3749	1629	10
Pfister 434	370	19.89	345	3548	1830	11

A four-row sample of Funk's G-91 from a field adjoining
above varieties but planted 10 days later yielded 2578 pounds per
acre field weight (no moisture sample taken). All varieties in both
fields received same irrigation and fertilizer treatments (300 pounds
of Ammonium sulphate per acre).

Sincerely yours,

Alvin Allen

Alvin Allen
COUNTY AGRICULTURAL AGENT

AA:P

c. 110

OUTLOOK AND RECOMMENDATIONS:

This county has a rather unstable type of agriculture in Chino Valley because of (1) scarcity of irrigation water on twenty-five hundred acres, (2) rolling topography with shallow soils, and (3) small size of farms. Local banks are reluctant to finance farming ventures in Chino Valley.

Big Chino Valley is showing some expansion of irrigated acres. Outlook for market of hay and grain is good because of interest in Little Chino Valley as a dairy production area.

Farm land in Verde Valley is decreasing slowly as more farms are subdivided.

Range cattle is still the major livestock enterprise but it is in serious trouble due to a two-year drouth and price-cost squeeze.

Trends

The 1957 corn crop should be equal to or greater than in 1956. Demand for corn ensilage will be the attraction. Vegetable production could increase slightly in Chino Valley. There is some interest in Verde Valley as a site for growing sugar beet seed. Disease problems are driving growers of beet seed out of Salt River Valley. Tests are underway in Camp Verde now to see how sugar beet varieties will react.

Dairying could increase in both Verde and Chino Valleys again in 1957. This change will not come before summer of 1957.

Poultry production will continue expansion in size of flocks but not in numbers of poultrymen.

Recommendations

The adult Extension Program for 1957 in Yavapai County should stress:

1. One major project for livestock, performance testing of beef cattle.

2. Organization of County Extension Council.
3. Nematode control in Verde Valley
4. Insect control of corn.
5. Expansion of D. H. I. A.
6. Variety tests of corn and vegetables.
7. Landscaping of Homes.
8. Survey of Vegetable Potential of Chino Valley.
9. County Survey of Agricultural potentials by communities.