

APACHE COUNTY
ANNUAL NARRATIVE REPORT

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TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	4
I. SITUATION	5
II. ORGANIZATION.	5
III. PROGRAM PLANNING.	5
IV. INFORMATION PROGRAM	5
V. PROJECTS	
3. HORTICULTURE	
A. Fruit Production	7
B. Grounds Beautification	7
C. Vegetable Production	9
1. Diseases and Pests.	9
2. Sweet Corn Varieties.	10
3. Sweet Corn Demonstration Results.	11
4. LIVESTOCK	
A. Beef Cattle.	16
1. Ailments.	16
2. Economics	16
3. Feeding	17
4. Improvement	17
5. Range Management.	18
5. DAIRY.	19
6. POULTRY.	20
7. AGRONOMY.. . . .	21
A. Alfalfa.	21
B. Permanent Pastures	21
C. Sorghums	22
D. Corn	22
1. Silage.	23

8.	IRRIGATION.	24
9.	ENGINEERING	25
10.	ENTOMOLOGY.	26
11.	SOILS	27
12.	RURAL SOCIOLOGY	28
	A. County Fair	28
13.	AGRICULTURAL ECONOMICS.	29
	CIRCULARS	30

SUMMARY

The greatest emphasis during the year was on horticulture, agronomy and livestock. Quite some time was also spent on the rural sociology project in connection with the county fair.

Horticulture activities included work on grounds beautification, vegetable production and fruit production. A "County Beautification Month" was sponsored by the Agent. In connection with this, landscaping meetings and demonstrations were held in county communities and a special "County Home Beautifying" bulletin published. Fruit work consisted mainly of local demonstrations in pruning and insect control help. In gardening the main accomplishment was the conducting of a number of sweet corn variety demonstrations.

In the livestock field work centered chiefly on trying to improve the marketing situation for beef cattle and help in general management practices.

Dairy work consisted mainly of helping to organize the yearly brucellosis testing of milk stock in the county.

There was very little activity in the field of poultry as the number of producers in operation is now at a very low minimum.

In agronomy the agent worked mainly with alfalfa, permanent pastures, corn and sorghums. Variety demonstrations were conducted with corn and sorghums.

Irrigation business consisted principally of making water supply surveys and plans for checking losses.

Engineering consisted mainly of helping individual farmers and with special domestic water supply problems and in helping plan building construction.

Some help was given farmers in connection with general insect control including fruit insects and home insects.

Soils work consisted chiefly of helping farmers analyze soil problems through tests and examination. The agent also served as a member of the Soil and Water Conservation Needs Committee.

Rural Sociology activities were in the field of County Fair activities, the chief aim to assist others in conducting the fair and help make it educational.

Agricultural Economics activities were in the field of livestock marketing and trying to help improve the situation.

I. SITUATION

One important change in the livestock situation was the increase in the price of cattle. This in turn made the cattle owners less concerned with marketing problems. As numbers were down in the county the local cattlemen held back quite a number of the heifers. Another trend which is continuing is crossbreeding, using Angus bulls on Hereford cows.

There was a great increase in the acres of crops in production for the year. This was because of the great increase in irrigation water available. Many new plantings of alfalfa were started. Also there was a great increase in corn silage.

II. ORGANIZATION

Acting as chairman, the agent, along with Frank Fanning, S.C.S., and Ernest Jones, F.H.A., again selected a county election committee and designated a place for receiving ballots for the A.S.C. election.

The agent met with the County Board of Supervisors to select a Fair Commission. The agent then met with the Commission to select department heads and committees for the County Fair.

The agent was again able to obtain an increase in the county appropriation to the extension budget. It is felt that this is an indication of some support, especially when there is great public pressure to hold down county taxes.

III. PROGRAM PLANNING

The plan of work for the year was formulated by checking over the previous years accomplishments and consulting with leading ranchers and farmers as to their problems.

IV. INFORMATION PROGRAM

The agent continued to report Extension news to the local paper. Some material was used under column head, but most was printed as special articles. The new head, which we furnished, may have been a little too large, as the newspaper is now very space conscious. Three papers are being published from one office, one for Show Low, one for Round Valley, and one for St. Johns. The news from all three areas is usually crowded into each paper separately.

The agent took the Arizona Farmer reporter along with him around the county. News items were obtained for the Arizona Farmer at this time.

IV. INFORMATION PROGRAM -- Continued

The agent wrote a new county bulletin entitled "Apache County Home Beautifying." This has been very popular with home owners and it is felt the time spent in preparing it was well worthwhile.

The radio station at Show Low was used to get out special announcements for extension connected meetings and activities.

Following are the number of column inches of agricultural, home economics and 4-H information used in the newspapers of our county during the annual report year 1958: 4-H Column, 177; 4-H General, 420; County Agent Column, 204; Home Economics General, 4; Agricultural General, 160; Total Column Inches, 965.

V. PROJECTS

3. HORTICULTURE

A. Fruit Production.

One of the main problems in this field is the need for cleaning out uncontrolled growth in orchards. Competing weed growth as well as half-dead trees should be removed. There is still need for improvement in proper selection, planting, fertilization and pruning. Codling moth and clover mites are the main pest problems.

For a number of years most county orchards have been in an unthrifty condition. This is believed to be due mainly to a combination of drouth, mite damage and weed competition. Also, many trees are over-age and need replacing. Home orchard owners do not seem to have time to take care of larger orchards like they did earlier. As a consequence, many orchards are neglected. Also pruning demonstrations have not been held for a few years.

Activities during the year in this field were chiefly in the line of making recommendations for proper pruning, variety selection and disease and insect control.

Pruning meetings were planned by the Agent for the St. Johns, Springerville and Eagar areas. Orchards used for the demonstration belonged to Bertha Waite, St. Johns; Trammell Brothers, Springerville; and Dell Hale, Eagar;

C. R. Smith of Concho fall-planted fruit trees and the results were very poor with only a few of the trees surviving until growth started the following spring. One county resident says he has good luck receiving young trees in the late winter, heeling them in until spring, and then planting. Most trees are purchased and planted the same spring.

The Agent gained valuable information from a fruit production training meeting held at Sedona during the spring.

Insects and diseases encountered were codling moth, spider mite, aphids, chlorosis and sun-scald damage. Sun-scald was especially bad on peach and plum trees and white-washing was recommended on a trial basis.

B. Grounds Beautification.

There is plenty of room for improved landscaping and homegrounds beautification throughout the county. Comparatively little has been done in this respect. The majority of individuals

V. PROJECTS

3. HORTICULTURE

B. Grounds Beautification. (Continued)

who desire to landscape their homes need help. Large home lots contribute to poor appearances in the various towns. Older homes need corrective landscaping while newer ones need pre-planning. Yellowing of plants is a common trouble in the county due to alkalinity.

Some landscaping work has been done in recent years on a few homegrounds. The majority of these were in cooperation with the Extension Service.

Headway was made two years ago in combating iron chlorosis of both beautification plants and fruit trees. Iron chlorosis, a physiological disease, is probably the most common trouble experienced by gardeners in many parts of the county so anything in this line is very helpful. Iron chelate was used successfully in 1957.

A special drive was made during the early spring of the year to stimulate a countywide clean-up and beautification campaign. The agent worked with the St. Johns, Eagar, and Springerville communities in setting up plans for each. One month was set aside as County Beautification Month.

The Agent met with the St. Johns Chamber of Commerce and plans were made for a clean-up day. City equipment was used along with individual homeowners cooperating. The Agent conducted a special meeting at the high school illustrating good landscaping with drawings and colored slides. After the meeting, the group went to the A. E. Thurber home where the previously staked-out landscaping plan was explained. The Agent also helped in the location and planting of trees in the city park.

In Eagar the Agent met with and assisted an interested group in staking out the locations of blue spruce along the main street. The aim was to have this town noted for this one variety of tree. Later individuals got the trees from the White Mountains. A good percentage of those planted are still growing. The Agent held the same type of meeting for the Round Valley area as was held in St. Johns. The Guy West home in Springerville and the Jim Colter home in Eagar were landscaped.

In Springerville the Agent with the help of Harvey Tate, worked up a landscaping plan for the Community Park. Jim Armer, Manager of the First National Bank and 4-H Club Community Leader, was instrumental in disseminating landscaping information in the area.

V. PROJECTS3. HORTICULTUREB. Grounds Beautification. (Continued)

The Agent prepared a bulletin called "Apache County Home Beautifying" in conjunction with the campaign. This was given out at the landscaping meetings. It was also mailed to many county home-owners who were not at the meetings. The First National Bank at Springerville kept copies on hand for a period of time, so that interested customers might get one. This bulletin was prepared with the average home-owner in mind, giving fundamental landscaping rules and adaptable varieties.

Also, later in the season, the Agent discussed the landscaping of the Round Valley High School grounds with a General Agriculture class of the school. The class intends to do some work next spring.

C. Vegetable Production.1. Diseases and Pests.

Generally speaking, home vegetable producers are using recommended varieties. However, among the list of recommended varieties, and new ones coming on the market, no one is sure which one is probably best for his own garden and needs. Insect and disease control are a main problem. There is a need for greater use of barnyard manure and weed control.

The home garden has always been of importance in the county. Gardens are somewhat smaller than they used to be. About half of the gardens receive fair to good care and the other half poor care. Curly top and tomato fruit worm are and have been the chief tomato disease and pest for some time. Corn earworms, flea beetles, Mexican bean beetles, cabbage aphid, grasshoppers, squash bugs and spotted cucumber beetle are others of the chief pests affecting vegetables. Sweet corn test plots and tomato test plots were planted by gardeners two years ago. However, several common available varieties were not in the test and need trying.

Curly top, especially of tomatoes, practically eliminated the early and middle season crop. Only a few of the plants remained to produce some later tomatoes. Squash was also affected quite severely.

Several infestations of blister beetles were brought to attention. One large chili garden belonging to Procopio Chavez of St. Johns was saved by spraying the young plants with DDT.

V. PROJECTS3. HORTICULTUREC. Vegetable Production. (Continued)2. Sweet Corn Varieties.

Demonstration plots comparing six different sweet corn varieties were established with several cooperators in the St. Johns and Round Valley areas. Five highly rated hybrids and one open-pollinated variety were included in each plot. Results are tabulated in the charts which follow. Cooperators are listed on the charts. Seed was furnished free-of-charge by the Corneli Seed Company.

SWEET CORN DEMONSTRATION RESULTS

University of Arizona Extension Service in Apache County

Cooperators Reporting: T. E. Waters
LaRue Plumb
Edward Waite
Merle Heap

Year: 1958
Location: St. Johns, Arizona
Elevation: 5,725 feet
Irrigation: Little Reservoir

VARIETY

	IOCHIEF	GOLD RUSH	GOLDEN BANTAM	SWEET-ANGOLD	GOLDEN BEAUTY	GOLDEN CROSS
STALKS						
Height	6 ft.	4½ ft.	6 ft.	7 ft.	4-4½ ft.	6 ft.
Sturdiness	Good	Good	Poor--Good	Good	Good	Good
Coloring	Dark Green	Good Green	Good Green	Light-Good	Good	Light-Good
Successing	None-Very Little	Very Little	Very Little	Very Little	Very Little	Some
EARS						
Number per stalk	1	1	1	1 - 2	1	1
Length	9 inches	6-7 inches	6 inches	9 inches	7 inches	7 inches
Number Kernel Rows	16	14	10	17	12-13	14
Uniformly Filled	Poor-Very Good	Fair--Good	Poor--Fair	Good	Fair--Good	Good
Husk Tightness	Good	Fair	Poor--Good	Good-Very Good	Fair--Good	Fair--Good
KERNEL						
Coloring	Good	Good	Good	Good	Good	Good
Width & Depth	Small-Deep	Fair--Good	Fair--Good	Fair-Very Good	Fair--Good	Good
Tenderness-Flavor	Poor-Very Good	Good	Poor--Good	Good	Good	Fair-Very Good
Days To Harvest	84	70	79	92	74	85

Note: The above figures are averages of the results reported by each cooperator.

SUMMARY OF COOPERATORS OBSERVATIONS

IOCHIEF:

One gardener rated this as the top corn of the six. Another said hail damage or something caused a lot of nubbin ears and flavor not the best. Others didn't especially mention this variety.

GOLDEN BANTAM:

This open-pollinated variety was ranked last by practically all cooperators. Ears were small, kernels shallow and worm damage bad.

SWEETANGOLD:

This corn was ranked either in first or second place by all cooperators. Sweetangold was the heaviest producer, having the largest ears and more per stalk.

GOLDEN CROSS:

This older, popular variety is still ranked tops, or close to it, in quality and for home use by most cooperators.

GOLD RUSH:

This was the second earliest variety being next to Golden Beauty. One person placed this tops of the two early corns. In one case this variety just didn't do too well.

GOLDEN BEAUTY:

This was ranked first of the two early varieties most of the time. This corn is the earliest producer planted. One said it was more tender and better flavored than Gold Rush.

RECOMMENDATIONS:

The average results of these demonstration plots seem to indicate that Golden Cross, Iochief, and Sweetangold should be planted as the main longer season crops, and Golden Beauty planted as an early crop in the St. Johns area. Further comparisons for several growing seasons are needed to make sure. Also, since eating quality is different for different persons, it is recommended that each home gardener conduct his own experiment.

SWEET CORN DEMONSTRATION RESULTS

University of Arizona Extension Service in Apache County

Cooperators Reporting: A. W. Voigt

Milo Wiltbank

Carl "Buzz" Haws

Year: 1958

Location: Springerville and

Eagar, Arizona

Elevation: 7,000 feet

Irrigation: Round Valley Water Supply and Well

VARIETY

	GOLD RUSH	GOLDEN BEAUTY	SWEETANGOLD	GOLDEN CROSS	TOCHIEF	GOLDEN BANTAM
STALKS						
Height	4 ft.	3½ ft.	6 ft.	5½ ft.	5 ft.	6 ft.
Sturdiness	Good	Fair	Very Sturdy	Good	Good	Good
Coloring	Dark Green	Dark Green	Light Green	Dark Green	Med.-Light Green	Dark Green
Succoring	Little	None	Very Few	Few	None	None-Few
EARS						
Length	7½ ft.	6 ft.	8½ ft.	8½ ft.	8 ft.	7 ft.
Number Kernel Rows	12-13	11	16	13-14	16-18	8
Uniformly Well Filled	Good	Good	Good	Good	Good	Good
Husk Tightness	Good	Good	Good	Good	Good-Bad	Loose-Worry
KERNEL						
Coloring	Light Yellow	Light Yellow	Whitish-Yellow	Darker Yellow	Whitish-Yellow	Dark Yellow
Width & Depth	Medium	Wide & Deep	Small & Deep	Wide & Deep	Narrow & Deep	Wide & Shallow
Tenderness-Flavor	Very Good	Very Good	Fair-Very Good	Very Good	Fairly Good	Very Good
Days To Harvest	98	96	112	100	112	101

Note: The above figures are averages of the results reported by each cooperator. Length of growing season was obtainable only from one cooperator. This planting was effected by hail on August 11 and also by competition from a row of shade trees nearby.

SUMMARY OF COOPERATORS OBSERVATIONS

IOCHIEF:

One of three cooperators reported this variety as the best all-around corn. Another ranked it as second place.

GOLDEN BANTAM:

"This was by far the poorest of all," said two gardeners. "It was a poor producer and it did not measure up to the other varieties."

SWEETANGOLD:

One cooperator ranked this corn as his second choice and another called it a good late corn.

GOLDEN CROSS:

Two cooperators prefer this variety above all the others in both production and eating quality. The other placed it third after Iochief and Sweetangold.

GOLD RUSH:

"Early and very good," said one cooperator. Good early corn. One cooperator failed to get a good stand of this corn.

GOLDEN BEAUTY:

Good early corn. One cooperator failed to get a good stand of this corn.

RECOMMENDATIONS:

The average results of these demonstration plots seem to indicate that the later main-crop sweet corn plantings should be of either Golden Cross Bantam, Iochief or Sweetangold. For the early corn crop in this area a definite advantage was not shown for either Golden Beauty or Gold Rush.

It is suggested that further plantings be made of these varieties to make results more meaningful. Also other varieties might be planted alongside these for comparison. Because of the variation in individual taste, each gardener should make his own comparisons in his own garden.



Harvey Tate and T. E. Waters Inspect Sweet Corn
Variety Demonstration Plot in St. Johns.



Harvey Tate and Edward Waite Inspect Sweet Corn
Variety Demonstration Plot. Earliest corn has
been harvested.

V. PROJECTS4. LIVESTOCKA. Beef Cattle.1. Ailments.

The main cattle disease and insect problems in the county have been horn flies, screw worms, lice, grubs, pinkeye, cancer eye and plant poisoning.

During past years quite a bit has been done on the identifying of possible poison plants and acquainting ranchers with them. Ranchers generally have been using the recommended treatments for the other troubles.

During this year, 1958, the agent continued to help ranchers in recognizing plant poisoning species as well as to recommend good range management to prevent poisoning. A very minor demonstration showing the effect of 2, 4-D ester on loco was presented on the Melvin Crosby Ranch east of Springerville. The material was effective in killing regular loco but not the woolly or pubescent type. However, it is still felt that hoeing is cheaper. Good range management, being sure not to overgraze, is the most practical recommendation made by the agent. Also, the concentration of a large number of cattle on a small area was suggested as a possibility. The cattle should trample out the loco without any one animal getting too much.

In connection with the new systemic boluses and sprays for grubs and other parasites, the agent put out a circular informing ranchers as to what is and is not known as to their effectiveness. Very little has been tried, as the material is so costly.

2. Economics.

There never has been any organization for marketing cattle in Apache County. A few cattlemen have sold cattle together periodically to contract buyers, but that is all.

The Agent made a listing of cattle available for sale in the county, as was done two years ago. However, because of the extra demand for cattle, sales were completed almost before the listing could be completed.

In cooperation with Dr. George Campbell, the agent made temporary plans for holding a meeting to discuss marketing organization possibilities. The Agent contacted the Cattle-growers representative for Apache County, Harbon Heap, to get them to sponsor this. This was agreed to by Mr. Heap.

There are two annual registered sales conducted in the county, one at Suncrest Ranch in the fall and one at Hoopers.

V. PROJECTS

4. LIVESTOCK

A. Beef Cattle.

3. Feeding.

Our main problem is how to provide a good supplemental feed for range cattle. Periodically, a few individuals try fattening out cattle and need information on this.

Each year the Agent has given some recommendations on supplements, especially during drouth.

Less supplemental feeding was necessary for range animals this year than during the previous drouth year. However, some individuals use a protein-vitamin A supplement regardless of the year.

There were no fattening operations as last year, but a few individuals fed feeder cattle corn silage and some grain on a maintenance basis. As a lot of corn was grown and ensiled this year, there will probably be some warming up of feeder cattle with silage. Cattlemen will want the cattle to still sell as feeders rather than fat stock because of the price differential.

4. Improvement.

The need is to further improve range herds by continuing to select bulls on "weight-for-age" as well as for conformation. Also, there is getting to be quite a problem in connection with dwarfism.

For quite a long time most ranchers have bought good grade herd bulls. However, some went too heavy on conformation, forgetting size and scale. Also the continuous use of comparatively inbred registered stock has increased dwarfism. Herefords have been the most popular breed, with some Angus coming in.

The Agent has recommended the use of large, rugged bulls and those as free from dwarfism as possible.

Local cattlemen have attended quite well the Suncrest and Hooper Bull sales in the county. Also some purchased bulls from C. A. Mc Carrell and Goesling Brothers by private treaty. Most cattlemen have been quite particular in getting only the better grade animal.

This year there has been unusual activity in the purchasing of Angus bulls to cross with Hereford cows. Many

V. PROJECTS4. LIVESTOCKA. Beef Cattle.4. Improvement (Continued).

cattlemen feel that the hybrid result gives more weight at the sale. Where good Angus bulls are used on poor Herford cows, there is a definite improvement. The question is still whether good Herefords are just as good as the cross from good animals of both breeds. Also, ranchers will have to keep up their breeding stock if they want something to cross with.

5. Range Management.

Juniper control is still one of the main needs in the county. Also needed is better grazing practices to give previously drouthy ranges a chance to recover.

Late in the season most of the county areas received moisture. As a result, ranges are in fairly good condition. Less trouble with poison plants and the like is expected this spring.

Most of the Juniper control in the county during recent years has been done by cabling and bull-dozing. Last year many ranges were necessarily grazed extremely heavy.

Juniper burning continued on the Chilcott ranch near Concho. A few other ranchers are also doing some burning.

V. PROJECTS5. DAIRY

The main concerns in dairying in the county are management problems in connection with family-type cows. Also milk produced in the area is generally not pasteurized so the need for brucellosis and T. B. testing is especially important.

One attempt to operate a dairy in St. Johns several years ago failed. This was either because of lack of interest and ability on the part of the operator or lack of economic soundness of the project or both.

The Agent organized Brucellosis testing of cattle in the St. Johns and Round Valley areas. This was done in cooperation with the livestock inspector and local veterinarian. Other areas are to be tested later.

V. PROJECTS

6. POULTRY

There have been only a few problems in this field as of late. These have been connected chiefly with disease and parasite troubles. Marketing periodically creates a problem.

Four years ago commercial poultry owners and bird numbers were increased and it was necessary to organize in order to get surplus eggs out of the county. Since then numbers have been reduced and all eggs are marketed within the county.

Whiting Brothers of St. Johns continue to buy eggs ungraded, grading and cartoning them for sale.

A few death loss problems were checked by the Agent. One producer, Doyle Wilkins of St. Johns, lost quite a large number because of blowouts.

Some help was given to the few egg producers on the market prices and outlook as predicted by the majority of specialists.

V. PROJECTS7. AGRONOMYA. Alfalfa.

Alfalfa has been the main crop in the non-mountain areas of the county for some time. The last few years a lack of reliable irrigation water has been an obstacle. Because of the lack of water few new stands of alfalfa have been planted and older fields are getting thinned out. Alfalfa was aphid damaged late in the season of 1956 but not in 1957.

As the supplies of irrigation water were very much improved, quite a number of farmers put in new alfalfa fields to replace those which had gone out during the drouth. The Agent furnished information on varieties to plant as requested by a number of farmers. Chiefly Ranger, Buffalo, and some High Altitude Northrup-King mixture were planted.

The Agent advised S. D. Ellsworth against going into green-chop feeding because of the high machinery cost and possible return.

There was a small invasion of blister beetles on the Leo Gibbons farm at Springerville. Because of the poor stand of alfalfa the agent advised cutting it rather than dusting.

B. Permanent Pastures.

There are a few individuals who now have small permanent pastures and more could have them. There seems to be a place for specially suited permanent pasture plants in the mountain areas and in the somewhat alkaline areas where water is available. Also, where pastures are too small to warrant harvesting machinery investment, it may be more profitable to have irrigated pasture.

Quite an interest has been shown in planting permanent pastures in the county during the year. The Agent has made recommendations for people in the Highway 66 area, around St. Johns, and in higher elevations.

Chief recommendations for alkali lands as shown on demonstration plots at St. Johns, were the following plants: tall fescue, tall oat grass, tall wheat grass, possibly orchard grass and sweet clover. For the mountain meadows a combination of smooth brome, orchard grass, intermediate wheatgrass and alsike clover were recommended.

V. PROJECTS7. AGRONOMYB. Permanent Pastures (Continued).

The Agent recommended varieties to plant to Bob Hunt in the Hunt area. Since the lands being considered are quite heavy on the alkaline side, special varieties were suggested. Alta Fescue, Tall Wheat and Tall Oatgrasses were recommended. It was suggested that only 1 or 2 varieties be used in a planting to avoid selective grazing by livestock.

C. Sorghums.

Some of the newer hybrid sorghums were tried out in the St. Johns area. None of the forage type came near corn in tonnage produced and the grain types were damaged so much by birds that results were meaningless. In the Springerville area frost hit before the grain matured.

D. Corn.

Field corn has been one of the main crops in Apache County through the years. Several varieties were tried, but were not too conclusive, since some of the best and most popular varieties were not included. In the past much of the corn was shocked and then the ears pulled later, the stover being fed to cattle separately. In recent years practically all of the corn is harvested by field choppers and put in silos.

Corn variety demonstrations were conducted in cooperation with Jack Brown of St. Johns and Trammell Brothers of Springerville. Practically all of the most popular varieties were compared. Following is a report of the demonstration.

V. Projects7. AGRONOMYD. Corn(1). Silage

This report gives the comparative tonnage of corn silage produced on the Jack Brown farm at St. Johns. Another test on the Trammell farm at Springerville was not measured due to lack of uniformity in growth conditions.

Seed was furnished by the cooperators and by two commercial companies.

An attempt has been made to compare varieties which have done well for individual farmers previously. Three sections of rows $21\frac{1}{2}$ feet long of each variety were harvested and weighed. The majority of the corn was in the early dough stage. Production per acre was computed from this.

SILAGE CORN TEST RESULTS

Conducted by: Apache County Extension Service in cooperation with Jack Brown, St. Johns.

Harvest date: September 9, 1958.

Sampling: Three $21\frac{1}{2}$ foot row sections of each variety.

VARIETY	TONS PER ACRE
G - 711	24.7
Texas 26	23.3
Mexican June	22.2
Texas 30	22.1
G - 95A	21.2

COMMENTS: The Mexican June variety had large stalks, but the ears were very immature with only blisters for kernels. This variety is exceptionally late.

As can be seen there isn't too much difference in the tonnage produced by these varieties. Repeat trials should be made to check these results. Where production is about the same, the price of the seed would determine which variety to plant.

V. PROJECTS8. IRRIGATION

The chief problems in connection with irrigation are connected with a shortage of water and obtaining good quality water for the lower areas.

Irrigation supplies come chiefly from the Lyman Reservoir and St. Johns Little Reservoir for the St. Johns area. The Bunch, Tunnel, White Mountain, and Nelson Reservoirs furnish irrigation for the Springerville-Eagar area. The Concho Springs and Reservoir furnish a small supply for Concho. In Hunt there are quite a number of pumps which supply water for farming.

During the year the agent and Specialist Allan Halderman made checks and plans to conduct a moisture-loss demonstration on the Lyman Irrigation canal. This will begin as soon as irrigation starts next spring.

The agent and Halderman also made a survey and took water samples of the wells at the S. D. Ellsworth farm at Hunt. This is in connection with making recommendations for a complete farm operation.

V. PROJECTS9. ENGINEERING

Most of the problems in engineering are quite closely tied in with other projects. Chief among these seems to be in the obtaining of plans for such things as farm buildings, water systems, sewage disposals and various farm machinery.

During the year the agent and Specialist, Ted Welchert, worked with Dick Hext, who lives on a farm near St. Johns, in setting up plans for plumbing from a hand-dug well to an elevated tank for a home water supply.

One special problem during the year consisted of giving advice to Arlo Jepson of Alpine on the obtaining of flour mill equipment and locating a source of good milling wheat.

V. PROJECTS10. ENTOMOLOGY

The main insect difficulties during the year, and also for other years, were those connected with specific crops and livestock, the main sources of income.

Chief crop insects most troublesome during the year again included grasshoppers at Alpine and Nutrioso, corn earworms, Mexican bean beetles, squashbugs, codling moth, flea beetles and spotted alfalfa aphids. These are discussed under agronomy and horticulture.

Main livestock insects were the usual ones. These included cattle lice, ticks, screw worms, and grubs. Also horn flies and stable flies were troublesome. These were treated under livestock. Screw worms were the worst they have ever been in the history of the county.

Especially troublesome on landscaping plants this year were aphids. Weeping willow trees were covered with a reddish-brown aphid late in the season. As it was so near the cold weather period, most decided to let nature take care of the "bugs" rather than spray with BHC or Malathion.

Enlarged apple tree roots were checked by Dr. Shields for disease but were analyzed as the usual woolly aphid.

V. PROJECTS11. SOILS

Soil problems in the county are primarily connected with the lack of proper fertilization, knowledge and practice. Also a main problem is how to handle soil alkalinity.

The Agent, as in previous years, was confronted with the chlorosis problem on landscaping and garden plants especially. In the Springerville area a layer of soft caliche is located just below the surface of the ground. In the central and Northern parts of the county general alkaline conditions often prevail. Last year chelates were successfully used in treating chlorosis of landscaping plants.

A soil survey was made of the S. D. Ellsworth farm at Hunt. Lyman Amburgey was present to help make the check and give suggestions. Soil samples were taken at various locations and tests taken by the Soils Department. It is planned to follow this farm through and continue to study it and advising.

Samples were also collected at the Bob Hunt place in Hunt along with the recommendations for permanent pasture.

The Agent participated in the meetings of the meetings of the Soil and Water Conservation Needs Committee at Springerville. The Agent publicized the activities of this committee several times.

The Agent also attended a very good soils conference at the University.

V. PROJECTS12. RURAL SOCIOLOGYA. County Fair.

The County Agent's office was instrumental in starting the first Apache County Fair in 1926. Since then the office has been connected with the fair in one way or another. In recent years facilities at the fairgrounds have been much improved by drilling a well and building new livestock pens. Also an addition was constructed for poultry and small animals.

The method of organizing consisted of having the appointed commission members meet with the County Agent and select a manager and committees for each department. Delbert Lambson was selected as manager and did a very good job. Commission members were Melvin Greer, St. Johns, Chairman; Lyle McDonald, Chambers, Member; and Paul Eagar, Eagar, Member.

Again great stress was made on having this year's county fair serve as a real educational tool. It is felt that this was done, since all judging was open to the public and explanations were given for placings. Since we do not have all of the sideshow type attractions at our fair, the agricultural, home economics and other exhibits are the big attractions. Attendance was estimated by the manager to be the largest yet.

There were 94 head of cattle and 18 head of sheep entered. All of the cattle pens were filled this year according to Clair Platt, beef chairman. This is the largest number in the history of the fair, which was first held in 1926.

Dick Hext, Chairman of the small animal department, reports that entries were the largest ever. All poultry and rabbit pens were filled, with some doubling up necessary. Along with this department there were entries from the Navajo people in various types of fleece. This is something new.

Practically every other department showed similar increases in participation.

V. PROJECTS

13. AGRICULTURAL ECONOMICS

The main work under economics was in with livestock marketing. See the livestock project.

Chief problems in connection with economics are connected with the marketing of livestock and the making of a survey of the general economics situation in the county.

A start was made on a county economic survey last year by Dr. George Campbell.

This year the Agent made a special survey of the cropland of the Vernon area to be used in the Soil and Water Conservation Needs inventory. Material being compiled in this survey will be useful in the county.

A ~~livestock-for-sale~~ listing is discussed under livestock. Also a beginning on plans for a marketing meeting is discussed there.

The agent helped out by sending out the income tax suggestion bulletin to the mailing list requesting it.

The agent also served as chairman of the A. S. C. Election Board to select an election committee.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Arizona

University of Arizona
College of Agriculture
U. S. Department of Agriculture
and Apache County Cooperating

Agricultural Extension Service
Home Agent Work
County Agent Work
St. Johns, Arizona

February 17, 1958

TO: APACHE COUNTY CATTLEMEN

SUBJECT: SYSTEMIC INSECTICIDES FOR CATTLE GRUB CONTROL

Recently you may have read or heard about new insecticide materials which preliminary testing shows may give close to 100% control of cattle grubs.

Two kinds are being tried. One, ET-57, is given to the animal in pill form. Another systemic control is sprayed on the animal and is believed to have the same control. You may have heard of these by their trade names.

At the present time these materials are supposed to have been distributed only in 4 Midwestern States on a trial basis.

On this type of control the best time to give the treatment is believed to be the middle of the grub cycle, around August and September.

Al Lane and Dr. Roney of the University plan to get us some material to try ~~out~~ on a demonstration basis on few cattle in the county next fall.

Sincerely,



C. L. Isaacson
County Agent

CLI/nd
80 cc:

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Arizona
St. Johns

University of Arizona
College of Agriculture
U. S. Department of Agriculture
and Apache County Cooperating

Agricultural Ext. Service
Home Agent Work
County Agent Work

SUBJECT: Home and Community Landscaping Meetings

TO: Organization Leaders in Round Valley and St. Johns

It would be very much appreciated if you would announce the following in your meetings. It is felt that something of this sort should be of interest to at least all home owners. This is planned to coincide with the County Beautification Month of March.

Landscaping meetings conducted by the Apache County Agricultural Extension Service will be held in Round Valley and St. Johns according to the following schedule:

Round Valley: Thursday, March 20, at 1:00 P.M., in the North Room of the Round Valley High School there will be an illustrated talk on the principles of home landscaping. Following this, colored slides of adapted shrubs, trees and flowers will be shown. Immediately after the inside program the group will drive to the Guy West home in Springerville, where the location of plants around this home will be pointed out. Following this the group will go to Eagar and visit the Jim Colter home where the suggested location of plants will be discussed. Plants will have been staked out previously in order to save time.

St. Johns: Friday, March 21, at 1:00 P.M., the same type of program will be held beginning at the St. Johns High School. After the inside meeting the group will move to the Ezrael Thurber, Jr, home to check the previously staked-out locations of plantings.

Sincerely,
C. L. Isaacson
C. L. Isaacson
County Agricultural Agent
U. of A. Ext. Service
St. Johns

cc: 50

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Arizona

University of Arizona
College of Agriculture
U. S. Department of Agriculture
and Apache County Cooperating

Agricultural Extension Service
County Agent Work
Home Agent Work
St. Johns, Arizona

June 26, 1958

TO: APACHE COUNTY CATTLEMEN:

We are again compiling a listing of "cattle-for-sale" in Apache County. I believe this should help in getting buyers and sellers together with less waste of time. More buyers should be attracted by making it easier to locate cattle. You might be interested in the fact that when we listed cattle in 1956 a total of 8500 head were included.

As soon as we hear from you cattle owners as to what you want to sell, we will compile our listing and send it out to possible buyers. This list will also be sent to County Agricultural Agents in the Southern Counties where there is a feeder cattle market. Also, newspaper and radio publicity is planned. Any suggestions you may have for improving what we are doing will be very much appreciated. We already have two good buyers waiting for our listing to come out, so hope to get answers from you soon.

Inclosed is a brief form which you should fill out and return to our office, just as soon as you know what you want to sell. We plan to put out new lists from time-to-time, to keep up-to-date. One important thing is that you should LET US KNOW JUST AS SOON AS YOU SELL so we can keep the list current.

We are sending this to those county people who we have on our beef cattle mailing list. Anyone else can get a form or call in the information to our office.

Don't forget, send your form in as soon as you can decide on what you want to sell.

Sincerely,



C. L. Isaacson
County Agent

CLI/nd
Encl.
CC: letter 231
CC: form 281

APACHE COUNTY CATTLE FOR SALE

CLASS OF CATTLE	Number To Sell	BREED <input checked="" type="checkbox"/> check				Owner's Name	Owner's Address
		Here-ford	Angus	Crossbred (describe)	Other (describe)		
CALVES	Heifers						
	Steers						
YEARLINGS	Heifers						
	Steers						
2-YEAR OLDS	Heifers						
	Steers						
DRY COWS							
WET COWS							
BULLS							

COMMENTS:

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF ARIZONA

State Agricultural College
U. S. Department of Agriculture
and Apache County Cooperating

Extension Service
County Agent Work
Home Agent Work
St. Johns, Arizona

September 3, 1958

TO: Milk Cow Owners in St. Johns Area

Saturday morning, September 6th, all female milk stock
6 months of age and over are to be blood tested for Brucellosis.
There is no charge for this service.

You owe it to yourself and family to bring your cows to
one of the following locations at the proper time;

8:00 A.M. - 8:45 A.M. -----Wilhelm Corrals
9:00 A.M. - 9:45 A.M. -----Owen Gibbons Corral
10:00 A.M. - 10:45 A.M. -----H. J. Platt Corrals
11:00 A.M. - 11:45 A.M. -----Ove Overson Corral
(Overson Farm)

Sincerely,

C. L. Isaacson

C. L. Isaacson
County Agent

CLI/nd
cc: 80

COOPERATIVE EXTENSION WORK
 IN
 AGRICULTURE AND HOME ECONOMIST
 State of Arizona

University of Arizona
 College of Agriculture
 J. S. Department of Agriculture
 and Apache County Cooperating

Agricultural Extension Service
 Home Agent Work
 County Agent Work
 St. Johns, Arizona

August 4, 1958

TO: Round Valley Dairy Cow Owners

All female dairy stock 6 months of age and over will be tested for brucellosis on Thursday, August 7th. There is no charge for the testing.

The following schedule has been worked out with the local live-stock inspector and the veterinarian:

<u>Time</u>	<u>Place of Testing</u>
9:00 - 11:00 A.M.	Minor Hall Corral (Formerly Florence Hall's)- Eagar
11:00 - 12:00 A.M.	Melvin Crosby Corral, Eagar
1:00 - 1:30 P.M.	Joe Burk Corral, Springerville
1:30 - 2:00 P.M.	Joe Nelson Corral, Springerville

It is very important that your milk stock be checked to protect your family against disease. Be sure to remind your neighbor as we do not have the names of all dairy cow owners.

If you bring your cows early be sure that someone stays to identify her when she is tested.

Sincerely,

 C. L. Isaacson
 County Agent

CLI/nd
 cc: 100