

ANNUAL NARRATIVE REPORT

NAVAJO COUNTY
ARIZONA

December 1, 1957

to

November 30, 1958

By

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County Agricultural Agent

Annual Narrative Report, 1958, Navajo County

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COUNTY SITUATION

Navajo County, located in the Northeastern part of Arizona, is approximately 300 miles long and 60 miles wide. It ranges in altitude from 4,500 to 7,000 feet. The climate is pleasant in the summer and fall but cold, damp winters make travel into the rural communities hazardous. Dusty spring weather presents many problems to the homemakers. The southern part of the County is becoming an important summer camping, fishing and hunting area. About 60 per cent of the County is Indian Reservation territory for the Navajo, Apache, and Hopi Tribes. Another large section of the County is government owned as Sitgreaves National Forest. According to the 1950 Census only about 18.6 per cent of the land in the County is privately owned.

Agriculture is the basic industry of the County. Cattle and sheep are the leading products; sheep are chiefly raised by the Navajo on the Reservation. In the Snowflake-Taylor area truck crops are grown, while Joseph City is primarily known as a dairy and poultry headquarters. Sawmills, tourist trade, construction work, railroading, mining, provide employment for the non-agriculture population. Approximately 80 per cent of the farmer population derive a portion of their income from non-agriculture pursuits.

Holbrook, The County seat with a population of 4,000 and Winslow with a population of 8,000 are the shopping centers for the County. Show Low, with its fast growing population, is another important center.

The County is becoming more aware of the necessity for improvement in health and sanitation facilities. There is a sanitary engineer employed by the County and by the City of Winslow. There are four doctors in Winslow and three in Holbrook. There are two dentists in Winslow, one in Holbrook, and one in Snowflake. There is a hospital in Winslow, one in Holbrook and a maternity clinic in Snowflake. There are also Indian Service hospitals at Keams Canyon, Winslow and Whiteriver.

There are two dairies which pasteurize milk at Joseph City and Taylor. In the outlying rural towns, such as Clay Springs, a few individual families own cows, but very few pasteurize their own milk. Many of the families in the County grow their own vegetables in the summer and freeze their surplus using their own home freezers or locker storage plants.

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There are small libraries at Show Low, Holbrook and Winslow, sponsored by the PTA, Business and Professional Women's Clubs, and the Women's Club.

While dominant religion is the Church of Jesus Christ of Latter Day Saints, many other faiths are represented in the County. The Relief Society organization which is the Women's auxiliary has a heavy program throughout the winter months. The summer months are free from church planned programs and provide an excellent time for meetings. The L.D.S. women are so busy with this church work that it is difficult for them to attend meetings outside their own community.

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2. ORGANIZATION

Office Conferences-County Staff

Weekly office conferences were held during the year. The Home Agent, Extension Stenographer, and County Agent. The County program and individual responsibilities were discussed. This system permits a closer communication. The staff agreed to keep each other informed as much as possible regarding the county program, particularly on any point where the other might be affected.

Office Sign

A new office sign was made with the following information on it:

AGRICULTURAL EXTENSION SERVICE
UNIVERSITY OF ARIZONA
with
NAVAJO COUNTY AND USDA
COOPERATING
HOME AGENT COUNTY AGENT

The sign is painted black letters on oak stain wood, size 2 feet 4 inches by 3 feet 4 inches long.

State Conferences

State Conferences were held in Tucson at the University during the Soils conference, during In Service training for 4-H Agents and Leaders and during State 4-H Roundup. Mr. Baker was in charge of the one during State 4-H Roundup.

Cooperation With Other Agencies

The Agent held conferences on an average of once a month with personnel from the Branch of Land Operations (BIA) from the Apache, Navajo and Hopi Indian Agencies; the Soil Conservation Service (SCS); Agricultural Stabilization and Conservation (ASC) and Geological Survey (USGS).

Three conferences were held with the Supervisor of the Forest Service.

Annual Narrative Report, 1958, Navajo County**Agricultural Stabilization and Conservation**

The Agent attended most of the ASC County Committee meetings.

ASC Election County Committee

The Agent cooperated with the Agricultural Stabilization and Conservation Service by announcing their County Committee election in a newsletter to the County mailing list and in a news story to the County press. The Extension Service Conference Room was also made available for a meeting place.

ASC Committee

The Agent served as Chairman of the Committee to select a nominating Committee for the purpose of holding an election for County Committeemen on the Agricultural Stabilization and Conservation Program. The following were selected on the Committee: Jim Finley, Chairman; Lavon Turley, Secretary; Beverly Thomas, Member; Alternates were Lawrence Wimmer and Irving Gibson.

Conferences With Administrative Staff

A conference was held in April between the Assistant Director, Mr. Howard Baker; the Home Agent, Miss Bettie Mead; and the County Agent on cooperation in the County Extension Program.

Conference was held with Howard Baker, Assistant Director in April concerning Home Agent.

Conferences were held with Miss Jean Stewart, State Leader, Home Economics Extension, seven different days relative to the Home Agent.

Director Charles U. Pickrell and Assistant Director, Howard Baker talked to the County Agent concerning public relations relative to the Home Agent.

Home Agent was relieved of responsibility in the County and placed on sick leave in April after resigning effective June 30.

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Appointment of new Home Agent

Mrs. Betty Hearn was assigned duties as Assistant Home-Agent and Acting Home Agent in April. She was given a regular appointment as Home Agent in August. Outstanding work is being accomplished by Mrs. Hearn.

Farm Organization

The Agent attended the Annual meeting of the Navajo County Farm Bureau at Show Low. He also attended the Annual meeting of the Resolutions Committee to formulate resolutions to present to the State Convention.

Fairs

Fair Catalog

The Agent revised the Agricultural portions of the County Fair catalog for the County Fair Commission.

Navajo County Fair

Extension Newsletter was mailed to the County mailing list reminding the farmers, ranchers, and homemakers to select and exhibit their best products at the County Fair, and offering the assistance of this office in selecting and preparation demonstrations for items to be brought to the Fair.

Many individual conferences were held on the subject and a half dozen demonstrations were given on fitting and showing beef cattle, dairy animals, and fruits and vegetables.

Editorial Praises Extension Service

According to an editorial in the County newspaper this was one of the best fairs Navajo County has had. The Editor praised the Extension Service, County Agent, and Home Agent for their part in both the Adult and 4-H Programs.

Judging

This year all judges except the Fine Arts were supplied by the Extension Service. They were as follows: Livestock, Al Lane; Dairy and Poultry, W. R. Van Sant; Horticulture and Agronomy, Harvey Tate and Ernie Foster.

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According to the Fair Commission and Exhibitors this was much more satisfactory than using lay judges.

Judging at Other Fairs

Apache County

This Agent judged the Field Crops at the Apache County Fair. He assisted Sam Armstrong in judging the Flower Show and Horticulture.

Gila County Community Fairs

This Agent judged the Flower Shows, Horticulture, and Field Crops in the Pine and Payson Community Fairs of Gila County. These were held on September 26 and 27.

Mr. Armstrong, County Agent, of Gila County has a wonderful system of organization in his Fairs. This Agent will be able to obtain a better organization in the Navajo County Fair next year as a result of the experience with Mr. Armstrong.

County Agent Association Officers Meeting

The Agent attended a meeting at the University, of the Officers of the Arizona County Agent's Association. The meeting was attended by Director Pou; Assistant Director Howard Baker; National Association President, Marian Bunnell, County Agent from Washington State; Ray Weick, Arizona President; Carmy Page, Vice President; Charles Robertson, Southern Director; and this Agent, Northern Director.

Civic Organizations

The Agent was guest speaker at the Rotary Club in Holbrook and Kiwanis Club in Winslow. The program was developed around the Extension Program from the University to the County and Community. The University was presented as a "tree of knowledge"; each branch representing a college of the University. The College of Agriculture branch was divided into three equal parts of Extension, Research, and Resident Teaching.

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The Extension branch was further divided into two as the Adult and Youth or 4-H Program being carried to the County by the County and Home Agents. Supporting trunk on this branch was shown as the Administrative and Specialist Staff.

Chamber of Commerce

The Agent accepted an invitation to attend a breakfast with the Chamber of Commerce. The purpose of this meeting was to discuss a housing integration by the Navajo Indian employees living in Holbrook. The business men expressed interest in the development.

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3. HORTICULTURE

Community Swimming PoolLandscaping Demonstrations

Detailed plan for landscaping Community Swimming Pool was supplied to Mrs. Betty Stovall, Chairman of Holbrook Garden Club in charge of the program. The plan was developed by Harvey Tate, Extension Horticulturist.

Mr. Tate and the County Agent visited this demonstration in May. About half of the plan was completed this year and about half of the plants that were put out lived. The Garden Club plans to continue with the plan another year.

This area has an extreme salt and drainage problem.

Garden Club Program

The Agent was asked to have charge of the program at Winslow Garden Club in May. The topic assigned was conservation. Since Mr. Tate was in the county it was arranged for him to be on the program. He used about half the time to show a series of slides on flowers in Arizona. He also talked on flower production. Mrs. Betty Hearn, the new Home Agent, was introduced to the Club.

Result DemonstrationWith Chelates On Evergreen

A result demonstration on use of chelates was established at the Highway House in Holbrook.

The following is the listing of the treatment used in the result demonstration.

Shrubs numbered toward street:

- | | |
|--------------------|--------------------|
| 1. Check | 5. Sequestrine 330 |
| 2. Sequestrine 330 | 6. Versenol |
| 3. Versenol | 7. Ironite. |
| 4. Ironite | 8. Sequestrine 330 |

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The preceding iron compounds were used in treatment of shrubs in demonstration to compare results and to see if any response is shown during the winter. Sequestrine 330 and Versenol used 1/2 lb. per treatment. Ironite applied 1 lb. per shrub.

The result on the trees was favorable. All trees except one changed from a sickly yellow to a healthy green after treatment. One tree died after treatment with Ironite.

However, it was next to the doorstep and it was believed to have been trampled over and broken.

Agent Attends Pruning School Sedona

The Agent attended a two day pruning school at Sedona for the Northern Agents. This was planned to observe effects of last year's pruning, as a refresher for Agents who attended the previous year and as training for those who did not attend before. It rained constantly two days. Interesting and informative question and answer sessions were held with the Extension Horticulturist, Harvey Tate; Extension Entomologist, Dr. J. N. Roney, and Assistant Director, Howard R. Baker. The group was able to make a fast inspection of effects of previous pruning in between showers.

Pruning Demonstration, Holbrook

A pruning demonstration was given at Vaughn Smithson's of Holbrook. Two peach, two cherries, one apple, and an apricot tree were pruned.

Individual Conferences

Constant calls were made at the Agent's office for advice on lawn management, care of ornamentals, and flowers. Most of the fruit growers and vegetable producers are on a small scale and require considerable individual attention. It is believed that many of these problems can be approached on a more organized program in another year.

Planning At Winslow Hospital

The Agent worked the 16th of August with Mr. Moore, Manager of the Winslow Community Hospital. Soil samples were taken.

On the 20th of August the Agent and Extension Horticulturist, Harvey Tate worked on the problem with Mr. Moore. A water sample was taken.

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Landscaping plans that had been made by Mr. Tate and the Horticultural Department at the University, were gone over and it was decided that more native plants of a hardier nature should replace some of the annuals and hot house plants.

The water is of desirable quality. The soil is very salty and of poor drainage. Recommendation was made to dig holes for plants, large, deep, and filling them with a mixture of blow sand and well rotted barnyard manure.

Fair Judge

Mr. Tate, Extension Horticulture Specialist, served as judge at the Navajo County Fair for Horticulture, Flowers, and Field Crops. He was assisted by Ernie Foster, County Agent of Greenlee County.

Landscaping Demonstration

Following discussion with the Horticulture Specialist, Harvey Tate, the Agent has begun a landscaping demonstration in front of and to the East side of the County Office. This area has consisted of weeds, scattered alfalfa, scattered iris, scattered bunch grasses and ground that was not level, as well as two trees too close to the building that were crowding the other trees and the foundation of the building. The Agent obtained the services of the S.C.S. in placing leveling stakes. The Fair Commission supplied a tractor to do the levelling and haul fertile soil. The two trees were removed, the ground levelled for irrigation, iris transplanted and fertile soil hauled in. A mixture of blue grass, perennial rye, and white clover were planted on October 21. Although this is later than is generally recommended the ground work needed to be done and the grass can be replanted next spring if it winter kills. Flagstone was hauled in from the county and a flagstone walk and retainer strip put in front of the office.

Apple Storage

Advice was supplied to Lyle Shumway on care and storing of apples. He has built a new refrigerated storage house with capacity for 1000 boxes. He has stored 600 boxes this year.

Pruning

Inquiries are being received on pruning of roses and ornamentals and fruit trees. There may be a need for a demonstration to be held on this during the winter.

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4. LIVESTOCK

Information

Bulletins were sent to cattlemen on Cattle Ailments, Livestock Shrinkage, Arizona Grasses and Weeds on the Farm, Ranch and Garden. Two newsletters of a general nature were mailed.

Ranch visit was made at the Hinkson Angus Ranch. Advice was given on feeding program with 400 Angus calves. Five bulls were observed, which were purchased at the National Livestock Show .

Livestock Meeting Whiteriver

The Agent and Livestock Specialist, Al Lane, attended the Livestock Program of the Ft. Apache Indian Agency at Whiteriver. The Agent gave a talk on increasing the calf crop. The Specialist gave a talk on supplemental feeding on the range. 88 men were present.

Registered Hereford Program

The Agent and Specialist visited the L. B. Decker Registered Hereford Ranch, at Snowflake. Advice was given by Lane on the test for Performance Program. He also furnished Mr. Decker with information concerning a bull purchasing program that the Mexican Government has in the U. S.

Ranch visit was made at Virgil Flake's. Four Angus bulls were observed, which were purchased at the National Livestock Show, Phoenix, in January. Lane advised Mr. Flake on a feeding program.

Steer and Lamb Implant Result Demonstration
With Hormones

A result demonstration was established at Mike O'Haco's Ranch, Winslow. Livestock Specialist, Al Lane, with assistance of County Agent and Mike O'Haco, implanted 22 steers and 12 lambs. Copy of complete demonstration is on file in Extension Office, Holbrook.

Tentative plans were made to have additional feeding demonstrations with stilbestrol implants at Vern Willis' and Rex Hunt's Ranches at Snowflake and Hay Hollow.

The Agent spent one day with Mike O'Haco at Winslow weighing cattle on a demonstration established three months earlier by the Livestock Specialist and the Agent.

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Result Demonstration, Cont'd.

These steers and heifers had been implanted with a hormone stilbestrol in the form of pellets in the ear. They were then fed on a sustaining ration with grain and silage in the feed lot for 30 days and then turned onto the range for 60 days. There were 42 calves in all, half steers and half heifers. Half were implanted and half used for control.

Those receiving implants showed an increase in gain of slightly more than 8% more than those not receiving implants. These will be weighed again in about 60 to 90 days.

To Mr. O'Haco this was conclusive evidence to justify the operation for all of his steers.

Northern Arizona Cattlemen's Ass'n.

The County Agent met with the President and Secretary of the Northern Arizona Cattlemen's Association in a planning meeting for the Annual Meeting held in Holbrook, January 18. He also attended the Association's business meeting and the banquet of Cattlemen and Cowbells. They asked the County Agent to serve on a committee in an advisory capacity to re-organize the Junior Cattlemen's Association.

Juniper Control Meeting

The Agent participated in a Juniper Control Meeting at Whiteriver, January 22.

Bull Testing Program

The Livestock Specialist, Al Lane, Dr. Nelms of the Animal Industry Dept. and Mr. Burnham, Information Dept., College of Agriculture, University of Arizona, conducted a bull testing demonstration at the Apache Indian Reservation, Whiteriver. The Agent was unable to attend because of a conflict with another program. The Agent held a conference with the three at Show Low the evening of May 13.

Southern Arizona National

The Agent worked with L. B. Decker, a purebred breeder in Snowflake. A fitting and showing demonstration was given to Mr. Decker and his two sons in preparation for the Southern Arizona Livestock Show.

Mr. Decker was also advised on giving shots or penicillin before moving the calves in order to avoid shipping fever. The Agent wrote a letter to Specialist Al Lane, asking him to contact Mr. Decker at the Show and advise him as needed.

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Southern Arizona National, Cont'd.

This was the first show of this type in which Mr. Decker competed. His pen of three bulls placed second in the Show. He wrote a letter expressing appreciation for the assistance rendered by both the Specialist and County Agent.

Livestock Loss

L. Barr Turley reported the loss of a registered Hereford Bull on an irrigated pasture. This was the fifth animal he had lost on this one pasture, during the past year. There were no losses on any other pastures.

The Agent with Louis Hamilton of the Plant Material Section, University of Arizona, Range Conservationist with SCS and Range Conservationist with Indian Service made a study of all plants which might be poisonous to livestock. Since the pasture was in fair condition the cattle had eaten very few of the weeds. Possibility of nitrate poisoning was considered.

Brucellosis Information

Herman Thomas had been misinformed to the effect that he would need to have his cattle tested and quarantined in order to ship out of the State. The Agent supplied him with official information on shipping from a Modified Certified Brucellosis Free County such as Navajo County. All he needed was a certificate from an inspector to ship out of the county or out of the State.

Livestock Study DaysWhiteriver

On August 13, a livestock study day was held on the Apache Reservation. 57 were present. Mr. Lane gave a demonstration on classing feeder cattle. Practice classing and judging was conducted. The County Agent gave a talk on cattle outlook. E. E. Ellison, Extension Agent with the Apache Indian Agency was in charge of the meeting.

Hopi

On August 14, a livestock study day was held on the Hopi Reservation. Al Lane gave a type demonstration with a two year old heifer. Those present judged classes of hereford heifers, hereford steers, a class of ewes, and a class of rams.

Springerville

Eighteen 4-H members and six adults attended a livestock classification and judging day at the Suncrest Hereford Ranch at Springerville.

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Livestock Study Days, Cont'd.Fair Judge

Mr. Al Lane, Extension Livestock Specialist, with the University of Arizona judged the livestock both 4-H and adult at the Navajo County Fair.

Fitting and Showing Demonstration

The Agent gave a fitting and showing demonstration at the Mike O'Haco Ranch with both beef cattle and sheep.

Range Tour

A range tour was held with the S.C.S. and the Hopi B.I.A. at Cephas Perkins Ranch West of Holbrook. Plantings of alkali Sacaton were observed on a salt flat. The planting was made last summer. Fair results are evident.

Cattle List for Dr. Stubblefield

A list of cattlemen with the number of cattle in their operations was completed and mailed to Dr. Tom Stubblefield. This list was needed to complete a study he is making.

Cooperation with Brucellosis Program

The County Agent cooperated with the Federal Veterinarian in sending out cards announcing the testing schedule in the County.

Assistance with Cattle Sale

Herman Thomas reported 200 cows and calves for sale in August. The Agent wrote letters to 6 county agents and the Arizona Farmer Rancher listing details of the cattle for sale. The announcement appeared in the Arizona Farmer Rancher. The Cattlemen expressed appreciation for the assistance.

Auction Sale at Snowflake

The Agent assisted with planning and attended the Community Cattle Auction Sale at Snowflake, October 30. The 456 head were sold. Most of the cattle were sold to local buyers. The selling price was slightly lower than had it been a week or especially a month earlier. However cattle on the market were off. Most cattlemen were fairly well pleased.

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5 DAIRY

Plans were discussed with Mr. Van Sant, Dairy Specialist and local dairymen to hold a meeting in August to discuss artificial breeding and DHIA

The Dairy Specialist, W. R. Van Sant, Dr. Verl Smith, Head of Dairy Department, University of Arizona, and Mr. Loy Despain, who is receiving his Master's Degree in Dairying at the University, attended a dairy meeting at Holbrook on Dairy Herd Improvement Association, DHIA) and Artificial Breeders Association.

A tour was made to observe the dairies in the County.

The dairymen at Joseph City indicated an interest in both programs. There is a possibility that Mr. Despain whose home is in Joseph City, will be interested in serving as Manager of both of these associations when he obtains his degree in January. He expects to work on these two programs in addition to establishing a Poultry program at Joseph City.

Dairy Tuberculosis Testing

The Agent cooperated with the Federal Veterinarian in sending notices to dairymen of the date their cattle were to be inspected.

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6. POULTRY

The Poultry Specialist, Mr. Van Sant was contacted for a list of the hatcherymen in with the National Improvement plan. This list is kept on file in the Extension Office. A list was supplied to the Vocational Agriculture Instructor at Snowflake.

A poultry mailing list of this county was sent to Mr. Van Sant, Extension Poultryman.

There are only a half dozen commercial producers in the county. Most of them are located at Joseph City. L. H. Wimmer has the largest flock with 9000 laying hens. These eggs are sold through a local cooperative at Joseph City, Winslow and Holbrook, both to stores and on the milk route.

Mr. Kartchner of Woodruff has about 4000 hens. His eggs are sold locally in the stores.

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. AGRONOMY

Troy Williams of Linden requested information on the best variety of grain sorghum to plant in the area. The Agent wrote to the Agronomy Specialist for information. The Agent also wrote letters to Agents in four surrounding counties for any crops booklets that had been made up in their counties. 100% cooperation was received from the Agents.

Need For Cash Crop

The Agent was asked about a cash crop for the dry land area in the county. Because of the large acreage of pinto beans in Coconino, this crop was considered. Valuable information was received from County Agent, Bill Brechen on this

Establish Sorghum and Corn Variety Tests

George Clark, Extension Agronomist spent two days in Navajo County with the County Agent. He brought sorghum varieties to be given trial tests at Ted Smith's in the dry land area. He also plans to send corn varieties to be planted in the same areas. These plantings will be made the 10th of May for corn and 20th of May for Sorghum.

Result Demonstrations were established at Ted Smith's, Linden, with ten varieties of sorghum and four varieties of corn. Planning was done with Extension Agronomist, George Clark in April. Records of the demonstration are in the county Agent's office.

A demonstration with sorghums was set up at Rex Hunt's of Hay Hollow.

Observations were made during the month of the demonstration plantings of grain sorghums at Ted Smith and Troy Williams, Linden; and at Rex Hunt's, Hay Hollow. The plantings looked good at both areas. The Linden plantings on dry land farming had had very little rain since being planted May 20 and were in need of rain.

The Agronomy Specialist, George Clark, with Dr. Stith and Dr. Baltensperger from the University Agronomy Department visited Navajo County to observe the grain sorghum result demonstration in the dry land farming area at Linden.

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Result Demonstration Grain Sorghum Harvested

George Clark, Extension Agronomist, Troy Williams, and the Agent, checked the yields on the grain sorghum demonstration plantings at Linden. Results are in the County Agent's Office.

Grass Nursery Hay Hollow

Copy of a letter was received by the Agent from Louis Hamilton written to Dan Freeman, Area Conservationist, asking for money assistance from the Soil Conservation District to keep the University of Arizona Grass Nursery at Hay Hollow in operation. Copies of this letter were made and sent to the Assistant Director of Extension Service, Extension Livestock Specialist, Agronomy Specialist and Soils Specialist.

It is this Agents feeling that this project could be quite valuable to Northern Arizona if it were organized properly.

A field day was planned by the County Agent and Unit Conservationist for May or June at the Grass Nursery. Ranchers and Farmers were invited to study the different plants. One or more specialists from the Extension Service, Louis Hamilton from the University, and a Range man from the SCS were invited to participate on the program.

Field Day Grass Nursery

A field day was held June 17 at the Snowflake Branch Nursery, the Plant Material Section, University of Arizona. Fifty-seven Farmers, Ranchers, and Agricultural leaders from Navajo and Apache Counties attended the event. This was a joint program sponsored by the Agricultural Extension Service, University of Arizona, and Soil Conservation Service.

Sorghum Alnum

Requests were received from Darrell Brimhall, Snowflake; Irving Gibson, Hay Hollow; R. L. Pearce, Linden; Burr Webb, Joseph City; Mr. Allen, Woodruff; and Jim Finley, Goodwater, asking permission to plant Sorghum alnum as trial plots. This was recently classified as a noxious weed.

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Further interest was developed for trial plantings of sorghum alnum which was ruled a noxious weed by the Commission of Agriculture and Horticulture. The Extension Specialist suggested that the reason for the ruling was to protect seed breeders in Southern Arizona and that because of the cold winters in Navajo County it probably would not survive through the winter here. He suggested calling the Commission to see if permission could be granted to have some trial plantings in this county under the observation of the County Agent. The Agent was informed by the Commission that the only way they could do this was by request from Dean Myers of the University of Arizona. The Agent asked the Agronomy Specialist to make necessary contacts at the University. He informed the Agent that the Agronomy Department would not approve it. Therefore it was not presented to Dean Myers.

Tansey Mustard

Mr. John Bushman of Joseph City reported an outbreak of weeds in the community. The weed was identified by Agronomy Specialist, George Clark as Tansy Mustard.

Agronomy Tour of County

Dr. Howard Ray, Extension Agronomist, arranged with the County Agent to conduct a tour of the County for the benefit of new members of the University. This tour was held October 29, with Dr. D. F. McAlister, Head of Agronomy Department; Dr. M. A. Massengale, new member of the Research Staff, who will be conducting a mobile research program in Northern Counties; Mr. Bob McKnight, the new Assistant Information Specialist with the University; Dr. Howard Ray, who recently was employed as Agronomy Specialist; and the County Agent. Field Crops and farming were observed at Goodwater, Holbrook, Woodruff, Hay Hollow, Snowflake, Taylor, Shunway, Show Low, Linden, Burton, Pinedale, Clay Springs, and Joseph City.

Sorghum Alnum, Continued

As further interest developed in the County with Sorghum alnum, the Agent called Dr. McAlister, Head of the Agronomy Department. He gave his approval to write Dean Myers, who referred the letter to Dr. Frevert, Director of Research. Both agreed that a program could possibly be developed on this during the winter. The Agent has proposed it as a possibility to Dr. Massengale who will be doing research in the Northern Counties.

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8. IRRIGATION

Water analyses were obtained and sent to the University for Raymond Randall and L. H. Wimmer, Joseph City; Jim Finley and Stuart Despain, Holbrook; Ella Blackwell and Loy Despain, Joseph City.

New Development

Advantages and disadvantages of flood as compared to sprinkler irrigation were discussed with Jim Finley. He is planning to plant 300 acres of irrigated feed crops. This will be a new development.

Wells are being drilled to take care of 100 acres of new development. The development of the land will follow if the first 300 acres is favorable.

In response to an irrigation problem with salt in water, the irrigation specialist, Al Halderman worked with the Agent and Jim Finley. He advised Mr. Finley to wait until the need of a soil amendment was apparent before making application.

Mr. Al Halderman, Irrigation Specialist for the University, worked with the Agent on a water problem at the Finley Farm North of Holbrook a second time during the year.

Reservoir at Lakeside

Farm visit was made to F. E. Hammond's place at Lakeside to advise on a reservoir for storage water. Conferences were held with C. K. Spaulding, Supervisor of Sitgreaves National Forest, conference was held with Vic Evans of SCS to obtain technical service for Mr. Hammond. He is getting the reservoir which will facilitate his watering problem.

General Information

Professor Schwalen was supplied information concerning the amount of storage water, amount of runoff, depth of moisture in the soil and other general water conditions in Navajo County.

Information was supplied to Bill Bourdon on measuring water in an irrigation ditch.

The Irrigation Specialist advised the agent on a leaching problem on the Shelley place at Holbrook.

This is the beginning of a Specialist team approach that the Agent desires, to work on a problem of high salt, high water table, poor plant growth in the Holbrook area.

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9. ENGINEERING

Agricultural Engineer, Ted Welchert spent one day in the County bringing the Agent up to date on building plans and outling how available material could best be used.

Moylen Owens of Show Low was supplied building plans for a pole type barn and a walk-in type milk parlor. He was also supplied plans for a feeding barn.

Apple Storage

Ted Welchert, Agriculture Engineer, with the University of Arizona, supplied information to be used by Lyle Shumway of Shumway, in building an apple storage house. He plans to store about 1,000 boxes of apples.

Assistance with House Modification

Two requests from Show Low were received for information on controlling excessive moisture in their homes. These were from Mrs. Ted Stock and Mrs. Lester McCleve. The Agent visited their homes and wrote a letter to Mr. Ted Welchert, Extension Agricultural Engineer for assistance on the problem. A letter was received suggesting improved ventilation and insulation.

Mr. Welchert worked with Mr. and Mrs. McCleve, Mr. and Mrs. Stock, and Mr. Charles Johnson on the 18 and 19th of November. Insulation and more heat in the bedrooms are needed. It was recommended the McCleves insulate their ceiling using a vapor barrier. They also need some heat in the rooms. The most practical method, because of the house arrangement, would be to use small electric fans in each room. It was recommended they try this in one room only at first on a trial basis.

The Stock house may be more simple because of the house arrangement. Since the ceiling has already been insulated it was recommended that a butane gas stove be placed in the hall with a fan on it to blow hot air through short ducts through each bedroom and through the hallway.

Mr. Johnson, who is the Bishop at the Show Low Church, presented a problem of the floor buckling in at the height of the irrigation peak. It was found that a pipe canal for the hot water system runs in four directions under the floor. Apparently gophers or moles have dug holes to this canal, allowing water to accumulate. This moisture increase with hot temperature caused the trouble. They will attempt to locate the spots next summer.

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10. ENTOMOLOGY

Fruit Spray Program

This Agent recommends that the breakdown for small sprayers should be shown in circular when it is revised. Many home orchardists in Northern counties use the three gallon sprayer or sprayer that fits on end of hose.

Louis Mansfield and Dan Toney of Keams Canyon asked for information on spraying apples for Coddling Moth. The Agent advised DDT as recommended in Extension Circular.

These two men have only a few trees and use a three gallon sprayer. This is true of a large majority of fruit growers in the county. The recommendations in the circular and U.S.D.A. bulletin are given for commercial producers with power sprayers. The Agent called Dr. Roney, Extension Entomologist, to find out whether the recommendations for this sprayer would be in the same ratio as for 100 gallons sprayer and for the method of measuring ounces by spoonfuls. The information was obtained and passed on to producers and to stores selling the insecticides.

Babbitts Hardware Store, which handles seeds and insecticides, asked for a supply of bulletins on different subjects in order to supply proper information. These bulletins were supplied to them and also sent to the other stores handling similar products.

The Agent supplied bulletins on spray material to Babbitts Hardware. The spray calendar was explained in detail to Mr. Lehman, Manager of the Department so that the information could be passed on to those purchasing insecticides. Extension bulletins were passed out with the material.

The Fruit-Growers Association at Lakeside was given an outline of how to spray for coddling moth. Dr. Roney's circular was discussed in detail with emphasis on using the DDT spray using proper timing and thorough coverage.

The above was stressed with individual growers all over the county.

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A campaign was carried on in the county to encourage apple growers to follow the DDT spray schedule for codling moth. Poor results were obtained last year. This was probably due to several reasons. 1. Improper timing. 2. Only one spraying. 3. Improper application. These have been stressed with individuals and with dealers handling insecticides.

Weevil Control

Vaughn Smithson of Holbrook, asked for information on control of weevils in wheat stored in a five gallon container. He was given a U.S.D.A. bulletin which outlined several methods of control. Advantages and disadvantages were pointed out. He decided to use heat for control.

Grasshoppers

An outbreak of differential grasshoppers appeared in the Joseph City Area. The Agent recommended use of Aldrin and worked with John Bushman on control. One application obtained approximately 80% control. Dead grasshoppers were observed all over his place.

While the Agent was on Annual Leave the Home Agent contacted the Specialist by phone for recommendations on controlling grasshoppers for Dewey Farr of Lakeside. He was advised to use Deildrin or Aldrin.

Corn Ear Worm

Dr. Roney was contacted for the latest control for Corn Ear Worm. The Agent established a result demonstration with Glen Heward on using DDT to control Corn Ear Worm. The shoe dauber was used with applications every three days for four applications. Satisfactory results were obtained.

Cucumber Recommendations

A letter was written to Dr. Roney, Extension Entomologist to obtain information to be included in a newsletter to be sent to the cucumber growers on management recommendations for the coming year. The President of the Cucumber Growers Association expressed a desire for the information newsletter.

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Result Demonstration With Systemics

A Result Demonstration was established with Dr. Roney at Mike O'Haco's Ranch at Winslow. Two products were used - Co-Ral and Trolene. Complete details are on file in the County Agent's Office.

Results appear satisfactory with the ox warbles. A more thorough check will be made in December. Questionable results were obtained in control of other insects.

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11. SOILS

Soil Samples

A demonstration was given to Wallace McLaws in taking soil samples on one of his farms. He followed this by taking samples on two other fields. These were sent to the University for analysis.

Soil samples were sent to the University as follows: V. P. Richards, Joseph City; BIA, Polacca; Joe Rogers, Snowflake; Drew Shumway, Taylor; Barney Drain, Woodruff; and J. M. Young, Goodwater.

Recommendations were made to the above individuals on the basis of results of their soil tests. Analysis sheets are on file in the County Agent's office.

In Service Training

A three day In-Service training school was attended at the University of Arizona, conducted by Mr. Amburgey, Soils Specialist. This was one of the best planned meetings that I have ever attended. Although the Agent felt that he was spending too much time out of the county he was convinced that the time was well spent. The enlightenment on the saline and alkaline problems were quite interesting.

Soil Specialist

The Soil Specialist worked with the Agent at two different times on problems at the Finley Farms. This is a new development area that will be quite extensive if too many problems do not arise

Conservation Needs Committee

The first meeting of the Conservation Needs Committee was held in Navajo County, September 18. Mr. Lyman Amburgey, Extension Soils Specialist from the University of Arizona attended the meeting. The first meeting was an orientation program. This is the committee set up by Secretary of Agriculture, Ezra Taft Benson on a nation wide basis to determine the land and water needs in each county in the United States projected to 1975. The second meeting of the Conservation Needs Committee met at the County Agent's conference room October 23. The committee completed and approved the N-1 form. Vic Evans, Unit Conservationist, SCS is Chairman and Amos H. Underwood, County Agent, is Secretary.

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The third meeting was held November 20. This was a tour to observe the different classes of soil in the field in Navajo County. In this manner the Committee will better be able to determine the use that the soils will probably have in the future as shown on form N-2.

Fertilizer Test Plots

A fertilizer test plot was established at Ed Muder's between Shumway and Show Low. This is result of planning since last August with Lyman Amburgey, Soils Specialist and Dr. Tucker of the Soils Dept., University of Arizona. The test was established on a permanent irrigated pasture of fescue, brome, and orchard grass. The pasture was established in the spring of 1957. Water is applied every 10 days by sprinkler system in the regular pasture program.

Various amounts of nitrogen, phosphate, potash, and trace elements were applied on plots 10 ft. by 20 ft. Three replications of each were applied. The tests were established by Dr. Kirt Tucker, Lyman Amburgey, and County Agent in Holbrook.

The complete outline of the tests are on file in the County Extension Office and in the Soils Dept. at the University.

EXPERIMENT 58-m

<u>Treatment</u>	<u>Green Weight</u>		<u>Dry Weight</u>	
	lbs/42 sq.ft.plot	lbs/a	lbs/42sq.ft.plot	lbs/a
1. 0	0.23	239	0.12	124
2. 100-0	0.70	726	0.34	353
3. 200-0	1.68	1742	0.52	539
4. 300-0	2.08	2157	0.67	695
5. 0-92	0.20	207	0.12	124
6. 100-92	1.55	1607	0.49	508
7. 200-92	2.63	2727	0.73	757
8. 300-92	3.48	3609	1.24	1286
9. 200-92-72& Fe, Zn, Mn	2.73	2831	0.94	975

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13. AGRICULTURAL ECONOMICS

County Survey

The Agent worked with Dr. Campbell a couple of days in checking data to be added to the County Survey. Dr. Campbell's suggestion that the list of landowners be checked at the Tax Assessors office in order to revise the mailing list was done. Dr. Campbell attended the fruit-growers meeting with the Agent at Lakeside and discussed economics with the group.

Purchasing Beef

Dr. and Mrs. James Schmidt of Keams Canyon asked the Agent where and how they could buy half a beef for their home freezer. The Agent advised that unless they knew of someone who was feeding out a steer, which is not common in the county, that it is usually more economical to contact the different meat markets and see which has the product desired. He also outlined the U. S. Grading system of the dressed carcass and the advantages and disadvantages of each. They purchased half a beef of choice grade for 47¢, cut up and packaged

Crop Economic Data

Conferences were held with Dr. George W. Campbell, on Economic program in the County. Plans were made for him to work with the SCS Unit Conservationist, the Vocational Instructor, and the Agent to revise some economic data on various crops in Navajo County. This work will be done in December.

Miscellaneous Information

Mr. and Mrs. E. Hinkson were supplied charts showing how to cut up beef and lamb for the freezer.

Market Reports were sent to leading cattlemen.

1958 Farm Tax Guides were sent to the farmer and rancher mailing list in the County in December.

Dr. Campbell, Extension Economist supplied the information which the County Agent used in a talk on outlook at the Whiteriver Livestock Study Day.

Income Tax and Social Security Planning Program

Dr. George W. Campbell, Extension Economist worked two days with the Agent on plans for a series of meetings of an educational nature on Income Tax and Social Security for farmers and ranchers.

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Income Tax and Social Security, Cont'd.

Conferences were held with the following accountants; Vernon H. Humes, Yates Heywood and J. C. McCleve of Holbrook, and A. Palmer of Show Low. The purpose of these conferences was to inform them of the plans and to obtain opinion of the need for this type of program. Each of these men expressed the opinion that there is a need for more education along both lines. They also said they would be glad to cooperate on a possible panel discussion. The Specialist suggested that a series of two or three community meetings be held in homes with perhaps a half dozen couples, including husband and wife, being invited. The first meetings would be introductory and of a general nature.

The Agent proposed that this be presented to the County Farm Bureau as a sponsor with the Extension Service. After some community meetings on a small scale on a trial basis, the Farm Bureau might want to include this into their County Program for the coming year. The first meetings would be held in Farm Bureau Leaders homes but not limited to Farm Bureau members.

Schedule has been made for a series of three meetings of husbands and wives in the homes of Farm Bureau Leaders as follows:

- Dec. 8, Virgil Flake, Snowflake
- Dec. 9, Bert Solomon, Shumway
- Dec. 10, Almon Owens, Show Low.

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14. PLANT PATHOLOGY

Tree Planting

Dr. Shields, Extension Plant Pathologist, was asked to visit the county on a fruit disease which was killing apple and peach trees in a young commercial orchard at Joseph City. It was determined that the trees which had been planted with the graft 18 months before had been planted from four to 16 inches below the ground line. This was causing the trees to smother by not receiving enough oxygen. Fair growth was received last year. This year additional soil was put around the trees which caused the trouble. He was advised to either pull the soil away from the trees which would be a temporary solution or dig them up and replant.

Zables Honeysuckle

Dr. Shields also worked with the Agent on a problem with Zablex Honeysuckle hedge at the V. P. Richards home to observe a zable's Honeysuckle hedge which has been turning brown in the summer for the past two years, and losing its leaves when it should be green. A plan was outlined for checking on nematodes. This should be done in the middle of summer when growth is at its peak and after the problem reappears. This year the condition appeared later than last year and did not appear to be so severe.

Crabapple Disease

Mrs. Roy Charlson of Show Low brought a sample of crab-apples with a disease. The sample was sent to Dr. Ivan Shields. This was found to have advanced stages of a physiological disease known as "Bitter Pit". This is caused by a disturbed water relationship.

Chlorosis in Apples

A sample of leaves and description of disease on apple trees was sent to Dr. Ivan J. Shields, Extension Plant Pathologist; it was identified as an acute case of Chlorosis. Iron sulphate was recommended.

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Curley Top

The Agent contacted Dr. Shields on a tomato disease prevalent in the county. It was established as curley top or Western Yellow Tomato blight. Ten people from all over the county contacted the Agent on this problem. Ninety per cent of plants purchased from the valley died. Twenty-five per cent of plants raised locally died.

Other problems that developed were Chlorosis in roses, peaches, and garden plants. Crown gall of apricot and "damping off" in beans.

Powdery Mildew on Roses

Miss Augusta Flake of Snowflake reported powdery mildew of roses. She was advised to use dusting sulphur.

The Agent recommended dusting sulphur for control of powdery mildew to three homeowners during October.

Cucumbers

The cucumber fields of Snowflake were checked for disease. Curley Top and Angular leaf spot were found to exist in a majority of the fields. Curley Top was the most prevalent.

A letter was written to Dr. Shields, to obtain information to be included in a newsletter to be sent to cucumber growers on management recommendations for the coming year. The President of the Cucumber Association has expressed a desire for this newsletter.

The letter will be written in December with a follow-up in the spring.

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15. INFORMATION

Assistant Information Specialist, Bob Doan spent three days in the county with the Agent. The information program for Navajo County was discussed in detail. It was agreed that the program should be increased as the county overall Extension Program grows.

Contacts were made with the Show Low Radio Station, White Mountain Eagle Publishers and Mr. and Mrs. Box and with the Publisher and Editor of the Winslow Mail, Mr. J. Morris Richards.

Mr. Doan supplied a short tape each week for the Show Low Radio station. Mr. Doan also suggested that each week the Agent send at least one sheet of the specialist newsletter each week to the three newspapers and three radio stations.

The Agent started this program in addition to any special news available.

Arizona Farmer Reporter

Paul Gribben spent part of one day with the County Agent. He attended the 4-H Electric Judging pilot meeting at Holbrook conducted by Ted Welchert, Extension Engineer, from the University.

Introduce New Home Agent

The new Assistant Home Agent, Mrs. Betty Hearn, was introduced to the publisher of the Holbrook Tribune News and the Show Low White Mountain Eagle.

Newsletters

A general information newsletter was sent to the mailing list of 550 farmers and ranchers.

A dairy letter was sent to dairymen announcing a dairy meeting.

Weed and Grass Bulletins

The bulletin recently published by the University on Weeds of the Farm, Ranch and Garden, with a grass bulletin was sent to the county mailing list. This has been received with many favorable comments.

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Livestock Bulletin

The bulletin published by the University on Shrinkage of Livestock was mailed to the cattlemen's mailing list for the county before roundup so the information could be used when selling their cattle.

Kiwanis Meeting

The Agent was speaker at the Kiwanis Club in Winslow. The Agricultural Extension Service and its role with the College of Agriculture was outlined to the Club.

Navajo Indian Agency

The Agent met with representatives of the Indian Agency to explain the services that are available through the Agricultural Extension Service, of the University of Arizona.

Newsstories to County Papers

Newsstories were sent to the local newspapers of Agricultural and 4-H events in the County.

A summary and complete rundown of exhibits at the Fair was supplied to the local papers. The entire list of entries was published in the Holbrook Tribune,

Radio Coverage For Fair

The County Agent gave a summary of the livestock, dairy, poultry, 4-H and Agricultural show at the County Fair over KDJI radio during the Fair.

Bob McKnight Visits County

The Assistant Extension Information Specialist spent the day of October 29 with three members of the Agronomy Department and the County Agent on an Agronomy tour of Navajo County. Tentative plans are being made for him to work with the Agent on an Information Program as soon as the Annual Reports and Plan of Work are completed.

Cub Scout Advisory Committee

The County Agent has been selected to serve on an advisory committee for the Cub Scouts. He attended a meeting with 86 present, consisting of parents and boys.

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OUTLOOK FOR 1959

The general outlook for agriculture during the coming year is generally good.

There was more rain during 1958 than this County has seen in many years. The rangeland and desert which is generally parched and brown showed green in most places. Benefits will carry over into next year even if rains do not continue.

Quality and prices this year were favorable to cattlemen because of range conditions. This should continue next year although to a somewhat lesser degree.

Operating costs will continue to rise. Labor and equipment prices are continually rising. This will necessitate a more efficient operation.

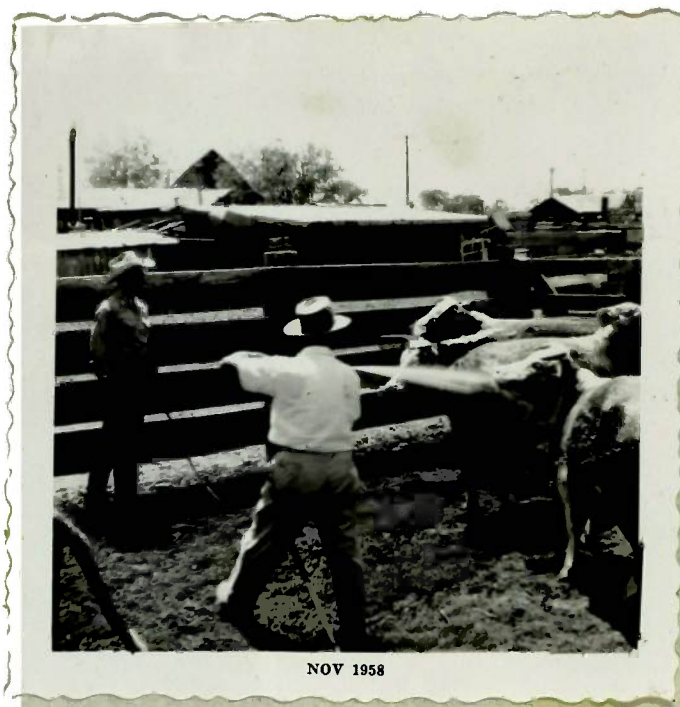
The dairymen of Joseph City should be in a more favorable position. They have consolidated to market their milk under the trade name "Midway Products". This will cut down on overhead and increase efficiency.

Dryland farmers should be in a more favorable position after the fall rains if normal moisture is obtained in the spring.

Insect and weed condition is normal.

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Result Demonstration at Mike O'Haco's Ranch, Winslow.
Systemics to control cattle grubs.



Dr. J. N. Roney with sprayer. Mike O'Haco standing by,

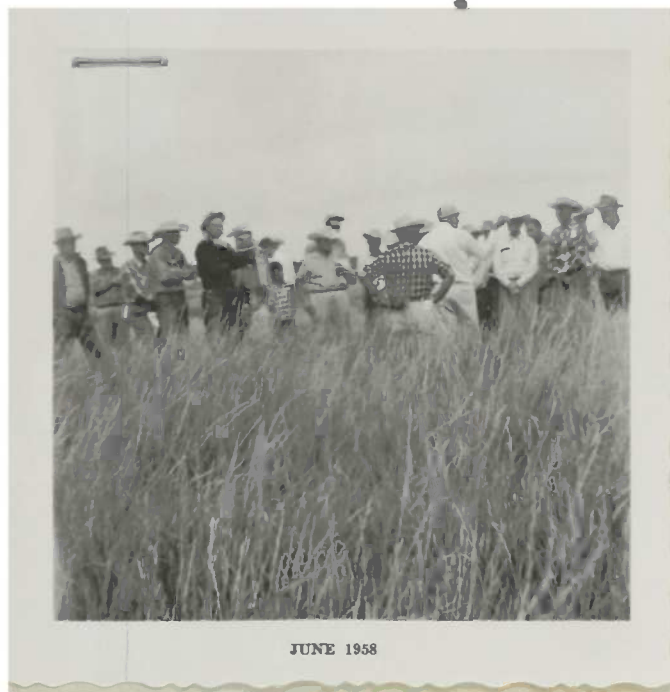
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Observation Day at Ted Smith and Troy Williams
Farm, Linden. Result Demonstration of Grain
Sorghums.



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Study Day at University Nursery
Snowflake



JUNE 1958

Nursery Field Day Proved Interesting To 57 On June 17th

(From Last Week)

Fifty-seven ranchers, farmers and field men from Navajo and Apache counties received a guided tour through Hay Hollow, near Snowflake, June 17, to see various types of grass they constantly see too little of on their own ranges.

The nursery was established in 1954 in an agreement between the University of Arizona and Bill Bourdon, local farmer, for the purpose of providing a location for the plants to be tested for adaptability to Northern Arizona.

Since that time, the farm was purchased by Irving Gibson, who has continued the work on the grass nursery, keeping it fenced, irrigated, and cultivated. As host for the field day last month, Gibson said he intended to keep up the experimental work, in conjunction with Louis Hamilton, manager of the plant material center, U. of A., Tucson.

Others present and on the program in addition to Gibson, Bourdon and Hamilton were Mervin Wallace, state agronomist, Soil Conservation Service, Phoenix; Tom Baker, range conservationist, SCS, Springerville; Vic Evans, unit conservationist, and Amos Underwood, county agent, both of Holbrook.

Wallace emphasized that management more than species determines productivity of pastures. He said alta fescue, orchard grass and smooth brome have been proven to be adapted for irrigated pasture. The nursery is trying to produce better strains of these. Two legumes adapted to northern Arizona are birdsfoot trefoil—a non-bloating plant—and ladino clover. Both work well in a grass mixture.

Management consists of rotating the livestock to permit irrigation and regrowth between grazing. And he emphasized the need to maintain moisture in the upper two feet of the root zone as well as supplying adequate nitrogen for growth.

Concerning this, Hamilton said that a 30-unit application of nitrogen will provide sufficient additional forage for an animal unit and the return in beef will more than pay for the fertilizer.

Baker discussed range grasses, and again emphasis was on management. The wheatgrasses, such as pubescent, intermediate and tall wheatgrass, fit in well in the northern range areas under dryland conditions, Baker said. Western wheat is being tested for low rainfall and lower elevation while species of lovegrass and panicum are under test to find their resistance to cold.

Blue grama is another matter,

he said, being a bunch grass and not a sod former. However, ranchers have cut as much as a ton of hay from it at one cutting.

Visitors were taken on a tour of a field and green chop operation by Gibson. In this irrigated pasture he has used a mixture of alta fescue, orchard grass and brome grass interplanted in alfalfa. The fescue has become dominant over the grasses. The ratio of grass to alfalfa is about 60% grass to 40% alfalfa. This pasture was established ten years ago.

Gibson is cutting the feed, letting it wilt, hauling it to the bunkers and feeding it to yearlings located on a half-section of range. These cattle also receive a mixture of barley and salt in one-to-nine mixture fed free choice.

This was the first time most of these Navajo and Apache county ranchers and farmers had seen the work being done at the grass nursery, and their questions showed the intense interest these men have in learning more about the possibilities for better results in both irrigated pastures and range grazing.

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 HOLBROOK TRIBUNE NEWS
 (Front Page)
 Sept. 19, 1958

County Fair Events Achieve New Heights In Excellence, Quality, Entertainment And Attendance

Navajo County's 26th annual fair has come and gone with a record of achieving new heights in every department for excellent, entertainment, and attendance despite inclement weather part of each of the first two days. What was lacking in the way of curtailed midway this year was more than made up in extent of entries in all classes of exhibits, horse show, cutting horse contest, rodeo and horse racing.

Total of 441 persons had entries in this year's various exhibits, and since few people made a single entry, the thousands of entries are easily accounted for, according to officials of the fair.

Of the 441 entrants, 135 entered the fruits, vegetables, and field crops divisions, 166 in 4-H Club work, 75 in home economics, 20 in Indian arts and crafts, 18 in poultry and rabbits (for the largest showing ever made in this department); 8 in sheep, 3 in hobbies, and two in dairy.

New livestock barn was filled with 81 head of livestock, which included 37 Herefords, 11 sheep (of which 6 were registered Suffolk), 11 angora goats, 4 Holstein cattle, 4 milk goats, 3 Angus cattle, 8 Guernsey cattle, 2 Texas longhorn steers, and 1 each of Brown Swiss and milking short-horn cattle.

Grand champion pen of feeder steers, and pen of feeder heifers, were both taken by Virgil Flake, Snowflake, making it four successive years for winning on feeder steers.

Reserve champion pen of feeder steers was won by Van Holyoak of Clay Springs, while the reserve champion pen of feeder heifers went to Bruce Flake of Snowflake.

Grand champion of all breeds bull was shown by Ted Smith, Linden, with an aged Hereford Bull, and reserve champion bull of all breeds went to Mike O'Haco, Winslow, with an 11-month old Hereford.

Grand champion female of the show for all breeds, was won by Lowell Vern Turley, 4-H'er of Snowflake, with a 14-months-old Hereford heifer, with reserve champion in the same division won by Fred Jennings, Holbrook, also a 4-H Clubber, with an 8-months-old Angus heifer.

Tedd Hunt of Snowflake had the grand champion beef steer, and Terry Hunt showed the grand champion dairy female with a yearling heifer.

A new and interesting addition to this year's premium list was the 4-H Booth class. Four entries were made this first time, with all of them being awarded blue ribbons. These included:

Juniper Ridge 4-H Club, Mr. and Mrs. Frank Malone and O. E. Wilson, leaders; Holbrook 4-H Clubs, Mrs. Joan Crabtree and Leland Black, leaders; Hopi Reservation 4-H Clubs, Hansen Tootsie and Francis Ovah, leaders; Woodruff 4-H Club, Mr. and Mrs. Ernie Crofford, Mrs. Minnie Bowler, and Miss Elda Bowler, leaders.

Boys and girls from all the clubs worked with their leaders to build booths, showing the central 4-H Club theme or idea, to tell the 4-H Club story to Navajo County.

With all tabulations far from completed Wednesday night, best and most complete exhibits by one exhibitor in each classification were listed as follows:

IRRIGATED VEGETABLE AND TRUCK CROPS—Billie Smithson, Holbrook, first; D. L. Smithson, Holbrook, second; A. A. Guenther, Whiteriver, third.

WITHOUT IRRIGATION VEGETABLE AND TRUCK CROPS—Ted Smith, Linden, first; Elma Layne Sargent, Clay Springs, second; Gerald Brewer, Pinedale, third.

IRRIGATED FIELD CROPS—Wallace McLaws, Holbrook, first; Robert McLaws, Holbrook, second; and Reed Larson, Woodruff, third.

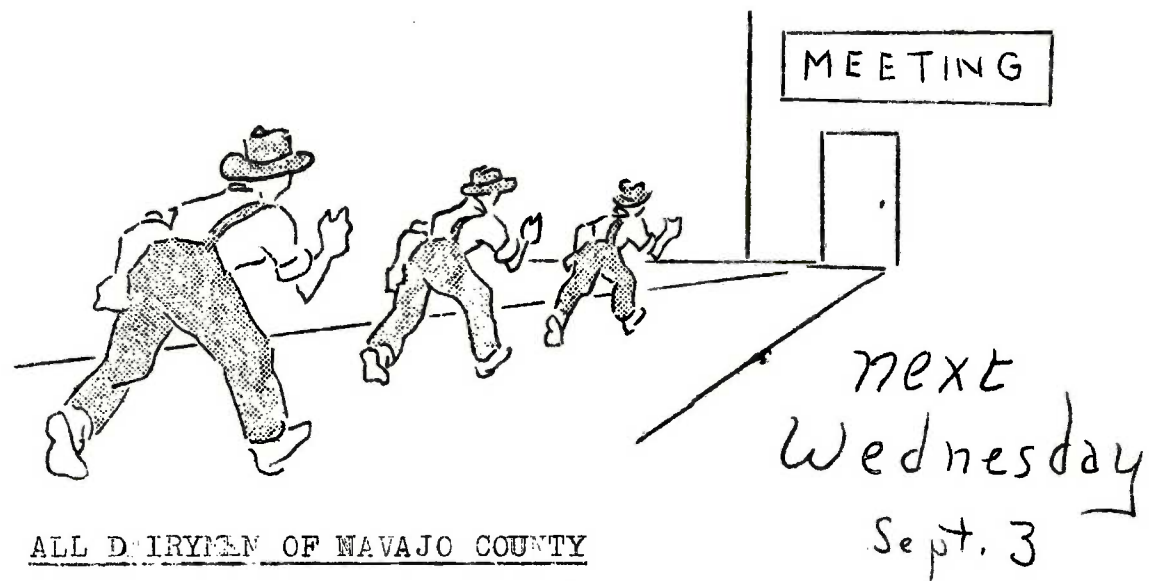
DRYLAND FIELD CROPS—Ted Smith, Linden, first; Van Holyoak, Clay Springs, second.

FRUITS—H. V. Heward, Woodruff, first; W. P. Denham, Show Low, second; Erwin Hansen, Lakeside, third.

Annual Narrative Report

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Arizona
July 30, 1958

University of Arizona
College of Agriculture
J. S. Department of Agriculture
and Navajo County Cooperating
Agricultural Extension Service
Home Demonstration Work
County Agent Work



ALL DAIRYMEN OF NAVAJO COUNTY

Dear Dairymen:

You are invited to attend a dairy production meeting at the County Agent's office, Holbrook, Wednesday night, September 3, 7:30 P.M.

Guests at the meeting will be Dr. Smith, Head of Dairy Department, University of Arizona, W. R. Van Sant, Extension Dairy Specialist, and Mr. Despain who will receive a Master's Degree in Dairying in January.

The main purpose of the meeting is to discuss DHIA testing and artificial insemination. You will also have an opportunity to discuss any dairy problems with these specialists.

Sincerely,

Amos H. Underwood

Amos H. Underwood
County Agricultural Agent

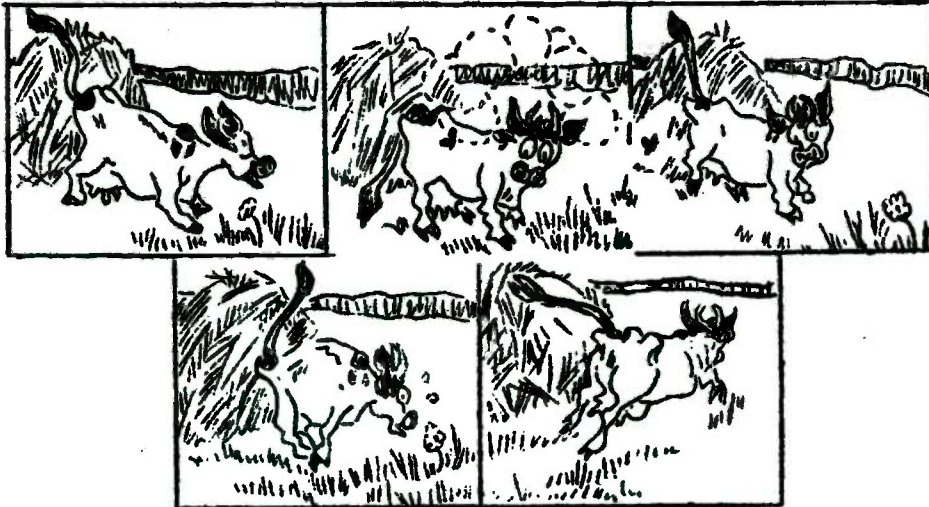
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Annual Narrative Report
 COOPERATIVE EXTENSION WORK
 IN
 AGRICULTURE AND HOME ECONOMICS
 State of Arizona
 Holbrook
 August 19, 1958

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

Agricultural Extension Service
 Home Demonstration Work
 County Agent Work



Dear Rancher and Farmer:

Many cattlemen have expressed interest in a couple of new products for livestock.

Systemics for Insects-Trolene and Co-Ral

Arizona cattlemen have new hope of controlling that old pest--the common cattle grub.

Two new organic phosphorous insecticides that kill grubs--one taken internally---are coming on the market now, says Al Lane, University of Arizona Extension Livestock Specialist.

Most of the herds treated with the two new insecticides show 75 to 95 percent of the grubs killed.

The insecticides are Dow ET-57 (Trolene) and Bayer 21/199 (Co-Ral). Though both are approved for beef cattle, unfortunately there may be a limited supply of these materials available this year. However, production has been stepped up in an attempt to supply the anticipated demand.

ET-57 is given orally by bolus (a large pill) using a balling gun, which places the capsule back of the animal's tongue. Bayer 1/199 is used as a spray.

These insecticides for beef cattle are reasonably safe, but should not be used on cattle which will be slaughtered in less than 60 days, nor on young calves a month or 6 weeks old. It also probably is not advisable to use the material immediately after weaning because of the normal set-back that follows weaning.

Cost runs from 50 cents to \$1.50 a head, depending on the animal's size.

Time to apply is between the heel fly season and before the grubs work themselves up into the cow's back. In Arizona this would probably mean the latter part of September and not much later than the first part of October.

ET-57 also shows promise of controlling sheep nose bot and sorehead. Bayer 21/199 shows promise for control of hornflies, lice, ticks and iron screwworms.

Cattle grubs are present in cattle almost every month of the year in one form or another. But the only time they make their presence felt is in the spring when cattle run and kick up their heels due to the buzz of the adult flies.

Result Demonstrations at Winslow, August 8

August 8, a result demonstration was conducted at Mike O'Haco's ranch at Winslow using Co-Ral and Trolene. Dr. J. N. Roney, Extension Entomologist from the University, helped the County Agent and Mike set up the demonstration. Ninety-six animals were sprayed with Co-Ral. Ten animals were treated with Trolene and ten animals were left untreated so that results can be checked during the season.

Have you Vaccinated for Sleeping Sickness

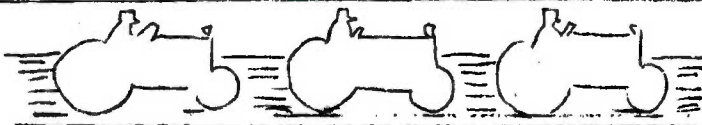
There has been an outbreak of the Western Strain of sleeping sickness in California, this summer, and reported cases in the Salt River Valley. One known case in Navajo County has been verified. Last year several cases occurred in this county near Joseph City, Winslow, and Snowflake.

The latter part of July this year one horse died at Snowflake with the disease according to Dr. Max Taylor, D.V.M., Veterinarian at Show Low; verified by Dr. Kissling, D.V.M., Chief of Federal Laboratory, Montgomery, Alabama.

Apply for Gas Tax Refund Now

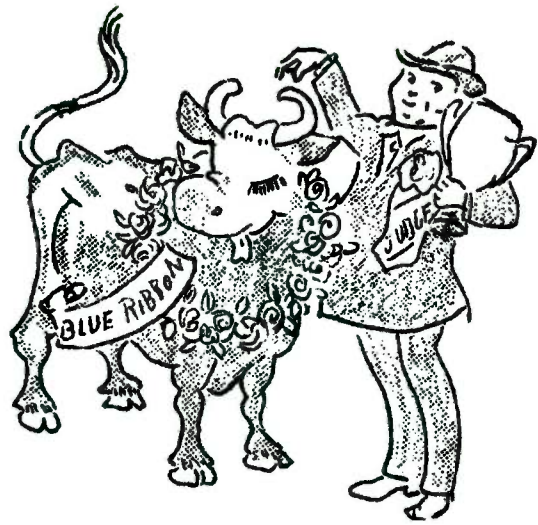
Do not neglect to send off your application forms for Gas Tax Refund on gasoline used on the ranch or farm. You will receive 3¢ per gallon used off the highway. File on Federal Form 2240. If you do not have the form it can be obtained at the County Agent's office.

This must be done not later than Sept. 30.



County Fair

The date is rapidly approaching. When you receive your Fair Book and entry form it would help greatly if you will fill out the form and return to this office. This will give us an indication of the amount of space needed for each department.



Our Fair is an important event in the County. It is your Fair. Help make it the best by selecting now your livestock, field crops, fruit, vegetables, flowers, home products, and whatever you have.

We will be glad to assist or send you information in selecting exhibits or in showing animals in the fair. We have a circular No. 192, "Vegetables, Fruits, Select them, Show Them", that we will be glad to supply upon request.

Our Number One Crop

Our Boys and Girls. Other crops and livestock are produced to support this crop. The 4-H Club is an important organization to use in developing our boys and girls. Do yours belong? If so encourage them to do a good job and complete their project.

We will reorganize clubs in October. New Members will be enrolled at that time.

New Bulletins:

1. Circular 265 - Arizona Ranch, Farm, and Garden Weeds.
2. Circular 218 - Grain Sorghums in Arizona
3. Circular 263 - The Changing Role of the Indian in Arizona
4. Circular 259 - Beef in the Family Menu.
5. Circular 264 - Bulbs for Northern Arizona

The above bulletins as well as many others are available free of charge at the County Agricultural Extension Office. Just drop a card to the County Agent Box 428, Holbrook, Arizona.

You are being sent copies of the Weeds bulletin and Beef Bulletin.

Feel free to call on your County Agent or Home Agent with any of your problems at any time. Phone 34, P.O. Box No. 428.

Sincerely,

Amos H Underwood

Amos H. Underwood
County Agricultural Agent