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

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December 1, 1950

to

November 30, 1951

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By

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County Agricultural Agent

Agricultural Extension Service

COCONINO COUNTY

ARIZONA

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HIGHLIGHTS

This year was one of great disappointment for the dirt farmers. Perhaps the driest June and July in the history of this area was experienced by the farmers. Good stands of beans and grain were almost completely ruined before the summer rains started in late July.

The cattlemen experienced their driest early summer in the history of this area. Almost every cattleman in the county was forced to haul water in May, June and July. Then the last part of the summer and early fall the cattlemen experienced one of his best years. Rains came late and continued until late in the fall. Feed and water conditions were excellent from the middle of August until the cattle left this area in late October.

The best organized County Fair was held at the Flagstaff Armory on September 28, 29 and 30. Exhibits were all above the previous two years with the exception of Agriculture. Severe drouth limited crops and quality was poor. A crowd of about 5,000 attended this years fair.

Three mimeographed circulars were published this year by the Extension Horticulturist and this agent on landscaping. The titles are: "Ornamental Trees For Northern Arizona," "Flowering and Evergreen Shrubs For The Flagstaff Area," and "Flowers and Bulbs For High Elevations in Arizona." These three circulars greatly stimulated landscaping work in 1951.

I. THE AGRICULTURE OF COCONINO COUNTY

Coconino County is located in the northern part of Arizona. It is the largest county in Arizona and the second largest county in the United States. Most of the county, however, consists of National Forests and Indian Reservation. In 1951 there were about 25,000 acres of land classified as dry farming land. There were 1,512,655 acres of grazing land and 6,207 classed as other land. Most of the farming is dry farming with the exception of the Fredonia, Oak Creek and Hay Lake areas. The altitudes in the farming areas range from 4,000 to 8,500 feet, which gives quite a variation of crops. The largest farm areas are in the 7,000 feet elevations and limits crop varieties very much. Crops raised according to their importance are pinto beans, small grains, orcharding, forage crops and truck crops.

An estimated acreage of land planted to various crops for the 1950-51 season are as follows:

Pinto Beans	6,000 acres
Small Grains	8,000 acres
Forage and Pasture Crops	7,000 acres
Truck Crops	250 acres
Orcharding	500 acres
Idle Land	3,250 acres
Total	25,000 acres

The approximate yields of the crops raised during 1950-51 season were:

Crop	Individual Yield	County Average
Pinto beans	1-10 cwt per acre	250 cwt per acre
Winter wheat	1-4 bu per acre	2½ bu per acre
Spring wheat	5-10 bu per acre	6 bu per acre
Spring oats	5-15 bu per acre	8 bu per acre
Alfalfa hay	1-3 T per acre	2 T per acre
Alfalfa seed	150-300 lbs per acre	200 lbs per acre
Orchard Crops	Low to poor yields	
Berries	Excellent yield	

The large number of acres in Coconino County consisting of forest land makes it one of the main range livestock grazing counties in Arizona. As stated earlier there are 1,512,655 acres classified as grazing land. The high elevations, however, make grazing somewhat of a summer enterprise. The majority of the cattle and sheep come into this county in late April and will stay as late as November if weather permits. The approximate number of cattle grazing in Coconino County in 1951 was 35,000 or about a 10,000 decrease over 1950, which was caused by the removal of all cattle from Houserock Valley and most of the remaining Strip Country because of severe drouth conditions. The number of sheep in Coconino in 1951 amounted to around 28,000 head. This was about a 3,500 head increase over 1950. Sheep flock increases and more feed than usual in the San

Francisco Peaks area were the two main causes for the increase.

Dairying in Coconino County is becoming smaller each year. There are now only three dairies in Coconino County and only two of these own cattle. The third dairy ships in all their milk as they claim they can do this cheaper than raising cattle. The necessity of good housing and barns in this climate and the difficulty of raising their own feed will always limit dairying in this county. In 1951 there were about 275 head of dairy stock which was a slight decrease over 1950.

Poultry in Coconino County is becoming quite a popular small enterprise. Many people are raising a backyard flock that will number from 15 to 50 birds. Very few large flocks are in Coconino County, probably not over four or five. Poultry products are always in good demand in Coconino County but the housing necessary because of climate and shipping in all feed will keep poultry quite a small industry.

Problems exist in Coconino County like every other county. Some of the more important ones that confront the agriculture people now are:

1. A sound and practical soil management program.
2. Certified pinto bean and small grain seed source.
3. New crop varieties suitable for this county.
4. Domestic and livestock water supply.
5. Marketing and storage facilities for pinto beans and small grains.
6. Orchard disease work.
7. Weed control research work.
8. Crop insurance at a practical premium.
9. Increased farm labor supply.

II. ORGANIZATION

A. Extension

This agent left the county on December 4 to attend the Annual Extension Conference at the University of Arizona in Tucson. The agent traveled to Holbrook and picked up Jim Armer, County Agent, and Lidia Logan, HDA, from Navajo county. The conference ended December 8, and this agent returned to this county on December 9.

The annual conference was the most interesting and well organized conference this agent has yet attended. The key talk of the meeting was given by Dr. H. A. Hubbard, Professor of History, University of Arizona, on the History of Korea. Mr. K. F. Warner, Extension Meat Specialist, USDA, gave several very interesting and instructive talks. The 4-H part of the conference was well planned and gave the agents considerable information that will help them in their counties.

On April 30 and May 1, the County Agents from the higher elevations, Cochise, Gila, Apache, Navajo, Coconino and Yavapai, met in Prescott.

Mr. Charles Ellwood, Extension Agronomist and Mr. Walter Armer, Extension Animal Husbandman, discussed problems and past years work with the group. Mr. Howard R. Baker, Assistant Director, gave us some information on various reports that are required by the County Agent. The meeting was very worthwhile as it gave the agents an opportunity to talk over their work with the other agents that have somewhat the same type of problems.

On July 31, agents from Yavapai, Coconino, Navajo and Apache counties met in Flagstaff for a one day conference. Mr. Joe McClelland, Information Specialist and Mr. Howard R. Baker, Assistant Director, discussed Annual Reports, Plan of Work and 4-H Roundup with the group. This was a very constructive meeting and many new facts were given in writing annual and monthly reports that will make it a much easier task for the County Agent.

The County Agent was appointed a member of the Agriculture Mobilization Committee for this county in April. This committee was to meet the last Monday of every month. The only actual project the committee carried out this year was the survey of the Family Farm Policy requested by the secretary of agriculture. Meetings in the four communities in Coconino County, Fredonia, Sedona, Parks and Doney Park, were held. Many comments and suggestions were made by the farm people to the various federal USDA agencies. No comment was made at any of the four meetings on the Extension Service.

B. Farm and Ranch Groups

On February 8, the County Agent attended the annual meeting of the Northern Arizona Cattle Growers Association that was held in Holbrook. A very large attendance was present and many interesting talks were given. The county agent gave a short talk on how cattlemen need the advice and assistance of various agricultural agencies and stressed that the Extension Service was willing to help cattlemen at any time.

The county agent met several times with the three local farm bureaus in Coconino County during the year. The locals are located in Parks, Sedona and Doney Park. The agent was asked in many instances to assist in their programs and this opportunity was used to help convey the county extension program to the groups.

The agent has cooperated with the San Francisco Peaks Soil Conservation District Supervisors in many phases of their work. Weed control is mostly conducted by this group, however, the county agent does take care of the educational phase of weed control work.

III. PROGRAM PLANNING

The second Annual Program Planning meeting for the Doney-Blackbill Park Community was held on Wednesday evening, March 28, at the Doney Park Community Building. The Homemakers Club of that area served a potluck supper prior to the business meeting. Fifty-two people attended this meeting.

The 1950 recommendations and accomplishments were prepared in a mimeographed circular and distributed to all members attending. The group felt that all problems had been handled very satisfactorily by the Extension Service. Mr. Howard R. Baker, Assistant Director, Dr. J. N. Roney, Extension Entomologist, Mr. Charles Ellwood, Extension Agronomist, Miss Lucinda E. Hughes, HDA and the County Agent all gave brief talks on the 1950 Program Planning work and also on the 1951 program. Many new problems were presented to the Extension Service for 1951. These were then mimeographed on a circular letter with a brief comment on each problem as to what has or will be done by the Extension Service in 1951. This letter was sent to everyone in the east Flagstaff area.

On October 10, the first Annual Program Planning meeting was held at Parks for all agricultural people in that area. This work had been discussed with them earlier in the year and the people were quite familiar with the program. Mr. Howard R. Baker, Assistant Director, Lucinda E. Hughes, HDA and the County Agent reviewed the aims and purposes of program planning and let the group look through the mimeographed circular of the program planning work that had been done in Doney Park. There was an exceptionally good attendance at this meeting and the group presented a wide variation of problems for the Extension Service to work on in 1952. The agent prepared a circular letter after the meeting, listing the problems presented and gave a brief comment on each as to what has or will be done by the Extension Service in 1952. This letter was mailed to everyone in that area.

The third Annual Program Planning meeting for the Doney-Blackbill Park area was held on October 11, at the Doney Park Community Building. This meeting was called at this time to enable all program planning meetings to be completed in October before work on the program of work for the Extension Service is begun in November for 1952. All program planning meetings will be held in October in the future in Coconino County.

Mr. Howard R. Baker, Assistant Director, Lucinda E. Hughes, HDA and the County Agent discussed the past two years of this work with the group and commented on the work to be done in 1952. The Extension Service complemented this group on their fine cooperation in this new phase of work the past two years. The 1951 problems and accomplishments were given to the group in a mimeographed circular and a brief comment on each was made by the County Agent. Also colored slides of some of the work was shown by the agent. A circular letter listing the problems for the Extension Service to work on in 1952 was prepared after the meeting and sent to every farm family in that area. A brief comment on each problem as to what has or will be done by the Extension Service was made by the agent in this letter.

Program Planning has and is progressing quite well in Coconino County. It is the agent's intention to start this work in the Sedona and Fredonia areas in 1952. If this is done then all communities in Coconino County will have Program Planning.

IV. INFORMATION PROGRAM

A. Newspapers

In March the County Agent began his weekly news column again for the Flagstaff and Williams papers. This column entitled "Keeping You Posted" is published every Thursday in The Daily Sun of Flagstaff and The Williams News of Williams. In this column the agent talks directly to the people on timely and interesting subjects. Questions are sometimes asked by farmers and are answered in this column. This column enables the agent to reach many of the small home gardeners with necessary information that could not be conveyed otherwise because of the time factor.

Throughout the year the agent has written many feature stories on events on farm and ranch conditions in Coconino County that have appeared in the local papers and also in the Arizona Republic and Phoenix Gazette, which are state papers.

B. Magazines

News articles have been written for the Arizona Farmer published in Phoenix and also for the Arizona Cattlelog, also a Phoenix publication. These two magazines request information on agriculture during the entire year. The agent tries to summerize conditions about every two months for these two magazines.

C. Radio

On January 15, 1951, this agent began a radio program over station KGPH of Flagstaff. This program is called "The County Farm and Home Program." The time was first from 12:45 to 1:00 each Monday, Wednesday and Friday. In two months the Wednesday broadcast was discontinued as it kept the agent from being in the field the time that was required. The program has been carried on all year on Monday and Friday. The agent discusses a very wide field of subjects but endeavors to have the subjects timely. Many guest speakers have appeared on this program with the agent and whenever specialists are in the county they are asked to appear on this program. The public comment on this program has been very good. Many times phone calls come to the station before the program is over asking some phase of the subject being discussed on that program.

On August 13, the agent began a second radio program called "Your County Agent Reports" over KCLS of Flagstaff. This program is on every Monday morning from 8:45 to 9:00. The program is broadcast direct from the County Agent's office. The agent also discusses timely subjects on this program.

D. Circular Letters

During 1951 the agent used the circular letter very much to help convey information to the agricultural family. Insect control measures

were used as subjects for many circular letters. The agent has tried to make the circular letters as brief and to the point as possible. It has been the experience of this agent that a long circular letter is seldom read or read in its entirety while a short letter is usually fully read. Most all circular letters from this office is animated in some manner. It is found by the agent that this type of letter holds the attention of the reader longer and probably long enough for them to fully read the message on the letter.

E. County Circulars

In 1951, the County Agent and Extension Horticulturist completed and published three county circulars on landscaping. The circulars are: "Flowering and Evergreen Shrubs For The Flagstaff Area," "Ornamental Trees For Northern Arizona" and "Flowers and Bulbs For High Elevations In Arizona." These were mimeographed in the County Agent's office. They have been a very popular circular and several hundred have been distributed. The circulars list plant varieties that have and will grow in this high elevation and also gives comments on many of the different plants. In the near future a permanent bulletin will be written which will combine all three of these circulars.

There are more needs for county circulars as most state circulars and bulletins have little practical information for the agriculture in this high elevation and severe winters. It is hoped such circulars can be written in the near future.

F. State Circular Distribution

The County Agent's office has a bulletin board of 90 different circulars and bulletins. These are arranged so all bulletins on the same subjects are in one row. This enables the visitor to find the bulletins more easily. Only the bulletins and circulars that have information applicable to this county are on the board. The agent's office has distributed approximately 3,000 bulletins and circulars in 1951. The large distribution is attributed mainly to the information given on various publications by the agent on radio and in newspaper columns.

G. Visual Aids

The agent was able to collect a small number of color slides on some of the demonstration work done in this county in 1951. Mr. Joe McClelland, Information Specialist, was in the county twice and took these pictures.

This office is without a camera or projector and has been very limited in this field. It is hoped that a large collection of color slides can be made of some of the important demonstration work in 1952. If this work is recorded in that manner it is very easy to show farm groups over the county what is being done and is also an excellent permanent record on this type of work for the agent's office.

V. PROJECTS

3. Horticulture

A. Insect Control

The greatest problem that is still threatening to ruin the apple orchards in Oak Creek Canyon is the successful control of the spider mite. In the past three years quite a number of different miticides and methods and times of application has been tried on the two-spotted mite. It was thought that parathion was the answer after the success of 1950. However, after the 1951 season we know that parathion is not the answer.

The agent recommended the spraying of lime-sulphur in December and March of the past year. This lime-sulphur destroys any living red spider and two-spotted mite that is still present after the trees go into dormancy. It also kills or destroys the millions of eggs in the bark and around the crown of the tree. Only one orchardist sprayed with lime-sulphur in December but did not follow up in March. Other orchardists sprayed only in March.

Early surveys in April and May revealed no two-spot or red spider in the December sprayed orchard. However, in some orchards sprayed in March and some not having sprayed at all, medium to extra heavy infestations of red spider and two-spot were found. The agent recommended 15-20 ounces of 25% wettable parathion to each 100 gallons of water as a spray to combat these mites. Good control apparently resulted as no mites were found until late June. Mites also began to show in the December sprayed orchard at this time. Regular parathion spray was then followed throughout the summer. Some orchardists sprayed six and seven times during the season. Immediate kill was noticed but the residual action was poor and eggs continued to hatch and re-infest the orchards. Leaf damage was mild to severe in orchards using parathion and fruit was quite irregular in size, shape and color. Two spotted mites were still present at harvest time when spraying had to stop.

One orchardist, Frank Pendley, used a new miticide, sulphenone, about mid-season on a portion of his orchard. Quick kill did not result on the two-spot, however, excellent residual effect was noted. Young mites hatching as late as ten days after spraying were being killed. This miticide looked very promising, however, the trees it was used on had considerable leaf and fruit damage from the mite before the sulphenone was used. This new miticide will be used in 1952 and results will be accurately recorded.

The Junipine Ranch, managed by Tom Anderson, tried another new miticide, aramix. This was put on in spray form about the middle of July. No previous spraying had been done on this orchard, only lime-sulphur in March. The aramix also showed remarkable residual properties and continued to kill newly hatched mites for weeks after the application. This orchard was checked regularly by the agent and no infestation of two-spotted mite appeared the rest of the season that would warrant additional spraying. At the end of the season the apple trees were still

very green and healthy looking and the fruit was of a good size and quality. This miticide will be used again in 1952.

Dr. J. N. Roney, Extension Entomologist and this agent made an extensive survey of these orchards in September to make our conclusions on the mite problem. The conclusions were that apparently the parathion is killing all natural enemies of the mites, thus leaving only the miticide to do the control work. The sulphenone was not killing the natural enemies, however, because this was used on trees that had been sprayed with parathion an accurate conclusion could not be reached. The aramix also does not kill natural enemies of the two-spot and it appeared that the natural enemies are more than necessary to help the miticides to do their work. This appeared to be the key to success in mite control on the Junipine Ranch. Recommendations for 1952 spraying will be not to use parathion on the apples until one of the newer miticides prove to be a failure in controlling the mite. It is also the hope of the agent that all orchardists will use lime-sulphur in December and March as was recommended in a circular letter in October, 1951.

The codling moth was quite common this year in Oak Creek. First signs of the moth was in early May. All orchards except one used DDT as recommended in the "Fruit Insect Control" circular. One orchardist failed to follow up the first DDT spraying and let a period of five weeks lapse before the second application was applied. This orchard suffered 100% apple loss due to worm damage. Other orchardists followed the recommended spray schedule and very little worm damage could be found at harvest time.

One orchardist chose to use arsenate of lead for codling moth control. This orchard suffered about 50-75% apple loss from worms. This definitely proved DDT superior to arsenate of lead for codling moth control.

This is the first year that thrip was not present in damaging numbers in Oak Creek. Hardly one thrip was ever found during the bloom and early fruit setting season. No exact explanation could be given other than perhaps the dry open winter.

B. Spray Thinning

Elgetol, a dinitro spray composed of sodium dinitro orthocresylate, was used this spring for the first time in Arizona for thinning fruit in the full bloom stage. This chemical has and is being used quite successfully in fruit orchards in the northwestern states. It is recommended that one pint to one quart per 100 gallons of water be used and sprayed on the fruit trees from full bloom to two days past full bloom. It is recommended that up to 30 gallons per tree be applied. The weather conditions should be fairly warm, above 70 degrees, and no wind.

The Junipine Ranch applied elgetol on about seven pear trees. The weather was not too favorable during full bloom. Rainy weather, cool and windy were the conditions at the time of spraying. About 15 gallons per tree were applied. The results were quite successful.

The pear trees sprayed had always set from two to five pears per flower cluster which made it necessary to hand thin. This year the trees set only about 2% doubles and no triples and etc. No hand thinning appeared necessary as only one pear for each flower cluster had set. Just prior to harvest it was noted that some hand thinning should have been done to prevent small limbs from breaking. Elgetol will be used again in 1952 on pears.

Frank Pendley used elgetol on Jonathan apples during full bloom. Weather conditions were very bad. Wind was strong, rainy and temperature was 56 degrees at the time of spraying. Some difference could be noted in the apple set on sprayed and check trees. However, there was not enough to say that the spray was the influencing factor. Weather conditions apparently caused the failure. Elgetol will be used again on apples in 1952.

The growers are of the opinion that elgetol will work in Oak Creek Canyon. If it does a great saving in labor can be achieved as well as securing higher quality fruit. Elgetol will be used on apples, pears and peaches in 1952.

C. Orchard Management

Walter Jordan, of Sedona, purchased the most up-to-date apple grader for $3,600. This grader is all mechanical and has twelve bins to drop the various grades of apples into. This type of grader made the harvesting cost much lower in 1951 than previous years.

Frank Pendley removed about 400 mature Jonathan apple trees in December and January. The lack of demand for this apple and constant powdery mildew trouble were the reasons for this work. In April over 500 double red delicious trees were planted in this area. The trees were purchased from the Stark Brothers Nursery. Only about ten trees failed to live the first season, which was a very good average.

The severe type prunning of peach trees and semi-severe type prunning in apples have definitely proven itself in Oak Creek. This method of prunning enables the grower to keep the trees in a vigorous healthy stage and also to keep the fruit close to the ground. A much higher quality fruit and larger fruit results from this method. It is very necessary, however, that a thoroughly experienced orchardist do the prunning as an unexperienced man is quite likely to cut the fruit wood.

4. Livestock

A. Range Grass Food Analysis

In April of this year work was started on analysis of the important range grasses for possible major or minor food element deficiencies. Cattlemen have been asking for such a survey to be made as they suspected phosphate deficiency in many of the range grasses. Walter Armer, Extension Animal Husbandman, Dr. B. P. Cardon, Animal Nutritionist, of the University

of Arizona, and the County Agent made collections of grasses. Collections were made in Kendrick Park area, Rogers Lake, Gray Mountain, Dead Man Flat, Pollock Ranch and Anderson Canyon. The varieties of grasses collected were Arizona fescu, mountain muhley, spiked muhley, blue grama, black grama, side out grama, blue stem, galleta and alkali sacaton. Shrubs collected were cliff rose, Oregon grape and chamiza. The plants will again be collected in August and late fall, probably in November or December. Results of these analysis will be made available to the livestockmen so a supplementary ration can be fed in areas where food deficiencies are found.

B. Poison Weeds

In August reports came in of cattle losses due to poison weeds in the Lake Mary area. Three cattlemen had lost several head of livestock and could only trace the cause to something they had eaten. The County Agent surveyed this area and collected a great number of suspicious weeds. They were sent to the University of Arizona for identification. The Animal Pathologist was also consulted on these losses and told of the symptoms of the dieing animals. The only weeds that were classed as poisonous and possible to cause death were phlox, nightshade, pingue and whorled milkweed. The Animal Pathologist believed whorled milkweed was doing the killing. The County Agent investigated this area still further and found the cattle had been eating whorled milkweed in many areas while no nightshade could be found that had been grazed upon. It was very doubtful if enough pingue could be eaten to kill cattle and phlox is only poisonous after a frost of which there had been none. The final conclusion was that whorled milkweed was the cause of the cattle losses. Its control is quite difficult, however, 2-4,D in the ester form is supposed to kill it. Good range and pasture management is about the surest way of eradicating poison weeds.

C. Water Tanking

The summer of 1951 was perhaps the driest year in the history of the cattlemen in Coconino County. Water was hauled to cattle in May, June, July and part of August. This made the cattlemen realize the great importance of good tanks. It also made him realize the necessity of holding this water once it is in the tanks.

Mr. Shirus Morris, Jr., a cattleman west of Williams asked for assistance in bentoniting a large tank on his range. This tank has never held water any length of time. Mr. James Middleton, Irrigation Specialist, and the County Agent assisted him in locating this material and giving instructions on its application. The bentonite was delivered to Williams for about $34 a ton. It was to be applied at a rate of two pounds per square foot. The tank was first disced in early August and the bentonite was spread evenly over the disced area. The discing was only about 2-3 inches deep. After applying the bentonite it was to be disced again to mix it with the top soil, however, a heavy long rain prevented this. The tank filled completely on August 7. On September 7, Mr. Middleton and the County Agent inspected the tank and it was still full. The last report in late October was that the tank was still holding very well.

Dr. R. O. Raymond, of Flagstaff, applied bentonite to a tank south of Flagstaff. His type of soil only required him to put one pound per square foot. This was put on the same method as Mr. Morris, however, it was rolled after the second discing. The tank was dry and not enough rain fell in November to fill this tank so the success will not be known until next spring.

6. Poultry

A. Poultry Management

Poultry products have been always in demand in the Flagstaff and Williams areas. This has been an incentive to many farmers to raise poultry. The necessity of good housing and shipping in of most all the feed, however, have held the poultry flocks down to quite small numbers. Many farmers have small flocks ranging from 50 to 250 birds. These poultry raisers, although small, do require considerable time during the year. The County Agent prepares two or three circular letters that contain essential information on good poultry management and this is mailed to all poultry raisers in the county. The agent also uses his weekly news columns and weekly radio programs to discuss correct poultry management with the poultrymen.

B. Poultry Diseases

Frank Todd of Oak Creek had a chronic outbreak of cholera in April of this year. The outbreak was in his laying flock of about 300 birds. Egg production dropped almost 90% in two days. The County Agent conducted a post-mortem on several birds to diagnose the disease. Sulphamerazine was recommended to be placed in their drinking water. It was also recommended to seperate the sick birds from the uneffected flock and if birds were too sick to destroy them by burning the carcass. The County Agent also recommended a complete disinfection of the entire area which was done immediately. A mixture of one pound commercial lye and two and one-half pounds of water slaked lime in five and one-half gallons of water was used. The poultryman lost many birds, however, the above treatment checked the disease and the flock fully recovered. The source of infection was traced to egg crates that had been hauled from Chino Valley in Yavapai County where a number of cholera cases had broken out over the past year.

Range paralysis occured in this county on two occasions this year. In both cases the chicks had been purchased from the Phoenix area. One poultryman had the disease break out in a eight week old flock of 300 birds. The agent investigated the diseased birds and diagnosed it as range paralysis. Since there is not any recommended treatment for this disease, the agent recommended immediate isolation of sick birds from the other flocks. The poultryman's wife stated they had this disease many years ago and had controlled its spread by giving the birds castor oil in their drinking water. The agent suggested they mix the castor oil into the mash so the birds would eat it more readily. This was done and was given to the sick birds and also the unaffected flock. The treatment apparently was satisfactory as very few additional birds became sick and many of the sick birds became well.

Coccidiossis was again quite a common disease in the late spring and early summer. Many of the small poultry raisers improvise small poultry houses that are inferior in so much as to keep out drafts and allowing over heating. Both of these factors are ideal to stimulate coccidiossis. The County Agent kept the poultry raisers informed on this disease all spring and recommended measures for its control. Sulmet solution in the drinking water has proven to be a good preventative for this disease.

7. Agronomy

A. Small Grain Commercial Fertilizer Demonstration Plots

One of the greatest problems confronting the small grain farmer in this county is how to increase the yield. One method that has a possibility of doing this is by use of commercial fertilizers. Since all grain is raised on dry farms, the practical use of commercial fertilizer is a question. During the past two years the County Agent has been conducting demonstration plots on small grain commercial fertilizing. The results have not as yet been conclusive enough to warrant its use. However, the past two years have been very dry and it is felt a fair trail has not been given the commercial fertilizers.

This year three more demonstration plots were set up by the County Agent and various amounts of commercial fertilizer was applied. Two applications were given to each plot, one at seeding and one in late July at boot stage. Again this year the extreme drouth conditions during June and July caused the disbandment of one plot and a poor result on the remaining two. Response was definitely noted on all plots that received above 45 pounds of nitrogen per acre. Plots receiving less than this amount showed no response either in greenness or size of stalk. Plots receiving at least 45 pounds of nitrogen on the second application were especially outstanding over check plots. It also appeared that ammonium nitrate was more successful than ammonium phosphate. The use of treble-superphosphate appeared to have no great effect on the response.

The cause of poor results on these plots were possibly two fold. First, summer rains were very late and the grain had suffered tremendously by late July when the showers started. The rains then continued and a mild fall delayed frosts about three to four weeks and the grain did not mature normally. Secondly, the method of application was not good. The first application was hand broadcast on the seed bed and then worked into the seed bed by the grain drill. The second application was also hand broadcast.

It is the opinion of the County Agent that all the fertilizer should be placed into the seed bed at drilling time. By doing it this way the fertilizer is there when the rains come. It is also the opinion of the County Agent that atleast 50 pounds and probably 100 pounds of nitrogen will be needed per acre to give any response in the dry farming areas.

Whether or not this will be practical will have to be determined when a normal rainfall year can be experienced.

The following are the two demonstration plots that were carried through to completion. Notes at the end of each demonstration outline will explain the yield figures.

Cooperator - William Scholz, Parks, Arizona
Plot Size - 1/50 acre (20' x 43')
Crop - Side Oats
Planting Date - May 8, 1951
Replications - Three on each application

Plot Diagram:

N

W											E
	4	5	6	check	1	2	3	4	5	6	
	1	2	3	4	5	6	check	1	2	3	

S

May 8, 1951 Application

1. 100 lbs per acre of 16-20-0
2. 100 lbs per acre of 16-20-0
3. 50 lbs per acre of 33-0-0
4. 50 lbs per acre of 0-45-0 and 50 lbs per acre of 33-0-0
5. 100 lbs per acre of 0-45-0 and 50 lbs per acre of 33-0-0
6. 200 lbs per acre of 0-45-0 and 50 lbs per acre of 33-0-0

July 24, 1951 Application

1. 100 lbs per acre of 16-20-0
2. 300 lbs per acre of 16-20-0
3. 50 lbs per acre of 33-0-0
4. No application
5. 50 lbs per acre of 33-0-0
6. 200 lbs per acre of 33-0-0

Yields: (average of the three plots)

1. 9.06 lbs hay per plot
2. 11.25 lbs hay per plot
3. 9.25 lbs hay per plot
4. 8.25 lbs hay per plot
5. 11.70 lbs hay per plot
6. 11.80 lbs hay per plot

Check - 5.90 lbs hay per plot

Comments: This grain was too green to harvest as grain and was cut as hay. The weights were taken of the hay. The weights represent an 8 foot cut 43 feet long through each plot.

Cooperator - Oscar Ryberg, Parks, Arizona
Plot Size - 1/50 acre (20' x 43')
Crop - Markton Oats
Planting Date - May 8, 1951
Replications - Three on each application

Plot Diagram:

N

W										E
	4	5	check	1	2	3	4	5	check	
	3	2	1	check	5	4	3	2	1	

S

May 8, 1951 Application

1. 100 lbs per acre of 16-20-0
2. 50 lbs per acre of 33-0-0
3. 200 lbs per acre of 0-45-0 and 50 lbs per acre of 33-0-0
4. 200 lbs per acre of 0-45-0 and 50 lbs per acre of 33-0-0
5. 100 lbs per acre of 0-45-0 and 100 lbs per acre of 33-0-0

July 24, 1951 Application

1. 300 lbs per acre of 16-20-0
2. 150 lbs per acre of 33-0-0
3. 50 lbs per acre of 33-0-0
4. 150 lbs per acre of 33-0-0
5. No application

Yields: (average of the three plots)

1. 216 lbs grain per acre
2. 257 lbs grain per acre
3. 200 lbs grain per acre
4. 256 lbs grain per acre
5. 179 lbs grain per acre

Check - 158 lbs grain per acre

Comments: These plots were harvested with a combine. A hail storm a week before harvest shattered considerable

grain. Some plots had a very poor stand because of heavy Russian thistle growth. These yield figures are low, however, many grain farmers only received 200 to 300 lbs of grain per acre.

B. Commercial Fertilizing of Stubble

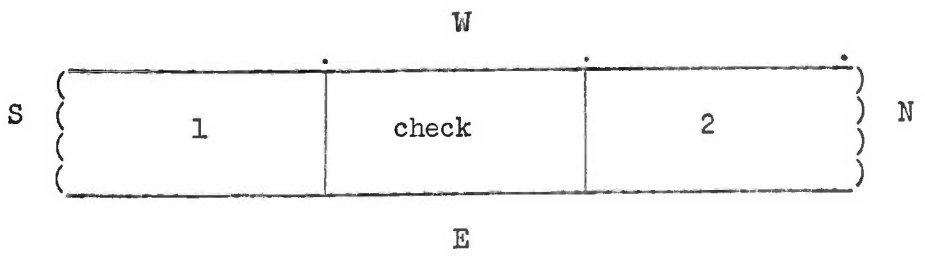
The increasing of organic matter in the soils in this county is definitely needed and it is quite certain an increased yield could be attained if this is done. To plow under stubble land in the fall or early spring and plant a crop to this land the same year is not satisfactory in this county. No decaying or breakdown of the stubble results until late summer because of low temperature. This means the nitrates are tied up when they are needed and the present crop suffers. It is believed if a commercial fertilizer application to the stubble land before plowing in the spring and then planting a crop later in the spring might stimulate stubble breakdown sufficient to enable a successful crop to be grown the same year as the stubble is turned under.

This was tried on the Tom Marlar farm north of Parks, Arizona. Two different applications of commercial fertilizer were applied to ½ acre plots. The plots had heavy barley stubble. The land was plowed in April and planted to oats in late May. The first planting of oats failed to germinate and had to be replanted the middle of June. This meant the oats would not have time to mature for seed, however, hay could be made. A good stand of oats were secured from the second planting, however, deer and elk kept this oat field grazed the entire summer and prevented the oats from growing tall enough to cut for hay. The fertilized plots did show, however, a much greener oat and larger stooling than the check. The ammonium nitrate plot showed greater response than the ammonium phosphate plot. It is felt that this type of a demonstration will work. It is hoped additional work can be done on this in 1952.

The information on this demonstration is as follows:

Cooperator - Thomas Marlar, Parks, Arizona
Plot Size - 1/2 acre (72' x 300')
Application Date - April 5, 1951
Stubble Plowed Under - April 7, 1951
Date Crop to be Planted - May 28, 1951 (approx.)
Crop to be Planted - Oats

Plot Diagram:



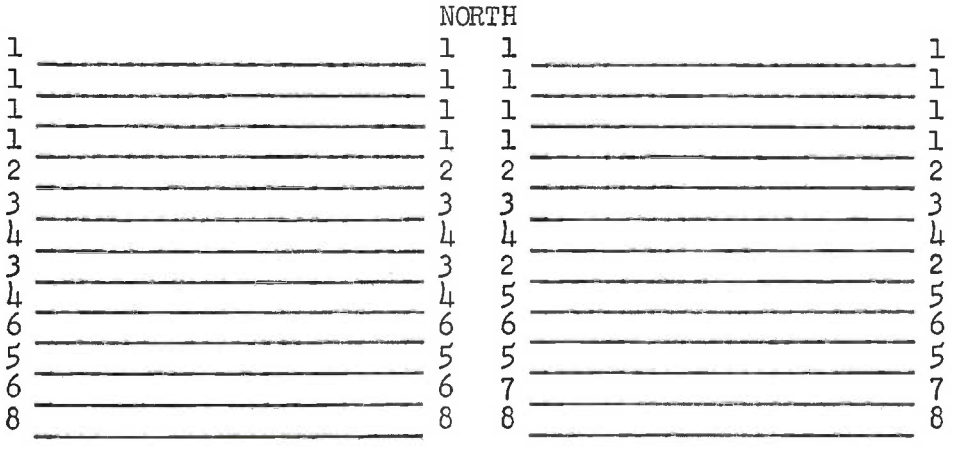
1. 200 lbs per acre of 33-0-0
2. 200 lbs per acre of 16-20-0

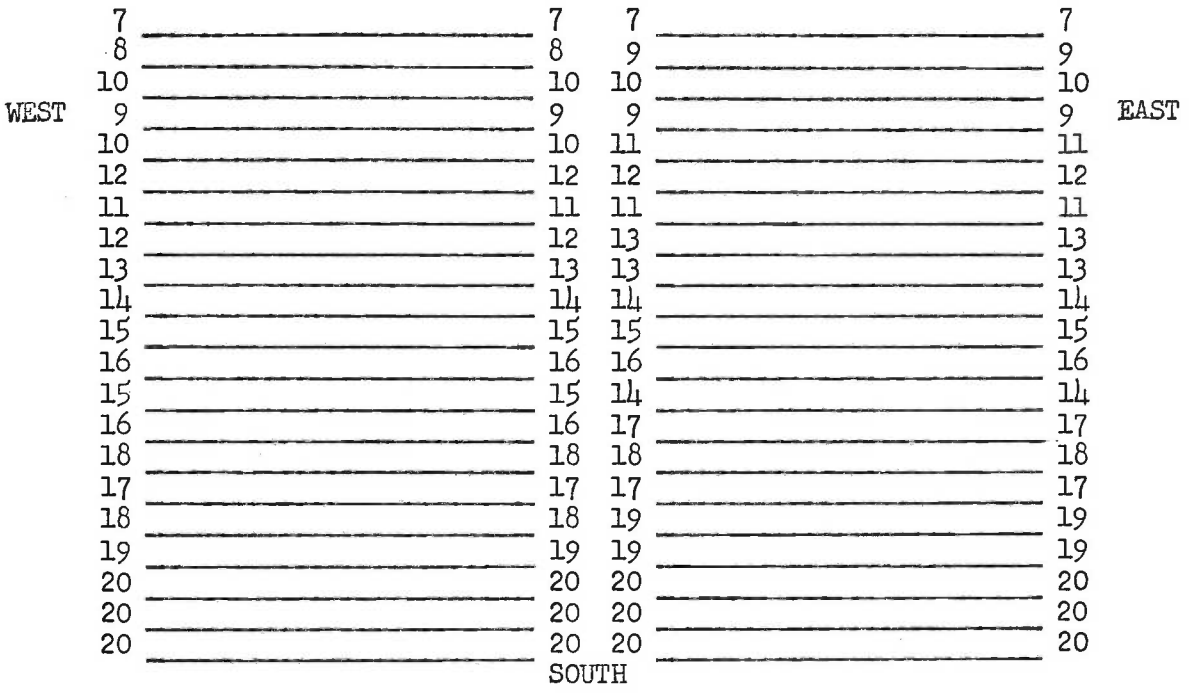
C. Small Grain Nursery

In growing grain at 7,000 feet elevation the farmers are quite limited to the varieties that will give a practical yield. In the past years Markton and Colorado 37 oats; Early Baart 38, Federation, Reliance, Defiance wheats; and Union Beardless, Trebi, Hannchen barleys have been the main small grain varieties grown. Some of these are giving poor yields and the farmers are requesting information on new varieties. Small grain nurserys grown in this county for many years have been of some value, however, very little reliable information has been recorded on these nurserys. Drouth conditions the past two years have almost completely ruined all small grain nursery work by this agent.

This year another small grain nursery was planted on the 24th of May on the County Farm north of Flagstaff. The land was well prepared and planted with a one row Jr. Planter by the County Agent. Moisture was fair at planting time and a good stand of all varieties was secured. The varieties were planted in 20 foot rows and each variety was replicated three times. The extreme drouth conditions in June and July made all varieties suffer tremendously. The wheat varieties and barley varieties all stunted and headed out early. At the time of harvest many were completely shattered because of early maturity or some failed to develop seed. The remaining varieties were harvested on September 7 and September 28. The grain was sent to the University of Arizona where they were threshed. The following comments and yield weights do mean something however, because of a very unnormal growing season definite conclusions or recommendations cannot be taken from this years work. The following are outlines of the nursery, comments and grain yields.

Location - County Farm
Row Length - 20 feet
Replications - Three on each variety
Planting Date - May 24, 1951





Grain Varieties

1. Guard Rows of Reward (W)
2. Reward (W)
3. Kubanka (W)
4. Thatcher (W)
5. Speltz
6. Spring Rye
7. Moore (B)
8. Two Row Barley (B)
9. Compana (B)
10. Beecher (B)
11. Trebi (B)
12. Colsess (B)
13. Otis (B)
14. Side Oat (O)
15. Vicland (O)
16. Bridger (O)
17. Colorado 37 (O)
18. Bannock (O)
19. Brunker (O)
20. Guard Rows of Bannock (O)

Comments: Taken on September 7, 1951

Wheat

Reward - early maturity (middle of August)
- too badly shattered to harvest
- fair height

Kubanka Durum - very late maturity (needs 10 days more)
- large, well-filled heads
- fine straw

Thatcher - very similar to Reward, but heads are smaller

Speltz - very late maturity (needs 10 days more)

Rye

Spring Rye - heaviest, longest, largest heads of any grain in the nursery
- much vegetative growth
- late maturity (needs 7 days more)

Barley

Moore - stems very short
- fair-sized head, well-filled
- late maturity (needs 7 days more)

Two Row - short stems
- medium maturity
- fair-sized, well-filled heads

Compana - very short stems
- very small heads
- early maturity

Beecher - early maturity
- small heads
- very short stems

Trebi - medium maturity
- large, well-filled head
- very short stems

Colsess - rather late maturity
- good, well-filled heads
- short stems

Otis - very short stems
- early maturity
- grain completely shattered
- very small, poor heads

Oats

Side Oats - very good growth and good set of grain
- late maturity (needs 10 days more)
- shows excellent promise for hay or pasture

Vicland - very short stems
- early maturity

Bridger - good growth (not quite so rank as side oats)
- late and uneven maturity (needs 7 days more)

Colorado 37 - very similar to Bridger except earlier maturity

Bannock - very similar to Bridger except that kernels are smaller and growth is not quite so rank

Brunker - very very short stems
- early maturity

Pounds per 20 foot row (approx. 10 sq. ft.)

Wheat	I	II	III	Average	Approx. Yield per acre
Kubanka Durum	0.17	0.12	0.11	0.13	594
Speltz	0.16	0.17	0.09	0.14	639
Rye	0.33	0.31	0.27	0.30	1370
Barley					
Moore	0.17	0.09	0.11	0.12	548
2-row	0.23	0.11	0.16	0.17	776
Compana	0.05	0.06		0.05	228
Beecher	0.05	0.06	0.09	0.07	320
Trebi	0.20	0.20		0.20	913
Colsess	0.12	0.20	0.20	0.17	776
Oats					
Vicland	0.14	0.16	0.11	0.14	639
Bridger	0.28	0.20	0.11	0.20	913
Colorado 37	0.14	0.28	0.33	0.25	1142
Bannock	0.17	0.33	0.19	0.23	1050
Brunker	0.03	0.08	0.12	0.08	375

D. Pinto Bean Variety Tests

The greatest problem facing the pinto bean farmers in Coconino County is how can they increase the yield of their beans to make them practical to grow as a farm crop.

Pinto beans have been grown in Coconino County for the past twenty years. Farmers have failed to maintain their coil fertility by the constant growing of beans and not plowing in the bean straw. Land has become very depleted in some areas. Also the farmers have failed to maintain a high seed vitality for their bean seed. Field run seed is replanted year after year and no new seed is being introduced. It has now come to the point where low soil fertility and poor bean seed has almost made it impossible to raise pinto beans profitably. Last year, 1950, the County Agent planted several old and new varieties of pinto bean seed in a demonstration plot. Results were not conclusive because of too late of planting and drouth.

This year the County Agent with the cooperation of the Extension Agronomist, Charles Ellwood, secured twenty-five pounds of seed of each of the following pinto bean varieties: Idaho III, New Mexico 295, New Mexico 641, San Juan and Scottsfluff. These varieties were planted with a regular four row planter by Mark Ferrell on the Ward Place in Doney Park on June 7. Each variety totaled about one acre. A good stand was secured on each variety. Rains that normally come in mid-July did not come until August and then they were very spotty and light. The first good rain did not come until the last three days of August. This was too late to benefit the pinto beans. The varieties all stunted very badly and matured out early. Some spots in the field evidently had more moisture and the varieties look well. In late August the agent with the assistance of Joe McClelland, Information Specialist, secured colored slides of the five varieties. The pictures showed the size of plant and number of bean pods on each of the varieties. These pictures were very helpful in explaining and showing the different farm groups the growth habits of each of the varieties. By mid-September it was concluded that the varieties on an acre basis would not warrant cutting and threshing. Therefore the yield figures were not secured. If these varieties had been threshed the yield figures would not be at all accurate and would also be very misleading. From the growth results received some farmers are ordering seed from Colorado to plant in 1952. It appeared that Idaho III was the superior variety with the San Juan variety second. The other varieties failed to set enough pods to establish them as a possible variety for this area.

E. Sweet Corn Variety Tests

Sweet corn for family use is grown very successfully in this county. Many farmers and town people grow small plots each year. Golden Cross Bantam and Ioana have been the main varieties grown. However, a large number of new varieties have been placed on the market in this county and the people have asked if they will do well here. The County Agent secured a small amount of seed from Dr. D. W. Pew, of the Vegetable Research Farm, near Tempe, Arizona. The varieties secured were Ioana, Golden Cross Bantam, Golden Security, Woodruffs' New Earligolden, Victory Golden, Seneca Golden, Iochief, F-M Cross and Seneca Chief. These varieties were

planted on the County Farm north of Flagstaff on June 1, 1951. Moisture conditions were poor and because of no rain in June or July a poor stand was secured. All varieties burned beyond recovery during July and early August. The test was concluded as a failure in late August. It is hoped these same varieties can be planted again in 1952.

F. Weed Control

The farmer in Coconino County is still facing a serious weed control situation. Bindweed or wild morning-glory still is threatening most farm areas and must be controlled or the farmer will have to soon give up.

The past four years the chemical 2-4,D in the ester form has been used. At first it was appled with the low pressure sprayer then it was found that a high pressure sprayer gave better results. In the past two years the high pressure sprayer has been used and about 1½ pints of the actual acid has been applied per acre. The cost has varied from four years ago at $7 per acre to this year at $5 per acre. This cost includes the chemical, spray equipment and the labor.

This year many farmers again sprayed their infested land. Results were again good. The County Agent gave the farmers assistance in planning their spraying and kept all latest information on weed spraying before them at all times. It is felt, however, that there is still something not being done in the spraying to finally achieve full eradication of bindweed. The farmers have asked for research work on this project for 1952. It is hoped this can be done as this agent also believes that the growth habits of this weed are not fully understood and in order to achieve successful control the plant must be fully understood.

11. Soils

A. Soil Management

Almost all farmers in Coconino County are farming run-down depleted soil and must correct this condition or be forced from their land.

In the past twenty years, farmers have been working their land with only one idea in mind - to get a cash crop every year. Crop rotation or soil building practices have been completely over-looked. In the past three growing seasons the County Agent has tried to educate the farmers into setting up a good soil management program for their farm. However, little progress has been made because drouth conditions the past three seasons have prevented the farmers from having any successful crops. A new program is very difficult to introduce into an area that has no capital or has not made a profit on crops in three years.

This year the agent has taken a great number of soil samples for farmers and orchardists. These samples almost always showed small to

serious deficiencies in nitrogen and phosphates. Each farmer was shown these results and the agent discussed how they could be corrected. Most soils are very deficient in organic matter. The agent encouraged plowing under crop residues and leaving land fallow. The introduction of commercial fertilizers in our orchard soils was recommended. With the assistance of the Soil Specialist, Howard Ray, the agent believes he has stimulated soils work, especially in practicing a good soil management program. Many farmers have indicated they will put into practice the various recommendations given them by the Soils Specialist and County Agent.

12. Rural Sociology

A. Farm Safety

The practice of Farm Safety in this county has been very important and must be practiced by all in order to operate their farms at the greatest efficiency.

In the past years accidents have occured in this county that have caused loss of man hours. The agent has kept the agricultural people safety conscious by use of circular letters and newspaper articles.

In 1951, the agent has kept safety practices before the people as much as possible. July was National Safety month and the agent stressed safety in the radio broadcasts, newspapers and circular letters. There were 401 Safety Week circular letters mailed in July. The agent also conveyed messages of Farm Safety in his radio broadcasts and weekly news columns.

B. Fire Prevention

Farmers in Coconino County as well as the nation must always practice Fire Prevention or they are likely to have their farmstead wiped out.

Farmers in this county have had their attention called to Fire Prevention over the past year by the County Agent's office. Circular letters were mainly used in doing this.

This year the County Agent mailed 365 circular letters on Fire Prevention during the month of October. On many of the agent's radio broadcasts and news columns during the year, Fire Prevention was stressed. It is felt a countywide coverage was made during National Fire Prevention Week on the many ways farms can prevent disasterous fires.

Pear Thinning Done By Elgetol
(Junipine Ranch)

Fertilized Markton Oats
(Ryberg farm)
Plot No. 4

Unfertilized Markton Oats
(Ryberg farm)
Check Plot

ANNUAL

DONEY--BLACKBILL COMMUNITY

PROGRAM PLANNING MEETING

MARCH 28, 1951

1950 RECOMMENDATIONS AND ACCOMPLISHMENTS

AGRICULTURAL EXTENSION SERVICE COCONINO COUNTY

William M. Brechan, County Agricultural Agent
Lucinda E. Hughes, Home Demonstration Agent

F O R W A R D

On March 20, 1950, the Agricultural Extension Service initiated Program Planning in the Blackbill-Doney Park community. Program Planning is a system whereby the rural people present their problems to the Extension Service in order of their importance. We of the Extension Service then work on these specific problems or projects. The Extension Service believes this is the most efficient way for their personnel to serve you. Although this type of planning is new in Arizona Extension work, we are sure it will soon be practiced by every county in Arizona as it is in most other states.

The first year of this new phase of work has proven very interesting and we believe very practicable. We believe all the projects recommended by your group a year ago have been worked on and in most cases satisfactory results were achieved.

We of the Extension Service wish to acknowledge the fine cooperation given us by the following organizations in helping to make our first year of Program Planning a success; Northern Arizona Light and Power Company, Electrical Appliance Dealers in Flagstaff, San Francisco Peaks Farm Bureau, San Francisco Peaks Soil Conservation District Supervisors, U. S. Geological Survey, State Land Department, Blackbill-Doney Park Homemakers.

We are looking forward to working with you in 1951 on your problems. We hope our accomplishments will be higher than during 1950.

Lucinda E. Hughes
County Home Demonstration Agent

William M. Brechan
County Agricultural Agent

The following is a very brief summary of the accomplishments made on your problems presented to us in March, 1950.

PROJECT OF FIRST IMPORTANCE

POSSIBILITY OF BUILDING A CO-OP TO HANDLE MARKETING OF BEANS, GRAINS, AND LIVESTOCK AND TO HANDLE STORAGE OF BEANS AND GRAINS. ALSO TO BUY OWN BEAN CLEANER AND FEED MIXER.

Progress County Agent gathered all information on Co-op Building and presented to the community. No further action taken by the community.

TO GIVE LATEST INFORMATION ON HOME FREEZERS BY LECTURE AND DEMONSTRATION.

Progress A freezing school was held in Flagstaff in July. Fifteen Doney Park residents attended. Information on both buying and using a home freezer was given.

TO SECURE LATEST INFORMATION ON CROP INSECT CONTROL, ESPECIALLY THE HARVESTER ANT.

Progress County Agent furnished interested farmers with recommended control measures for Harvester Ant.

INVESTIGATE POSSIBLE UNDERGROUND WATER SUPPLY TO IMPROVE DOMESTIC WATER SUPPLY.

Progress County Agent's office, SCS office, SFP Farm Bureau all corresponded with U. S. Geological Survey and State Land Department on possible underground water survey for this community. Such a survey was approved and started in fall of 1950. To be completed by fall 1951.

TO ESTABLISH VEGETABLE VARIETIES THAT WILL GROW UNDER DRY FARM CONDITIONS.

Progress County Agent secured many varieties of vegetable seed and planted some. Unnormal dry summer did not permit growing of any varieties.

TO HAVE SOIL ANALYZED AND RECOMMEND SOIL BUILDING PRACTICE TO FARMERS.

Progress County Agent took many soil samples in the community and discussed analysis with the farmers.

PROJECTS OF SECOND IMPORTANCE

TO GROW SMALL GRAINS IN A NURSERY TO ESTABLISH RECOMMENDED VARIETIES FOR THIS AREA.

Progress Agronomy Department of University of Arizona was unable to supply this agent with seed.

TO CONTROL ROCK SQUIRRELS AND RABBITTS.

Progress U. S. Fish and Wildlife Service sent Mr. I. F. Rogers to this county in April to work with farmers on rock squirrels and jack rabbitts.

TO DEMONSTRATE USES OF ELECTRICAL APPLIANCES.

Progress An electrical fair was held in the community building on April 25, 1950. All electrical appliances on display and many demonstrations were given.

TO GROW SEVERAL VARIETIES OF PINTO BEANS TO DETERMINE IF THEY ARE SUPERIOR TO THE NATIVE PINTO IN YIELD AND ADAPTATION.

Progress County agent grew several varieties of pinto beans on County Farm. Results published and mailed to all farmers.

PROJECTS OF THIRD IMPORTANCE

INVESTIGATE POSSIBILITIES OF SECURING SMALL GRAZING PERMITS FOR FARMERS WHO ARE ADJOINING FOREST LAND.

Progress San Francisco Peaks Farm Bureau sent resolution to Forest Service, but no progress made.

SET UP SOME COMMERCIAL FERTILIZER DEMONSTRATIONS TO DETERMINE IF COMMERCIAL FERTILIZERS HAVE A PLACE IN THIS AREA.

Progress Commercial fertilizer demonstrations tried on small grains and beans. Results published in circular and mailed to all farmers.

HOME ECONOMICS PROGRESS REPORT

(Requests of the 1950-51 Countywide Home Economics Planning Meeting
Doney--Blackbill Communities Participating)

AIM

Recommended: To help people be aware of the part they play in making their community a wholesome and attractive place in which to live with adequate facilities for education, recreation social and spiritual guidance.

Progress:
(a) 4-H club maintainance sponsored and lead by a member of the homemakers club.
(b) Community building used for recreation and educational purposes for all groups.
(c) Rural library maintained by the community.
(d) Two meetings held in Doney Park on kitchen planning and arrangements. Fifteen homes improved kitchen facilities to a greater or lesser degree.
(e) Leader training meeting held on teenage recreation. Three Doney Park leaders attended. New games and types of recreation were taught by leaders at their November club meeting. Club aim--to learn a new game at each meeting.

PROJECTS

Recommended: Clothing Group.
(a) Tayloring.
(b) Styling of dresses.
  (1) Re-styling of old clothes.
  (2) Alterations.
(c) Study of new textiles.
(d) Making of comfortable house dresses.

Progress:
(a) (1) Five meetings held on tayloring. Four homemakers from the Doney Park group participated in the classes and made woolen suits.
  (2) Demonstrations given to club members on making and using pressing equipment, and making bound buttonholes and selecting buttons.
(b) No action taken except as selection of suit and coat patterns for the individual apply.
(c) To be done in June, 1951.
(d) Two meetings held, one on pattern alteration and one on the principles of a comfortable house dress. Fifteen house dresses and cotton wash dresses made.

Recommended: Nutrition Group.
(a) Home freezing.
(b) Basic seven plan for better meal planning.
  (Continuation of 1949-50 study)
  (1) Emphasize meals for children.
  (2) Box lunches.
  (3) Low cost meals (Principles of buymanship)
(c) High altitude cookery.
(d) Meals that can wait.
(e) Garnishes and buffet entertaining.

Progress: (a) One freezing demonstration held in Flagstaff. Fifteen Doney Park residents attended. Emphasis on buymanship of freezer and preparation of foods for the freezer.
(b) One meeting held on basic seven food plan. Emphasis on lunches--both box and home.
(c) No report.
(d) No report.
(e) No report.

Recommended: Home Management Group.
(a) Better buying.
(b) Kitchens (Donstruction of 1949-50 study)
(c) Interior decorations, etc.
(1) Upholstering.
(2) Rug making.
(3) Slip-covering.
(4) Better lighting.
(5) Hard water.

Progress: (a) To be done in April--Buymanship of pots and pans.
(b) To be done in October--Floor finishes and coverings and working heights. Two meetings were held in 1950 with emphasis on work centers and arrangement of storage space. The planned tour was not taken in Doney Park.
(c) (1) No report.
(2) No report.
(3) No report.
(4) One-half hour talk and demonstration was given by Alice McKinney of the Northern Arizona Light and Power Company on adequate lighting.
(5) To be done in November, 1951 as a problem in laundering and use of various soaps and detergint

Recommended: Health Group.
(a) Pest control (Flies).
(b) Safety on the farm (4-H).
(c) Safe milk as a community program,
(d) First aid.
(e) Continued emphasis on recreation.
(f) Safe water.
(g) Getting the most out of what you have.
(h) Community attitude towards tourist and newcomers.

Progress: (a) Not primarily a Doney Park problem--No report.
(b) 4-H project.
(c) No report.
(d) No report--telephone service being worked on by the community as a whole.
(e) Homemakers club and 4-H club aims to learn a new game at each meeting.
(f) No report.
(g) No report.
(h) 4-H sponsored clean-up along old highway 66 to impr... appearance of area.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Arizona

University of Arizona
College of Agriculture
U.S. Department of Agriculture
Cooperating

Flagstaff, Arizona

April 2, 1951

Agricultural Extension Service
Home Demonstration Work
County Agent Work

Dead Weeds

Old Newspapers

SPRING CLEAN-UP TIME

Broken Glass

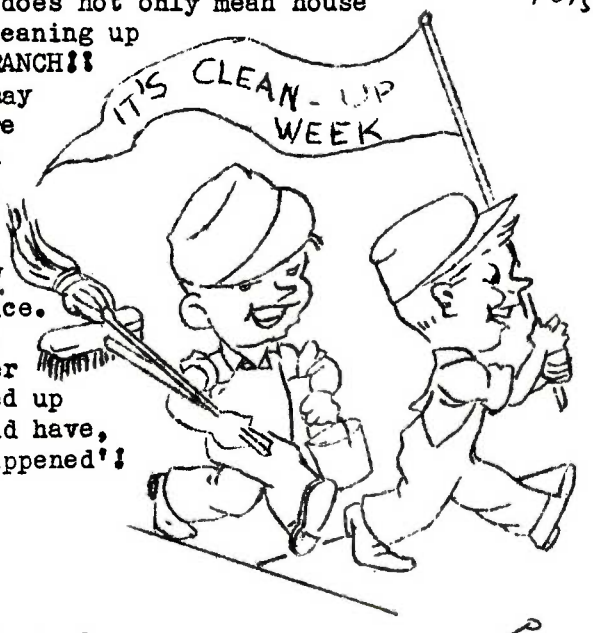
No Five Extinguisher

Storage of Poisons

Spring cleaning does not only mean house cleaning--it means cleaning up your ENTIRE FARM OR RANCH!! Cleaning up rubbish may prevent a serious fire or accident. Rubbish also harbors insects, some of which are deadly poisonous. Take a day or two NOW and clean up your place. DON'T be one who will have to say at a later date 'If I had cleaned up my place like I should have, this wouldn't have happened'!

Oily Rags

Rusty Nails



Broken Floors

Broken Steps

Poor Lighting

Sincerely yours,

William M. Brechan

William M. Brechan
County Agricultural Agent

WMB:arg

Storage of Flammable Materials

Worn Electrical Equipment

Defective Stoves

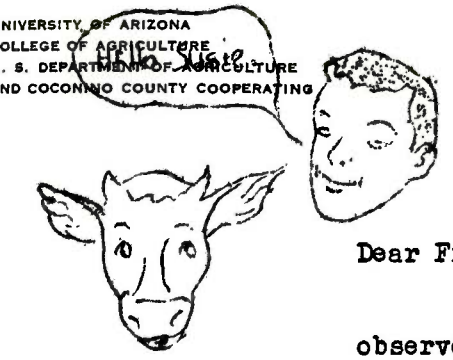
Low Clothes Lines

Leaky Gas Pipes

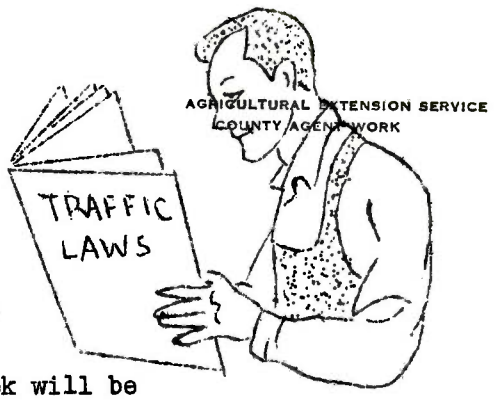
COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF ARIZONA
FLAGSTAFF

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

AGRICULTURAL EXTENSION SERVICE
COUNTY AGENT WORK



Speak to animals when approaching them.



Know and obey all traffic laws.

Dear Friend:

National Farm Safety Week will be observed from July 22-28. This will be a week for all of us to take special check on ways of preventing accidents. We should then practice safety not only one week out of the year, but 365 days out of the year. If we all would do this there would not be 17,000,000 man work days last each year, 18,000,000 deaths each year and 1,500,000 disabling injuries each year from farm accidents.

Suppose we all adopt safety practices such as handling animals with care; operate tractors safely; use the right tools for the right job; keep machinery in good repair and use all safety devices; be "firesighted"; watch your step - to prevent falls; treat guns as if they were loaded; know and obey all traffic and safety rules.

Won't you all do your part in preventing accidents and saving a life that could very easily be your own?

Sincerely yours,

William M. Brechan

William M. Brechan
County Agricultural Agent

WMB:arg

Dry clean outdoors.

Keep ladders in good repair.

ANNUAL

DONEY--BLACKBILL COMMUNITY

PROGRAM PLANNING MEETING

October 11, 1951

1951 RECOMMENDATIONS AND ACCOMPLISHMENTS

AGRICULTURAL EXTENSION SERVICE

COCONINO COUNTY

William M. Brechan, County Agricultural Agent
Lucinda E. Hughes, Home Demonstration Agent

F O R E W A R D

On March 28, 1951, the Agricultural Extension Service held their 2nd Annual Program Planning Meeting in the Blackbill-Doney Park Community. Program Planning is a system whereby the rural people present their problems to the Extension Service in order of their importance. We of the Extension Service then work on these specific problems or projects. The Extension Service believes this is the most efficient way for their personnel to serve you.

The first two years of this new phase of work has proven very interesting and we believe very practical. We believe all the projects recommended by your group have been worked on and in most cases satisfactory results were achieved.

We of the Extension Service wish to acknowledge the fine cooperation given us by the following organizations in helping make our first two years of Program Planning a success: San Francisco Peaks Farm Bureau; San Francisco Peaks Soil Conservation District Supervisors; Blackbill--Doney Park Homemakers; Cinder-Hillbillies 4-H Club; Doney Park Improvement Association; and Mr. Andy Matson.

We are looking forward to working with you in 1952 on your problems. We hope our accomplishments will be higher than during 1951.

Lucinda E. Hughes
Home Demonstration Agent

William M. Brechan
County Agricultural Agent

The following is a very brief summary of the accomplishments made on your problems presented to us in March, 1951.

FREEZING DEMONSTRATIONS.

Progress A freezing demonstration was held this summer by the H D A.

RODENT CONTROL OF RABBITS AND ROCK SQUIRRELS.

Progress A circular letter was mailed to everyone on the County Agent's mailing list on the latest recommended control of rock squirrels and rabbits on April 3, 1951.

SOIL BUILDING PROGRAM.

Progress The Extension Service employed a soil specialist in May of this year. He and the County Agent are working now on a soil building program for your community.

NEW CROP VARIETIES.

Progress The extreme drouth condition this summer prevented the County Agent in doing any of this work.

NEW SMALL GRAIN VARIETIES.

Progress A small grain nursery was planted this year. It was fairly successful. Colored pictures will be shown of these varieties and grain yields will be mailed to everyone later this winter.

INSECT CONTROL.

Progress The County Agent discussed many insects and the recommended control measures in his weekly radio programs and weekly news articles during the summer months.

SEWING MACHINE CLINIC.

Progress Only two or three showed any interest in this so the meetings were canceled.

CORRECT HOME LIGHTING.

Progress If there is enough demand this will be done in 1952.

COMMERCIAL FERTILIZERS.

Progress Commercial fertilizing work was done on small grain but only the plots in Garland Prairie were successful. Results of these will be made available later this winter.

HIGH ALTITUDE COOKERY.

Progress Pressure canners were tested by the H D A. High altitude cake bulletins were distributed from the County Agent's office.

UPHOLSTERING.

Progress This project will be done in 1952 by the H D A.

FAIR JUDGING STANDARDS.

Progress The H D A worked with the women on this during the summer. Mrs. Earl Primmer served as superintendent of the Women's Department at the 1951 County Fair and did a very good job. The County Agent received a bulletin on judging standards the last of September and will distribute them to all interested people.

PROPER IMPLEMENTS FOR MOISTURE RETENTION.

Progress The drouth condition caused this project to be postponed for at least a year.

GRAZING PERMITS FOR FARMERS.

Progress No progress was made on this project this year.

On behalf of the Extension Service, we would like to express our appreciation to everyone who has given their cooperation in making this new type of work successful in Coconino County. We will welcome your suggestions or criticisms on this work at anytime.

Very truly yours,

Lucinda E. Hughes
Home Demonstration Agent

William M. Brechan
County Agricultural Agent

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

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

Agricultural Extension Service
County Agent Work

October 12, 1951

FIRE, OUR FRIEND---
keeps us warm
makes modern industry possible
cooks our food
furnishes power for transportation
gives us light

FIRE, OUR FOE---
destroys our forests
destroys buildings
and human lives

Dear Friend:

If you were asked to help to fight a fire that was destroying your neighbors home, wouldn't you gladly offer your services? I know you would! Your country is now asking you to help prevent fires that destroy thousands of lives and millions of dollars worth of valuable property. Won't you do your part? Let's all practice Fire Prevention 365 days out of the year! It pays!

Sincerely yours,

William M Brechan

William M. Brechan
County Agricultural Agent

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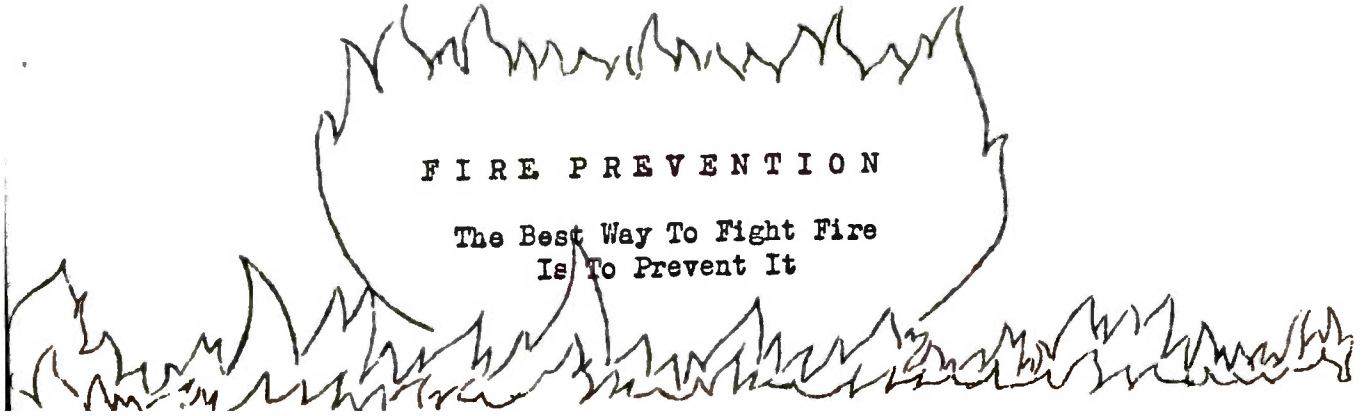

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF ARIZONA

FLAGSTAFF

VERSITY OF ARIZONA
LEGE OF AGRICULTURE
. DEPARTMENT OF AGRICULTURE
COCONINO COUNTY COOPERATING

AGRICULTURAL EXTENSION SERVICE
COUNTY AGENT WORK

October 19, 1951

Dear Friend:

On Thursday evening, October 11, the Doney-Blackbill Park community held their 3rd Annual Program Planning meeting. We regret that more of you could not attend but we realize this meeting did conflict with the bean harvest. It was proposed that the meeting be held about ten days to two weeks later next year.

I would like to list the problems that were suggested and indicate what has or will be done on each problem by the Extension Service.

1. INFORMATION ON TAILORING DRAPES
   The H D A will conduct this work in 1952.

2. UPHOLSTERING AND CLEANING OF RUGS
   The H D A will conduct this work in 1952.

3. INFORMATION ON LAMP SHADES
   The H D A will conduct this work in 1952.

4. DRY CLEANING METHODS
   The H D A will conduct this work in 1952.

5. CLEANING OF PYREX UTENCILS
   The H D A will conduct this work in 1952.

6. HIGH ALTITUDE IRRIGATION
   The County Agent has written the Extension Irrigation Specialist who will be in this area soon and will meet with Mr. Greaves of Mormon Lake to work out whatever problems he may have.

7. PERMANENT PASTURES FOR CINDER SOILS
   Information on permanent pastures will be secured and see if a recommended mixture can be found for this area.

8. CERTIFIED PINTO BEAN SEED
   The County Agent will locate certified bean seed and notify the interested farmers.

9. CERTIFIED GRAIN SEED
   The County Agent will locate certified grain seed and notify the interested farmers.

10. GRASSHOPPER CONTROL
    The County Agent has notified Dr. J. N. Roney of this condition and it will be delt with in the spring.

11. RODENT CONROL
    Latest recommendations on all types of rodent control will be mailed to everyone early next spring.

12. MOISTURE RETENTION
    This was discussed with the soils specialist and if anything can be found to improve moisture retention in the cinder soils it will be passed on to the farmer.

13. CHANGES IN THE COUNTY FAIR
    A meeting of the fair commissioners, board of supervisors and all others interested will be called in November, 1951.

14. BREAD MAKING
    The H D A will conduct this work in 1952.

15. VARIETY TESTING OF PINTO BEANS
    Varieties that have shown promise the past two years of demonstration work will be grown again in 1952.

16. FERTILIZER TESTS ON PINTO BEANS
    If commercial fertilizer can be secured in sizable amounts the soils specialist and county agent will conduct demonstration plots on this project.

17. INFORMATION ON MIXING YOUR OWN COMMERCIAL FERTILIZERS
    This information has been secured and will be given to the farmers.

18. LABOR SHORTAGE
    The County Agent and State Employment Service will meet soon and discuss this situation.

If anyone should like to suggest additional problems please feel free to do so.

Sincerely yours,

William M Brechan

William M. Brechan
County Agricultural Agent

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF ARIZONA

FLAGSTAFF

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AGRICULTURAL EXTENSION SERVICE
COUNTY AGENT WORK

October 19, 1951

Dear Friend:

On Wednesday evening, October 10, the Parks and Williams areas held their 1st Annual Program Planning meeting. A very representative group of people were there from all areas and many problems were presented to the Extension Service to work on in 1952.

I would like to list these problems and comment on each one.

1. HYBRID CORN VARIETIES
   The County Agent and soil specialist will attempt to locate one or two varieties that have been grown in similar areas and these will be planted on Mr. George McNelley's farm. Enough seed will be secured to plant a sizable plot.

2. SUMMER FALLOW
   The County Agent and soils specialist will attempt to encourage as many as possible to leave some of their land fallow in 1952. Then this will be checked with unfallowed land in 1953. Circular letters on information on fallowing will be sent to farmers this fall and next spring.

3. GRAIN VARIETIES
   A small grain nursery test will be conducted in 1952 if enough small grain seed can be secured.

4. GRAIN FERTILIZER TESTS
   If enough commercial fertilizer can be secured several plots will be set-up in 1952.

5. BINDWEED ERADICATION
   The County Agent will attempt to locate all information possible on the control of bindweed in hopes of reaching some successful control measures.

6. WOMEN'S ORGANIZATION
   The H D A will attempt to organize the women in this area so some definite project can be started next spring.

7. GREEN MANURE PRACTICE
   Farmers will be contacted and asked to grow small acreages of green manure. These plots will be watched and checked by the County Agent.

8. TYPES OF TILLAGE AND SEEDBED PREPARATION
   These practices will be sent to farmers in letters and will also be discussed with farmers.

9. SOIL SAMPLING
   The County Agent will take as many soil samples for farmers as possible and will discuss results with individual farmers.

If anyone has additional problems please feel free to submit them to my office.

Sincerely yours,

William M Brechan

William M. Brechan
County Agricultural Agent

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