

ANNUAL NARRATIVE REPORT

of

JOHN McLERNON  
COUNTY AGRICULTURAL AGENT

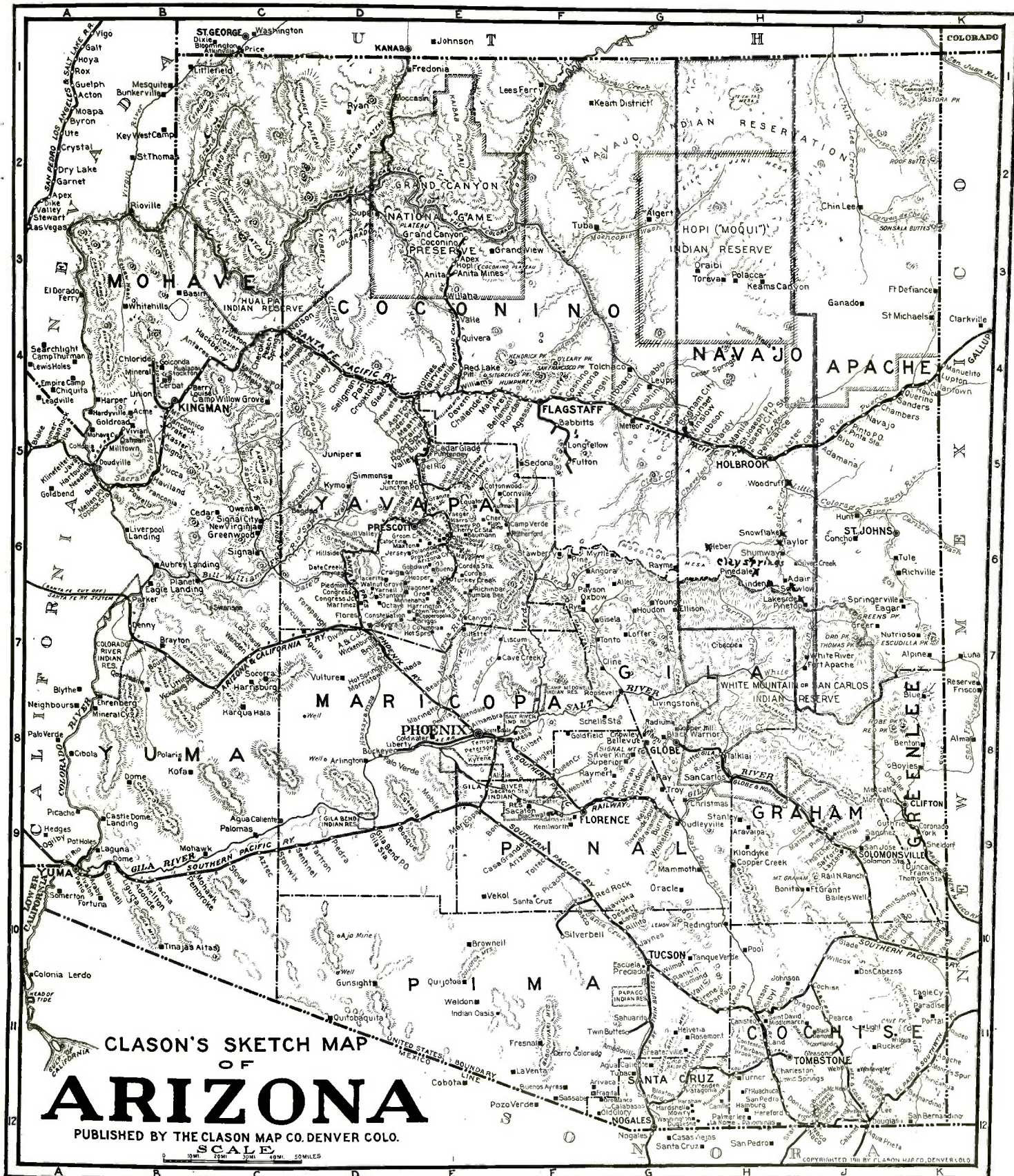
NAVAJO COUNTY

ARIZONA

1936

December 1, 1935 - November 30, 1936.

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SUMMARY OF ACTIVITIES 1936

The following figures are resultant of the work done during the past 10 months by the County Agricultural Agent.

- 959 individual farm calls.
- 416 different farms visited.
- 928 office calls.
- 161 telephone calls.
- 889 individual letters written.
- 17 circular letters prepared.
- 597 bulletins distributed.
  
- 31 4-H Club boys and girls completing beef feeding projects and showing result of feeding in Cattlemen's Stock Show.
  
- 13 weirs installed at Joseph City and Showlow irrigation districts.
  
- 11 samples of irrigation water analyzed and recorded through University of Arizona.
  
- 63 weir measurements taken for Silver Creek-Showlow irrigation district.
  
- 154 Work Sheets prepared for farmers cooperating in Agricultural Conservation program.
  
- 42 Range Examination Reports prepared for ranchers cooperating in Agricultural Conservation program.
  
- \$1,820 distributed to cooperators of 1934-1935 Corn-Hog program.

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County Organization:

Navajo County Farm Bureau was organized in 1916 and has, according to the files of the County

Agent's office, been more or less continuously in operation since. This year, the organization was renewed and officers elected at the same time that the Agricultural Conservation program was initiated. The practice used was that at the time of election of community officers for the Conservation program, these officers were also elected as the Community Farm Bureau officers. The county officers were elected at the time that the County Agricultural Conservation Board met to elect County Committeemen for the agricultural program. These officers, at the present time, are as follows:

W. C. Gardner, president  
A. D. Owens, vice-president  
J. A. Hansen, secretary-treasurer

At each meeting of the County Board the County Farm Bureau officers have, also, met to act in an advisory capacity in the carrying out of the Extension program. The leaders and officers of the Farm Bureau have been very helpful but have found it almost impossible, this year, to create any real interest in the Farm Bureau program among the farmers as a whole.

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CEREAL GRAINS:

The local supply of seed grain, at the beginning of the year, was very low due to the drought conditions over a period of two years. A good deal of seed corn was shipped in from Colorado and Greenlee County, Arizona. The acreage planted to corn in 1936 was considerably less than the 1935 acreage, partly because of abandonment and partly because of compliance with the Soil Conservation and Domestic Allotment program. The productivity yield of corn for the county is not as great as has been reported in former years. This is, undoubtedly, due in some measure to the failure on the part of the producers to rotate their corn acreage. The County Agent visited a good many fields which had been continuously in corn for as many as 15 years. The silage corn, however, of most of the irrigated sections did produce very good tonage, the average yield being approximately 15 tons to the acre.

The County Agent cooperated with two communities in the setting up of community organizations for the purchase of silage machinery. It is expected that the Rural Resettlement Administration will cooperate next year in purchasing more silage machinery on a community basis. The production of corn for silage in the dry land areas is very light, the rains in many areas coming too late to be of very much benefit. The production of corn for grain in the dry land areas was exceptionally heavy in proportion to the stock growth.

A considerable momentum was given to crop rotation practices this year by the Agricultural Conservation program. The results of last year's variety tests at Joseph City showed definitely that Sure Cropper and Ferguson Yellow Dent were good yielders for this locality. However, practically no seed was available at planting time of these varieties.

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LEGUMES AND FORAGE CROPS:

The Agricultural Conservation program, initiated at the beginning of the year, resulted in the planting of a much larger acreage to alfalfa and clover than has been customary in this county in the past. If the Agricultural Conservation program does not accomplish any more than to have created interest in the growing of legumes it will have been worth while.

An informal survey of the feeding operations of small dairy and beef feeders of this county shows that less than ten per cent are feeding a ration containing sufficient protein. It has been very difficult this year to get a reasonably good stand of clover or alfalfa in the dry land areas; and it was noted that the producers who did get a reasonably good stand were the ones who had plowed their ground last fall or very early in the spring. An additional amount of work in the development of a clover more adaptable to the conditions of this county would be very well received by our dry land farmers. They are now using sweet clover, which is not entirely satisfactory as to yield or value as hay. One rancher experimented this year with Crested Wheat grass with fair results. He will continue the experiment next year on land with more sub-irrigation, and it is hoped will produce some seed.

Several farmers purchased Super-Phosphate fertilizer and, with one or two exceptions, reported very good results from the use of 100 pounds to the acre. The fertilizer used was quite expensive due to the high freight rate from Los Angeles. The Extension Agronomy Specialist, Mr. Roy Westley, established two grass seed experiments, one at Woodruff and one at Linden, in cooperation with the County Agent. However, no results were obtained from these plots due to the fact that the one at Woodruff was flooded out by irrigation and the one at Linden failed to germinate due to lateness of rains. Mr. Westley was, also, of great assistance in getting several operators to introduce Grimm alfalfa, especially in the Showlow district. It is believed that this type of alfalfa will be more valuable for our higher elevations than the common Chilean, which has been used.

Some grasshopper infestation was experienced in Linden, Showlow, and Pinedale. Thirty bags of grasshopper poison left over from last year's allotment to the county ~~were~~ used by Elias Smith, A. D. Owens, and N. A. Peterson.

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TRUCK GARDEN: The establishment of a cannery at Snowflake last year, under the Rural Resettlement Administration, resulted in an increased activity in truck gardening. The principal truck garden crops grown in the southern part of the county are beans, sweet corn, cabbage, and squash. Several meetings were held in cooperation with Mr. Harvey Tate, Extension Specialist, and Mr. Mack Wharton of the University Experiment Station together with the County Agent and the farmers were assisted in developing proper cultural methods; also, proper grading and packing methods were demonstrated to the farmers.

The truck garden production was, in some ways, encouraging to the producers and, in other ways, did not prove to be as beneficial as had been hoped. As far as production per acre was concerned it was definitely shown that Snowflake, Taylor, Shumway, and Showlow were areas capable of very good yields. The greatest drawback to truck gardening was found to be the great scarcity of cheap harvesting labor. One operator was forced to pay as high as \$.01½ per pound for gathering string beans. The shipping cost to Phoenix was \$.00½ per pound and the lowest price paid in Phoenix for the beans was \$.02½ per pound. Another disappointing factor in the truck production to the producers this year was the fact that the details for the transfer of the local Cannery Association ownership from the Rural Resettlement Administration was delayed so long that a great deal of the stuff they had raised for cannery use was ripe before the cannery was in operation. It is believed that next year a considerably better disposal of truck garden crops can be effected. It is, also, expected that the completion and opening of Highway 60 from Showlow to Phoenix will considerably facilitate the marketing of truck garden crops in the Salt River Valley. It is the consensus of opinion of the County Planning Board that too much emphasis should not be placed on the production of truck garden crops in this county until more favorable marketing conditions are perfected. It is their belief that a program which would tend to increase the amount of this type of crop unduly would do the county more harm than good at this time. The County Agent's office cooperated with the Board of Directors of the Cannery Association in securing from the Arnold Pickle Company a ten acre contract for pickling cucumbers. This contract proved of doubtful material value to the producers, but it did show definitely that a very good return could be derived from cucumbers by operators who were willing to produce a large enough quantity to pay for hiring labor. Again, the lack of cheap harvesting labor was the chief cause of low net return to the producers.

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Southern  
Navajo Co  
Cannery &  
Marketing  
Assn.  
Cooperative  
Financed by  
Rural Rehabilitation  
7  
Sept. 1936  
Located  
at  
Snowflake



Navajo Co.  
Creamery  
Privately owned  
and Financed  
Cooperative  
to extent that  
many farmers  
bought stock  
to finance.  
1936  
Located at  
Dayton



Daggo Reservoir  
Storage for  
Silver Creek  
and Showlow  
Irrigation  
Project  
Supplying  
Shumway  
Dayton  
Snowflake

TRUCK GARDEN (continued):

The County Agent's office cooperated with the Winslow farmers in conducting a Jack

Rabbit drive to save the melon crops in that area. The drive was very successful and materially reduced the amount of damage to the crop. The Joseph City and Woodruff areas produce a great deal of truck garden crops and have a very good market in Holbrook and Winslow. However, it is felt that any great increase in acreage would seriously hurt the market for these communities.

Home Beautification:

Dr. J. N. Heywood of Snowflake has assisted this office materially in the Home Beautification work that has been done. Dr. Heywood has developed a very beautiful flower garden himself and has been instrumental in getting a great many of the farmers interested in this type of project. For the first time in a good many years, the people of Holbrook are beginning to think about home gardens and beautification of yards. This is largely due to the fact that a new water supply is being established for Holbrook which will make it possible to do some work along this line in the future. The County Agent addressed the Federated Women's Club of Holbrook on the subject, "Cultural Methods That Should Be Used for the Development of Home Gardens", and a great deal of interest was shown in this topic.

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ORCHARD: The orchards of the county suffered a considerable degree of damage due to early fine weather and later frosts. However, the apple crop was reported as being about average. The peach crop was reported as a near failure and the other fruits some less than average. The quality of fruit is very good as to flavor but is not up to size or freedom from worm injuries. Proper pruning and thinning of fruit would increase the value of the crop tremendously. Mr. J. H. Hansen of Lakeside packed about 400 boxes of apples and, even using the minimum of grading care, had more culls than commercials. During the Santa Fe Tour in October, Lakeside held an apple exhibition in connection with the other exhibits. The fruit shown was of good quality and created considerable interest. The lack of pruning and spraying in the orchards of the county is responsible for a considerable loss in commercial value of the orchard crops.

Mr. Rex Graham of the State Horticultural Inspection Service reported to this office that about 100 new fruit trees were brought into the county this year. About 100 raspberry vines and an unusually large number of ornamental shrubs were, also, brought in. There were, however, no orchards of any size started this year. Most of the increase went to the enlargement of existing orchards. Before the county could develop very far along fruit production lines, an increase in the knowledge of the use of orchard heating appliances would be necessary. The district around Showlow is the most promising area for the further development of fruit production.

Mr. Harvey F. Tate, Extension Horticulturalist, in cooperation with the County Agent held four meetings in the spring on general orchard practice. Spraying methods were particularly stressed at these meetings. However, a lack of spray equipment throughout the county made it impossible to follow out recommendations to any great degree. Two method demonstrations were held in the Showlow and Lakeside districts to develop proper grading for local markets. No attempt was made to develop standardized grading because of the peculiarities of the local market conditions. Plans are under way to secure a spray outfit for Lakeside and Showlow--preferably one that could be used for weed control as well.

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SOILS AND IRRIGATION:

In cooperation with the National Youth Movement a soil sampling project was set up in the County Agent's office. This project gave employment to eight different boys over a period of about two months. All material has been filed for future mapping and examination. Time did not allow, this year, for a completion of the project which will have to wait for a continuance of the National Youth Administration to furnish enough labor to complete it.

The Joseph City Irrigation District started a project this year in which the County Agent cooperated to a great extent. This project consisted of the drilling of wells  $2\frac{1}{2}$  miles west of Holbrook on the south side of the Little Colorado River. The blue print map, printed by Mr. Harold Schwallen of the University Experiment Station, enclosed in this report shows the location of these wells. The wells are 6 inch drillings in Coconino sandstone formation and do not require casings. The County Agent weired and measured most of these wells individually and collectively over a period of several months. The total flow at the present time from all of the wells is approximately 750 gallons per minute. The water is very good, and a copy of its analysis is given in the table on the following page. Mr. Carl Harris, United States Department of Agriculture and Bureau of Agricultural Engineering, and Mr. Schwallen both assisted the County Agent materially in the development of this project. Both Mr. Harris and Mr. Schwallen met at various times with the irrigation officials and water users and gave very helpful information in regard to what could be accomplished. It is hoped that, eventually, this irrigation company will develop the water with power and deliver the water to their irrigation ditches in Joseph City. Such a development will be of very great value as it will do away with the use of flood water from the Little Colorado River, which contains so much clay and salt that the farms are slowly becoming unworkable.

This office cooperated with the Snowflake Irrigation District and measured the water in this project over a period of four months. This material was sent to Mr. Carl Harris who has kept a record of the flow from Daggs Reservoir and the amount of water delivered in each of six ditches from figures sent him by the County Agent. The table of this information is included on the pages immediately following the above-mentioned water analysis table on the next page. As is shown on the table, there is a considerable increase of water from the outlet at Daggs Reservoir to the head of each of the six ditches. This water is undoubtedly of spring origin, coming along Silver Creek. It is the belief of this office that a considerable

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SOLUBLE SALT ANALYSIS OF WELLS IN  
JOSEPH CITY IRRIGATION PROJECT

NAME WELL	TOTAL SOLUBLE SALTS	CALCIUM	MAGNES- IUM	SODIUM	CHLO- RIDES	SULF- ATES	CARBON- ATES	BICAR- BON- ATES
McLaws	483	97	15	24	60	75	trace	212
Joseph City Canal	347	75	4	88	112	85	0	183
Test Well # 1	483	105	15	10	62	90	0	201
Test Well # 2	522	97	19	25	60	120	0	201
Test Well # 3	512	112	15	15	60	120	12	178
Test Well # 4	500	112	11	13	62	95	0	207
Test Well # 5	499	105	11	21	60	95	0	207
Test Well # 6	532	105	15	25	60	120	0	207
Test Well # 7	504	97	19	24	60	100	0	204
Test Well # 8	502	105	11	22	60	100	0	204
Bushman	1165	112	11	462	684	150	trace	246

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SILVER CREEK AND SHOWLOW IRRIGATION COMPANY

Average Flow from Source (Daggs Reservoir) from April 17-July 26  
Average Flow at Head of 6 Delivery Ditches and Acreage under Each  
(Measurements in Cu.Ft. per Sec.)

DATE	DAGGS EAST--Canal 302 acres	SNOWFLAKE WEST--Canal 505 acres	SHUMWAY EAST-- Canal 34a.	SHUMWAY WEST Canal 221a.	TAYLOR EAST Canal 637a.	TAYLOR WEST Canal 314 acres
4/17	22.18	5.73	8.93	1.02	2.26	6.21 3.10
4/25	21.99	2.93	6.95	.35	2.20	8.38 2.46
5/9	20.20	6.21	8.79	.44	3.10	6.95 4.26
5/18	23.08	7.33	8.38	11.45	3.94	6.21 3.94
5/24	22.64	5.85	9.90	1.28	4.84	9.20 3.94
6/5	23.08	6.21	8.93	1.02	3.10	6.21 2.46
6/21	20.20	6.58	15.20	1.02	3.94	7.85 4.42
7/12	20.42	5.73	9.34	1.28	3.94	6.21 4.84
7/26	19.12	4.04	7.99	.82	2.40	5.49 3.17
TOTAL	192.91	* 50.61	84.41	8.68	29.72	62.71 32.59
AVERAGE	21.434	5.623	9.378	0.964	3.30	6.967 3.621

\* 268.72 Total Average 44.786

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SOILS AND IRRIGATION(continued):

increase in acreage  
could be developed from  
the present water supply.

Another increase in available water for this district will be realized with the completion of a new power plant which is being built above Daggs Reservoir. This will allow water used for power to be stored in the reservoir during the non-irrigation months. Heretofore, this water was lost because the power plant was below the reservoir. This office has cooperated fully in this project, also.

Lone Pine Reservoir was completed this year with proper dedication ceremonies. A spring freshet, after completion of the reservoir, brought the water level up to 70 feet. This water immediately disappeared, going out at the rate of about 4 feet a day. Additional funds were secured by the Water District from WPA to put clay plugs in the holes along the reservoir banks that developed. Whether this work has been beneficial is not yet known as the reservoir has not filled up sufficiently to test them. It was the opinion of Dr. Riche, Dr. A. Fife, of the Soil Conservation Service, L. W. Windsor of the Agricultural Engineering Bureau, and Carl Harris that any work along this line would be of doubtful value and could only be definitely worked out by experimentation. It is believed, that regardless of whether or not Lone Pine Reservoir holds water for any length of time, the project will, in time, materially benefit the Irrigation District and make it possible to bring a considerable amount of new land under cultivation. It may be that a re-financing of the project will be necessary in order to make it possible for the district to survive. This would, of course, be put before the State Debt Adjustment Committee, for decision.

This office cooperated with the Showlow Irrigation District in establishing six permanent weirs in their irrigation system in order to make it possible for the water boss to more equally distribute the flow to each member of the company. Two 3 foot weirs, three 2 foot weirs, and two  $1\frac{1}{2}$  foot weirs were built and installed by the County Agent. This district, also, contemplates the building of a new reservoir on Showlow Creek to supplement their present water supply. In cooperation with the Rural Resettlement Administration, this office aided the district in making arrangements for loans, the details of which have not yet been completed.

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Wier measuring flow of all  
Flowing Wells of Joseph City Project  
Average 8 measurements July and August 750 Gals per Min.  
(8 wells) 1936



Well #9 of Joseph City Project  
Approx flow 160 Gals per min  
Reduced to 115 Gals per min  
when 90 other well drilled 100' East  
1936



Blasting 100' well in Joseph City Project in  
effort to open water bearing, result - no  
increased flow resulted  
1936





Flowing well Joseph City Project  
est. flow 90 gal per min.  
1936



Flowing well Joseph City Project - V weir readings  
over period of 3 months average  
130 gal per min. measured 190 gal p/m  
until other wells were drilled  
1936



Joseph City Project  
Chas Stream from 3 wells from left showing flow from  
new drilling coming in to stream - ~~water~~ the cloudy  
flow of water came in at 48'  
1936

SOILS AND IRRIGATION (continued):

In cooperation with  
Roy Westley, Agronomy  
Specialist, two result

demonstrations were held in contouring. The primary reason for these demonstrations was to aid cattlemen in working out their Soil Conservation range program. A great deal of interest is shown in this work by the ranchers of this county and it is hoped that this program will give an impetus to this type of range improvement. These demonstrations were conducted at Mr. J. L. Westover's place at Joseph City and on Mr. Marshal Flake's place at Snowflake.

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WEED CONTROL:

The weed problem in the county is becoming more acute with each succeeding season. Encroachment of Bind Weed, Turkistan Thistle, Camel Thorn, Loco, White Top and many other root spreading weeds are gaining headway in this county. In conjunction with Mr. Roy O. Westley and Mr. Harvey Tate, of the Extension Service, and Dr. Streets, of the Experiment Station, some preliminary work has been done in itemizing and estimating the extent of damage. The County Planning Committee watched with a great deal of interest the demonstrations in Apache County and awaits the report of the Experiment Station and the Extension Service on this project. Preliminary plans have already been made for securing at least one and perhaps two spray outfits for this county, providing equipment which would be useful for orchard and crop as well as for weed control can be secured at a reasonable price.

RODENTS AND PREDATORS:

This office cooperated with the Biological Survey in lining up ranchers to cooperate in the killing of prairie dogs on the ranges. Mr. Ike Rogers was the local representative of the Biological Survey in this county during the months of June, July, August, and September. It is the consensus of opinion among the cattlemen that this work could be made more effective if a man were available in the early spring before the range dries up during the spring dry spell. Mr. Rogers reported very good prairie dog kills throughout the county and the cattlemen all expressed themselves as being very well pleased with his work and the benefits that accrued.

Through this office about 100 quarts of grain were distributed, mainly for the control of Kangaroo rats on the premises of various farmers in the county.

With a few exceptions, the ranchers have pretty well controlled the prairie dog trouble in the county. The few non-cooperators, of course, make it harder for those who do try to control the pests to do a thorough job. It is the opinion of the Cattlemen's Association that, if a range program is continued next year, rodent control work should be included in such a program.

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POULTRY: The commercial poultry industry of the county had a very considerable increase in numbers this year. There are twelve flocks in the county of 500 birds or over, which could be classified as commercial flocks. All of these operators had very little mortality in their flocks, this year. Only one operator had a greater loss than 9 per cent from the time of purchase of his chicks until the pullets were put in their laying quarters. This one operator was the only large poultryman to purchase baby chicks outside the State of Arizona. Mr. Clyde F. Rowe, Extension Poultryman, and the County Agent made a survey of operators and listed their baby chick losses. The results of this survey are given in the table on the next page.

The poultrymen were exceptionally fortunate in having been able to sell all of their fryers this year. The lowest reported price received for white Leghorn fryers, dressed, was .23¢ per pound. Winslow, Holbrook, and McNary were the principal markets supplied. However, a very good market can be developed in Gallup, New Mexico, and Central Agency at Window Rock in New Mexico. It is planned that next year the poultrymen will take advantage of these markets. A very good market is evidenced in Winslow and Holbrook for heavy hens, which is supplied almost entirely from Farmington district in New Mexico. An equally good market could be developed in Gallup and Central Agency.

A result demonstration in the construction and use of wire bottom laying nests was established at Mr. E. E. Swan's farm at Joseph City. These nests have proved very satisfactory when used from the time that the pullets start to lay. Mr. Swan reports that less than one per cent of the eggs are cracked or need washing. Three method demonstrations were given in killing and dressing poultry for market. Two result demonstrations were completed in worming methods and worm control methods through sanitation. The tape worm problem in the county is not a serious one at the present time, but will probably become increasingly so as the poultry population increases. Individual conferences with producers resulted in the correction of feeding practices with two large operators and several small flock owners.

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SURVEY OF CHICK AND PULLET LOSSES  
NAVAJO COUNTY  
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OWNER	ADDRESS	PURCHASE	DATE	LOSS	INSPECTED	HATCHERY
Swan	Joseph City	2,000	4/22	104	6/22	Gold Spot
Swan	Joseph City	2,000	3/10	21	6/22	Gold Spot
Wimmer	Joseph City	1,500	3/21	133 (100 lost in shipping)	6/22	G.Haws
G.Shelly	Joseph City	1,800	4/18	54	6/22	Gold Spot
W.Shelly	Joseph City	1,500	3/24	60	6/22	Gold Spot
W.Shelly	Joseph City	700	3/21	49	6/22	Gold Spot
L.Porter	Heber	600	3/21	15	6/22	G.Haws
Smith-Heywood	Snowflake	800	2/1	70	6/22	G.Haws
Smith-Heywood	Snowflake	800	3/10	70	6/22	G.Haws
L.Neff	Shumway	1,000	4/12	250	7/8	Missouri

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DAIRY: Dr. C. J. Prchal, veterinary with the United States Department of Agriculture, Bureau of Animal Husbandry, over a period of six months blood tested 1,500 head of dairy stock for Bangs disease. The total reactors for the county was fifteen. Dr. Prchal, also, completed T.B. tests in three herds. Both the T. B. tests and Bangs disease work proved very popular with producers of the county and it is the general concensus of opinion that such work should be continued.

The new creamery at Taylor has been completed and the equipment installed. However to date, they have not operated because of a lack of power sufficient to run the machinery. When they started their project last year it was supposed that the Snowflake Irrigation and Power Company would have installed new machinery sufficient to supply the power the creamery needed. Due to postponment of WPA work on the project, this power was not developed in time for the creamery to operate this year.

Mr. Clyde F. Rowe, Extension Dairyman, called several meetings in cooperation with the County Agent in connection with the creamery project and demonstrated to the farmers how it would be possible for them to deliver cream in proper condition so that first class butter could be made. During the Santa Fe Tour, Mr. Rowe had a very good dairy exhibit and assisted farmers in their dairy problems. Mr. R. N. Davis, Dairy Husbandman of the University, and Mr. Rowe inspected the creamery, together with the County Agent, and aided the Creamery Association materially in their projected set up. The Creamery Association, on their recommendation, decided not to attempt ice cream manufacture the first year of operation.

Regardless of the fact that there are listed in this county better than 2,000 head of dairy stock, it is extremely doubtful if there are enough to supply the Creamery Association with a milk flow great enough to keep their machinery running. Smith-Heywood Dairy Company of Snowflake reports difficulty in securing enough whole milk to supply even their demands. They deliver milk in Holbrook and Winslow. It is expected that if and when the creamery starts operations that a good many farmers, especially in the dry land farm area, will increase their dairy heads. Two meetings were held in the dry land section to discuss feeding practices necessary for increased milk production. It is noted that very few farmers in these areas feed any protein content, the general practice being to depend entirely on dry pasture and silage. Two commercial dairies were aided in the development of rations which, they report, materially increased their milk flow.

DAIRY(continued):

The County Agent treated four cases of milk fever with calcium gluconate this year. No other cases of milk fever treatment have come to the attention of this office.

The Rural Resettlement Administration has taken preliminary steps toward the purchase of dairy bulls for Linden and Pinedale communities in cooperation with this office.

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LIVESTOCK: Most of the work done with livestock this year has been done in cooperation with the Livestock Association of Northern Arizona. This office has had very fine cooperation from all members of the association and especially from the officers, who are as follows:

Ross Perner, president  
J. C. Wetzler, secretary  
W. C. Wiltbank, vice-president  
W. J. Wyrick, vice-president

The last of May the Cattlemen's Association of Northern Arizona held a two day Stock Show in Holbrook, which was very well attended and to which the County Agent devoted a great deal of time. This Show is an annual affair and this year Mr. Chas. Pickrell, Extension Animal Husbandman, acted as judge for all classes of livestock. Director P. H. Ross, also, attended and assisted in the awarding of prizes. The main purpose of this Show was to raise the association dues for the National Livestock Association. In this regard the show was more than successful, the association having a nice balance after all expenses and dues had been paid. This office handled all of the correspondence and details for this show as well as assisting on the grounds during the show.

The 4-H Club boys and girls who participated in this show fed calves for the market which were furnished by the stockmen and were shown in a fat calf class. The results and statistics of this project are given in the table on the next page.

The Rural Resettlement Administration in cooperation with this office set up a loan for the purchase of a Percheron stallion. Five Snowflake operators borrowed the money for the purchase of the stallion which was procured from Eshelman in Kansas. The animal is an outstanding individual as a yearling and, with proper care and handling, will be a very valuable addition to the livestock of the county.

This office cooperated with the Cattlemen's Association in the preparation and circularization of a listing sheet of livestock for sale in the fall. The cattlemen were very well satisfied with the results obtained through this circularization. Practically all of the stock available had been sold by the last of November. Very few cattlemen took less than \$.05½ for steers. Approximately head were sold and shipped from Holbrook during October and November this year.

The feeding of range mineral as a range practice was established through the County Agent's office on the Spurlock Ranch, one of the largest in the county. The results have not as yet been reported.

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4-H CLUB BOYS' AND GIRLS' FAT CALF CLASS RESULTS FROM  
NORTHERN ARIZONA LIVESTOCK ASSOCIATION STOCK SHOW  
Holbrook, May 1936.

EXHIBITOR	OWNER	INITIAL WT.	SELLING WT.	INCREASE	FINAL 4-H CHECK
Bruce Hansen	S.W. Jaques	374	710	336	\$ 23.37
Susa Hansen	S.W. Jaques	343	600	257	17.84
Wm. Hunt	S.W. Jaques	426	680	254	17.63
Chas. Hunt	S.W. Jaques	425	630	205	14.20
Chas. Hunt	S.W. Jaques	370	680	310	21.55
Jackie Eubanks	H. Eubanks	400	601	201	14.07
Joy Eubanks	H. Eubanks	400	587	187	13.09
Ralph Hansen	J. A. Hansen	392	660	268	18.76
A. Bushman	J. Bushman	517	700	183	12.81
W. Brinkerhoff	M. Flake	380	450	70	4.75
W. Brinkerhoff	M. Flake	410	640	230	15.95
W. Brinkerhoff	M. Flake	410	540	130	8.95
Earl Jones	J. Jones	400	790	390	27.30
Johnie Jones	J. Jones	350	650	300	21.00
Arleen Porter	A.B. Porter	272	490	218	15.26
Barbara Bourdon	Wm. Bourdon	475	670	195	13.65
Billie Bourdon	Wm. Bourdon	500	700	200	14.00
Clint Randall	A.B. Randall	382	570	188	13.16
A. DeSpain	A.B. Randall	449	570	121	8.47
Grant Turley	Fred Turley	425	670	245	17.15
Ruthie Willis	V. Willis	475	740	265	18.55
Lehi Rogers	Wm. Bourdon	525	750	230	15.75
Lehi Rogers	Wm. Bourdon	545	750	205	14.35
Lehi Rogers	D. Curry	500	550	150	10.50
Lehi Rogers	D. Curry	500	710	210	14.70
Earl Smith	Wm. Bourdon	450	640	190	16.15
Earl Smith	Wm. Bourdon	430	730	300	23.85
Marian Smith	Wm. Bourdon	430	750	320	22.15
Roscoe Rogers	R. Perner	315	570	255	12.87
Elliot Butler	R. Perner	330	540	210	14.05
Max Heywood	Wm. Bourdon	400	640	240	19.65
Ada Lee Perner	R. Perner	250	520	270	18.90
Betty Flake	M. Flake	320	500	180	12.60
Ira Willis	V. Willis	320	480	160	11.20
Eldon Stratton	W.R. Stratton	300	570	270	18.90
Eldon Stratton	Gene Hancock	550	670	120	8.40
Eldon Stratton	Gene Hancock	450	570	120	8.40
Terrance Brimhall	Wm. Bourdon	480	660	180	8.80
Phil Shumway	Wm. Bourdon	550	870	320	20.95
B. Turley	F. Turley	400	680	280	19.60

\*Most cattlemen donated feeder 50 lb. at .07 per lb. bringing final 4-H check \$3.50 higher than actual gain shown at .07 in table above.

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LIVESTOCK (continued):

The Agricultural Conservation program for the range started too late for some operators to benefit from it. However, approximately 40 ranchers cooperated in the program. The total number of acres owned or leased by these operators is approximately 600,000, or about two-thirds of the privately owned land of the county. Mr. F. L. Jackson of the United States Forest Service was assigned as Range Examiner for this county by the Forest Service. He has proved to be a very capable worker and has cooperated excellently in carrying out the program.

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County Agricultural Agent  
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4-H CLUBS:

One 4-H Club project was carried on this year in beef production, which was county-wide and the statistics of which are included under the Livestock section of this report. It is expected that the Stock Show put on by the Cattlemen's Association of Northern Arizona will be sponsored again next spring with another 4-H Beef Feeding project included. However, if the show does become assured, there will probably not be as many boys participate as last year. The rules governing the showing of stuff will be altered to some extent with a view to making the stock that is shown more nearly conform to standard quality.

Two Community 4-H Clubs were established, one at Woodruff and one at Joseph City, in conjunction with the girls' clubs of the Home Demonstration Agent. In these clubs the boys were allowed to choose the project in which they were most interested and no attempt was made to form clubs on a production basis. The boys and girls in these Community Clubs met jointly for a part of the program and were divided into separate groups for project information and instruction. Mr. H. R. Baker, State Club Specialist, assisted in the organization of these Community Clubs.

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MISCELLANEOUS:

FARM PLANNING COMMITTEE WORK:

S.C.D.A:

In cooperation with Dr.  
Geo. W. Barr, Extension  
Economist, the County

Planning Board started its work in February. This committee was composed of the following members:

Jesse M. Smith, Snowflake, chairman  
O. W. Hatch, Taylor  
A. D. Owens, Showlow  
Gus Hansen, Lakeside  
L. D. Rogers, Linden  
J. L. Westover, Joseph City  
James Brinkerhoff, Woodruff  
F. F. Avery, Snowflake

This County Planning Board held several meetings and, following instructions, they made a County Farm Report, a copy of which is attached. Also, two meetings were held with the Range County Planning Board, and a copy of their recommendations is, also, attached. Nine Community meetings were held in accordance with the regulations of the Soil Conservation and Domestic Allotment Act and a county organization was perfected to carry out the provisions of this act. In May, Mr. W. C. Gardner and Mr. F. F. Avery attended a State meeting of S.C.D.A. committeemen in Tucson together with the County Agent. There were 154 farmers in the county who filled out work sheets in conjunction with this program. The County Committee met several times with the County Agent to supervise this work. This fall Mr. Ben Rencher was appointed as civil engineer for the purpose of measuring and checking compliance for this program. During the month of November Mr. Rencher finished his work on the program and the paper work in this office has been nearly completed. We need only the return of the listing sheet from the state office to complete the applications for payment.

The range part of this program was started in this county in the month of October and details of this work are included under the Livestock section and, also, in the last paragraph of the Soils and Irrigation section of this report. Mr. Jesse M. Smith and Mr. Wm. R. Bourdon accompanied the County Agent to the State Planning Meeting in Tucson in March. Both Mr. Smith and Mr. Bourdon reported to the local County Committee and the Livestock Association, respectively, on this meeting. At the Livestock Association meeting, the comment on this program was varied but the great majority believed that no national cattle program would meet with the approval of the stockmen in this section. However, it is now apparent that a good many of them have changed their minds after actually having a chance to cooperate in such a program.

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REPORT OF NAVAJO COUNTY FARM PLAN COMMITTEE

The Committee presents this report in the hope that it will furnish a basis for a future permanent County plan. Also, the Committee hopes that this plan will meet the requirements for which it was originally set up and that it will aid in the formation of an adequate State Plan. In the opinion of this Committee, this plan is neither complete nor final, and because of the limited time at its disposal for the work of a comprehensive program the limitations and the need for revision of this plan are self evident.

The Committee considers the conditions of production and the processes of marketing for this County, in many respects, to be unique. They consider <sup>that</sup> the problems of the producers can best be solved by the producers of this County, they further consider that any programs of control of production or marketing can best be accomplished through educational and co-operative processes by the producers.

There are several specific problems confronting the Agricultural Industry of this County which arise from the changing conditions of transportation, marketing, size of farm unit and the economic and social structure of the various farming communities. Some of these problems have been tentatively considered:

1. That the change in transportation facilities and freight rates have made it possible for the more bulky products such as hay, grain, potatoes and dry beans from agricultural sections more favorably situated to supply our normal markets for these products, at a price below our cost of production. This condition indicates that there should be a switch in the type of produce that the producers of this County should raise. It is the belief of the Committee that a switch to more concentrated and higher revenue producing crops, such as truck garden crops, should be carefully worked out and that this should be correlated with a very definite co-operative marketing system.

2. That the more extensive feeding of livestock will furnish an economic outlet for some increased feed production, and that a certain amount of co-operation between the livestock men and farmers can be worked out to the advantage of both branches of the agricultural industry of the County.

3. That because of the relatively small farm units prevailing in many of our farm sections, a switch to poultry production for a limited number of producers, would increase the earning capacity of these smaller acreages.

4.- That the co-operative ownership and use of grinding mills would increase the value of the feeds available for feeding purposes.

5. That any new lands which might come under irrigation, such as those proposed to come under the new 'Lone Pine' project, be controlled by the water district to obviate the introduction of promotional land schemes, and hold

the land value at a point at which it will be possible for the producer to pay his capital investment in a reasonable length of time.

6. That there are some acreages in the County requiring additional water to carry over short periods of water scarcity occurring in the existing supply and that such increased water supply can best be furnished by co-operative effort with a Governmental Agency.

7. That an intensive co-operative program of weed and pest control with governmental co-operation is essential.

8.- That a thorough study by existing State and Federal agencies of the movement of agricultural products into the State should be made, with a view to the formation of a policy which would secure to the producer of the State, maximum possible markets for his products.

9. That the first requisite of each producer in any plan, be that he first make every possible provision that his farm unit be as nearly as possible a self supporting unit.



10. That one of the greatest benefits to the producers of the County, that the Government provides, is the supplying of a source of credit to the producer. This benefit would be greatly enhanced through a simplifying of the procedure for the use of these credit funds, both from the individual and the group basis.

The Committee feels that the producers of this County can best be served through co-operative effort among themselves and co-operative effort with existing governmental agencies, and that any governmental or State program that might be instituted in this County, should first be carefully gone over with authorized re-presentatives of the producers of this County.

This report is respectfully submitted for the consideration of the Secretary of Agriculture and his duly authorized Agents.

NAVAJO COUNTY LIVESTOCK PLANNING COMMITTEE REPORT--A

Whereas: In token of appreciation of the efforts and co-operation of the Extension Service and in recognition of the fact that this is the first time the average producer has had the opportunity to express his thoughts, the undersigned desire that the conclusions hereinafter set forth may not be held in the light of negative thought, and

Whereas: We appreciate the importance of soil erosion control and realize it should be given serious consideration where necessary. However, by reason of the elimination of the causes creating erosion in this country, (open range and over grazing periods) the ranges at present are near properly stocked due to the aforementioned elimination and natural conditions, now

Therefore, Be it Resolved: By the Navajo County Livestock Planning Committee in convention assembled this seventh day of March, 1936, that we do hereby oppose any further restrictions or control upon the livestock industry either by way of Federal Control or through any State Co-operative Agency, and be it

Further Resolved: That we oppose any excise or consumer tax on beef or beef products for the benefit of this or any other industry for the reason that such tax means increased cost to the consumer which in turn is reflected in a decreased consumption, and be it

Further Resolved: That we do hereby oppose any alteration of the embargo on meat products from South American

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NAVAJO COUNTY LIVESTOCK PLANNING COMMITTEE REPORT--A  
(continued)

countries and deplore any effort to change the basic protective tariff rate on cattle. We oppose as harmful to the industry, reciprocal trade agreements affecting livestock, and respectfully request of such reciprocal treaties not existing.

Respectfully submitted,

J. C. Wetzler

W. R. Bourdon

Johnnie Jones

W. H. Eubanks

Ross Perner

W. J. Wyrick

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## NAVAJO COUNTY LIVESTOCK PLANNING COMMITTEE REPORT--B

The Navajo County Livestock Planning Committee met at Lone Pine Dam on March 7, 1936, and decided upon the following recommendations to be presented to the State Planning Committee on March 16, 1936.

The individual members of this committee wish to express our appreciation for this opportunity given us to voice our opinions on matters affecting our industry in connection with which policies and regulations and laws are being worked out by our National Government at this time.

We appreciate the efforts and cooperation of our Agricultural Extension Service in the past and look with favor upon this idea of investigation and exchange of ideas between the producers and the Department of Agriculture through the co-operation of the Extension Service.

We grant that conditions existing in the past such as uncontrolled open range with resultant overgrazing has had some effect on past erosion and we realize that a broad program of soil conservation is important to our whole country, but we believe that the present practice of grazing control by individuals is taking care of the problem in a natural way in this part of the State and that an intensive program of erosion control is unnecessary except possibly on the Navajo Indian Reservation.

Under the circumstances we do not see the necessity for State or Federal control or supervision of the livestock

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NAVAJO COUNTY LIVESTOCK PLANNING COMMITTEE REPORT--B  
(continued)

industry whether connected with a soil conservation movement or any other program and we are definitely opposed to any excise or consumers tax on beef or beef products for financing such programs.

We do feel that our Department of Agriculture should take a more aggressive attitude and co-operate with the livestock industry in our fight to maintain an embargo on beef and beef products from countries suffering from Foot and Mouth disease and other dangerous stock diseases.

J. C. Wetzler

W. R. Bourdon

Johnnie Jones

W. H. Eubanks

Ross Perner

W. J. Wyrick

John McLernon  
Navajo County, Arizona  
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MISCELLANEOUS:

AAA--CORN-HOG PROGRAM:

A great deal of time was spent by the County Agent this year in an effort to wind up the 1934 and 1935 Corn-Hog program for this county. After re-writing most of the individual material for cooperators and fulfilling many requirements imposed by the AAA officials, the program has progressed to a point where only three signers of the program yet remain to be paid. Mr. Chas. U. Pickrell, Extension Animal Husbandman, performed indispensable work making it possible to proceed as rapidly as possible. It is hoped that the three checks still outstanding will be paid before the first of the year. All of the demands of the AAA officials in regard to the program have been complied with by this office to date.

DEBT ADJUSTMENT COMMITTEE:

One Debt Adjustment Committee meeting was attended by the County Agent, during which no definite work was accomplished other than outlining a general procedure for the county. This office cooperated with one farmer in an effort to get the Debt Adjustment Committee to act on his problem, but after reviewing the case the chairman of the committee decided that his financial troubles were not acute enough to require any action by this committee. It is possible that the Debt Adjustment Committee will find it necessary to request some type of action in regard to the Snowflake Irrigation District if it proves that Lone Pine Dam, which was discussed in the Soils and Irrigation section of this report, will not store water.

CROP AND SEED LOANS:

This office cooperated with the Crop and Seed Loan representative, Mr. H. C. Decker, in making collections and working out the preliminary preparations for loans in this county.

RURAL RESETTLEMENT ADMINISTRATION:

This office cooperated with the Rural Resettlement Administration in the matters pertaining to farm plans necessary for loans and transferring the ownership of the cannery at Snowflake to the local association.

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MISCELLANEOUS:

A. B. BALLANTYNE MEETINGS:

Mr. A. B. Ballantyne,  
Rural Sociologist, held a  
series of meetings in the

county in March in conjunction with his Discussion Group program. A total of eight meetings were conducted at which the attendance was somewhat disappointing, but the results seemed well worth while. At these meetings, attention was also given to an effort to increase interest in the County Farm Bureau program.

SANTA FE TOUR MEETINGS:

In October the Santa Fe  
Railroad cooperated with  
the Extension Service in a

series of three educational meetings in this county, one at Lakeside, one at Snowflake, and one at Holbrook. The attendance at the Snowflake and Lakeside meetings was very good and the attendance at Holbrook was as good as could be expected due to the fact that the tour was held during the fall round-up period and all cattlemen were busy gathering their stuff and selling. The farmers of the county, generally, have expressed themselves as being very well pleased with the tour and the County Agent sincerely hopes that such a program can be continued in the future. It is hoped that if another tour is planned next year that it can be arranged a little earlier in the season to allow the range cattlemen to benefit from the program.

It was with extreme regret that the county and state lost the valued services of Mr. C. R. Fillerup, who passed away the 19th of February. Director P. H. Ross, Dr. Forbes, A. B. Ballantyne, Chas. Lueker, and E. S. Turvell of the University Extension Service came to attend the funeral, which was one of the largest ever held in this county.

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County Agricultural Agent  
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PROJECTED PROGRAM OF WORK, NAVAJO COUNTY, 1937

PROJECTS	COMMUNITIES	METHODS & PROCEDURE	GOALS
<u>Explanation:</u> This program of work has been developed by the County Agent in cooperation with the farmers of Navajo County. A circular letter with a return card, a sample of which is enclosed, was mailed to all Navajo County farmers and stockmen. From the returned cards, to date, a chart was developed showing the communities which were interested in certain projects and the number of persons in each community interested in such a project. The response from this circularization was very good and it is felt that the general feeling of the farmers, as a whole, was quite accurately expressed.			
# 1 Poultry Management	Snowflake Woodruff Joseph City Lakeside Pinedale ClaySprings Winslow	Completion of result demonstration in improved laying nests. Establishment result demonstrations in feeding program with at least one operator in each community. Establishment of at least 4 reasonably large turkey operations in Lakeside, 2 in Showlow, and one in Snowflake. Method demonstrations in marketing of eggs and meat products in each community. Promote one poultrymen's tour to include, if possible, a trip to at least one other county. These projects to be worked out in cooperation with University Poultry Specialists and Experiment Station.	A more complete commercialization of poultry industry of county based on available market conditions and possibility of development of future market.
# 2 Orchard Management	Lakeside Showlow Snowflake Taylor Woodruff	Pruning demonstrations in communities listed. Spraying demonstrations Lakeside & Snowflake. Method demonstration in thinning of fruit Lakeside. Meetings in Lakeside, Showlow, and Snowflake to try to establish for the county a market grading system. In cooperation with Resettlement the purchase of at least two spraying machines for county-wide use on cooperative <del>basis</del> basis. These projects in cooperation with University Specialists & Experiment Station.	A reasonably good marketing system as a result of reasonably good orchard practice which will insure saleable products.

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# 3 Dairy Management	County- Wide	In cooperation with Resettlement attempt to purchase at least 3 pure bred sires, one each for Linden, Pinedale, Clay Springs. Cooperate with creamery pro-	Establishment of reasonably good feeding practices based on available feed reduction of numbers cross-bred cattle in dairy herd especially Herford crosses which are quite prevalent
ject at Taylor in effort to bring about successful operation. 4 meetings in conjunction with dairy Specialist to over come present feeding practices which do not include protein. Establishment one result demonstration in milk records and feed records. Establishment of 2 result demonstrations in mineral feeding requirements. These cooperating with Specialists and Experiment Station.			85% completion
# 4 4-H Clubs	County- Wide	Establishment one Beef feeding club on county-wide basis for Cattlemen's Association Stock Show. Establishment at least 4 Community Clubs, places to be determined by availability of leadership, interest and number requesting clubs. Cooper-	
ate with Specialist in these. # 5 Corn Production		Method demonstrations Winslow, Snowflake, Woodruff, Joseph City, Taylor, Showlow, Clay Springs on Ear Worm control and seed selection. Cooperate with Specialists and Experiment Station.	Marketing of corn comparatively free from injury both for canning purposes & <u>huckster sale</u> Development market grades based on local market conditions.
# 6 Truck Production	County- Wide	Establishment local seed distribution for cantaloupes from Joseph City, beans from Snowflake, corn from Snowflake, & Joseph City, and peas from Lakeside. Also other truck garden seeds from communities	
which were especially successful last season. Meetings at Winslow and Joseph City to increase interest in development of truck crops. Cooperation with Cannery at Snowflake in effort to increase effectiveness. Cooperate with Specialists & Experiment Station.			Increased <del>effective</del> acreage in legumes for soil benefit & to <del>increase</del> modify present feeding practices
# 7 Crop Rotation	County- Wide	2 result demonstrations at Linden and Showlow and sweet clover rotations. Full utilization of Agricultural Conservation program in development of project. Cooperate with Spec-	
ialists & Experiment Station.			

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|---|-----------------|---|---|
| # 8<br>Rodent<br>Control                        | County-<br>Wide | Full cooperation with U.S. Biological Survey to reduce losses. Effort to get Bio. Survey operative in county in early spring before grass starts. Cooperate with Specialists & Experiment Station, also.  | As nearly as possible a complete eradication of rodents.  |
| # 9<br>Range<br>Poison<br>Weed<br>Eradication   | County-<br>Wide | Cooperate with ranchers in endeavor to work out some method of practical as well as theoretical way for Loco eradication. One result demonstration established using fire gun on small patches to determine costs and effectiveness. Cooperate with Specialists & Experiment Station.   | Inclusion of project in range program. More complete fencing out of Loco areas.                                 |
| # 10<br>Range<br>Livestock                      | County-<br>Wide | Continuation result demonstrations in range mineral feeding. Method demonstration with Dr. Pistor in treatment of Loco affected animals. Method demonstration in parasite control in hogs. Cooperate with Northern Arizona Cattlemen's Association and its Annual Stock Show. Cooperate with Specialists and Experiment Station.  | Reduction of losses in calf crop especially those due to mineral deficiency.                                    |
| # 11<br>Water &<br>Moisture<br>Conservation     | County-<br>Wide | Result demonstration to determine feasibility of Joseph City water irrigation districts, pumping water from wells established this year south & west of Holbrook. Establishment of reasonably accurate water distribution in Showlow district based on weir measurements established this year. Completion of supplementary dam for Showlow district. Cooperate with Resettlement in establishing stock water for Linden, Burton, Clay Springs. Method demonstrations in Snowflake-Taylor district for increased effectiveness of water used & consequent increase in acreage under irrigation. 3 result demonstrations terracing at Clay Springs, Linden, Showlow. One result demonstration in strip farming at Showlow. 3 method demonstrations water spreading & contouring at Woodruff, Snowflake, Joseph City. Cooperate with Specialists & Experiment Station. Continuation & completion soil sampling project at Woodruff. | Increased efficiency in irrigation & dry farming practices in accordance with desires & ability of cooperators. |
| # 12<br>Agricultural<br>Conservation<br>Program | County Wide-    | Completion of present programs & instituting of such programs as may be started next year.  | Prompt & full payment to all cooperators entitled to payment.   |

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- # 13  
Supplementary County- Wide Establishment of result  
Projects demonstrations in weed  
control in all commun-  
ities. Endeavor to se-  
cure cooperation of all  
farmers interested in  
project of sprayer for weed control in accord-  
ance with suggestions of University Experiment  
Station and Extension Specialists.
- # 14  
Home County-Wide In cooperation with the  
Beautification Home Demonstration Agent  
hold meetings and method  
demonstrations pertaining  
to project. Cooperate  
with University Experiment Station and Extension Specialists.

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