

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

for

COCHISE COUNTY
ARIZONA

December 1st. 1928 - November 30th. 1929.

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County Agricultural Agent.

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INTRODUCTION

During the fiscal year just passed, it has been the desire of the agent to follow the program of work as drawn up at the start of the year as closely as possible. This is the only way that definite progress can be made on any project.

Of course emergency work and unforeseen developments arise that can not be avoided. Miscellaneous work has a large place in the work of the agent.

The Farm Bureau has added another local to the active ranks. The Mc Neal local has been started up again this year. Several other communities should be revived in order to get the best results from extension work. Effort will be made to revive these locals.

The livestock industry is still thriving and prosperity prevails. The price of cattle is off a little but the grass is the best in years so this offsets the lower prices.

Cotton growing has been discontinued for a year or two due to the Pink Boll Worm and Tharberia Weevil. A larger acreage of Cauliflower was planted this year. Irrigation is still one of the main problems in Cochise county and will be for several years. Studies on pumping plants have been continued.

The agent believes that the agricultural industry in Cochise County is faced by the following problems;

- First . . . Organization
- Second . . . Irrigation
- Third . . . Financial
- Fourth . . . Development of a system of permanent agriculture and cash crops.

SOIL IMPROVEMENT

Project No. 1

- i. Name of Project: Soil Improvement
- Location: The three valleys in Cochise County.
- Date Effective: December 1, 1927
- ii. Conditions Justifying Project: Practically all of the farm lands in the three valleys are very spotted small acres of Black Alkali. Often times the spots will not be over fifty feet in diameter. These spots injure the appearance of the farms and also cause trouble in irrigation. The farmers have not known how to remedy them and keep the spots from burning the crops.
- iii. History of the work done to date: 1927 was the first work done on reclamation of black alkali soil. A few soil samples were analysed and preliminary studies were made. 1928 was when the work began to take form. Two demonstrations have been started.
- iv. Purpose:
1. To improve the quality of the fields and give a more uniform yield of crops from each farm.
 2. To leach out and use gypsum on all black alkali spots in cultivated fields.

SOIL IMPROVEMENT (CONTINUED)

- V. Statement of Goals: Secure three Co-operators and establish result demonstrations at each of the three farms. Keep records of costs and length of time necessary to reclaim the soil.
- VI. Plan of Procedure: Secure Co-operators by personal visits explaining nature of work. Establish result demonstrations. Keep a record of soil analysis and cost of gypsum and water used. Have experiment station specialist inspect county and give advice.
- VII. Records: Costs and soil tests will be recorded. A full narrative report will be made as the work progresses.

Calendar of Work:
Project No. 1

WHEN	WHAT	WHO
January :	Inspect fields for water penetration, Alkali Removal, etc.	County Agent
March :	Same as Above	County Agent
April :	Inspect; See about Alkali Conditions	County Agent
June :	Take Soil Samples See Field is bordered and made ready.	County Agent
July :	Apply Gypsum	County Agent
August :	Inspect for Results	County Agent
September :	Inspect for Results	County Agent
October :	Check on Results and write up Records	County Agent

SOIL IMPROVEMENT (1929 Addition)

Project No. 1

Name of Project	Soil Improvement (1929 Addition)
Location:	The Three Valleys
Date Effective:	December 1, 1927
Status:	Test and Demonstration
Purpose:	Same as Last Year
Co 1 for 1929:	Secure 2 Co-operaters Establish Demonstrations
Plan for Procedure:	Same as Last Year
Methods:	None Special
Records:	As Attached.

RECORD SHEET

Soil Improvement - Alkali Reclamation

Name E. C. Russell Address Willcox Date Nov. 30, 1929

Location of Demonstration Field: Two miles Due West of Willcox in South East Corner of Ranch.

Area: 10 Acres in Field

Condition of Field at Beginning: Bare spots in Alfalfa Field. No Vegetation.

Alkali Present:	Total Salts	825	Carbonates	120
	Sodium	256	Bicarbonates	390
	Calcium	None	Salphates	None

Source Alkali Analysis: University of Arizona

Treatment of Land: Plowed Irrigated three times.
Applied gypsum at the rate of two tons per acre.

Dates of Irrigation: Jan., April., May, June, July, Sept.

Discharge of Pump: 800 Gallons per Minute.

Results: Black Alkali all neutralized. White Alkali ~~leached~~ leached out. Soil takes water freely and is good tillable condition. Demonstration completed. Started in 1928, and finished Nov. 30, 1929.

Progress Report Complete. 1929.

Soil Improvement.

Project No.1.

A large number of the farmers in the pumping districts of Cochise county have small circular spots of narrow strips of Black Alkali present in the fields. These spots or strips cause a loss of crops, injure the appearance of the farms and causes trouble in irrigation. A result demonstration was started on the L.C. Russell farm to teach the farmers how to remedy this condition and have a uniform stand of crops.

Soil samples were taken on this farm and the amount of black alkali determined. A ton and one half of Gypsum to the acre was needed to neutralize the alkali present. The plot selected was bordered up and plowed in the fall of 1928. Then it was irrigated three times and allowed to dry out. After discing, the gypsum was applied at the rate of two tons per acre and irrigation resumed. The Lewis Lumber Co. of Willcox furnished the gypsum free of charge to stimulate the use of gypsum. Soil samples were taken again this fall and the analysis showed that nearly all of the alkali had been removed from the soil. The plot will be seeded to alfalfa next spring and then the adjoining farmers will be able to see the results. Until then, only those familiar with the process can tell the results. The soil before treating, would not take water at all, now a six inch irrigation will not stand on the surface over one hour. This is better than the majority of his farm.

The city of Willcox is laid out right on a large deposit of black alkali. The home makers that desire a lawn or flower garden have had to haul soil in so that the plants would grow. In a year or two the alkali would come to the surface again and kill out the plants. Last year the agent assisted three ladies with their garden troubles by having them use gypsum. The results were so gratifying that the Womens Club of Willcox asked the agent to address the club on the proper care of the flower gardens and lawns. Particular stress was placed on the use of gypsum. As a result of this meeting, two result demonstrations

have been started. Mrs. P.P. Page and Mrs Harry Saxon are the two co-operators. Soil samples have been taken and a high content of black alkali was found in both yards. As each demonstration contains two city lots, 10 sacks of gypsum were used on each plot. This work was done about the first of October. Heavy irrigations will be given the yards this winter and spring. If the alkali is sufficiently leached out the agent will recommend the use of superphosphate and a nitrogen fertilizer. The agent will give his assistance to the two co-operators and try to have them have the best lawns and flower gardens in town.

This work doen not directly aid the farmers but by comparisons, the treated yards will be so easily distinguished that this will prove to the farmers that the treatment for alkali is effective and satisfactory.

FARM CROPS

Project No. 2

- I. Name of Project: Farm Crops
- Location: Renewal of old alfalfa fields.
Stewart, Mt. View and El Frida.
- Date Effective: December 1, 1927
- II. Conditions Justifying Project: Farmers have been in the habit of leaving their alfalfa fields for 10 and even 15 years without renewing. The yield decreases and no rotation is practiced. The other soils on the farm suffer by this practice.
- III. History of Work done to date: The first work done on this subject was in 1928. The agent has influenced several farmers to plow up their old alfalfa and seed down other fields.
- IV. Purpose: To increase the yield of alfalfa per acre and to rotate the crops so as to increase the yield of other crops also.
- V. Statement of Goals: Secure 4 Co-operators to plow under old alfalfa and plant new. Check results by getting yields on all crops affected.
- VI. Plan of Procedure: Secure Co-operators by personal visits. Keep records of yields of new alfalfa, old alfalfa and crops planted on the turned under alfalfa fields.
- VII. Records: Narrative reports will be made as the work progresses and records kept.

Project Report Complete. 1929.

Farm Crops.

Project No. 2.

No work was done on this project in 1929. Several farmers have plowed up old fields of Alfalfa and seeded down new ones, but this was the result of the work done last year.

Cotton.

Misc. Project.

As both the Pink Boll Worm and the Thurberia Weevil were found in the Cochise County cotton in 1928 and previous years and the state and federal quarantine boards both had a quarantine placed on this cotton, the agent persuaded the farmers not to grow any cotton this year. This method is the best remedy known to eradicate both of these cotton pests. Cotton growing may be resumed in a year or two if it is deemed advisable. This will be governed by the price of cotton at this time.



Figure 1 a Wonderful start of Beans

HORTICULTURE

Project No. 3

- I. Name of Project: Horticulture
- Lovation: Every community in entire county.
- Date Effective: December 1, 1927.
- II. Conditions Justifying Project: Most valley farms have small plantings of fruit and those in the mountains have commercial plantings. These farmers have not known how to care for them properly and need instruction in pruning, spraying and orchard management to secure proper returns.
- III. History of work done to date: Several years ago there was instituted a project to stimulate the planting of home orchards and of course proper care was to have been a part of it. This was carried out for a few years and then due to changing conditions the work lagged. There was planted quite a number of small orchards and a few vineyards which now need proper care. Due to the fact that deciduous fruits do not yield well on account of late frost there is a tendency to plant vineyards to take their place.

IV. Purpose:

1. To stimulate planting of good vineyards of varieties that will provide fruit over as long a season as possible.
2. To improve quality and quantity of fruit in the commercial orchards in the larger canyons in the mountains, by proper management.

V. Statement of Goals:

Secure about 9 co-operators divided roughly as follows: 5 orchard Co-operators, 2 vineyard Co-operators, 2 orchard and vineyard Co-operators. Give at least one pruning demonstration in each community in County. Carry records on two vineyards year after year. Conduct one spraying demonstration in control of theips.

VI. Plan of Proceedure:

Secure Co-operators by personal visits, explaining nature of work planned in each case. Plans for future include furnishing record forms to such Co-operators as can use them. Pruning demonstrations will be given by the University Specialist supplemented by demonstrations to be given by the County Agent in outlying communities not reached by the specialist.

VII. Records.

For this year narrative reports will be made of the work as it progresses.

HORTICULTURE
Project No. 3

Name of Project:	Horticulture (1929 Addition)
Location:	Every community in County
Date Effective:	December 1927
Goal for 1929:	Same as Last Year
Plans of Procedure:	Same as Last Year
Methods:	Same as Last Year
Records:	See Attached

Calendar of Work:
Project No. 3

WHEN	WHAT	WHO
December 2 days	: Arranged Work with : Co-operators	County Agent
January 9 days	: Pruning Demonstration	D. W. Albert and County Agent
February 5 days	: Pruning Demonstration	County Agent
March 3 days	: Pruning and Follow up	County Agent
August 2 days	: Visit all orchards and : vineyards pruned and : check up on Results	County Agent
September 2 days	: Same as Above	County Agent
October 1 day	: Same as Above : Complete Records	County Agent

RECORD SHEET

HORTICULTURE

Vineyard Growing.
Result Demonstration at San Simon

Name Ed. Gentner Address San Simon Date Nov. 1929.

Location of Vineyard

Three miles east and one mile south of San Simon

Size. One fourth acre.

Varieties. Flame Tokay, Black Hamburg, Thompson Seedless,
Rose of Peru and Muscat.

Pruned. Jan. 16, 1929.

Notes. The only planting in the valley that is spaced
properly and pruned to one stump.

Results and Data.

Second year for vines. Good stand and vines are
well headed to a single stump. Vines made a good
growth.

RECORD SHEET

Horticulture

Care of Young Orchard
Result Demonstration in Whitewater District

Name Frank Davis Address Webb Date Nov. 1929

Location of Demonstration Orchard
Two miles due east from Elfrieda

Size - About $\frac{1}{2}$ acre - All Apples

Variety: Arkansas Black - Winesap - Delicious
Interplanted with grapes.

Pruned: January 15th

Notes: This orchard and grape planting is being used as
a model for all farmers in the community to follow.

Results and Dates: Third season when pruned in January. All
trees were alive and in good condition.
Good growth last year. No disease, no
pests visible.

Fall check up showed all trees made a good
growth and none have died out. No disease
or pests visible.

RECORD SHEET

Horticulture

Vineyard Growing
Result Demonstration at Naco

Name Southern Arizona Edison Co. Address Naco Date Nov.

Location of demonstration. Vineyard.
1 mile north of Naco.

Size of Vineyard. About 2 acre.

Varieties. *Bouquet*
Alacante Beuchet, Zinfandel, Mission, Muscat,
Black Hamburg, and Flame Tokey.

Pruned. Jan. 22, 1929.

Notes. This vineyard is being grown to prove that
grapes are the best fruit for that district.

Results and dates.
Wonderful growth this year. Vines are ready
to bear fruit now. Third year coming up.
No dead vines and vines all headed properly.



Figure 2 Transplanting Cauliflower with a machine

Progress Report Complete. 1929

Horticulture Project No. 3.

Grapes.

The dry farm vineyard result demonstration at Hereford is still being carried on. The agent and Prof. D. W. Albert of the University of Arizona, visited the demonstration in January and pruned the vines. The rabbits got through the fence and killed out over half of the vines. Those that were not killed were injured a great deal. The project will be carried one more year and then abandoned unless a better showing is made.

The vineyard demonstration at the power plant of the Arizona Edison Company at Naco is doing extra well. Every vine but one grew and that was replanted this spring. The agent pruned the vines in January and visited the demonstration again in the fall. The vines are now ready to produce a crop of fruit next year. The foreman of the plant is taking excellent care of the vineyard.

The Concord grape planting in Cave Creek that was planted through the efforts of Al. Kinnison, a former extension worker, is now in full bearing and produced about 7 tons of grapes this year. This is an average of nearly three tons per acre. The crop was sold in the fancy Concord baskets.

The agent and Mr. Albert gave a series of method demonstrations on the proper way of pruning grapes. Demonstrations were given in all communities where grapes are grown. Grapes have proven to be the best fruit crop in the county for they always bear some fruit while other fruits often freeze and lose the entire crop.

Mr. Frank Davis of Elfrida planted an orchard two years ago and used grapes as an inter crop. These grapes are doing very well and produced a little fruit in 1929. Next year the vines will bear a good crop of fruit.

One result demonstration on grape growing is running in the San Simon Valley. Mr. Ed. Gentner has a planting that was set out according to the agent's specifications. The agent has been pruning the vineyard and giving advice on irrigation and cultural methods. Only two vines out of 160 have died out.

Deciduous Fruit

The result demonstration on the proper care of a young orchard was visited three times this year. The agent and Prof. D. W. Albert pruned the trees in January and gave the proper instructions for the care of the orchard during the coming year. The agent visited the planting in the summer and then again in the fall to check up on results. The trees have all made a wonderful growth and the orchard is in fine shape. These trees will make a wonderful pattern for all of the other growers to pattern after as the trees are properly spaced and pruned.

The agent and Prof. Albert gave a series of pruning demonstrations on proper methods of pruning both young trees and old neglected orchards. These demonstrations were given in all communities where any fruit is being grown. The agricultural classes of both the Benson and St. David High Schools were given instructions on proper pruning methods. Good attendance was had at all of the pruning demonstrations. Check up visits were made to most of the orchards some time during the year. Improvements were easily distinguished where the pruning had been done.

Vegetable Growing.
Project No.4.

I. Name of Project Vegetable Growing
Location: Stewart District
Date Effective: December 1, 1927.

II. Conditions Justifying Project: The farmers of the upper Sulphur Spring Valley have been trying to find a cash crop that would be a success in this valley. They appealed to the Agent for help in trying out the various truck crops. Some good cash crop must be found in order for a number of these farmers to keep on operating.

III. History of work done to date: The year 1927 was the first time any work on this project was done. Spring lettuce was tried and did not prove successful. The lettuce was planted in January and was to be harvested in May. Nearly the entire 40 acre trial planting went to seed. Mr. Church, Mr. Scott and Mr. Takagi were the three men trying to experiment. These men then tried fall lettuce also. The lettuce was planted in August. Hot weather about harvest time in November caused the lettuce to go to seed. No lettuce will be planted in 1928. Mr. Church planted seven acres of Cauliflower in 1927. The yield was very good and the price per pound was high enough that 40 acres of cauliflower will be planted in 1928. The cauliflower crop yielded over \$300. per acre. The crop was marketed in November and December.

- IV. Purpose: To find a cash crop for the farmers of the Sulphur Spring Valley.
- V. Statement of Goals: Secure three Co-operators. Find a truck crop that is adopted to Cochise County.
- VI. Plan of Procedure: Secure Co-operators by personal visits and test out the various truck crops that might be suitable for Cochise County. Secure the aid of the Vegetable Growing Specialist. Keep records and make frequent inspection trips giving advice on the proper management of crops.
- VII. Records: Records of yields and prices received for crops will be kept. Narrative reports of the progress of the various test crops will be kept as the work progresses.

Calendar of Work
Project No. 4

WHEN	WHAT	WHO
December	: Visit Prospective Growers Discuss Cauliflower Growing and Organization.	County Agent
January	: Same	County Agent
February	: Same	County Agent
March	: Holding Meeting. Discuss Cauliflower.	Specialist County Agent
April	: Hold Meeting. Organize Association.	County Agent
May.	: Two Meetings of Association. Distribute Seed. Work out dates of Planting.	County Agent
June	: Visit fields. Give cultural Suggestions.	County Agent
July	: Visit Co-operators. Give suggestions about transplanting.	County Agent
August	: Directions - Spraying and cultural Practice.	County Agent
September	: Same	Agent
October	: Same and Begin to Harvest	County Agent
November	: Harvest Help Complete Records	County Agent

COOPERATIVE EXTENSION WORK
in
Agriculture and Home Economics
State of Arizona

Willcox

Project No. 4

Name of Project:	Vegetable Growing (1929 Addition)
Location:	Stewart District
Date Effective:	December 1, 1927
Goal 1929:	75 acres of cauliflower. Form an association of Vegetable Growers.
Plan of Procedure:	Arrange for purchase of seed cooperatively. Get growers together to form working agreement. Horticulture Specialist to assist, in developing project. Other details same as last year.

Progress Report Complete. 1929.
Project No. 4.

Vegetable Growing.

Cauliflower.

At the beginning of the present season, the farmers of the Willcox district, that were interested in cauliflower held a meeting and organized a vegetable growers association. A loose association was formed to grow and market their crops, mostly cauliflower. Eight men signed the agreement and Mr. J. W. Church was elected president of the Organization.

The agent purchased thirty seven pounds of early snowball seed for the association. The seed was purchased for \$8.50 a pound direct from an importing house. This made a saving of about \$15.00 a pound on seed. The seed was planted on June 2nd. Mr. Church agreed to grow the plants for \$1.00 a thousand, each farmer to furnish their own seed. All but three of the growers gave their seed to Mr. Church. The three that planted their own seed lost all of the plants and forced them to drop out of the cauliflower growing for this year. Hot weather held the plants back and they were not ready to transplant until the 18th of July. Directions were given Mr. Church on the proper strength of Corrosive Sublimate with which to treat the seed. A mistake was made at treating time and a solution four times too strong was used. This affected the germination to some extent and only plants enough for about 60 acres of cauliflower were grown. The first year the crop was grown the seed was not treated and black rot was introduced into the soil on the Church ranch. A very small percentage of the crop showed any signs of the black rot this year.

Donald Scott was the first man to start transplanting. He planted a little over 20 acres but the summer floods cut down his acreage until he had 16 acres mature. Mr. Church was next to transplant and he set out 17 acres on his home ranch and 6 acres on another ranch. The other ranch was sandy and very low in nitrogen supply. For this reason the cauliflower on this place did very poorly. The crop was planted on the ranch as an experiment. Mr. Harbour transplanted 7 acres of first class plants. This was the first year Mr. Harbour ever grew any vegetables and he stated that he would do better next time. Mr. Wass and Mr. Roberts both planted six acres but were very late in getting the plants set out. Neither of these two fields matured in time to get much cauliflower cut before the freezes killed the crop.

The association purchased 100 pounds of Black Leaf 40 and a 200 pound barrel of fish oil soap to be used on the aphids. A spray machine was purchased and used cooperatively. The first order of spray materials was used up and another barrel of soap and 60 pounds of Black Leaf 40 was purchased. The 1929 crop of cauliflower had practically no aphid damage as excellent care of all the fields was the result of the improved spray machinery. In past years the crop was sprayed with little knapsack sprayers and good work could not be done.

Mr. Scott purchased a Cabbage transplanter to try to transplant cauliflower plants. The machine was built to plant either on the level or in a furrow, but would not set the plants on the side of a ridge. Planting in the bottom of the furrow did not give good results on the Scott ranch as cultivation could not be practiced until the plants were quite large. The water flowing directly over the top of the plants seemed to retard their growth and made the crop late. Hand planting seemed to be the most practical and give the best results.



- Figure 3 Cauliflower field of J. W. Church

The weather in October was too warm for the cauliflower to do well. The growers had to tie up all the earliest part of the crop to keep the sun from coloring the heads. In normal years this is not necessary and a saving of about ten dollars an acre would result. A large percentage of the first part of the crop was lost because the farmers would not tie up soon enough. After the returns from the first shipment was received they soon saw that it would be necessary to tie up in order to get a number one price.

The General Marketing Company of Phoenix and Denver signed an agreement with the association to handle the crop on a 15% commission with a 35 cent per crate packing charge. This is the standard cauliflower deal. One grower would not sign the agreement and did not give his crop to the General Marketing Company. This created hard feelings and almost broke up the association. One carload of cauliflower was shipped to Kansas city on the 20th of October, netting the growers 55 cents a crate. This was a very fair price but the growers thought that it would be better to trim all the heads and ship it all locally. This made a great deal extra work but the returns were higher. Early freezes and temperatures running down to 17 degrees F. by the 10th of November delayed the crop and a good deal of the cauliflower was not harvested, due to frost damage and continued cold weather. A minimum temperature of 13 degrees on the 22nd of November almost finished the crop. Several small shipments were made after the date. The final results of the season are as follows; Donald Scott sold enough "flower" to pay all expenses including rent on the land. Mr Harbour cleared about \$100.00 above all expenses. Mr. Church cleared over \$1000.00 on his patch. Mr. Wass and Mr. Roberts both lost about \$20.00 an acre. If the cold weather had held off for ten days longer all of the growers would have made

at least \$100.00 an acre. This is the second season in succession that the cold weather has hit the crop at least three weeks before the average for the past 40 years. Plans are being made to grow another crop next year but unless more favorable weather conditions prevail next year the cauliflower growing industry will suffer a serious set back in Cochise county.

Lettuce.

Lettuce growing was tried again this fall for the third time. Mr Donald Scott planted five acres and Mr. J. W. Church planted three acres. One field was planted on August 15th and the other on August 20th. Both fields grew an excellent stand of lettuce. The grasshoppers cleaned off about two acres of the two fields. The lettuce was maturing at the time of the state fair and a crate from each field was entered in the special lettuce class. First and second prizes were awarded this lettuce.

Almost all of the lettuce in both fields went to seed before it was mature enough to ship. The balance of the crop was very badly damaged by tip burn, caused by the extra cold weather. This has been the experience for the past three years. Only about \$50.00 worth of lettuce was shipped from both fields. A great deal more experimenting will have to be done with lettuce before lettuce growing will be a profitable industry in Cochise county. Probably in time, the proper dates of planting, cultural methods and other factors will be worked out so that lettuce will be a successful crop.

Figure 4 Shipment of trimmed Cauliflower

*Removed for
Culinary purposes*

RODENT CONTROL.

Kangaroo Rats.

Several of the larger cattlemen in the upper Sulphur Spring Valley have started a clean up campaign on the Kangaroo rats. This work was started last year and was continued on through this year. The Biological Survey furnished each man with two 80 pound sacks of poisoned barley to start the work. The balance of the grain was sold to the co-operators at cost. These men hired an extra man to ride the ranges and distribute poison.

Gophers.

The agent keeps a supply of poisoned grain and cans of strychnine on hand to distribute to the farmers in the county to help control the Gophers. The Biological Survey co-operates with the Extension Service and furnishes the poison to the county agents so that they can distribute it.

Mr. Mack Taylor, of the Biological Survey, spent a month in Cochise county this year, giving Gopher trapping demonstrations, assisting the agent with the rabbit problem and teaching the farmers how to poison gophers. Several of the farmers have followed up his work and are continuing the fight against rodents.

Rabbits.

The Jack Rabbits have become as much of a pest as the Prairie Dogs were before the Biological Survey cleaned out the dogs by poisoning. Rabbits are very hard to contro for they have no permanent home. Rabbit drive do not give more than temporary relief at the best and trapping is not feasible at present. Mr. Taylor gave six rabbit poisoning demonstrations that fully proved that poisoning is the proper way to control the rabbits around the irrigated farms. The agent assisted Mr. Taylor with the demonstrations, helping to arrange the meetin, put out the prebait and to help distribute the poisoned alfalfa. Over 400 rabbits were killed in one night around the farm of Mr. J.W.Church. It was estimated that 2000 rabbits were killed at these

these six demonstrations. One farmer had been sleeping in his sweet potato patch every night until the poisoning was done. The next night no rabbits came into the patch and no more trouble was experienced for over a month. Then a few rabbits began to wander in from the surrounding country. Early spring is the time to poison rabbits for they are all concentrated around the irrigated farms at that time as there is no green grass on the ranges. After the grass starts the rabbits scatter out and follow the best feed.

Mr. Taylor experimented with shooting rabbits with a 22 rifle on several of the ranges where rabbits could not be poisoned. He found that they could be killed for three and one half cents apiece by this method. This is the only practical way to rid the ranges of rabbits for poisoning is not successful on the open ranges. Three cattlemen have followed up this experimental work and have hired hunters to shoot rabbits.

A project will be included in next years plan of work for the agent feels that rabbit control is a very important phase of the work. The poisoning has been so very effective that a good project is possible.

SHEEP FARM FLOCKS

Project No. 5

- I. Name of Project Sheep Farm Flocks
- Location: Mt. View
- Date Effective: December 1, 1927
- II. Conditions Justifying Project:
- The range sheep men have to import bucks and pay a large price for each animal. Several farmers have a large number of acres of pasture land and plenty of ditch banks and weeds to clean up. A small flock of good Rambouillet Sheep will prove profitable as the large outfits will buy the bucks and the local markets will buy the fat lambs.
- III. History of Work done to date:
- 1928 is the first year that this project has been in progress. One man already has a small start of sheep. Two more men are going to get small flocks this fall when the large outfits ship.
- IV. Purpose:
1. To supply large sheepmen with cheaper bucks and to use up waste pasture on the small farms.
 2. Supply a source of income to the farmers.
- V. Statement of Goals:
- Secure three Co-operators with 50 to 100 sheep in a flock

SHEEP FARM FLOCKS (Continued)

Project No 5.

- Vl. Plan of Procedure: Secure Co-operators by personal visits. Secure good bucks for the flocks. Purchase Ewes from larger outfits at shipping time. Arrange with larger outfits to purchase the bucks from men having farm flocks.
- Vll. Records: Narrative reports will be kept as the work progresses. Records of profit from sale of wool and animals will be kept.

SHELP - FARM FLOCKS (1929 Addition)

Project No. 5

Name of Project:	Sheep - Farm Flocks (1929 Addition)
Location:	Mt. View
Date Effective:	December 1, 1927
Purpose:	Same as Last Year
Statement of Goals:	Secure 2 Co-operators with 50 to 100 sheep in flock.
Procedure:	Same as Last Year
Records:	See Attached

Calendar of Work
Project No. 5

WHEN		WHAT	WHO
<hr/>			
January	:	Outline Work with Co-operators	County Agent
May	:	Try to get pure-bred Ewes from University. Check up on Condition of lambs and results of shearing.	Prof. Stanley
September	:	Check up on condition of lambs and flocks	County Agent

RECORD SHEET

Sheep - Farm Flock

Name E. C. Russell Address Willcox

Breed: Rambouillet

No. Pure-bred Ewes Bucks 1 Lambs

No. Grade Ewes 20 Wethers 5 Lambs 29

Notes on Flock Percent Lambs 145

Good quality *grade* Ewes. Sold bucklambs to Kineo sheep co. for \$20.00 apiece. He is saving ewe lambs and has ordered 5 registered ewes for next years breeding flock.

Notes on Fleece

Fleeces averaged $10\frac{1}{2}$ lbs. Sold with Kineo ranch fleeces for same price.

Project Report Complete. 1929

Sheep. Farm Flocks.

Project No. 5.

One demonstration has been functioning all year. One co-operator near Willcox has a flock of 20 excellent grade Rambouillette ewes and a registered buck. He has an agreement with the Kineo Sheep Co. to sell all of his buck lambs to them for breeding purposes. He is getting \$20.00 a head for them this year. Next year he is adding five registered ewes to the flock and he will get more money for the pure bred lambs. Mr. Russell had an excellent lamb crop this year, averaging 145%. The wool clip from the flock averaged 10½ pounds to the fleece of first class wool. The sheep have been fed no hay or grain and have rustled their living by picking weeds and grass from the ditches and fence corners and grazing in a brush pasture. All revenue has been clear profit.

A new co-operator has been secured this fall. Mr. Frank Davis, of Elfrieda, has purchased 30 grade ewes and a Rambouillette buck. The ewes cost \$12.00 a head. Complete records will be kept on this flock next year. The sheep were purchased to late this year to start any records.

DAIRY HUSBANDRY
TUBERCULOSIS ERADICATION

Project No. 6.

1. Name of Project Dairy Husbandry
 Tuberculosis Eradication
 in entire County
- Location: Every community in County.
- Date Effective: December 1, 1927
- II. Conditions Justifying Project: Due to the fact that all dairy products are used for human consumption, it is very important that dairy cattle be free from tuberculosis.
- III. History of the Work done to date: All the cattle in the entire County was tested for T. B. in 1924. The U. S. D. A. and the State of Arizona cooperated in this work. Over 1% infection was found so the work was repeated in 1927. The work was not completed in 1927 due to lack of funds. The work will be completed in the fall of 1928.
- IV. Purpose: The eradicate tuberculosis in the dairy cattle in Cochise County.
- V. Statement of Goals: Complete eradication of tuberculosis in Cochise County.

Vl. Plan of Procedure: Cooperate with the Assistant State Veterinarian. Line up the dairymen and have the heads in the corrals on the day the territory is to be done.

Vll. Records: Keep records on the farms tested and on the percent of infection found. To check up all herds to be sure 100% of the animals are tested.

No Tuberculosis testing was done in Cochise County during the year 1929. The project remained inactive.

DAIRY HUSBANDRY - BETTER STOCK

Project No. 7

- I. Name of Project: Dairy Husbandry - Better Stock
- Location: Stewart and Mt. View Communities
- Date Effective: December 1, 1927
- II. Conditions Justifying Project:
- The dairymen in these sections have allowed the milk stock to become crossed with hereford cattle until the dairy strain had almost run out. New blood was needed to build the herds up again.
- III. History of work done to date:
- 1927 was the first year that any new stock was brought in. Two pure-bred Jersey Bull Calves and two Jersey heifer calves were imported in 1927. One registered holstein bull calf was imported in 1927. It is planned on importing several more calves in 1928.
- IV. Purpose:
- To build up the dairy herds in the districts mentioned above.
- V. Statement of Goals:
- Secure four Co-operators for better Sires and herd improvement.

VI. Plan of Procedure:

Import better stock and use dairy bulls instead of range bulls. Have two or three co-operators and use the same bull. Save the heifer calves from good parents and build up a better herd.

VII. Records:

Narrative reports will be made as the work progresses. Keep records of the calves and better animals that are shipped in to the communities.

DAIRY HUSBANDRY - BETTER STOCK

Project No. 7

Name of Project:	Dairy Husbandry Better Stock
Location:	Sulphur Spring Valley
Date Effective:	December 1, 1927
Purpose:	Same as Last Year
Goals:	Same as Last Year
Procedure:	Same as Last Year
Records:	See Attached

Calendar of Work:
Project No. 7

WHEN	WHAT	WHO
January	: Hold Meeting - Better Breeding Stock.	Mr. Mortenson Mr. Rowe County Agent
April	: Hold Meeting at Pomerene, Breeding and Feeding. Visit St. David Co-operators.	County Agent Mr. Rowe Mr. Reed
May	: Arrange for Meeting. Create Favorable sentiment	County Agent Mr. Mortenson Mr. Rowe

Progress Report Complete. 1929

Dairy Husbandry - Better Stock

Project No. 7

Meetings were held at St. David with the local Farm Bureau to stimulate interest in better dairy stock. Very few pure bred bulls have been used in Cochise county and the milk stock has about ran out. The St. David district purchased two registered bull calves.

One registered Guernsey and one registered Jersey bull calves were shipped into the Willcox district this year. The farmers are now saving their better heifer calves and will breed them to these registered bulls. This year nearly all of the farmers borrowed dairy type bulls instead of using the range bulls that were close at hand. The high price of hay has retarded the dairy industry but this is offset by the increase in revenue.

Livestock. Range Cattle.

The Western Cattle Growers Association held two meetings in Cochise County this fall. One meeting was held in Willcox and one in Douglas. The association has done a great deal to help the cattlemen get a better price for their beef. The agent has co-operated with the association in every possible way.

Close contact has been maintained with two breeders of pure bred Hereford cattle and a number of registered bulls have been placed in the county. Purchasing good bulls is the quickest way to build up a good herd. The breeding herd of Babbitt and Cowden is one of the best herds in the state.

Several cases of cattle dying from poisonous weeds have been reported to the agent. There is a poisonous on the east slope of the Chiricahua mountains that has never been identified. A number of cattle have been killed every fall by this weed. The U.S.D.A. and the animal husbandry department of the university of arizona have both been trying to locate this plant. A specie of milk weed has caused considerable trouble on the west slope of the Galiura mountains. The sheep loco is a very bad plant on the west slope of the Chiricahua mountains. The weed is so wide spread that the cattle have to be taken off the range after the grass dries up and the loco begins to appear.



Figure 5 Fall shipment from 3 Links Cattle Company

BOYS' 4-H CLUB WORK

Project No. 8

I. Name of Project:

Boys' 4-H Club Work

Location:

Double Adobe - Frontier

Date Effective:

December 1, 1927

II. Conditions Justifying Project:

As leaders in promoting the welfare of our Agricultural population we have in 4-H Club Work an opportunity of directing in to proper channels the farm and home practices of coming generations and to create on their part an ability and a desire to work, cooperatively in the solution of their problems. We have many boys and girls on the farm who need the training given in our 4-H Club Work.

III. History of work done to date:

The first boys' 4-H Club was organized by the former County Agent, C. A. Smith. In 1927 four poultry clubs were organized. The Benson club did not finish because the bridge across the San Pedro washed away and the Club members could not attend meetings. The other three clubs finished up over 60% memberships. In 1928 two poultry clubs were formed. One at Double Adobe and one at Frontier. Only two members at Frontier achieved. The Double Adobe club finished 75%. Both communities then formed

garden clubs. These clubs are still in progress. Achievement day will be held later in the fall.

The 4-H Clubs have been given a separate section in the Cochise County Fair. Formerly the work was included in the Home Economics division. Miss Seward was appointed chairman of the work. Prizes will be given in each phase of Club activities.

III. Purpose:

To teach boys and girls between ages of 10 and 20 years in profitable and accepted farm and home practices. To correlate the 4-H Club activities as much as possible with the solution of problems being attacked in other extension activities; to teach better citizenship; to instill a desire on the part of boys and girls to know the economics of their job; to teach the dignity and fineness of the job farming and home making.

IV. Statement of Goals:

Organized work in 2 communities with clubs in following projects: Garden and Poultry Clubs in both Double Adobe and Frontier districts.

Enrollment:

Boys 29
Girls 3

Completions 65 percent

Train 2 demonstration teams.

Hold 0 leaders conferences.

Hold one County Club rally or achievement meeting.

V. Procedure:

The extension agent will prepare a calendar of work in cooperation with the club specialist giving a rotation of meetings so that it will be possible to visit each group in turn. The extension agent will prepare a program of work for the leaders giving dates, work assigned to leaders, extension agent and specialists. Copies shall be furnished to all parties concerned.

Each club will be expected to prepare a program of work based upon the above calendar.

The County Agent will organize the following clubs in the Double Adobe and Frontier Communities. These are to be organized by October 1, enrollments will be sent in as the clubs are organized and the Assistant Director will see that project material is mailed at once for the club members to the Club leader.

The extension agent will be responsible for selecting leaders, organizing clubs visiting club members, training demonstration teams, publicity and arranging meetings.

Work and responsibility of club specialist to be indicated in program of work. Responsibility for collecting State Fair exhibits shall rest with County Agent.

*Exhibit (see p. 19)
See end of
Bureau's
minutes*