

SUPPLEMENTAL ANNUAL NARRATIVE REPORT

OF

LYNN M. FITSIMONS

COUNTY AGRICULTURAL AGENT

Graham County  
Arizona

From August 1, 1957 to November 30, 1957

HIGHLIGHTS OF GRAHAM COUNTY EXTENSION WORK: SEPTEMBER 1

THROUGH NOVEMBER 30, 1957

Two items of extension organization and planning took place early in September when the agent began in full charge of the county. Mr. Ben Gallegos of Guatemala visited Graham County from the 9th through the 12th. He was studying land practices and went with the agent on routine calls, and practices and policies were discussed.

In the office the agent planned a weekly conference for all members of the staff so that plans could be made for the coming week. These were usually held early Monday mornings.

A high point in extension work is always the Annual Extension Conference held at the University of Arizona - this year October 22-25.. This four-day program informs, builds enthusiasm, acquaints new staff members, and provides for exchange of ideas and philosophy in extension work.

Three speakers from outside Arizona were Mrs. Katharyn Zimmerman, State Leader, Home Economics Extension, University of Missouri, Luke M. Shrubber, Assistant Administrator, Federal Extension Service, and William T. Calkins, Manager of the Office of Agricultural Publications, University of California. In addition the agents and specialists heard from Dr. Richard A. Harvill, President of the University of Arizona, Dr. Harold E. Myers, Dean of the College of Agriculture, University of Arizona, and William R. Matthews, publisher and member of the Board of Regents, as well as others on the extension staff, and from other organizations.

Since this report is a supplemental report covering only four month's time most of the activities are described under the project headings.

## I. SITUATION

Since this is a supplemental report to that of Mr. John Sears, and covers only four months, most of the information is furnished under project headings. Mr. Sears' report carried the full history and background of project and demonstration activities in the county. This agent spent a full month with Mr. Sears getting acquainted in the county and in the office, with problems and situations as they developed.

Work reported here will be only that which was done since August 1st, or that where results were noted during this period on work done previously.

## II. ORGANIZATION

Since the plan of work was already established this agent tried as far as possible to follow the schedule and carry out plans, In order to keep things running as smoothly as possible, office conferences were held with the full staff. Also the agent made it a point to meet members of other local agencies, and to work with the superintendent of the Safford Experimental Farm.

The various public agencies, churches, and schools, and the two local banks, as well as the Graham County Farm Bureau and several service organizations, gave support and assistance to extension service work and plans.

## III. PROGRAM PLANNING

No new communities have been organized in Graham County for several years.

In order to continue the work plan for the county this agent endeavored to divide time between farm and ranch visits, meetings as called, and the work of regular reports, correspondence, and publicity. Specialists in nearly all fields came into the county to give assistance, and these activities are reported in the various project report sections.

#### IV. INFORMATION PROGRAM

##### 1. Newspaper

###### a. Weekly

Graham County Guardian - located at Safford, the county seat. This is the only weekly in the county and carries all news provided by the county agent relative to meetings, timely information on crops, gardens, insect pest control, livestock, dairying and poultry. Pictures are used as often as possible to illustrate successful projects, or participants in 4-H events. A new process introduced at the plant three years ago enables the paper to publish better pictures than formerly.

The agent used the title heading "FITS' FINDINGS" and combined material furnished from the state office information division with interesting anecdote stories about individuals in the county and their accomplishments. Reference was made to new bulletins as they came into the office, and this created a noticeable demand for them. A copy of the column as used follows this report section.

This paper also carries excellent 4-H publicity and pictures, and there are times when the issues are sold out completely because of demand created by 4-H stories.

A total of 2,048 column inches of news was used this year for an increase of 10.6% over the previous year. The breakdown by column inches shows 224 for county agriculture news, 614 for county agent column, 618 home agent column, 568 4-H general and 24 homemaker general.

###### b. Daily

There are no dailies published in the county. Both Tucson and Phoenix dailies are widely read in the county, but there is no local coverage.

##### 2. Magazines

The agent is now and then interviewed by a representative of the "Arizona Farmer", the principal farm magazine of the state. This paper sent a special reporter, Ken Bowyer, to spend time at the Safford Experimental Farm Field Day held September 27. During this time he came into the extension service office for ideas and information.

##### 3. Radio and Television

Television reception has increased considerably in the valley the past three years, but there are no facilities for originating a program in this area. Some local people have benefitted from the programs coming from Mesa and Tucson.

In radio the agent continued to work with the home agent in planning joint or separate programs at the regular Saturday time over Station KGLU. This program is still called "Stepping Along with the Extension Service" and has a lively marching theme song. It is always on Saturday, but the hour may vary according to other station commitments. "Bit" news is often used in a special commercially sponsored morning program at 8:10 A.M.

#### 4. Circular Letters

Graham County relies somewhat more on newspaper and radio for information service than on the circular letters. During this report period only a few, mostly 4-H letters, have been used.

#### 5. County Circulars

Graham County does not use circulars.

#### 6. Circular Distribution

The county office distributes circulars published by the Department of Agriculture, the Experiment Stations, and the University of Arizona. The bulk of this distribution is to those who call at the office for information. At times, based on farmer requests in the office, a new pertinent bulletin is sent to all those on the special mailing list, such as those which supply information on cotton, livestock, or poultry. This year most such distribution took place during the early part of the year, which is the time most of the newer bulletins come out.

Whenever county-wide meetings, or field meetings were held, the agent furnished pertinent bulletins to those who wanted them.

As suggested, any mention in the agent's regular newspaper column creates immediate demand for new circulars.

#### 7. Visual Aids

During this part of the report period there was not much need for the use of visual aids. The agent did find that the slide projector in the office is really not sufficiently strong for large meetings such as those held in the Courtroom.

The movie sound projector was not used in this brief time; however, it is a very excellent one, and can be used to good advantage for both adult and 4-H meetings.

# Graham County Guardian

FRIDAY, SEPTEMBER 27, 1957

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SECTION TWO

## Fits' Findings

by  
**LYNN M. FITSIMMONS**  
Acting County Agent

COMING EVENTS: University of Arizona, Safford Experimental Farm Field Day, FRIDAY, September 27, 9:30 a.m.

GRAHAM COUNTY FAIR: OCTOBER 11, 12, and 13.

Cotton leafworms in damaging proportions have been reported in Graham County. This insect can completely defoliate a cotton field in a few days when they are in large numbers and it is happening here. The cotton leafworm is frequently injurious in the Southeast but harmful infestations had not been reported in Arizona since 1944.

Full grown cotton leafworm larvae are slender and about 1½ inches long. They vary in color from yellowish-green to nearly black. There are three narrow white stripes along the back and a white line along each side. In addition two parallel rows of black spots extend along the back. Each spot bears a black line surrounded by a white ring. In the dark forms, the black spots are joined together.

Control of cotton leafworm by dusting with toxaphene and DDT, benzene hexachloride and DDT has given satisfactory results. One side to use is that if you find more than six worms per plant it is generally profitable to dust. If

Ed Sportsmen also took the air assistant Secretary Leffler in commenting on the future of the fish said that he has always felt Topock should be resolved in favor of a small diversionary flow for wildlife purposes and after visiting the area he was "100 times more convinced."

Bennett pointed out that when salt water is removed from an area, salt cedar and other undesirable growth takes over. "Topock Marsh will go to salt cedar and other undesirable growth which will transpire as much or more water than will a waterfowl pond including a diversionary canal," he continued.

Benjamin is sure that we can work out an agreement with the Bureau of Reclamation if there are no objections from other sources," he concluded. Allison, Swift and the others who took part in the aerial investigation all expressed views similar to those of Leffler and Benjamin.

A final decision on the matter is expected soon after the first of the year.

the infestation is bad enough, dusting right up to defoliation may pay. The cotton quality can be affected by this pest.

Last Thursday and Friday I attended the District Extension Conference in Phoenix. The conference was on alfalfa and included cultural methods, insects, diseases, and uses. It was a very interesting conference, and will help in the coming months in making recommendations in Graham County.

Available now is a new Extension Service bulletin "Poultry Housing and Equipment for Arizona." This publication includes complete design recommendations and suggestions for the laying house and other structures.

The use of special watering and feeding equipment is covered, along with climate data, comparison of plastic and steel pipe and general recommendations on roosts, nests, lighting, wiring, cooling, disposal pits, and catching crates.

Don't forget the Experimental Farm Field Day FRIDAY, starting at 9:30. It's for you.

Premium books and entry blanks for the Graham County Fair are available here at the office as well as at the Valley National Bank and the Chamber of Commerce office. Don't wait too long.

### Good Demonstrations Stand Up To Tests

The proof of the pudding, of course, is in the tasting, and the proof of a demonstration is in the testing.

During the recent 4-H Leader's Conference in Flagstaff, Sarah Harman, Assistant State Leader of 4-H Club Work, outlined some accurate tests of a good demonstration.

Local adult leaders know that a demonstration consists of three main steps or parts: (1) the introduction; (2) the main body; and (3) the summary. But checking to see if members include all these parts in their demonstrations is not enough.

Leaders can easily check their members' demonstrations for effectiveness by answering these questions:

- (1) Did it arouse interest enough so that the audience wants to try the thing demonstrated?
- (2) Was the demonstration clear enough so that anyone unfamiliar with the subject would be able to go home and use the approved practice?
- (3) Did you prove the demonstration was worthwhile?
- (4) Did a good product result or did you use conclusive examples of the values of the practices demonstrated?

By using these questions, a leader will be able to evaluate a club member's demonstration, deciding if it has proved valuable to the audience as well as to the member doing the demonstration.

### No Off-Flavor In Cooked Chicken From Fat In Feed

Poultrymen know that added fat in the mash can give faster, more economical gains, and now can stop worrying about the chance that this added fat will affect the taste of the cooked meat.

The report that fat in poultry feeds does not cause off-flavors in the meat or skin of chickens was given at the recent meeting of the Poultry Science Association of Columbia, Missouri. The tests were done at the University of Wisconsin.

The scientists fed White Rock chicks diets with 26 percent added fat, while another group of chicks got a similar diet without the added fat. The meat was cooked, then judged by taste panels.

The taste testers could tell no difference at all in the meat of chicken on the two diets, and they even rated the skin taste of fattened chickens slightly higher in one test.

The researchers point out that the fat level in these diets was considerably higher than the one-to-five percent normally used in commercial poultry feeds.

### Production Of Feed Grain High

Feed grain production this year will be about the same as the bumper harvests of last year. Increased production of oats, barley and sorghum grain will cancel out the drop in corn.

Carry-over of grain at the end of the 1957 harvest is expected to be five million tons more than it was at the same period last year. Total supply of feed grains for 1957-58 feeding will be a little above last year's record high.

Output of by-product feeds is also expected to be high. The number of animals fed will be about the same as last year. This should result in somewhat lower prices for feed grains.

### Central Arizona Milk Marketing Area Expanded

The Central Arizona Federal milk marketing area has been en-

larged, effective Sept. 1, according to the U.S. Department of Agriculture.

Cocaine and Greenlee Counties will be added. The area includes the counties of Maricopa, Pima, Pinal, Graham, and a part of Yuma.

A supply-demand formula is being added to the order. Under this formula, when more than the sales of Class I (bottling) milk plus varying monthly reserves come to market, the price is reduced; when less, the price is raised.

One amendment provides for transfer of a producer's base in the base-excess plan when a partnership is dissolved.

All amendments are based on a hearing in Phoenix last March 12-14. The amendments were submitted to handlers and producers for exceptions. After slight modification, they went to producers for approval or disapproval.

### Sept. 30 Is Deadline For Gas Tax Refund

Arizona farmers have until Sept. 30 to fill out forms for refund of Federal Gasoline Tax. All Arizona farmers are eligible for a refund for any gas they bought for farm production purposes between July 1, 1956 through June 30, 1957.

The refund is 3 cents Federal Tax on each gallon of gas. The average payment last year when the tax was 2 cents a gallon was about \$20.

Any Arizona farmer who has not received the Internal Revenue form 2240 should get one immediately. Fill it out and mail it to the Internal Revenue Service before Sept. 30.

## V. PROJECTS

### #3 - Horticulture

The primary problems in this field were Root Rot and Chlorosis. Response to calls in several cases were made. Inspections were made of the tests reported by Mr. Sears. It is hoped that reliable recommendations will be able to be made on these problems when results are obtained.

Harvey F. Tate, horticulturist from the Extension Service at the University of Arizona spent two days in Graham County. The new library building at Eastern Arizona Junior College was landscaped. The agriculture class from the college was present, and Mr. Tate conducted this as a demonstration. He also discussed recommendations with this agent concerning fruit trees and gardens. Plans were made to hold fruit tree pruning, landscaping, and rose pruning demonstrations this winter and early spring.

### #4. Livestock

In October Graham County was declared a modified Brucellosis free area. This will help ranchers and farmers in the movement of cattle in that it will mean an elimination of some of the health certificates and the necessity of taking some of the blood samples. This situation came about by the cooperation of Mr. Sears, the Federal and State Departments, veterinarians, and the ranchers.

Cattle feeders were informed on the results of the use of stilbestrol in cattle feeding experiments conducted by the University of Arizona. Indications are for an increased use of implants in this area since it is cheaper than mixing with the feed.

### #5. Dairying

Your agent and Ralph Van Sant, extension dairyman, spent two days in assisting Seth Mattice, Brooks Curtis, Ted Larson, and Alma Bryce to set up supplemental herd books in connection with their I.B.M. records in the Dairy Herd Improvement Program. These supplemental herd books will greatly assist in the selection of herd replacements and development of cow families.

Close contact has been kept with Freeland Moody, D.H.I.A. Tester.

Recommendations were given concerning the use of roughages and greens in dairy rations.

Listed on the next page are the 1957 annual averages for the Graham County D.H.I.A. Association and the high herd average for butterfat production in Graham County:

<u>Ave. No Herds on Test per Month</u>	<u>No. Herds Reported</u>	<u>Cow Yrs. Reported</u>	<u>Percent Cow Yrs. Dry</u>	<u>Ave. Milk</u>	<u>Percent Butter- fat</u>	<u>Ave. Fat.</u>	<u>No. Cows Sold or Culled</u>
13.8	14	1,058	13.9	11,111	3.84	426.4	249

The herd owned by M. M. Larson, Rt. 1, Box 442, Safford, holds the Graham County record for butterfat, with 517 pounds of butterfat for the Association year, October 1, 1956 - September 30, 1957.

#### #6. Poultry

Diseases of poultry were found in many small flocks in Graham County. In most cases inadequate sanitation has been maintained. Cleaning up the poultry houses and pens, and yards, and the addition of lime was encouraged. Cases of coccidiosis, chicken pox and infectious bronchitis were observed and confirmed by test. The use of sulfa drugs and antibiotic, reinforced feeds was recommended in addition to sanitation, and results were good.

Recommendations were given as to feeding and housing of poultry. The new set of plans developed by Mr. Welchert have been valuable in making housing recommendations.

Assistance was also given in the problem of getting rid of sparrows. Sparrows have reached such proportions that their consumption of feed has been costly as well as the transmitting of diseases and parasites.

## V. PROJECTS

### #7 - Agronomy

#### Alfalfa

Alfalfa was the topic of discussion of the district extension conference in Tempe on September 19 and 20. Thorough discussions of varieties, irrigation practices, cultural practices, insect control, feeding value, production costs, weed control, disease control and harvesting were presented by University of Arizona personnel. Recommendations given have proved valuable in assisting farmers in Graham County.

#### Grain Sorghums

Grain sorghums are increased in the county. One of the major problems is the birds eating the grain prior to harvest. This has been in such proportions that up to 60% of the crop in some cases, did not reach the storage bins.

The use of newer sorghum silage varieties was observed throughout the county. Advance seed mix, Tracey, Tex, Hegari, Sart and Sumac were mainly used. Advance Seed Mix yields have been reported up to 27 tons per acre. However, in some cases the moisture content has not been considered so that dry matter production may not be as high as it appears at first. Reporting of such yields could be misleading.

#### Forage Crops

The use of Coastal Bermuda grass was encouraged. This forage shows a potential for areas where other crops will not thrive. This could be used as a pasture and thus derive an income where other crops fail to do so.

Assistance was given to Mr. L. C. Chapman in organizing, planning the program, and in carrying out the Safford Experimental Farm Field Day. This was the first field day held for several years at the farm and approximately 200 people were in attendance. Your agent was asked to address the group twice during the day. The first time was to acknowledge the Extension Service help, and the second to discuss the merits, uses and limitations of Coastal Bermuda Grass in this area.

Some farmers are using plastic covers for trench silos this year. This will be interesting to watch to see if these covers come up to the statements of the salesmen.

## V. PROJECTS

### #7 - Agronomy

#### Cotton

The cotton crop suffered in quality and yield from rains totaling 1.54 inches in October. Difficulty in picking and picking too wet caused lowering of grades in many cases. The first freeze recorded at the Safford Experimental Farm was on November 6 when the low was 29 degrees.

A cotton quality meeting was held on September 12. Dr. Ivan J. Shields, Plant Pathologist, and Ted Welchert, Extension Agricultural Engineer, Alfred M. Pendleton, Federal Extension Service, Dale Cannon, agricultural engineer and Mr. Butterfield of the El Paso cotton classing office discussed different phases of cotton quality and how to maintain it. The meeting was held at the Valley National Bank and refreshments for the thirty-five farmers were served by Doyle Cluff. The Lines Company and the Valley Implement Company followed up by announcing operator schools for mechanical pickers.

Fertilizer demonstration plots were observed on the Lea Hunt and Bob Colvin farms. On the Hunt farm little differences could be seen as to plant size or color. On the Colvin farm differences in plant size and color were noticeable. Yield results will be obtained from these plots. Also on the Colvin farm damage from the cotton leafworm was apparently reduced on the nitrogen fertilized plots.

Also observed was a fertilizer demonstration on the Alf Claridge farm, put out by a fertilizer company. Considerable differences could be noted on nitrogen fertilized plots as to plant size and color. Yields will be reported when harvest is completed.

Cotton diseases annually take a toll in the Graham County cotton crop. Following is an estimate of this loss as reported to Dr. Ivan J. Shields, extension plant pathologist.

1957 ESTIMATED COTTON PERCENTAGE REDUCTION  
FROM FULL YIELD DUE TO DISEASES IN GRAHAM COUNTY, ARIZONA

DISEASE	% REDUCTION FROM FULL YIELD						
	Average Estimate for Arizona					Your County Estimate for	
	1952	1953	1954	1955	1956	1956	1957
<u>Parasitic</u>							
1. Root Knot Nematode	2.5	3.0	2.3	2.02	2.30	1.0	1.0
2. Verticilium Wilt	1.75	1.6	2.1	3.1	3.50	3.0	2.5
3. Bacterial Blight	.25	.4	.8	.41	.10		_____
4. Texas Root Rot	2.75	2.6	1.9	2.18	2.80	5.8	6.5
5. Seedling Disease (Rhizoctonia, etc.)	4.5	2.6	2.6	2.66	2.40	2.0	2.0
6. Boll Rots, (except No. 3)	.6	.3	.7	1.9	.60		_____
	<u>12.55</u>	<u>10.5</u>	<u>10.4</u>	<u>12.27</u>	<u>11.70</u>	—	_____
<u>Non-Parasitic</u>							
7. Others, including Crazy Top and deficiencies	.25	1.8	2.1	.5	.13	1.0	1.0
	<u>12.80</u>	<u>12.3</u>	<u>12.5</u>	<u>12.77</u>	<u>11.83</u>	<u>12.8</u>	<u>13.00</u>

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## V. PROJECTS

### #7 - Agronomy

#### Castor Beans

Some interest has been shown in growing castor beans commercially in Graham County. Two problems are in harvesting and marketing. This year for the first time satisfactory harvesting machines are available, according to University of Arizona personnel. However, in this area the recommendation is made that a definite marketing agreement be made prior to the crop year, as this area is at a disadvantage due to freight costs. The interest has increased because of the lower cotton allotments and the need for another cash crop to provide income on acres taken out of cotton. More information is needed concerning costs of production, expected yields, and potential income for the growing of castor beans.

### #10 - Entomology

Two cotton insects became serious economic problems in Graham County during this period in addition to those reported by Mr. Sears.

The first is the cotton leafworm. This insect pest attacked cotton fields from one end of the county to the other. Apparently agronomic factors caused a variation in seriousness of damage from one field to another. Fields were defoliated by this worm in three days' time. They also attacked small bolls and shucks and left considerable droppings that fell on open bolls and caused some spotting of cotton. Control with DDT-Toxaphene and DDT-BHC gave good results in reducing numbers of these insects.

The second one is the pink bollworm. This very serious pest of cotton has shown an alarming increase in the eastern counties of the state this season. In fact, Graham County showed the greatest increase over the other four infested counties.

The gin trash machine operated here in Graham County during the week of October 7 to 12th. During this short period, a 100% coverage of the valley was not made due to the fact that all farmers were not picking cotton at the time. However, more different farms were found infested than at the same time last year when the trash machine operated for a two-week period. The

names of the farms found infested this year were: Barney and Clifford, Lloyd Clonts, Guy Anderson, Norman Welker and Tommy Garcia, all of which are located in the upper end of the valley. The farm being hurt the most is the Barney and Clifford south of Solomon. From 20 bushels of gin trash caught from cotton being ginned from this farm, 260 pink bollworms were found. From two different field inspections on the same farm, 400 green bolls were collected and inspected. Out of the 400 bolls, 67 pink bollworms were found and 10 others had been infested.

While this infestation is limited to the Solomon area at the present time, a hearing will be held on December 10 by the Arizona Commission on Agriculture and Horticulture to determine regulations required to eradicate the pink bollworm.

In the proposed regulations those that would affect farmers primarily are in essence:

1. Cotton trailers be of tight construction and covered prevent scattering of cotton in transport
2. Cotton picking machines be licensed and an inspection permit needed to cross county lines
3. The entire crop remnant be chopped or shredded and plowed under by a date set by the commission
4. The commission authorized to perform above operation and costs charged to farmer if not complied with

This will necessitate a vigorous educational program on the part of the Extension Service to inform cotton growers of these regulations as well as advise farmers in problems created by necessary changes in operation to comply.

In an effort to find a more practical method of control of cattle grubs, a test was set up using two systemic insecticides - Trolene and Co-Ral. On the following page are notes on this test. Results will be noted at completion of the test.

## CATTLE GRUB CONTROL TEST

EXTENSION SERVICE: John Sears, Lynn Fitsimmons, Dr. J. N. Roney

COOPERATORS: Heber Nuttall and Bob Mounds - Safford Packing Company  
Vance Cluff, Fannin's

LOCATION: Safford Packing Company

DATE OF APPLICATION: Monday, November 25, 1957

### BACKGROUND OF ANIMALS:

Animals weighed approximately 700 pounds; were purchased from Freddy Fritz of Greenlee County and put on feed about November 1, 1957.

A few grubs were already observed in the backs of some of the animals.

### PROCEDURE:

Animals were divided by gate cut and the first fifteen (15) were designated Lot. No. 1 - second fifteen (15) Lot No. 2, and the remaining, approximately thirty (30) head, were Lot No. 3 or the control lot.

#### LOT NO. 1

Material used: Trolene  
Rate: 30 grams per head ( 2 bolluses)  
How administered: Ball gun  
Marking of animals: Branded with one vertical bar (I)  
One animal marked with paint instead of brand

#### LOT NO. 2

Material used: Co-ral  
Rate: 1/2% (.5%) or 10 lbs. of 25% wettable powder in 50 gallons of water  
How administered: Sprayed on at 3/4 gallons per head

Marking of animals: Tails bobbed

#### LOT NO. 3 (CONTROL)

Material used: None      Marking: None