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EXTENSION SERVICE

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ANNUAL REPORT
OF THE
DIRECTOR OF EXTENSION SERVICE
Agricultural and Mechanical College of Texas
1917



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FOREWORD.

The data submitted in this report has been compiled from records kept by agents, specialists and cooperating farmers. At the beginning of each season's activities, agents or specialists are required to furnish cooperating farmers with blank forms for keeping records of crops grown under their supervision; to inspect such records on the occasion of their periodical visits to such farmers, and to instruct farmers how such records are to be kept, seeing to it that a careful record is kept of all efforts necessary to produce crops under their instructions.

When a demonstration has been completed the entire record is returned to the agent or specialist who has assisted in directing the undertaking. By this means we are enabled to secure definite data from which to compile our annual report.

This data not only enables us to determine results as regards the best agricultural practices that should be followed to obtain the best results from the standpoint of production, but it also enables us to show the monetary returns obtained by farmers who follow the instructions of representatives of the College and Department.

The large monetary showing made this year may be attributed to two causes; first, demonstration plats where farmers have followed the direction of agents and specialists have shown marked increases in acre yields as compared with crops cultivated under ordinary methods; second, the high prices received for all farm products. While to the latter cause may be attributed a measure of the increase and this measure is worthy of mention, by far the greater measure must be credited to the former.

I should like to stress the further fact, that while every effort justified by consistent agricultural practices has been put forth to encourage increased yields of farm products, thereby increasing the financial returns to farmers, we have not lost sight of what should be the primary purpose of all educational effort. If agricultural development is to be rapid, sure and permanent, those engaged in this pursuit must of necessity be brought to understand that their avocation is not only as remunerative as other undertakings, but they must also realize that better social and economic conditions are necessary to their permanent welfare. Looking to this end we have endeavored to direct our activities so that rural development may be so planned that those who reside on the farm may enjoy at least some of the conveniences that their city brothers have, and that a richer and better social life may be provided for the boys and girls who are soon to become rural husbandmen. It is needless to urge boys and girls to become farmers, unless it can be demonstrated to them that the farm offers them an opportunity to become prosperous, to such an extent as will enable them to enjoy some of the comforts that are the usual rewards of intelligent effort and industry, vouchsafed to men and women engaged in other occupations.

Evidence of the most positive character that the Extension Service activities, as carried on in the past, are fast accomplishing the results sought, are set out in the following report.

T. O. WALTON,
Acting Director.

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ANNUAL REPORT
OF THE
DIRECTOR OF EXTENSION SERVICE.
Agricultural and Mechanical College of Texas
For the Calendar Year 1917.

T. O. WALTON, ACTING DIRECTOR

("It shall be the duty of each of said Colleges annually, on or before the first day of January, to make to the Governor of the State in which it is located, a full and detailed report of its operations in the direction of Extension Work, as defined in this act, including a detailed statement of receipts and expenditures from all sources for this purpose, a copy of which shall be sent to the Secretary of Agriculture and the Secretary of the Treasury of the United States."—H. R. 7951, 63rd Congress.)

The last annual report of the Extension Service of the Agricultural and Mechanical College for the calendar year 1916, outlined the progress made and the results obtained in the development of cooperation between the Federal and State Governments contemplated in the Federal Act establishing cooperative Extension work. A partial interpretation of that cooperation from the Texas Service standpoint was contained in the Bi-ennial report to the Board of Directors of the College in September, 1916.

In preparing the projects for the bi-ennium 1917-19, it was the purpose of the Service to continue the work along the lines outlined in our report of 1916, which emphasized two guiding principles: "First, to demonstrate to farmers that a system of farming which makes food and feed its prime requirement is one which will more readily bring about agricultural abundance and independence. Second, to demonstrate to bankers, credit merchants and business men generally that such system of farming is the safest basis of credit and best insurance of continuing prosperity in an agricultural state."

Furthermore, we planned to permanently improve Texas agriculture by the building up of the soils through crop rotation; instructions in the correct principles of soil management; the reclamation of waste places, and the protection of those in cultivation by proper care and terracing; also, to improve the live stock interests by encouraging the introduction of the pure-

breeds best suited to climate and conditions, and a thorough instruction in the use of balanced rations; and, so far as possible, prevent or combat destructive pests and diseases. Realizing the close relation of production and marketing we determined that in order to stimulate increased production we should at the same time increase marketing facilities and instruct the farmer in curing, storing and caring for his surplus, and the converting of the same into cash at the minimum cost, and planned our activities accordingly. The progress made along these lines during the past year has convinced us that we are pursuing the right course.

The needs of the activities of the Service have been greater this year than ever in the history of the State because of the many unusual conditions, and yet these very conditions have rendered it practically impossible to make a tabulated statement that would exhibit the results accomplished. The organization of the largest army in the history of the nation and the prolonged drouth in certain sections of the State have resulted in unprecedented conditions, and have presented problems which must be solved by the Service in addition to following up the regular projects established. Furthermore, the minds of many of our employees have been halting between a desire to serve the colors and the call to stimulate the production of food and feed, and quite a number have left the Service and taken up arms. In fact, the general unsettled condition of the country has handicapped our efforts, while the drouth and shortage of food and feed have made it necessary for every member of the force to assume new responsibilities and often to reconstruct their plans. In many sections the demonstration plats were ineffective because of the drouth, while the price of feed has caused many revolutions in balanced rations.

During the summer young ladies from the University of Texas, College of Industrial Arts, Denton Normal School, Sam Houston Normal, San Marcos Normal and Canyon City Normal volunteered their services in an emergency food campaign. Organizations were perfected, and 371 volunteer demonstrators served throughout the canning season. As a direct result of their campaign, 2,474,000 containers of food were saved and 5,420 people were influenced to conserve food stuffs. The young women who volunteered for this service served without pay and deserve the highest praise for their patriotic zeal. The promptness with which this large force of volunteer workers was trained and mobilized for service is a tribute to the efficiency of the educational institutions from which they came and another evidence of the value of cooperative effort for the public welfare.

Numerous emergencies have developed to consume the time and energy of the Specialists and County Agents which have no place in our report forms, yet they are strictly in line with the Extension Service, such, for instance, as the aid rendered in the disposal of mules and horses to the Government, the securing of seed for planting, the locating of food and feed to be sent to the drouth stricken sections where live stock were suffering, and the locating of live stock to be shipped to the sections with surplus feed and insufficient livestock, also the proper storage and care of surplus crops in sections of large production, and giving advice regarding proper feed substitutes for livestock and poultry which might be obtained at prices

that would make a profit possible, and prevent the sale of breeding animals, and the consequent depletion of the production of meat, so necessary in the winning of the war.

During the year the emergency work authorized by Congress commenced and the proper placing of emergency forces developed upon the Extension Service a multitude of added duties and responsibilities, among which were the directing of emergency County Agent work, Emergency Boys' Club Work, Emergency Home Demonstration Work, Emergency Work in Entomology, and the Emergency Work for Urban Women and Girls, the latter being conducted in cooperation with the University of Texas.

Notwithstanding the various difficulties with which the Service has had to contend, records carefully kept by our Demonstration Agents and Specialists show an increase in production over ordinary methods amounting to \$2,444,900.11, as demonstrated by tabulated figures in the body of this report. Yet these figures give only a partial idea of the value of this Service. Furthermore, our reports from the Plant Industry Division, Animal Industry Division and Rural Economics Division show wonderful progress. In fact our Staff Specialists, through advice and direction and cooperation with County Agents are securing results which may not be expressed in figures, but which can readily be appreciated by a perusal of their reports given herewith. We feel safe in saying that the intangible results of Extension Service activities are ten fold the figures given above, and yet taking these as a basis, the \$65,000.00 appropriated by the State for the year 1916-17, is only about 2 1-2 per cent of the increase shown. And that this increase is conservative may be judged by the fact that we have not included the increase from Boys' and Girls' Work which runs up into the thousands, or the saving from the dipping of the 915,602 cattle and treating of 503,952 head of livestock for various diseases and pests, and numerous other activities. We do not boast an achievement in saying that we believe results are demonstrating the fact that the appropriation for Extension Service is the best investment the State ever made for the rural communities and yet the entire State is reaping the reward. The \$95,000.00 appropriated for 1917-18 furnishes the necessary nucleus around which is built up a fund of over \$500,000.00 to be spent in promoting rural welfare, and guarantees the cooperation of the United States Department of Agriculture, which is rendering us every assistance possible, in paving the way for a new agricultural era.

Whether the results be measured in terms of financial returns on the investments, or as a contribution by the government to foster an industry essential to the life of the nation, they justify the expenditure. When the United States entered the war, the organization of the United States Department of Agriculture and the cooperating Extension Service of the several States, constituted the only organizations national in scope that were instantly available to transmit the war policies of the government directly to the people in their homes. It is gratifying to be able to testify to the splendid loyalty of the Texas organization in this emergency. Without neglect of their ordinary duties, members of the Staff and District and County Agents have rendered conspicuous service to the nation in furthering its war aims, and have been leaders in their own communities and throughout the State in numerous patriotic undertakings.

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Plant Industry Division.

HORTICULTURE—Work in this division has been conducted under two general plans:

1. Lectures and demonstrations that have not been followed up.
2. Definite seasonal demonstrations that have been followed up through the year.

While more people are reached by the first method, yet the results are somewhat intangible, and more definite results are obtained by following the latter method. In all cases, where possible, demonstrations have been conducted cooperatively with the County Agents so that the work may be followed up and records kept of costs and results. Special attention has been directed toward Home Orchards and demonstrations in cooperation with the County Agents have been established in the following Counties: Dallas, Kaufman, Fannin, Brazos, McLennan, Kerr, Gillespie, Anderson, Henderson, Mitchell, Collin, Orange, Bexar, and Kendall. Demonstrations of Commercial Orchards in cooperation with County Agents have been established in the following Counties: Anderson, Dallas, Kaufman, Henderson, Smith, Dallam, Comanche, Callahan and Mitchell. A brief summary of three demonstrations in pruning, spraying and cultivation given in Henderson County will give some idea of results: Cost of spraying, \$47.00; pruning, \$14.00; total cost, \$61.00. Returns, \$710.00. The owner stated that on 100 trees that were not sprayed he sold 65 crates of peaches for \$68.75. He also stated that only one-quarter of the crop was marketable, consequently at the same rate he lost \$206.25 on these 100 trees because of failure to spray. In other words an expenditure of \$47.00 in spraying would have returned over \$200.00. The spraying results from one orchard in Camp County may serve to better illustrate the value of spraying.

	. Sprayed	Unsprayed.
Clean	77%	0%
Scab	15%	100%
Scale	0%	10%
Curculio	6%	80%

Many similar examples could be given, but the space will not permit.

With peaches particular attention has been given to rejuvenation by means of dehorning and very gratifying results have been obtained. As typical of the results the following from one demonstrator is quoted: "My personal thanks are due your department for the success of the work, which, when first undertaken, I am frank to say, appeared to be a mere waste of time. I did not consider the old trees in any other light than as an expense for clearing them off the ground. * . * * * I am now glad to have the trees remaining over 2 1-2 blocks of land which I value at \$100.00 per acre, which amount as shown by the report will make a handsome return upon the in-

vestment. The trees have made a splendid growth and my greatest expense for the next crop will lie in cutting out the surplus wood and thinning the fruit." The County Agent has recently made a thorough investigation and has failed to find a single live specimen of San Jose Scale in either of the three orchards treated. The sprayed trees have yielded a good crops of first class fruit, with practically no loss from damage from insects. When it is considered that there is scarcely an orchard in the county that is not suffering from the ravages of the San Jose Scale, and that the peach crop of the County has been worth \$200,000.00 annually in the past, one may get an idea of the values to the fruit grower this might mean.

Traveled by rail, 14,078, and auto, 3,387; delivered 73 lectures with an attendance of 3,227; made 35 demonstrations with an attendance of 524, and wrote 1,784 letters of advice.

AGRONOMY—Texas is essentially an agricultural state and the field of agronomy covers a very wide range of subjects. The calls for lectures and information have been so varied and insistent that it has been impossible to confine the work of the agronomist to a definite line of demonstration work as practiced in some other lines. Broom Corn, Permanent Pasture, Improvement of Seeds by Selection, Crop Rotation, Peanut and Cotton Improvement have received careful attention and many inquiries for advice have been answered and all the assistance possible rendered along these lines. So important was the subject of improvement of Corn by Seed Selection considered that a special man was employed to give his entire time to giving demonstrations in proper methods of planting, cultivating and field selecting of seed corn. In two counties alone 137 farmers selected seed corn for next year. Field demonstration plats are yielding from six to fifteen bushels per acre more than check plats. Corn from seed plats sold at \$5.00 per bushel when ordinary corn was selling at \$2.00 per bushel. Thirteen corn shows were held at which 6,500 ears of field selected corn were shown. Statements have been received from five bankers in as many counties, stating that the work was worth thousands of dollars to their respective counties. Six definite demonstrations have been established in the control of smut in small grain; seven in crop rotation; one permanent pasture demonstration established; four demonstrations have been established in soil improvement, with terracing as a basis. 175 seed plats were established; 135 were dropped on account of the drouth; 7,865 miles were traveled by railroad and 11,642 by auto; 8 lectures were delivered with an attendance of 397.

ENTOMOLOGY—A number of lectures and demonstrations were given in the control of garden insects, particularly cucumber beetles and aphids, or plant lice. Three demonstrations were established in this which proved conclusively to the farmers that these insects can be controlled. So important is this work considered that under the emergency appropriation bill recently passed by the Federal Government two specialists from the Bureau of Entomology have been stationed here to devote their entire time to truck crop insects. Special attention is being given to the sweet potato weevil, which seems likely to prove as destructive to the sweet potato industry as the boll weevil to the cotton industry. Definite lines of

field insect work have been undertaken the past season for the control of the cotton leaf worm, chinch bug and rice weevil. Definite demonstrations have been established for the control of the chinch bug. Cooperating with horticulturists, 25 demonstrations were established in fourteen counties in the control of fruit insects. These include spraying for the control of San Jose Scale, coddling moth, curculio and less important orchard insects. In many cases very gratifying results have been obtained as evidenced by definite records on file in our office, which space will not permit us to give. Spraying machines, including power sprayers, have been purchased in communities where spraying has never been practiced before. One grower stated that on his sprayed orchard 95% of the fruit was marketed at over \$1.00 per bushel and that on the unsprayed portion only 25% was marketable, making a profit of around \$100.00 per acre above the cost of spraying. Figures on file in the office show definitely that the work this season alone has been worth many thousands of dollars to the fruit industry of the state. Miles traveled by rail, 15,339; by auto, 2,994; lectures delivered, 95, with an attendance of 4,032; 42 agents were visited; 26 seasonal demonstrations were given; total numbers of demonstrations, 194, with an attendance of 1,115; 568 letters of advice were written.

NUT CULTURE—Texas is reported to have more pecan trees than any state in the union; however, only a small portion of the nuts now growing in the State are of the improved varieties, commonly known as paper shells. There are thousands of acres in the State growing native pecan trees of little value. These native trees could be easily top worked to improved varieties that are at the present time bringing from 25c to \$1.00 per pound. For this reason, more attention has been given the past year to top working native trees than planting groves. Fifty-four seasonal demonstrations were given the past year that will be definitely followed up; at these demonstrations instructions were not only given in budding or grafting, but also as to the proper treatment of the tree after propagation. Some of this will necessarily be extended over two or three years. Ten demonstrations were also given which will not be followed up and one hundred demonstrations were given in small towns showing how to work over the trees for home orchards. A persistent search has been kept up to find superior native nuts that are especially adapted to Texas conditions. In addition to nut culture, about 300 Jujube seeds were distributed to members of the boys clubs. It is expected to bud these to better varieties later. Instructions have been given also at a number of places for top working native persimmon trees, believing that these would furnish a source of cheap hog feed. In addition to the demonstrations given to the growers, much information has been furnished nurserymen regarding the proper method of growing pecans in the nursery row, with the result that a better grade of nursery stock is now being offered to the trade. Four demonstrations in planting young groves have been established. These will be planted the coming season. 54 demonstrations were given with a total attendance of 869; 637 trees were worked, 379 of which lived; 2,382 were worked by owners under the direction of the Specialist and 1,117 lived; 2,480 miles were traveled by auto and 7,413 by railroad.

The first of September the headquarters of the nut specialist was trans-

ferred to the Grubbs Vocational College, Arlington, Texas, in order to give more especial supervision of Extension activities at this place.

PLANT PATHOLOGIST—The diseases of cultivated plants are, from a farmer's standpoint rather new, and hence there is a greater need of educational lectures before definite demonstrations can be inaugurated than is necessary with most other work. For this reason a large portion of the plant Pathologist's time has been devoted to lecturing and general educational work rather than definite demonstrations. Consequently it is difficult to trace tangible results. The extreme dry weather of the past year has checked diseases as well as the growth of plants, and there have been fewer calls for plant pathologist work than would be the case in a normal season, and especially during a wet season. Advantage has been taken of these conditions to prepare, in cooperation with the Bureau of Plant Industry, a series of educational charts, illustrating in a proper manner the common diseases of plants and their control. The sweet potato industry in this State is assuming considerable proportions. In the past, serious losses have resulted from rots commonly called "soil sickness." Cooperating with the U. S. Department of Agriculture, demonstration was started this year with fifteen varieties of potatoes in order to demonstrate which are most resistant of this disease. This has terminated in a question of drouth resistance, two varieties proving much more resistant to drouth than any of the others and it is hoped that these will form a valuable addition to the varieties now growing. Cooperating with the U. S. Department of Agriculture six demonstrations were instituted in different parts of the State in the control of cotton anthracnose. Three different methods of treatment, as well as planting of aged seed, were undertaken. This work has aroused much interest, but as the cotton has not yet been ginned, definite results are not available. It is estimated that several million dollars are lost annually in this State from smut of small grain. This is distributed over a large territory and a general idea of the damage may be obtained from the fact that one grower in Wilbarger County had to sell his 2,000 bushel crop this year at a reduction of 45c a bushel on account of smut, resulting in a loss of almost a thousand dollars in this one instance. Realizing the importance of checking this damage as far as possible four Plant Pathologists were secured from the U. S. Department of Agriculture to assist in conducting a campaign of instructing the farmers in the treatment of seed wheat by means of formaldehyde. An exhibit demonstrating a new method of using formaldehyde for the control of smuts in small grain was undertaken in the educational booth at the Dallas State Fair. A large number of farmers visited the booth and learned this method of controlling the smut. 12,000 miles were traveled by rail and 1,200 by auto; 73 demonstrations were given with a total attendance of 5,295; 25 lectures were delivered with a total attendance of 2,000 and 200 letters were written.

The first of September the headquarters of the Plant Pathologist was transferred to the John Tarleton College, at Stephenville, Texas, in order to give more special supervision of Extension Service activities at this place.

VEGETABLES—That this work is important and that there is great

need for help is illustrated by the fact that agents in forty-two counties asked for 150 demonstrations in the establishment of farm gardens last year. Owing to his time being occupied by other duties the horticulturist was able to establish only three demonstrations in two counties; so promising were the results obtained that on August 1st, a Specialist was employed to devote his entire time to vegetable culture. A campaign was at once inaugurated for fall gardens; while there was considerable interest manifested the prolonged drouth prevented any tangible results. Twenty-two counties have been visited and definite demonstrations for spring gardens have been established in sixteen. Twenty-four County Agents have asked for assistance in this work, making a total of forty-six counties asking for help to date. Traveled by railroad 2,516 miles and 264 by auto; delivered 56 lectures with a total attendance of 357, and wrote 75 letters of advice.

Animal Industry Division.

The work of this division is normally divided into two definite classes, viz.: Field project work and general lecture or propaganda work.

The organization of the Animal Industry Division consists of a Chief of the Division with one stenographer and specialists on Extension hog raising, Dairy Extension project work, Dairy Manufacturing work, Sheep Extension work and two specialists in Poultry Extension work, and an Emergency specialist on Beef cattle. The problems are approached in the following manner:

Letters written in answer to inquiries, circular letters of information, general lecture work, articles of information for newspaper publication, published bulletins, movable schools, etc.

During the early part of this year our energies were devoted to field project work along the line of selecting animals, methods of feeding, breeding, management, and the marketing of animals, but on account of a serious condition brought about by the long continued drouth during the past six months, most attention has been given to emergency measures in the figuring of feed rations and the re-distribution of cattle, hogs and sheep.

In Poultry Extension Work, farm projects have been established in connection with County Agents in the following Counties: Comanche, Harris, Tarrant, Anderson, Johnson, Denton, Brazos, Bell, Wilbarger, Bexar, McLennan and Ellis.

By Poultry Farm Project is meant the designation of a certain farm as a demonstration in poultry farm management. On this farm such equipment as is advised by the poultry specialist, is secured. A flock is fed the rations recommended, the birds are treated for lice, mites, fleas, blue bugs, etc., and for diseases when necessary. The specialist endeavors to visit the farm at least once every sixty days, at which time meetings of other farmers in the community are held, to make the demonstrations effective.

Poultry Extension Specialists have encouraged, as much as possible, the holding of poultry shows, and have given as much assistance in the conducting of such shows as was practical. Such poultry shows have been fostered at Bryan, El Campo, Fort Worth, College Station, Rockdale, Cuero, Houston, Gainesville, Georgetown and Navasota.

Two-day short courses in Poultry Raising have been held at Grand Prairie, San Saba and Cleburne, Texas, with a total attendance of about 1100.

In order to facilitate poultry educational work, 15 local poultry associations have been organized with a total membership of 797.

As a means of encouragement in the breeding of special strains for high egg production, the poultry extension specialists have been instrumental in organizing the First Texas National Egg Laying Contest, conducted on the grounds of the Texas Experiment Station at College Station. In this contest there are 32 pens entered from different farms. Records

are being kept of the number of eggs laid by each individual hen, the amount of feed, etc.

The Poultry Extension Specialist has prepared for distribution 15 circulars of information, one bulletin on "Turkey Raising in Texas" and one on "Poultry Raising in Texas" and three Emergency Extension posters on poultry. He has also prepared 220 articles for publication, answered 5600 letters of inquiry, judged six poultry shows at which demonstrations in poultry selection were given. Has taken part in the regular programs of a number of agricultural conventions including the Texas Farmers Congress, Southern Association of Poultry Investigators and various Teachers' Institutes.

The Dairy Production Specialist has carried on his work in much the same manner as the Poultry Extension Specialist. Farm project work in this division has been carried on in the management of dairy herds, stressing the importance of keeping records by weighing and testing milk, culling out the unprofitable cows and the feeding of balanced rations to the entire herd.

Where an attempt has been made to build up interest in the dairy industry in any particular community, it has been found necessary for the farmer to cull out the unprofitable animal, to introduce by importation, numbers of animals of the proper type and breeding. As a result of this necessity, more than 1000 head of Holstein cows were brought into the State, mostly into the northwestern part during the past year, and about 300 head of Jerseys were moved from one part of the State to another. The movement of these cattle has been made possible by the cooperation of local bankers, who were willing to make loans to such farmers as had feed and were willing to feed the purchased animals a balanced ration as computed by the dairy specialist.

There has been throughout the year a constant flow of inquiries as to the best methods of feeding dairy cows, which have been answered in approximately 900 letters, also articles and timely circular letters have been sent out through this division to approximately 4000 active dairymen and dairy farmers. There has been throughout the year more than twice as many requests for general lecture work and movable school work, as could be complied with. Lectures have been given before approximately 11,335 people and a large number of field demonstrations (before approximately 3,100 people) on the following subjects: Remodeling barns, digging pit silos, constructing stave and wooden silos, the building of dipping vats, milk houses, remodeling old milk houses to conform to sanitary requirements, butter making demonstrations, milk testing, dehorning, cow judging, etc.

In order to rejuvenate interest in the Texas Dairymen's Association the dairy extension specialist has acted as its Secretary during the past year. The Chief of the Division has acted as Secretary of the Texas Jersey Cattle Club. Various meetings of these associations have been held at which programs of an educational character were carried out. In order to assist in the distribution of pure bred dairy cattle, assistance was given the Texas Jersey Cattle Club in organizing auction sales. In order to get the work on a substantial basis, the actual management of two auction sales was handled by the staff member. This cooperation has been going on

for three years during which time more than 1100 registered Jerseys have been sold at auction to more than 400 different individuals, thereby, establishing within the State a nuclei for a large number of improved dairy herds. When we first undertook this cooperation, Jersey cattle were very difficult to sell. On account of the fact that the individual breeders were busy men, their sales were not satisfactory. At the present time there are more than 100 breeders who are members of the Texas Jersey Cattle Club and no member of the Club has on hand at this time any surplus animals of high quality that he would care to sell in any way other than in the club auction sales. The Texas Jersey Cattle Club is now on such a good footing that we believe it can now carry on its business on a self sustaining basis and the service rendered in the past will be withdrawn at the end of this year. The Extension Dairy Husbandman has had charge of the animal dairy production test at the Dallas Fair. In this contest, some 30 head of dairy cattle from different breeders' herds, competed for a period of 12 days on a basis of economical butter fat production. The contest was made educational by publishing the results daily, conference work each day on the methods of feeding, etc.

DAIRY MANUFACTURING DEPARTMENT—The work of the dairy manufacturing specialist has been primarily assistance to creameries along the line of production of more and better dairy products. The work has been carried on by general visitations to all creameries in this State by circular letters of information and by special demonstrations in particular creameries. A most helpful demonstration carried on by this department during the past year, has been the butter scoring demonstration carried on cooperatively with eighteen creameries. These creameries have been divided into three groups of six each. The butter samples for each group, are sent in monthly rotation to a group member and are there scored and commented on by the specialist. This enables each creamery operator to see the butter from his own and five other creameries scored, and to observe definite conditions as to how the quality of each sample may be improved upon. Noticeable results have been accomplished in standardizing the moisture content, salt content, increase of overrun and improving the texture, flavor and keeping qualities of the butter scored. Demonstrations in pasteurizing have shown the possibility of making high class butter with remarkable keeping quality.

Other project work has included demonstrations in cottage cheese manufacture from skim milk, also the condensing of skim milk for ice cream making purposes. In one creamery where the skim milk was being sold as hog feed for 25 cents per cwt., by carrying out the advice of the dairy manufacturing specialist, including the purchase of \$400.00 worth of additional equipment necessary for the condensing of 300 gallons of milk per day for which \$1.25 per cwt. was received an additional profit of \$25.00 per day was secured. In this same creamery (the Falfurrias Creamery) which by the way, is one of the best in the State, \$400.00 per month was added to the returns by correcting practices in butter making necessary to get a proper overrun.

Upon the advice of the dairy manufacturing specialist, the Sinton Ice Cream Company added a butter making department, as well as a skim milk

condensory and were able to purchase all of the whole milk in that community on the basis of 60 cents per pound butter fat. Sweet butter was made of the cream and the skim milk was condensed and when necessary the two products were put back into the ice cream by the use of an emulsifier. The most phenomenal results shown by the work of the dairy manufacturing specialist during the past year, we think, has been at Alice, Texas. When work was begun at this place, the local creamery was in the hands of a receiver, and was losing money. This creamery has been organized on a thoroughly cooperative basis and in the face of the most serious drouth in history, is now making more than \$200.00 per month net profit, thanks to the instructions in making high quality butter, and in how to get a maximum overrun, given by the manufacturing specialist, also instructions in better feeding of better cows, given by the Extension Dairy Production Specialist.

SPECIAL HOG DEMONSTRATIONS—The State of Texas has experienced regular periods of high and low hog production. In every instance where enthusiasm runs high in hog raising, experienced farmers lose a great deal of money attempting this line of farming simply because they do not understand the principles of feeding. Demonstrations in how to feed hogs profitably were carried on at this college some two years ago. In this test it was clearly demonstrated that hogs fed on balanced rations including corn and skim milk, cow peas, peanuts or tankage, would make heavy gains and proportionate profits, while hogs fed on unbalanced rations containing corn alone, would make unsatisfactory gains and invariably show a loss financially. In making this demonstration, litter mates were used and the results were conclusive. Most of the time of the specialist in hog raising, has been devoted during the past year to carrying on duplicates of this demonstration in various parts of the State. Typical communities in representative counties, have been selected. Free tankage was secured from packing houses with which to balance the ration and this was offered free to farmers as an inducement to get them to carry out the demonstration in full. The specialist visited these demonstrations once each month when possible and other farmers in the community were invited each time to attend the meeting on this particular farm in discussions of feeding problems. These demonstrations have resulted in more definite information on feeding balanced rations, than could have been secured with much lecturing. The unprecedented drouth conditions which have come upon us have caused a heavy movement of breeding hogs to the stock yards. It has also caused a heavy line of correspondence in answer to inquiries as to methods of feeding, fattening and breeding stock, to prevent a financial loss. Circulars have been prepared in addition to answers to definite inquiries. In order to prevent the State from going entirely out of the hog industry, it was determined that an attempt should be made to have one brood sow or gilt carried over on many farms rather than large numbers on any given farm. In order to do this, arrangements were made to intercept shipments at the stock yards markets. Orders were secured usually through the county agent in furtherance of pig club work for carload lots of brood sows. Packing house buyers then selected the best gilts from lot shipments until the required number of high class animals were secured. They were then placed in quarantine yards, given the double treatment for hog cholera and

after ten days quarantine, were moved to the point of distribution throughout the state on practically that number of farms, since very few secured more than one sow each.

WORK IN BEEF CATTLE EXTENSION—On account of lack of assistance, very little definite beef cattle extension work, other than movable schools, general lectures and correspondence work had been done until drouth conditions created an emergency.

During the past ten months, however, drouth conditions have become very serious and it becomes necessary to make immediate movement of cattle including in many instances, entire breeding herds in the drouth stricken districts. To further this work, we have cooperated with the United States Bureau of Animal Industry in finding buyers and pastures for something over 200,000 head of these cattle, which have gone into the southern states east of Texas. We are also now undertaking to establish a large number of small herds of these high quality cattle in the eastern part of Texas, which has heretofore produced a very poor grade of cattle. To further this end, an assistant has been located at Fort Worth in cooperation with the Texas Cattle Raisers Association to make selections of breeding stock for such communities as desire carload shipments. It is not expected that large numbers will be placed on any one farm and naturally this movement will not materially relieve a great many drouth stricken cattle, but should as many as 400 farmers in East Texas be furnished with from five to ten choice heifers or cows for breeding purposes, we feel that a new industry will have been established in eastern Texas and seed will be saved for re-stocking the depleted ranches in the western part of the state.

EXTENSION WORK IN SHEEP HUSBANDRY—Under the Federal Emergency appropriation, a sheep specialist from the United States Bureau of Animal Industry has been assigned to the service in this division. Practically the same methods of work are being put into effect in the sheep extension work as those mentioned in poultry, hog and cattle work. Several Hundred Thousand Sheep have been moved out of Texas on to the ranches in New Mexico and Arizona and on account of the food shortage in those districts, a great many of them are now moving back this way. Sheep production in Texas has been mainly a ranch proposition in the past. Our efforts will be directed towards developing small flocks on many farms, especially throughout central and eastern Texas. With this end in view plans are now under way in the forming of sheep clubs by which boys of farmers, may secure a small number of ewes, sufficient to destroy the weeds in the pastures on that particular farm. This plan also includes the cooperative use of pure bred bucks and the cooperative marketing of the products of these small flocks.

The work of the Chief of the Animal Industry Division has been usually one of correlation and advisor in all lines of project work. In addition to this, 681 letters of inquiry have been answered, approximately 2000 circular letters have been sent out, 19,800 miles traveled by rail, 8,000 by auto. A great many lectures have been delivered, and some of the detail work of practically every project in the entire Division has been handled by the Chief of the Animal Industry Division.

Rural Economics Division.

During this year gratifying progress has been made in adding to the list of cash crops for Texas farmers. Through the efforts of this Service, the sweet potato crop has been made as dependable a source of cash income to Texas farmers as the cotton crop, thus adding to the prosperity of our farmers and making a valuable contribution to the nation's food supply. Our Specialists have further perfected plans for curing potatoes in storage houses, and in cooperation with County Agents have assisted the farmers of many communities in organizing cooperative companies to own and operate potato curing houses, a more extended review of which appears elsewhere in this report.

A large area in East Texas has long produced a limited quantity of most excellent sugar cane syrup, but for lack of standardization this valuable food product has not been marketable outside the community where it was produced. During this year representatives of the Extension Service made a study of this problem, and in cooperation with the Bureau of Chemistry of the United States Department of Agriculture, made a demonstration in Jasper County of an inexpensive and effective method of standardizing farm-made sugar cane syrup. This demonstration consisted of taking several thousand gallons of syrup of varying colors, density and quality and blending it into a uniform product which is readily saleable in any market. This work was done through a farmers' cooperative company which owns the plant. It is our purpose to organize similar enterprises in many counties in East and South Texas next year in order that farmers may be encouraged to increase production of sugar cane, which we believe they will do when assured a cash market. This achievement of the Extension Service adds another to the list of cash crops available to farmers in a large section of the State.

During the year the Service has cooperated with the Bureau of Markets of the United States Department of Agriculture, in an effort to assist farmers to market cotton at its full value. Expert cotton classers were stationed at a number of markets in the cotton section, and furnished farmers with information concerning the grade and staple of their cotton. Our hope was that when farmers knew the grade and staple, they would be able to sell their cotton for what it was worth. Experience taught us however, that this result did not follow. In practically all markets in Texas, cotton is bought on grade alone, and no attention is given to staple, notwithstanding the fact that staple more than grade fixes its value. As a demonstration of what may be accomplished by the production of good staple cotton and marketing it through cooperating groups of farmers, representatives of our staff joined with representatives of the Bureau of Markets of the United States Department of Agriculture in assisting groups of farmers in Smith, Dallas and Anderson counties in marketing small lots of cotton. The price received varied

from 1 3-4c to 8c above the price offered in local markets, the increase representing the premium now being offered in staple markets for good staple cotton. Encouraged by these demonstrations, we are now planning to enlarge this work next year, and combine it with our plans to induce farmers to grow better varieties of cotton. Such action is necessary to combat the rapid increase of production of inferior varieties, which is seriously lowering the value of the state's cotton crop.

In furtherance of our plans of rural community development, members of our staff conducted four successful demonstrations of community canning during the year. These demonstrations were conducted through four farmers' clubs in Smith county, each of which was induced to install and operate a small canning plant with a capacity between 500 and 800 cans a day. The total cost of building and equipment of each plant was less than \$175. They were operated on a toll basis by managers who were instructed and supervised by a member of our staff. The results of these demonstrations are very gratifying. The cooperators in these enterprises have from 200 to 700 cans of food-stuffs in their homes and the toll was sufficient to pay all expenses of operation and very nearly all the cost of the plant. These demonstration plants have accomplished four things: (1) Lightened the burden of the farm house wife; (2) increased the family's food supply; (3) saved waste of garden products, and (4) made the surplus of garden products above the requirement for home use a source of cash income through the sale of canned goods. The demonstration having proved successful, it is the purpose of the Service to organize many such enterprises during the coming year.

The work of developing a type of short-time credit adapted to serve the needs of Texas farmers was continued during this year. Lacking a satisfactory law authorizing the incorporation of credit unions, a demonstration in collective or group credit was undertaken with a group of farmers at Red Springs, in Smith county. A cash capital of approximately \$1,000 was raised and loaned to members under the terms of a cooperative agreement which served as a charter. The notes of borrowers were used as security for loans to the Association by a state bank. This process of loaning and borrowing was continued until the Association had supplied the credit needs of its members, aggregating approximately \$6,000. All loans were paid promptly, and this year's experience has demonstrated that this form of credit organization is well adapted to serve the short-time credit needs of Texas farmers. Representatives of the Extension Service assisted in preparing a rural incorporation law which was passed by the legislature. The law is broad and liberal in its terms, and authorizes the incorporation of farmers' societies for any purpose related to the production, harvesting, preparation for market and marketing of farm and ranch products. Other demonstrations of group credit were made during the year and are fully reported in the annual reports of members of the Rural Economics Division.

SWEET POTATOES—

During the year 1916, twenty potato houses were constructed. The potatoes were sold in the early part of the present year, partly through the efforts of our specialists, who visited the principal wholesalers in the large cities of the state and demonstrated the superior quality of cured potatoes

A visit was made to eight of these houses to gather data on their operation. The eight houses stored 22,000 bushels. Charges for storage ranged from ten to fifteen cents per bushel. It was learned after careful investigation that potato prices ranged from 40 to 80 cents at storing time, and that the potatoes were placed on the market in the spring at prices ranging from \$1.25 to \$2.00 a bushel. In fact, a tabulated statement is on file showing that after adding the cost to the price at which potatoes were sold in the fall, it was found that there was a gain of an average of over 70 cents per bushel, which would make \$15,000 increased gain on the 22,000 bushels. During the present year our specialist has spent practically all his time in sweet potato marketing work, being assisted from July 15 to November 30 by three specialists furnished by the Bureau of Plant Industry at Washington, D. C. Sixty-one houses were constructed. Data checked up to November 15 showed that up to that time 112,500 bushels had been stored in these houses. These figures do not include potatoes placed in the houses after that date, or what were stored in the sixteen houses from which we did not get a statement. These potatoes will not be sold until spring, so there is no way to get a definite figure of gains, but under existing conditions it is safe to assume that the prices will be at least in proportion, if not much greater, than last spring; and estimating on the same basis, since five times as many potatoes have been stored, the increase should naturally be five times as much, or \$75,000. This estimate is very conservative. In addition to the activities stated above, arrangements were completed for the construction of 31 other houses, which were not finished because of the drouth, lack of material and labor. The preliminary work has been done and the houses will be built next year. During the year we mailed out 95 blue prints for ten-thousand bushel houses, 31 blue prints for three-thousand bushel houses, more than 3,000 sweet potato bulletins, as well as 5,000 sweet potato specials; also sent out 600 specials on sweet potato weevil.

FARMERS' CLUBS—

The Farmers' club work, under the direction of a specialist, has been another important activity of the Rural Economics Division. A Farmers' club consists of a group of farm men, women and children, who meet at regular dates and render programs of a literary nature. Meetings are ordinarily held at a country school house and usually twice a month, although some clubs meet as often as once a week and others only once a month. This type of organization goes under various names, such as literary societies, debating schools, lyceums, community welfare leagues, etc. Their programs consist of singing and other music, declamations by the boys and girls, essays, debates and lectures by the older people. Often local and outside speakers are invited to speak to the clubs upon topics of interest and about which they have special knowledge. The farmers' club is a community going to school to itself. Its means of reaching the field of information are the essay, the debate and the lecture. The Extension educators of the country have been slow in discovering the farmers' club and in using it as a means of getting agricultural information to the farmers. While the educational feature of the farmers' club gives it its greatest value, much is offered in other ways. Its activities are as broad as rural life. The local school, social life, the health

of the community, good roads, cooperation in buying and selling, are among the many rural life problems considered by communities with an organized community center. The specialist's report covers these activities in a detailed way. Number of meetings held, 589, with a total attendance of 36,171; miles traveled by railroad, 61,151; other means, 15,168; letters of advice written, 5,334; requests for literature, 6,313.

MARKETING EGGS—

The egg crop of the state ranks in money value as one of our leading farm enterprises. Investigations reveal an enormous loss in spoiled eggs during the warm weather months. So high is this loss in July and August that the grocers of some of our remote communities have despaired of getting eggs to the consuming centers in a marketable condition, and do not buy eggs during these hot months. Every one knows how hard it is to get good eggs in the summer. The Rural Economics Division has been experimenting upon this problem for three seasons. It has been found that infertile eggs gathered daily and shipped twice a week reach the consumer in perfect condition. For the purpose of putting this method into operation, groups of farm women have been organized into egg selling associations called Egg Circles. A standard trade mark has been adopted. A stamp bearing a number is given each member. Each egg is stamped with the standard trade mark and with the number of the shipper. The stamp serves two purposes. It guarantees the egg and identifies the shipper. Fifty-one associations have been organized, and during the last twelve months 22 of these associations report that they have shipped \$39,214.00 worth of eggs. Had these eggs been sold at the local price of ordinary eggs they would have brought \$28,360.00, or approximately 33 per cent less than association prices. Careful estimates indicate that about three-fourths of these eggs sold by this method were reported. See table below.

MONTHLY DIFFERENCE IN PRICES.

	Jan.	Feb.	Mar.	Apr.	May	Jun	July	Aug.	Sept.	Oct.	Nov.	Dec.
Egg Circle Eggs	33	32	25	27	26	28	28	30	35	36	42	40
Common Eggs -	30	28	21	22	21	20	16	16	23	32	39	40
Difference -	3	4	4	5	5	8	12	14	12	4	3	0

The eggs have been introduced to the leading grocers in the larger cities of the State. Next year should see wide expansion of this type of marketing.

Administration.

PROJECTS.

The projects conducted at present were determined at the beginning of the Federal fiscal year, July 1, 1917. The projects conducted before that time were named and described in the annual report of the calendar year of 1916. As this report is required at the end of the calendar year, and as the appropriations begin with the fiscal year, it is not easy to make a complete detailed statement entirely free from confusion without making note of the asynchronism. As shown by the budget of the current fiscal year, the Projects and the appropriations for each are as follows:

APPROPRIATIONS.

U. S. Department of Agriculture for County and Home Demonstration Agents, Boys' and Girls' Work, Etc.....	\$ 69,000.00
U. S. Smith-Lever Fund	105,919.11
State Smith-Lever	95,919.11
Emergency Appropriation	148,000.00
	\$418,838.22

DISBURSEMENTS.

Project	Federal	State	U. S. D. A.
1. Administration	\$ 20,448.51	\$ 750.00	\$ 216.00
2. Publications	6,091.11	3,999.11	
3. County Agent Work	38,551.14	26,818.35	59,756.01
4. Boys' Club Work	3,568.35	1,731.65	900.00
5. Negro Extension Work	4,210.00	5,500.00	120.00
6. Home Economics	8,166.00	15,930.00	8,007.99
7. Extension Schools	5,056.00	8,060.00	
8. Animal Industry	2,136.00	8,580.00	
9. Creamery Work	1,284.00	420.00	
10. Dairy Extension	384.00	1,220.00	
11. Rural Economics	8,886.00	9,230.00	
12. Plant Industry	7,138.00	13,680.00	

Grand total	\$105,919.11	\$95,919.11	\$69,000.00

ADMINISTRATION.

The Administration allowance for the current fiscal year is over \$2,000.00 less than for last year, notwithstanding the fact that the total expenditures for the current year are over \$60,000.00 more, the service having been greatly enlarged, and added to this have been numerous new duties because of emergency work, as a large number of emergency workers have been placed in the fields and the administrative duties have increased greatly as a result. However, the experiences of the past three years have enabled us to systematize our work in such a manner and bring it to such a

state of efficiency that much more may be accomplished by the same force than in the formative period of our work, which was of necessity experimental to a certain extent as we had no precedent to guide us. We have had to evolve our own system, which seems to be as economical and as efficient as conditions will permit. The administration Project includes part salaries of the Director, Executive Secretary, Editor of Publications, Contingent Fund, Janitor's Services, office supplies and the clerical help required in the central office.

We have adhered to the same policy adopted July 1, 1916, at which time the activities of the Service were divided into divisions with a chief or leader at the head of each division, through whom the Director deals with his employees. These Divisions are:

- (1) Farm Demonstration Division (including the boys, girls and negro work).
- (2) Rural Economics Division.
- (3) Animal Industry Division.
- (4) Plant Industry Division.
- (5) Rural Women's Division.
- (6) Moveable Schools Division.

In addition to the Chiefs there are nine district agents, 125 county agents in the Men's Division of Farm Demonstration; one State Agent, one Assistant State Agent, two District Agents and 35 County Agents in the Girls' Division of the Farm Demonstration work, and one State Poultry Agent, one State Agent and four Field Club Agents, also attached to the Farm Demonstration Division. There are one Organizer, two Agronomists and two Home Economics Demonstrators in the Negro Division.

There are five men in the Rural Economics Division, five in the Animal Industry Division, five in the Plant Industry Division, one woman in the Rural Woman's Division, and one woman and two men Specialists in the Moveable School Division. In addition a number of emergency specialists of the various bureaus of the United States Department of Agriculture have been and are cooperating with us.

The demand for specialist work over the State has been extremely heavy, and while the present force has done a vast amount of work, they have been totally unable to fill the requests made for their services. In this connection it might be well to state that the work of the specialists is gradually being interwoven with that of the County Agents, in counties where there are Agents, so that the Agents, who, heretofore, were able to conduct only a few lines of work, are now enabled to establish definite, concrete, demonstrations in practically every branch of agriculture and live stock development, through the aid furnished them by the various specialists. In other words the policy of the department is to stress definite demonstration and project work rather than propaganda work.

The office scheme involves the handling of all correspondence, bulletins, circulars, itineraries, etc., by the Central Office, all letters being numbered and, where special questions are involved, referred to the specialists handling that line of work for answer. The records show that from January 1st, 1917 to December 31st, 1917, 47,463 pieces of first class mail were received; 553 additions through this source were made to the mailing list; 6,313 requests were made for literature; 29,210 pieces of literature were sent

out; 39,649 letters were written, 1,042 stencils were cut for circular letters of advice; 1,472 articles with a total of 3,882 pages were copied for publication, etc., 1,063 pages expense accounts were copied; 1,618 weekly reports were copied; 725 total pages miscellaneous reports were copied. Total letters and pages copied 47,327. Total letters passing through files, 84,476.

PRINTING AND DISTRIBUTION OF PUBLICATIONS—Our fund for printing and distributing literature is limited by terms of the law to 5% of the total appropriation. Experience shows that this amount is ample, if proper economy is practiced in the distribution of bulletins. We make it a rule to send bulletins only on request and do not keep up a mailing list for parties outside the State. They are not offered for general distribution, but are used to furnish information requested or to answer inquiries concerning any particular problem. We make it a point to issue bulletins only on topics not sufficiently covered by bulletins from the U. S. Department of Agriculture on conditions peculiar to our State, and then they are confined to the smallest size compatible with necessity and the number actually needed is thoroughly investigated so as to prevent waste. In all cases where possible we use the U. S. Department bulletins. We endeavor to so phrase our bulletins as to appeal to the understanding of persons unfamiliar with scientific terms. In reporting from the mailing room we will have to show results from October, 1916, to October, 1917, as this report is being compiled before the end of the year and we have no way of knowing what may be issued during the next month.

	No Printed.	No. Pages.
Number of Bulletins.....	71,500	1,584,000
Number of Circulars.....	154,510	258,830
Number of Leaflets.....	208,520	208,520
Number of Farm News.....	201,000	804,000
Number Farm and Home Hints....	70	180
	635,600	2,855,530
Government Bulletins distributed by County Agents.....		80,237
Bulletins or Circulars from State College or State Department of Agriculture		72,534
Circular Letters prepared by County Agents and sent out.....		141,507
Total		929,878
Pieces mail routed R. P. O. System and tied out in mailing room		343,200

CENTRAL OFFICE FORCE.

Following is a summary of the staff force, not including the Farm Demonstration and Home Demonstration Agents:

26 White Male Specialists	Correspondence Clerk
5 White Women Specialists	Filing Clerk
4 Negro Specialists	Foreman Mailing Room
2 Negro Women Specialists	Bulletin Clerk
Editor Publications	Mail Clerk
Chief Clerk	Appointing Clerk
Bookkeeper	1 Stenographer and Librarian

7 Stenographers

Farm Demonstration Work.

COUNTY AGENTS.

The County Agents work for this year in this division has been conducted with seven District Agents and 95 County Agents, and notwithstanding the war, the unprecedented drouth and the various duties consequent under such conditions, we feel that the tabulated results denote marked progress in County Demonstration Work. Under the head of corn, cotton, small grains, legumes, hay and forage crops we had 5,169 demonstrations and 3,063 reported on their work. The drouth in certain sections of the State completely destroyed many of the demonstration crops, while the call of Agents to the service of the country interfered with the demonstrations under their care and supervision. However, in the face of all adverse conditions a careful compilation of the records reveals the following conditions:

EFFECT OF DEMONSTRATION WORK ON COMMUNITY—15,275 farmers are raising practically all of their home supplies; 6,932 have opened new bank accounts; 4,949 have increased their bank deposits; 7,351 own their farms; 3,057 have paid off their mortgages and 4,733 are trading on a cash basis since demonstration work began; in fact, 72 1-2 per cent of the demonstrators and co-operators have decreased their indebtedness along various lines, while 72 2-7 per cent of farmers in demonstration territory are showing increased interest in agricultural meetings and 72 1-7 per cent are showing a desire to study their farm business and progress; 1,546 labor saving devices for the home have been installed among the demonstrators and co-operators.

FARM and FARMSTEAD IMPROVEMENTS—452 buildings were erected; 901 buildings improved, 279 building plans furnished, 851 buildings painted or white washed, 284 water systems installed, 264 lighting systems installed, 1,610 home grounds improved, 1,691 farm and home sanitary conditions improved, 3,694 homes screened against flies and mosquitoes, 699 fly traps installed, 1,220 sanitary privies erected, 116 telephones installed, 683 farmers furnished plans and induced to adopt a system of rotation with a total of 45,783 acres in such rotation; 800 new pastures were established, 438 old pastures were renovated with a total of 10,541; 615 drainage systems were installed, 818 farmers were induced to drain all or part of their farm, 1,041 were drained by tile and 56,459 by ditch; 1,343 farmers were induced to move stumps covering 18,574 acres; 3,701 farmers were induced to terrace their sloping land, totaling 130,930 acres; 28,424 home gardens were planted; 116,718 farmers were induced to save surplus products for winter use; 1,026 farmers planted cover crops to be turned under and 13,706 new implements and tools were bought.

Statistics Showing Total of Demonstration Agents Work in Texas for Year Ending December 31, 1917.

Kind of Crop	No. Dem-onstrators	Reportings	Total Average	Average Yield Per Acre	Increased Yield Per Acre	Total In-creased Yield Per Acre	Price Per Bushel or Pound	Total Value Increased Yield	No. Co-op-erators	Total Acre-age Coop-erators	A. Treated for Disease Insects	REMARKS
Maize	86	62	186	84 Bu	16 Bu	2972 Bu	\$ 1.50	\$ 4,464.00	85	1491		
Feterita	21	21	366	72 Bu	17 Bu	9222 Bu	1.40	12,910.80	190	516		
Kaffir	62	36	2490									
Corn	1767	1017	16211	26 Bu	14 Bu	226954 Bu	1.40	317,735.60	8323	26749	390	
Cotton	988	608	17605	813 lbs	305 lbs	5369525 lbs	.17	375,866.75	8073	40637	3190	Seed Cotton
Oats	285	184	9465	28 Bu	16 Bu	151440 Bu	.70	106,008.00	499	3144	27	
Wheat	281	180	1918	23 Bu	13 Bu	24934 Bu	2.00	49,868.00	499	12090	1000	
Barley	27	14	293	38 Bu	7 1-2 Bu	4378 1-2 Bu	1.50	6,581.25	11	160		Small Grain.
Rice	15	4	3004	77 Bu	23 Bu	69092 Bu	2.50	172,730.00	1	600		
Rye	42	27	151	32 Bu	17 1-2 Bu	2415 Bu	1.50	3,622.50				
Alfalfa	54	22	804	3 Ton	1 Ton	804 Ton	34.00	27,336.00	57	797		
Cane (hay)	81	30	487	2 4-5 Ton	1 1-2 Ton	730 Ton	30.00	21,900.00	343	1993		
Sorghum	78	52	3018	3 1-4 Ton	1 3-4 Ton	5281 Ton	30.00	158,430.00	53	426		
Sudan Grass	140	85	2250	3 1-2 Ton	1 1-4 Ton	3428 Ton	32.00	109,696.00	345	5524		Hay, Forage or Clover.
Med. & Pasture	13	11	61	2 1-4 Ton	1-2 Ton	30 1-2 Ton	32.00	960.16	11	63		
Millet	17	5	292	3 1-2 Ton	1 Ton	292 Ton	30.00	8,760.00				
Clover	88	41	90	1 Ton					10	20		
Soy Beans	135	102	1569	21 1-4 Bu	5 Bu	7840 Bu	4.00	31,360.00	645	6705		Seed Bushels. Cured Hay.
Peanuts	494	291	6354	1 2-3 Ton	1-2 Ton	784 Ton	26.00	20,384.00				Seed Bushel. Cured Hay.
Cow Peas	321	177	7421	24 3-4 Bu	7 3-4 Bu	49243 Bu	1.50	73,864.50	1498	12596		Seed Bushel. Cured Hay.
Field Peas	39	39	10027	1 2-3 Ton	1 Ton	6354 Ton	36.00	238,744.00				Seed Bushel. Cured Hay.
Velvet Beans	107	42	458	18 1-5 Bu	10 1-2 Bu	76065 Bu	2.50	190,162.50	1238	8192		Seed Bushel. Cured Hay.
Mexican Beans	18	6	250	2 1-4 Ton	1 Ton	7421 Ton	30.00	222,630.00				Seed Bushel.
Spanish Peanut	12	7	125	8 3-5 Bu	2 Bu	20054 Bu	2.50	50,135.00	200			Seed Bushel.
Total			84894					2,254,149.06	22283	122634	33249	

Total Value Increased Crop Yield \$2,254,149.06
 Poultry—1094 farmers were induced to produce infertile eggs, and received an average of 35c per dozen, which records show to be 7cts per dozen more than was received for ordinary eggs Total products 315,165 dozen. 22,061.55
 Total Increase 3,872.00
 Saving on Fertilizer Bought Cooperatively 74,145.00
 Farm Manure—148,290 tons estimated at 50c a ton 6,180.00
 Blue Prizes Won by Members Boys' and Girls' Clubs from Fair, Etc 84,492.50
 Farm Products Bought or Sold Through Influence of Demonstration Agent Work at Approximate Saving to Farmer of \$2,444,900.11

The preceding figures clearly reveal the advantages of demonstration methods more forcibly than could possibly be the case under normal conditions, for while the drouth has necessarily decreased the average yield over the State, yet the demonstration yields have been so nearly normal as to show an unprecedented increase under the circumstances and this increase figured at actual market prices reveals an income to the taxpayers of Texas of over \$2,444,900.11, produced by demonstration methods which would not have been received had the land been cultivated under ordinary methods. However, this is only a small proportion of the benefits accruing to farmers through demonstration methods. There were 22,283 co-operators, who cultivated 122,634 acres, but their increase cannot be shown as they are not required to keep complete records. Furthermore, there were various activities carried on, the results of which cannot be averaged or shown in figures without going more into detail than this naturally limited report will permit. However, we shall endeavor to mention a number of them.

CORN—(Including kaffir, milo and feterita) 11,303 farmers were influenced to select seed for next years crop, and 78,516 bushels of seed were selected, while 1,322 fall plowed their demonstration acres; 573 turned under cover crops; 3,338 harvested for silage, and 4,312 farmers were influenced to use better methods.

COTTON—756 farmers planted pure or selected seed and 1,692 were induced to field select seed for next year's crop; 773 fall plowed their demonstration acres and 102 turned under cover crops, while 11,676 farmers have been influenced to use better methods.

SMALL GRAIN—14,565 acres were thrashed for grain, 2,227 acres were cut for hay; 12,178 acres were grazed off at an estimated value per acre of \$10.00; 376 acres were turned under for soil improvement, while many farmers were induced to sow these crops for the first time.

HAY, FORAGE or COVER CROPS—823 acres were grazed off at an estimated value of \$14.20 an acre; 212 acres of soil in this class of crops were inoculated, while many farmers ordered material for inoculation through the County Agents; 456 acres were turned under for soil improvement.

SUMMER LEGUMES (Cowpeas, Soy Beans, Velvet Beans, Peanuts, etc.)—12,734 acres were thrashed for seed and 10,728 cut for hay; 27,250 acres were grazed off at an estimated average value for grazing of \$25.23 an acre; 7,289 acres were turned under for soil improvement; 1,249 acres were inoculated (181 by Department cultures and 1,068 by inoculated soils); 178,515 acres were planted to these crops due to the influence of the County Demonstration Agents.

POTATOES—Sweet Potatoes—There were 273 demonstrators, 112 reporting with a total acreage of 1,244, yielding an average of 276 2-3 bushels per acre; 400 acres were treated for diseases, insects and pests, while 2,574 acres were worked by improved methods and there was a 13,025 acreage increase in this crop due to the advice of the Agents. Irish Potatoes—There were 40 demonstrators, 29 reporting with a total acreage of

154 1-4, yielding an average of 159 bushels to the acre; 1,362 acres were treated for diseases, insects and pests, while 789 acres were worked by improved methods, and there was a 1,410 acreage increase due to the Agents work.

ORCHARDS—There were 208 demonstration home orchards containing 32,833 trees, distributed as follows: Peach 132; apple 54; pecans 6; citrus 6; plums 5, pears 3 and grapes 2. 840 orchards were inspected, containing 91,054 trees; 671 orchards were pruned containing 60,538 trees; 592 orchards were sprayed containing 23,784 trees; 240 orchards were wormed containing 31,444 trees, and 233 orchards were planted, containing 12,533. All the above were due to the Agent's influence and advice, while they assisted in caring for 105 orchards and actually sprayed 13,585 trees, pruned 19,006 trees and wormed 501 trees. It is difficult to estimate or give a correct idea of the value of the above work.

LIVESTOCK—Horses—36 pure blood stallions, 30 pure blood jacks and 274 brood mares were introduced in different sections due to the agent's influence; 47 demonstrations in feeding horses and 115 in feeding mules were given, and 2,335 horses and mules were cared for according to methods recommended.

DAIRY CATTLE—292 pure bred bulls and 1,789 bred cows or heifers and 2,477 grade dairy cows were brought into the different sections due to the agent's influence, while 3,785 were tested to determine the profitable milk producers; 2,492 farmers were induced to feed a better balanced ration and 17,414 head of stock were so fed; 196 demonstrations in dairy work were supervised with 3,568 cows in the demonstrations; 2 creameries and 32 cream routes were established due to the agent's influence; 8 cow testing associations and 44 dairy breeders associations were established.

BEEF CATTLE—284 bulls, 2,066 cows and 4,149 grade cows of the pure blood beef cattle type were placed in various sections of the State; 106 beef breeding herds were started, while 12,520 head of feeding cattle were brought in; 35 feeding demonstrations were given with a total of 7,389 cattle in the demonstrations; 2,997 head of beef cattle were cared for entirely by methods recommended, while 10,793 were cared for partially by these methods; 7 cattle breeders associations or clubs were formed with a membership of 239.

DIPPING VATS—522 dipping vats were built through agent's influence; they helped to construct 279 and helped to fill 628 with the solution, while the solution was tested for 755; 800 were built in the counties represented by agents. 925,602 cattle were dipped during the year.

HOGS—4694 head of pure bred hogs—559 pure bred boars and 4,035 pure blood sows or gilts—were distributed through the influence of the county agents; 1,520 herds were started; 298 feeding demonstrations were supervised with a total of 7,313 hogs; 1,644 farmers were induced to start the growing of grazing crops for hogs, while 26,399 head of hogs were cared for according to demonstration methods.

SHEEP—82 pure bred rams and 309 pure bred ewes were distributed through the agents influence, while 2,517 grade ewes have been introduced; 140 flocks have been started and 18 farmers have been induced to grow grazing crops for sheep.

POULTRY—120 poultry demonstrations have been held; 17,841 chickens 1,310 turkeys, 40 ducks and 28 geese have been grown and cared for according to demonstration methods; 1,724 farms, containing 157,487 birds have improved poultry management methods as a result of demonstration work; 1,094 farmers have been induced to produce non fertile eggs, and 3,781,978 eggs were produced bringing an average price to the farmer of 35c a dozen; 18 communities are raising the same kind of poultry.

LIVESTOCK DISEASES and PESTS—Demonstration Agents and other Extension workers have induced the farmers to have the following number of cattle treated for diseases and pests; blackleg 82,619; ticks 186,630; lice 6,938, hogs treated for cholera in co-operation with Dr. Frank R. Jones, Inspector in charge, U. S. Bureau of Animal Industry (single treatment 30,121; simultaneous treatment 20,716). Hogs treated for worms 4,869; lice 6,938; mange 16,870. Sheep for worms 55, scab 325; ticks 1,168. Horses—Disemper 223; accidents 29, other troubles 108. The County Demonstration Agent administered serum for the prevention of hog cholera to 13,288 hogs, and the following number of livestock were treated as demonstration: Cattle for blackleg 32,746.

FERTILIZERS—4,613 farmers were advised regarding use of fertilizers; 283 fertilizer demonstrations are being conducted with the County Agent; 4,280 tons of fertilizer were used in these demonstrations. 40 communities were induced to buy fertilizer co-operatively and 2,813 tons were bought, valued at \$33,178 at a saving to the farmers of \$3,872.00. 2,128 farmers were induced to home-mix fertilizer on agent's advice at an estimated saving of \$3.66 a ton, while 197 farmers top-dressed their crops with fertilizer at the suggestion of the agent.

MANURE—3,797 farmers have been induced to take better care of farm manure; 397 have provided manure sheds; 798 are composting farm manure and waste products. There are 462 manure spreaders in demonstration territory and the agents have helped to place 183. 846 farmers are using phosphate or other material for reinforcing farm manure and 148,290 tons of farm manure are now being saved due to county agent's advice.

SILOS—861 silos have been built as result of county agent's advice.

ORGANIZATION—The county agents have assisted in organizing 479 farmers clubs with a total membership of 19,729. Farm products have been bought and sold through these organizations with an approximate saving to the farmers of \$84,492.50.

MISCELLANEOUS DEMONSTRATION WORK—During the year agents made 94,630 visits to demonstrators, co-operators, other farmers, business men, boys' and girls' club members, traveling 650,035 miles by rail, team and otherwise. Persons interested made 57,297 calls on the agent at their office

or home and 33,464 telephone calls; 5,041 farmers meetings were held under the auspices of the agent or Extension Service representative, with a total attendance of 441,109, while the agent addressed 5,771 meetings; 1,528 field meetings were held with a total attendance of 17,770; 46,560 official letters were written by the agents and 3,918 articles relating to the work were prepared, while 141,507 circular letters were sent out; 80,237 U. S. Department of Agriculture bulletins or circulars were distributed, and 73,543 State College or State Department of Agriculture; 574 farmers are keeping cost records and 4,008 partial cost records at the suggestion of the agents; 185,000 are practicing fall plowing; 10,799 are selecting seed; 2,593 are growing improved seed for sale; 2,927 farmers are growing sugar cane or sorghum through agents influence.

Home Demonstration and Canning Club Work.

The Home Demonstration Work, in spite of adverse conditions, has shown gratifying results. The work is established in 30 counties and divided into three branches, namely: Canning Clubs, Poultry Clubs and Household Demonstration. The total enrollment of these clubs this year was 6,593, as compared with 4,575 last year. The improvement in quality is exhibited by the detailed reports of each County Home Demonstration Agent, the records of each club being on file in the office. Much of the improvements shown is due to the efforts of the district agents and especially the Assistant State Agent, who was in charge of the State work for several months after the resignation of the former State Agent, and who relieved the State Agent of much visiting, giving the State Agent opportunity to devote more time to the County Agents.

HOME DEMONSTRATION WORK—1,725 women were enrolled, 1,112 doing active work. There are 152 organized clubs, 80 holding regular meetings; 550 fruit and vegetable demonstrations were held in the homes and 450 in meetings; 47 bread demonstrations were given in homes and meetings with a total attendance of 1,825; 4 rest rooms were established; 585,824 containers of products were put up by demonstrators, valued at \$83,853.30; 19,213 pounds dried vegetables were stored; valued at \$2,202.00; 112,880 pounds of dried fruit were stored, valued at \$2,120.00, 4,505 gallons of brined vegetables were stored, valued at \$4,142.00. 146 women made winter gardens, 93 butter making devices were made; 339 butter making devices were bought; 8,587 pounds of butter were made, bringing an advance in price of 22 2-10 per cent, and 160 homes were induced to make new breads. Total value of products put up and stored \$92,317.30.

EMERGENCY FOOD CONSERVATION WORK—65,084 women and girls were influenced by home demonstration agents instructions; 1,036,467 containers of fruit and vegetables were packed, valued at \$248,788; 8,029 pounds of dried fruits and vegetables were stored, valued at \$1,476.50; 2,680 gallons of brined vegetables were stored, valued at \$906.00. 204 community canners were installed with an approximate output of 445,832. Total value of products put up and stored \$251,170.50.

GIRLS' CANNING CLUB WORK—It should be stated in this connection that the Girls' Club Work, as conducted by the Extension Service, is intensified, and is not to be reckoned in comparison with other efforts in Girls' Club Work, which consists mainly of enrolling girls and leaving them to take care of themselves, or follow instructions sent by mail. Under our system every girl receives personal instructions from her county agent throughout the year, and it is worth saying that no other kind of club work, either for boys or girls, will accomplish any enduring results. In canning club work

the enrollment was 3,118, total number members reporting 1,595; 1,287 girls made demonstrations in cooking; 340 in bread; 46 scholarships were awarded; 76 perennial gardens were established; 752,385 pounds of tomatoes were raised from the 1-10 acre plats; 92,157 pounds of beans were raised from 1-10 acre plats; 83,077 cans of tomatoes were put up from the 1-10 acre plats; 28,488 jars of tomatoes were put up from the 1-10 acre plats; 49,922 cans of other vegetables were put up from the 1-10 acre plats; while 66,479 jars of miscellaneous products were put up; number of containers of tomato products (ketchup-pickle relish) from 1-10 acre plat, 16,002, total value of all club products \$58,277.24; average cost of production from 1-10 acre \$5.31; average cost of canning per 1-10 acre \$7.37; average net profit per 1-10 acre \$17.05. Total number of containers put up from the farm and orchard, 121,388; total number girls making towels, and laundry bags, 1,619; making caps 1,898; making uniform aprons 1,754; making uniform dresses 981; 191 clubs held 2,123 regular meetings during the year with an attendance of 48,734. The total products valued at \$58,277.24 on the 1,595 one-tenth acres reported at a net increase shown of \$17.05 per 1-10 acre, reveals an increased production valued at \$27,194.75, which would not have come to the demonstrators had they not followed proper instructions, to say nothing of the fact that none of the \$58,277.24, would have been produced had not the club members been properly supervised and encouraged.

BOYS and GIRLS' POULTRY CLUBS—875 members were enrolled; 600 fulfilled the minimum requirements as to eggs set and chickens raised, 187 taking charge of entire flock on farm; 319 raised feed for flock; 332 used pure bred males at head of flocks; 64 made brooders, 64 purchased pure bred stock; 347 purchased pure bred eggs; average number of fowls in flock 35; approximately 13,974 chickens were raised, and 5,610 chickens approximately were fattened for market; 4 egg circles were organized; 1,670 dozen eggs were sold co-operatively; 1,546 pounds of market poultry were sold for a total of \$408.66; 255 pure bred fowls were sold for breeding purposes for a total of \$265.00. Approximate total value of all poultry products \$12,302.36.

Boys' State Agricultural Club Work.

BOYS' DEMONSTRATION CLUB WORK—This is a sub-division of the farm Demonstration Work and the boys are handled through the County Agents. There is a State Boys' Agricultural Club Agent and a State Pig Club Agent, also three Field Agents, added in September, who devote their entire time to this work. The work embraces the growing of field crops; such as corn, peanuts, cotton and kafir, and the raising of live stock, such as pigs, baby beef and lambs. The effects of the drouth in Texas on the Boys' Club Work this year are revealed to a certain extent in the summary of the crop records. The drouth was not only responsible for low yields and high cost of production, but also the small number of reports submitted. Club members hesitate to submit a report when they have made a poor record. It should also be mentioned that the reports were greatly handicapped by the fact that the Department was unable to supply the record books to many of the Club boys until after July 1—in fact, quite a number have not been received and we expect a number of others. Up to the present date (December 10, 1917) we have received 974 reports, as follows: Corn 370, Kafir 57, yielding 25.9 bushels an acre, at an average cost of .40 cents per bushel; peanuts 54, yielding 35.03 bushels an acre, at an average cost of .38 cents per bushel; cotton 56, averaging 829 lbs. seed cotton an acre, at an average cost of .03 cents per pound seed cotton; calf 50, average initial weight baby beeves, 366 lbs., average final weight, 658.6 lbs., showing an average net profit of \$22.50 as contrasted with an average net profit of \$17.70 for last year; pig 387 reports:

SUMMARY OF REPORTS ON PIGS.

Fattening Phase.

Initial Value—Feeding Project:

Number of Pigs	29	Value		\$ 131.08
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Final Value

Number of Pigs	29	Value		1,087.77—Increase.....\$ 956.69
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Breeding Phase.

Initial Value

Number of Pigs	43	Value		326.80
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Number of Pigs	43	Value		3,744.69—Increase.....\$3,418.89
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SOW AND LITTER PROJECTS.

Brood Sows—

Number of Sows	97	Value		\$1,888.72
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Value Sows, Pigs sold and on hand				7,069.05—Increase.....\$5,180.33
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Total increase	\$9,555.91
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Average yield of ten highest records of corn, 74.19 bushels per acre; average cost per bushel, 14 cents. Average yield of ten highest records in peanuts 69.33 bushels per acre; average cost per bushel, 27 cents. Average yield ten highest records in grain sorghums 36.3 bushels per acre;

average cost per bushel 24 cents. Average yield of ten highest records in cotton, 1572.7 pounds of seed cotton; average cost per pound of seed cotton 3 cents. Average initial weight of three of the highest record baby beeves, 202.6 pounds; average final weight, 544 pounds; average net profit, \$36.54.

3613 Corn Club boys were enrolled, being an increase of 1048 over last year; 1339 in cotton, being an increase of 448; 1433 in peanuts, increase 768; 800 in kaffir, decrease 233; 5115 in pigs, increase 1756; 569 in baby beef, increase 79; lamb, 0, decrease 46. There were 92 agents at work during the organization season in 1917, compared with 80 during the corresponding season 1916. The average enrollment per agent in 1917 was 132.6 members, compared with an average of 90.5 members in 1916. State exhibits and contests of club members were held at the State Fair, Dallas, Texas, and the Cotton Palace, Waco, Texas. Texas participated in an inter-state club contest at the Oklahoma State Fair, Louisiana State Fair, and Southern Livestock Exposition at New Orleans, and secured third place at each of the contests. We feel that this showing was very creditable, considering crop conditions in Texas this year. There were 290 exhibits at the State Fair at Dallas, 80 exhibits at Texas Cotton Palace, 10 at Oklahoma State Fair, 10 exhibits at Louisiana State Fair, and 10 exhibits at the Southern Livestock Exposition; total 390. A larger number of club members participated in the State and inter-state contests than ever before. They have a tendency to stimulate the interest of the boys beyond their local achievements. It is our opinion, based upon experience and observation, that encampment schools for club boys furnish an excellent means for giving good agricultural instruction. It is a good form of "outing" and tends to bring the boys together socially and enables the county agents to make use of the "gang spirit" that is usually to be found in boys. Twelve encampment schools of two to five days duration, one state encampment school, and one short course at A. and M. College were held during the year with an approximate total attendance of 1,050 club boys. It is our ambition to hold a county club encampment in practically every county next summer where the club boys are sufficiently organized. County encampments were held during the months of July, August and September in the following counties: Johnson, Travis, Williamson, Bell, Grayson, Houston, Freestone, Dallas, Childress, Dickens, Wilbarger and Lubbock. The average attendance at these encampments was about 40 club boys and there was a very good attendance of parents and other people during the day meetings. The attendance at the Bell County encampment was about 150, which was the second encampment of this kind which has been held in this county, while it was the first in the others. This indicates the interest it creates with the boys in their club activities. The State encampment at Dallas was a great success. There were 410 present, including about 40 county agents. The club boys were formed into a military organization, consisting of two battalions of four companies each. Each company was under the direct supervision of the captain. Assistant county agents were used as captains. The State Association entertained the club boys and county agents without cost for a period of six days, furnishing sleeping quarters, meals, passes into the Fair grounds, etc. The only expense to the department in connection with the State Encampment was the traveling expenses and the time of the staff members in conducting the encampment.

One hundred and sixty-nine (169) club boys were assembled at the Agricultural and Mechanical College during the Farmers' Short Course in July. A special program for the club boys was arranged. They were organized into a military organization. We plan to enlarge upon the encampment and short course feature of club work. We believe that it is time and money well spent.

Number of schools visited and meetings held in the interest of club work, 3126; approximate attendance, 120,706; Community, County, State and inter-state club contests reported held, 89; exhibits entered at above contests, 3,730; Livestock contests reported held, 42; county cash prizes, \$4,747.10; value scholarships to Encampment Schools, etc., \$3,103.55; value other prizes in county, \$1,833.00; prizes given by State Fair, \$465.00; prizes given by Texas Cotton Palace, \$361.00; total value prizes given in State, \$10,909.65. Number visits to club members, 9,594; approximate number of club boys who endeavored to carry out their work, 6,494.

Messrs. G. W. Johnson, W. S. Symonds and L. W. Hillam began work in Texas as club agents September 1, September 15 and October 29, respectively. The date given in this tabulation covers a period from January 1, to December 1, inclusive, or from the time the work was commenced by the agent as mentioned above:

	Williamson	French	Johnson	Symonds	Hillam
Total number of days in field.....	287	287	72	62	30
Number days worked in office.....	128	95	16	19	7
Number days worked in field.....	147	177	62	43	23
Number days off duty.....	11	15	00	3	00
Number days State Fair.....	10	10	20	10	3
Number of schools visited and meetings attended	145	115	22	21	32
Approximate attendance.....	12921	14122	1800	4620	2061
Number of County Agents visited	87	48	25	25	13
Conference with parties other than County Agents in Inter- est of Club Work.....	15	13	No data	No data	No data
Club Demonstrations visited.....	50	No data	1	3	No data
Miles traveled by rail.....	18227	15003	6838	2732	1788
Miles traveled by auto and other means of conveyance....	2591	2080	336	612	525
Total miles traveled.....	20818	17083	7174	3344	2313
Number letters written.....	1742	799	95	61	18

It should be borne in mind that the figures given here reveal only a small part of the results obtained from club work. Farmers who could never be reached do not object to their boys being kept busy with a demonstration plat, a pig or baby beef, and yet, the results obtained are forced on his attention and eventually on the entire community until the most indifferent must be convinced by the actual results and the way is paved for better farming; besides the boys of today will be the men of tomorrow and figures cannot express the value of proper instruction and training during the formative period of the club boys' life.

Negro Demonstration Division

NEGRO WORK—The plan in the negro work for the past two years has been to work from the individual to the community and from the community to the county as a unit, not by lectures, but by actual demonstration of successful methods, both in the home and field. The special work of this division for the past fiscal year has been the growing of food and feed crops and conserving the same, emphasis being placed upon the growing of corn among the men and better gardening among the women, together with the canning, drying and pickling of vegetables and fruits. The staff is composed of a chief and stenographer, with headquarters at Waco; two agronomists and two home demonstrators, with headquarters at Prairie View, Texas. This force had to carry to practically a population of 700,000 people the message of a better way to do things both in the field and at home. The need being great and the workers few, work was begun only in those communities where the interest was great enough to justify our entering. Corn and canning clubs were organized in nineteen counties. Demonstration corn plats were cultivated in seventeen counties, while demonstration gardens were cultivated in ten counties. The result in all this work was exceedingly successful in the face of the severest drouth Texas has known for years and the figures are on file in our office, being reported in such form as to render them difficult to tabulate. Number of workers for full period in the field, 2; number of workers part of time (9 months) in the field, 2; leader and stenographer, 2; total 6. Number counties regularly visited by agronomist, 18; number counties regularly visited by Demonstrators Home Economics, 20; number canning clubs visited regularly 47; number demonstration corn plats and clubs visited regularly, 34; number members corn clubs 782; number members canning clubs 1,142; number demonstration gardens visited regularly, cultivated and used as object lessons in gardening, 18; number hot water canners bought during the year by clubs, 54; number cans bought by club members during the fiscal year, 24,500; number demonstrations given in canning, 162; cans and jars put up by regular club members, 88,672; cooperators reached by single lectures, 574; jars and cans put up by people not regularly organized or regularly visited, 20,500; miles traveled by the entire staff 48,796; number boys corn clubs organized, 16; number girls tomato clubs organized, 20; number boys competing for prizes at Cotton Palace, 16.

The actual value of demonstration methods as advocated by the Extension Service were tested out thoroughly this year, for in all the counties where demonstration plats were secured, except one, there was a serious drouth, and there was a general failure of the corn crops, except in the case of the demonstration plats and those of cooperators, where the crops were worked as directed and on these the crops were good, except in the case of Falls and Brazos Counties, and in these instructions were not followed.

Women's Division.

RURAL WOMEN'S WORK—The activities of this division are devoted to the instruction of rural women in rural home economics. In order to give this instruction efficiently and at the minimum cost organizations of rural women have been formed. Regular written lessons are furnished these clubs and at regular intervals Demonstrators are sent, who give personal instruction in such branches of rural home economics as bread-making, canning, gardening, and poultry, also household conveniences are sent to various groups of clubs. One of the best features of the work is the growth of the cooperative spirit among the women as shown in their working together to make money for their churches and schools. In some instances, they have begun cooperative buying and selling. Reports on file in this office show:

Number of Clubs at the begining of year.....	67
Number of Clubs organized during year (Jan. to Sept.).....	79
Number of Courses of Study Sent Out to Clubs.....	375
Number of Lessons (4 lessons to each course).....	1500
Aggregate Number of Lessons Sent Out to Member of Clubs.....	9940
Number of Active Clubs to Date	60

The chief of this division and principal worker suffered a serious accident some months ago and after a lingering illness of several months, died, consequently the reports on this work are not as complete as desired.

Movable Schools Division

MOVABLE SCHOOLS—In this work the specialist in Home Economics, with the assistance of 371 volunteer demonstrators, through instruction and advice saved 2,474,000 containers of food, notwithstanding the fact that almost the entire state was drouth stricken and a large percentage of the food and feed crops were destroyed. This specialist cooperated with the county agents and gave a total of 79 lectures and demonstrations with an attendance of 5,420, wrote over 1,000 letters in answer to inquiries for advice and instruction and traveled 6,612 miles to reach communities where instruction and training had been requested.

The terracing specialist has on file in our office a detailed report filled with such declarations as these from farmers in Texas: "Last year on the thin land near the top of the hill I got 8 bushels of corn more per acre on land which was terraced than I did on better land near the foot of the hill which had not been terraced." Another says: "The terracing is worth \$2000 to my 100 acre farm." A third, reports: "The terracing probably cost \$50.00, and the increase in crop yield in 1916 was worth \$1500.00 over the average." Space will not permit the enumeration of even a small per cent, of these enthusiastic comments, but suffice it to say that these activities have been worth many thousands of dollars to Texas farmers. During the year 94 field demonstrations were made, 494 terraces were established, covering 1,655 acres with a total attendance of 3,196 to take advantage of the instruction given. These demonstrations were made in various sections of the State in order that as many as possible might be benefitted and it was necessary to travel 18,368 miles to respond to the numerous requests for advice and council in this work.

In the rural school work marked progress is shown. Forty teachers' institutes, representing 54 counties, were visited in the interest of instruction in Home Projects, with an attendance of 5,160, while 1100 letters of inquiry were answered. Number of schools selected for Home Projects, 12; number of pupils beginning Home Projects in selected schools, 448; number of circulars prepared on Home Projects, and mailed 1,000; total visits made to give instruction in Home Projects, 106; total class demonstrations, 100; total attendance, 3905, evening lectures given, 76; attendance evening lectures 3905; number community meetings held 56; number school farms supervised, 13; number of acres in school farms 62; number individual gardens supervised 400; number of home gardens by pupils in selected schools 133; total number present at demonstrations and lectures 12,749.