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Annual Report of the Extension Division for the Year Ending June 30, 1920

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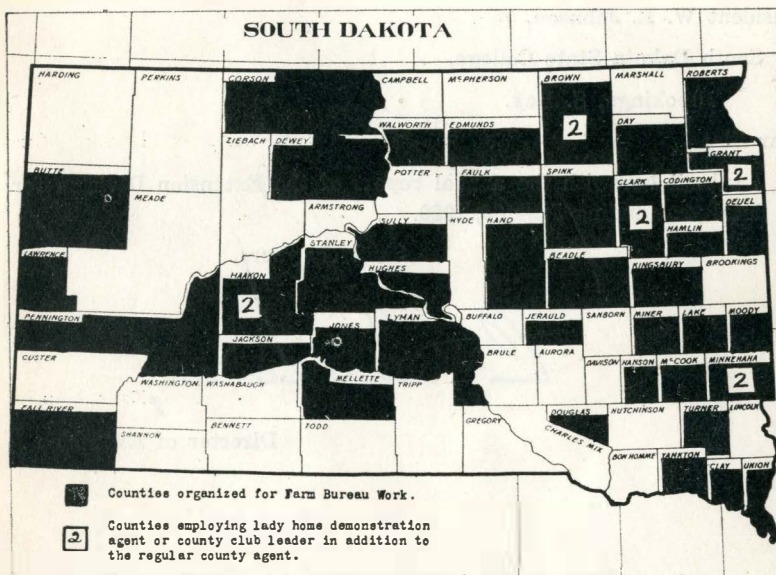
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Annual Report of the Extension Division

For the Year Ending June 30, 1920

SOUTH DAKOTA STATE COLLEGE OF
AGRICULTURE AND MECHANIC ARTS



Map Showing Organization of the State for County Farm
Bureau Work, June 30, 1920

Cooperative Extension Work in Agriculture and Home Economics. South Dakota State College and U. S. Department of Agriculture Cooperating.

C. Larsen, Director

Brookings, S. Dak.

Brookings, S. Dak.

President W. E. Johnson,
South Dakota State College,
Brookings, S. Dak.

Dear Sir:

I submit herewith the annual report of the Extension Division for the fiscal year ending June 30, 1920.

Sincerely yours,

C. Larsen.

Director of Extension

Project No. 1 ADMINISTRATION C. Larsen, Director

The past year has been filled with unusual activity and interest along the different phases of agricultural extension work. The demand for the services of the different extension workers has greatly increased, so much so, that it has become a problem as to how their time may be best assigned so as to accomplish the most.

Extension work is based upon cooperation. The counties, state and government cooperate in finding the problems and in solving them. Some of these agricultural and rural problems may be solved in the local community; others need the assistance of the whole county; other problems, again, are of a state-wide character and require the cooperation of all the counties. Again, there are other problems which are national in scope and which need the cooperation of all the states to bring about the proper solution. The counties, state and nation also cooperate in the financing and in the planning of the work. The agricultural extension program has been carried out according to the provisions of the South Dakota law enacted in 1915 and 1917, and also in accordance with the federal Smith-Lever Act passed by Congress in 1914.

The past year is the first one during which all of the farm bureau counties have cooperated and carried on extension work under our state law. During the two preceding years most of the counties in the state financed their agricultural extension work chiefly from emergency funds appropriated and furnished by the government.

The work as now carried on by the extension division may be grouped under the following heads, an arrangement which is in accordance with cooperative project agreements between the States Relations Service of the United States Department of Agriculture and the Extension Division of the South Dakota State College:

Project No. 1—Administration

Project No. 2—County Agent Work

Project No. 3—Short Courses

Project No. 4—Boys' and Girls' Club Work

Project No. 5—Home Demonstration Work

Project No. 7—Farm Management

Project No. 8—Livestock Improvement

Project No. 9—Agricultural Engineering

Project No. 10—Horticulture

Project No. 11—Animal Diseases

Project No. 12—Agronomy

Project No. 13—Entomology

The administrative work has been largely confined to the following:

Coordinate Federal, State and County Work Within South Dakota

The United States Department of Agriculture employs workers for helping to solve agricultural problems which are national in character. During the war there were more of these workers than there were during the past year. The federal appropriations for such work were

reduced at the close of the war. The Bureaus of Plant Industry and Animal Industry and Biological Survey have extended their projects.

Barberry eradication, hog cholera control, and the eradication of rodents, especially prairie dogs, have been continued during the last year with government funds. These federal workers accomplish the best results when cooperating with the different farm bureaus and county agents and other state extension workers. The director's office is the clearing house for coordinating these cooperating agencies within the state.

Project Funds

To project all funds in such a way as to obtain the best returns from the investment, and also to assign and to make an account of all funds for state-wide work in such a way as to meet the approval of the county, state, and federal authorities requires careful planning.

The state appropriation for state-wide work was \$26,500. This was used as an offset to the regular federal Smith-Lever appropriation. The state also appropriated \$51,000 for the county supervision fund. This latter was used as a 60 percent offset to money appropriated by the counties. The total appropriated by the counties was about \$88,237.

The Federal Smith-Lever, regular and supplementary funds, amounted to \$52,140.38. In addition, the States Relations Service set aside \$14,555 to be used in county agent work, \$3,168 to be used in boys and girls club work, \$1,503 to be used in home demonstration work and \$1,500 to be used in farm management demonstration work.

All requisitions and bills are audited, approved and recorded in the central office.

Coordinate the Work

Coordination of the work of the different branches of state agricultural extension is important. At the present time the different branches of work are classified as follows:

1. County agent work.
2. Boys' and girls' club work.
3. Home demonstration work.
4. Work of the various specialists.

COUNTY AGENT WORK

During the past year the number of farm bureau counties has increased from 39 to 41.

The various county farm bureaus have devoted most of their efforts to the following lines of work:

a. Livestock improvement, including a campaign for greater use of purebred sires, cooperative livestock shipping associations, combination livestock sales, cooperative wool marketing, poultry culling, dipping for scabies and other animal diseases, prevention of blackleg, anthrax and hog cholera, and the improvement of winter conditions for the caring and feeding of stock with the view of reducing loss of livestock.

b. Crop improvement, including new and high yielding varieties, registration of outstanding good seed, rodent control, plant disease and

insect control, and the cooperative marketing of alfalfa seed and certified seed potatoes.

c. Farm engineering, including the installation of the septic tank, water system, soil drainage, planning of model hog houses, barns, other farm buildings and laying out farmstead plans.

d. Farm management, including cost accounting or determining the cost of producing the different farm products, income tax records, record keeping for cooperative farmers' elevators and creameries, system on the farm, and farm leases.

e. In addition practically every county is carrying on regularly outlined work in connection with boys' and girls' clubs. In some of the counties where local women leaders can be obtained considerable work is done in respect to women's work, including public health, rural education, school lunches, garment making, and cooperative canning and preservation of foods.

During the past year there have been held 2,405 demonstrations. At these demonstrations the people in the neighborhood get together with the county agent and the specialist from the extension division. The specialist explains the demonstration. Anyone in the county who wishes to duplicate the demonstration, whether it be drainage, building a hog house, or growing some special variety of crops, may secure plans, blue prints and other needed information.

The following counties have local bureaus and are employing a county agent:

Beadle	Faulk	McCook
Brown	Grant	Mellette
Butte	Haakon	Miner
Clark	Hamlin	Minnehaha
Clay	Hand	Moody
Codington	Hanson	Pennington
Corson	Hughes	Roberts
Day	Jackson	Spink
Deuel	Jerauld	Stanley
Dewey	Jones	Sully
Douglas	Kingsbury	Turner
Edmunds	Lake	Union
Fall River	Lawrence	Walworth
	Lyman	Yankton

Recently two new counties have organized and several requests from additional counties have come in. These counties will undoubtedly organize farm bureaus in the near future. As soon as the county agent and farm bureau work is understood every agricultural county in South Dakota will organize under our cooperative extension law.

BOYS' AND GIRLS' CLUB WORK

The work in connection with the boys' and girls' club work has been demonstrated through fourteen different projects, as follows: Canning, sewing, bread baking, hot school lunch, gardening, corn, potato, grain, poultry, sheep, sow-litter, baby-pork, cow and calf and baby-beef.

There are now 6,652 enrolled in these clubs scattered all over the state, and who work together in 529 clubs, making an average of 13

members in each club.

This is organized agriculture and rural leadership in the making. Many of these young people have set excellent examples in improving agriculture. In addition most of them secure excellent financial returns from their work. The great object attained undoubtedly is the interest that is created for improved rural work and rural life.

In addition to the state-wide workers the following counties have employed local club leaders on part or full time: Grant, Haakon, Hamlin, Minnehaha and Roberts.

HOME DEMONSTRATION WORK

During the last year the home demonstration work in South Dakota was crippled by the loss of the state leader. For some time this position was vacant. It is difficult to secure a mature lady with the proper training, experience and good personality, and who is able to withstand inconveniences of exposure and hardships so common in travels in connection with extension work. Selma Rongstad, former assistant state club leader, was selected to fill the position.

The women's work as carried out in the different counties has been centered on food production, including poultry and gardening; food preservation, including canning, drying, and curing of meats; nutrition, including child feeding and the hot school lunch; clothing, including remodeling and textiles; and home management, including household accounts and household conveniences and arrangement.

The counties of Brown and Clark employ lady home demonstration agents. Recently Spink County has also employed a woman worker.

Women's work is growing in interest. The leader is not able to attend to all of the calls. A garment and clothing specialist and a nutrition specialist should be added to the staff as soon as funds will permit.

WORK OF THE SPECIALISTS

During the year many problems come up in the different counties and in the work of the farm bureaus which require the attention of a specialist. Every county outlines the different phases of its work in project form. The farm bureau and county agent set aside certain times during the year in which particular projects are to be emphasized. At the annual conference of all extension workers the particular specialists are scheduled to assist with projects in certain counties. The schedules are so arranged and coordinated that the specialists will assist in adjoining counties in one section of the state on the same trip.

During the year there has been a large number of outbreaks of contagious animal disease such as blackleg, hog cholera, and hemorrhagic septicemia. There has also been a large number of outbreaks of plant pests such as grasshoppers, army worms, cut worms, rust, smut and blight. The control of these and similar diseases require the guidance of a specialist.

Specialts are now employed along the following lines:

- M. R. Benedict, farm management
- Manley Champlin, agronomy
- H. E. Dawes, short courses
- A. L. Ford, plant pests

P. W. Kieser, publicity (one-half time)
J. C. Holmes, livestock improvement
F. E. McCall, horticulture (one-half time)
R. L. Patty, farm engineering
G. S. Weaver, animal disease

The various livestock, poultry and dairy associations have repeatedly passed resolutions and requested the college to employ additional extension specialists. Our specialists now employed are not able to attend to all demands on their services.

So far, our funds have not been sufficient for employing a poultry specialist, a dairy production specialist and a plant disease specialist. In addition there is an urgent need for an assistant in each of the following lines of work: farm management, livestock improvement, soils and crops, farm engineering and animal diseases.

The extension division has been emphasizing the securing of men of ability, experience and good personality. When these specialists go into the different parts of the state for the purpose of meeting a special set of difficult problems which the local people cannot solve, such conditions call for more than ordinary ability. These specialists are on the road, traveling day and night. It has been difficult to retain these men at the salary we have been paying.

During the last year the specialists attended 618 demonstrations and meetings. They sent out 8,219 letters in reply to inquiries, and 37,631 circular letters.

The extension division put up an exhibit at the state fair in September. Special emphasis was given to home demonstration work, improvements accomplished in livestock, eradication of animal diseases, and farmstead plans. A modern hog house and farmstead plans were demonstrated. The hot school lunch and material illustrating boys' and girls' club work were exhibited.

PUBLICITY

During the year the following bulletins and circulars were published by the extension division:

- Ext. Cir. No. 20—Club Songs
- 25—County Agent Handbook (second issue)
- 27—The Community Meat Ring
- 28—The Balanced Garden
- 29—The Suggested Farm Entrance Sign
- 30—Potato Certification for South Dakota
- 33—Barberry Eradication
- Hot School Lunch Circular
- Jr. Exit. Cir. No. 15—Sow-Litter Record Book
- 16—Cattle Club Record Book
- 17—Sow-Litter Club
- 18—Cow-Calf Club
- 19—Sheep Club
- 20—Sewing Club
- 22—Baby Pork Club
- 23—Corn Club

- 24—Potato Club
- 25—Poultry Club
- 26—Judging Dairy Cows
- 28—Hot School Lunch Circular

The requests for these circulars and bulletins are constantly increasing. Our mailing list is being increased from between eight and nine hundred each year by individual requests.

The publicity work in connection with the agricultural extension work could not possibly be carried on without the cooperation of the press throughout the state. The various publishers in South Dakota have received and published articles on improved livestock, crops, etc., and in that way have helped much to make extension work more effective and enable the different extension workers to carry out their program with much more completeness.

Recommended Capable Extension Workers

To secure and retain experienced and capable workers along the various phases of agriculture is one of the big problems in extension work. The changes incident to the war and the increased salaries paid in other states and by other parties have made it somewhat difficult to secure and retain the right kind of help.

During the year there was a change in the position of county agent leader. I. B. Johnson resigned March 15 and W. F. Kumlien, who was county agent in Lawrence county, South Dakota, was selected as the new county agent leader. He assumed his duties March 16.

The following changes have taken place among the agents of the state:

Agent	County	Date Change Was Made
A. L. Bushey	Aurora	Resigned Jan. 1, 1920
O. P. Drake	Beadle	Resigned June 30, 1920
A. D. Ellison	Butte	Began Dec. 1, 1919
A. W. Palm	Codington	Resigned Feb. 28, 1920
L. V. Ausman	Codington	Began Mar. 1, 1920
H. E. Skott	Clay	Resigned Dec. 31, 1919
W. D. Griggs	Clay	Began Jan. 1, 1920
E. C. Bird	Douglas	Resigned July 15, 1919
J. M. Brander	Douglas	Began Sept. 1, 1919
Deane G. Davis	Edmunds	Began Aug. 16, 1919
R. E. Johnston	Fall River	Resigned Jan. 31, 1920
Sam L. Sloan	Fall River	Began Mar. 10, 1920
J. I. Swedberg	Grant	Resigned March 15, 1920
H. M. Swift	Grant	Began Mar. 16, 1920
O. L. Anderson	Hand	Resigned Sept. 30, 1919
E. H. Aicher	Hand	Began Apr. 1, 1920
Geo. R. Mayland	Hanson	Resigned Mar. 31, 1920
L. M. Carl	Jackson	Resigned Nov. 6, 1920
Ira S. Johnson	Jackson	Began May 1, 1920
W. P. Gamble	Jones	Began Mar. 1, 1920
Dick Lewallen	Kingsbury	Resigned June 30, 1920
I. J. Bibby	Lake	Resigned Jan. 31, 1920
M. H. Shearer	Lake	Began Mar. 16, 1920

DIRECTOR'S ANNUAL REPORT

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W. F. Kumlien	Lawrence	Resigned Feb. 31, 1920
Evan W. Hall	Lawrence	Began May 16, 1920
Geo. B. Kennard	Minnehaha	Resigned Feb. 31, 1920
J. H. Hamilton	Minnehaha	Began Mar. 16, 1920
F. E. Lange	Mellette	Began Feb. 1, 1920
H. D. White	Stanley	Resigned Jan. 31, 1920
E. C. Anderson	Stanley	Began Feb. 1, 1920
O. B. Dunbier	Turner	Began Oct. 1, 1919
P. J. Crandall	Union	Resigned Apr. 30, 1920
A. L. Haynes	Union	Began May 1, 1920
D. L. Keck	Yankton	Resigned Dec. 31, 1919
C. A. Oppel	Yankton	Began Jan. 16, 1920

A. L. Haynes, assistant state club leader, resigned April 30 to become county agent in Union county. Paul P. Banker assumed this position at the close of the fiscal year.

At the close of the year Irene Dunne, assistant state club leader and specialist in girls' work, resigned to accept a similar position with the North Dakota Agricultural College. George H. Valentine, agricultural instructor in the Madison, S. Dak. high school, was selected. The selection of a man to fill Miss Dunne's place was done largely to fill a constantly increasing demand for work with the boys in livestock and grain. It is hoped that in the near future we may secure an additional lady worker to look after the details of the girl's club work.

Selma Rongstad, assistant state club leader, was selected as state home demonstration leader, and took up her duties in this position June first.

J. H. Hamilton, county club leader in Minnehaha county, resigned March 15 to assume duties as county agent in the same county. Eva Bickel was appointed as club leader in the county, assuming her duties April 1.

O. G. Tracy resigned as county club leader in Roberts county on October 31.

Nellie Petersen was appointed county club leader in Haakon county February 1.

Roberta McNeill, state home demonstration leader, resigned December 31. Selma Rongstad, former assistant state club leader, was appointed for this position, taking up her duties June 1.

Mary A. Dolve, home demonstration agent in Clark county, resigned April 30. Hazel Kent was secured to fill this position the latter part of June.

Elva Cronk was appointed home demonstration agent in Spink county for the summer months.

Dr. G. S. Weaver, former hog cholera specialist for the government, took up the work of animal disease specialist September 1, which position had been vacated by Dr. Dinwoodie, who resigned to become livestock editor for the Dakota Farmer.

A. L. Ford, extension specialist in plant pest control, was added to the force May 10. His work is to assist in the control of plant diseases and plant pests, such as grasshoppers, cut worms, army worms, etc.

Heretofore the extension agronomy work was done on part time by

members of the agronomy department of the college. It was impossible for these men to satisfy the demands, chiefly on account of the resident college work. Manley Champlin was selected as the extension agronomist effective March 1.

In the farm management department there had been a vacancy for some time. M. R. Benedict, former county agent in Minnesota, was secured to fill this position on November 15.

Professor George A. Starring, who was on half extension time in publicity work, resigned to accept a more remunerative position in Chicago. Paul W. Kieser, formerly employed by the Northern Normal and Industrial School at Aberdeen, was secured to take his place.

Answer and Assign Letters

Many of these inquiries require the attention of the specialists. These are turned over to the proper parties and promptly answered. The remainder of the correspondence coming to the extension division is answered in this office. During the last year the administrative department sent out 4,305 dictated letters and 3,858 circular letters.

Meet in Conference

The director has attended the regular conferences within the state, and in addition other conferences called by the chief of the States Relations Service, making a total of 58. The conferences within the state are with the officers of the farm bureaus and with the extension workers.

Address Public Meetings

The director spoke at 31 farm bureau meetings and picnics during the year. The subject matter discussed related to the different phases of organized agriculture and rural life.

Make Out the Various Reports

To make out the various reports to state and national authorities and to examine and approve reports admitted by the different workers requires much time.

The extension division as a whole, and its individual members, co-operate with every other organization which has for its program the development and improvement of rural life. The extension division, the Smith-Hughes workers, state and breed associations, granges, equities, etc., are all working in unison in their respective fields.

RECOMMENDATIONS

For agricultural extension work in South Dakota during the next biennial period as provided by session laws of 1915 and 1917, the following appropriation is recommended:

	1921-1922	1922-1923
To offset Federal Smith-Lever	\$37,000	\$43,000
To provide state money in county supervision fund for 41 counties now organized at \$1,700. Representing 60 percent of county appropriation.	69,700	69,700
For 14 new counties at \$1,700.	23,800	23,800
Total	130,500	136,500
Grand total	\$267,000	

Project No. 2 COUNTY AGENT DEMONSTRATIONS

I. B. Johnson, State Leader to March 15, 1920.
 W. F. Kumlien, State Leader after March 15, 1920.
 W. W. Underwood, Assistant State Leader.
 Harry J. Boyts, Assistant State Leader.

GROWTH OF FARM BUREAU MOVEMENT

The following table shows how the farm bureau movement has steadily gained ground in the state since the work first started in an organized way six years ago. In reading the table, proper allowance should be made for the sudden increase in farm bureau membership during 1918. A large number of these members belonged to the 41 emergency farm bureaus of that year, 18 of which were later discontinued after the termination of the federal war emergency funds. After the discontinuance of these bureaus, their respective members were no longer counted. The remaining 23 emergency bureaus became permanent July 1, 1919, and account for the 39 permanent bureaus for 1919.

Year	1915	1916	1917	1918	1919	1920
No. permanent farm bureaus	9	12	14	16	39	41
Emergency farm bureaus during war			7	41		
No. farm bureau members (men and women)	475	750	1466	10,017	11,676	State-wide membership campaign now under way

There are now 41 counties in South Dakota which maintain regularly organized farm bureaus as provided for under the state agricultural extension law. These farm bureaus, cooperating with the state agricultural college and United States Department of Agriculture, jointly employ on full time 46 paid extension agents. Out of this number there are 41 county agricultural agents, three county club leaders and two home demonstration agents. The location of the farm bureau counties and distribution of the extension agents are shown by the map on the cover-page of this report.

FARM BUREAU ORGANIZATION

At the annual conference of county farm bureau delegates and extension workers held at Brookings, January 26 to February 1, it was decided to have the state farm bureau federation take charge of the county farm bureau membership campaigns for this year. In accordance, on April 1, 1920, the federation opened up permanent office headquarters at Huron, and employed P. J. Crandall, former county agent of Union county, as its paid secretary.

The first membership drive was conducted in Hamlin county in June, where 723 members were secured. At this time similar membership campaigns are being conducted in several other counties.

The membership fee for members in most of the counties has been raised from \$1 to \$5 per year. One dollar of this amount goes to the state federation, 50 cents to the national organization and \$3.50 is retained in the local farm bureau treasury for general expenses.

The state federation assumes active charge of the membership drives in only those counties where the farm bureaus wish to cooperate. It is also optional with the county farm bureaus whether or not they wish to become members of the state and national federations.

Community Organization Plan

The general work of the farm bureau in each county is directed by a board of directors. In addition to this, however, most of the bureaus have community organizations through which the farm bureau members located in each community may get together and work out a solution of their respective community problems. The farmers and their families in these community organizations usually meet periodically at some central meeting place. Much of the community farm bureau work is carried on under the direction of a local community committee elected by the community. The extension agents usually take an active part in assisting the communities and their committees to carry on such lines of work as they may direct.

County Agent Reports and Records

The system of statistical and narrative reports required by the state office of all field extension agents has recently been changed from a weekly to a monthly basis. The new report form has also been modified in such a way that all field workers can use it, whether county agents, home demonstration agents or club workers, whereas three different forms were used previously.

Another much needed change has been introduced in most of the farm bureau offices pertaining to a daily record and "follow-up" card filing system for field extension workers. This system will not only insure a more efficient handling of office calls and field and office records of all kinds, but will greatly aid in making out monthly and annual reports.

County Program of Work

In South Dakota this year most of the farm bureaus have developed and are carrying out a carefully planned annual county program of work. The county program is a composite or coordination of the different community programs and has proven an excellent medium through which the objects of the county farm bureau may be accomplished. The community programs are usually based on a careful analysis and study of the local problems pertaining to farm business, farm homes and community life within each community.

The following program of work is being followed out this year by one of our typical South Dakota counties in the corn belt section:

Farm Bureau Program of Work

Analysis of Farm, Home and Community Problems in
a Typical South Dakota County

Scope of Farm Bureau	Chief Sources of Income	Factors Limiting Profits	How Factors May be remedied	Work Outlined for 1920	County Project Leaders
FARM BUSINESS	HOGS	Care and management Feeding methods Diseases and parasites Breeding	Modern housing Livestock tour Self-feeder demonstrations More forage crops Sanitation and quarantine. Junior pig clubs Breeder's associations	6 More modern hog houses 5 Self-feeder demonstrations 4 Forage crop and 6 Hogging-down corn demonstrations 2 Boys' and Girls' pig clubs	E. J. Guernsey
	CATTLE	Feeding methods Unstable market Breeding	Cheaper roughage More silos Balanced rations Livestock shipping associations Federal regulation County livestock breeder's association County sales pavilion	2 Feeding demonstrations 40 More silos 2 Livestock shipping associations Organization of county livestock breeder's associations	J. A. Barnes
	CORN	Cultivation Seed	Demonstrations and contests Boys' corn clubs Variety tests Corn show Field selected seed	1 Cultivation demonstration 1 Boys' corn club 2 Variety tests seed corn selection campaign Corn show	J. E. Dennison
	OATS	Varieties grown Diseases	Variety tests Smut treatment	Variety test 10 Smut demonstrations	M. L. Spears

	Most Urgent Changes Needed	Problems or Difficulties	How Problems May be Solved		
FARM HOME	Proper Disposal of waste	Lack of equipment in most farm homes	Drains for waste water Covered receptacles for garbage Indoor toilets	10 Indoor toilets and sewage disposal systems	Mrs. B. O. Olson
	More home Conveniences	To demonstrate need or value	Practical demonstration of their uses	10 Farm homes to install some equipment	
	Improved farmsteads	Neglect Lack of pride Farmers too busy to plant trees etc.	Farmstead demonstrations	5 Demonstrations on home ground planting	
COM-MUNITY	Good roads	Lack of favorable public sentiment	To show value of good roads	Road Legislation for 1 county highway	P. E. Bellamy
	Better rural schools	Increased taxes Small no. of pupils in average district school Opposition from families having no children	Consolidated schools	To induce 1 community to consolidate its schools	Mrs. C. K. Groth

Financing Farm Bureau Work

The state legislature in its regular session for 1919 provided \$51,000 state aid to assist in financing the county farm bureau work for the year beginning July 1, 1919. In making the county appropriations for the coming year, however, each county has increased its farm bureau appropriation by an average of \$463, thus requiring an additional \$280 of state offset for each of 40 counties. To meet this need, and to allow 10 new counties to start farm bureau work, the special June session of the state legislature appropriated an additional amount of \$27,805.

County Agent Handbook

One of the most valuable and helpful pieces of work that the county agent department has been able to accomplish this year has been the editing of a county agent handbook. I. B. Johnson, county agent leader up to March 15 of this year, is the author of the book. The book is pocket size and its 200 pages cover a great many kinds of agricultural information conveniently arranged for ready reference.

In addition to filling requests for the book in this state, the extension division has had over 400 requests from people in 43 different states.

Farm Bureau News

A Farm Bureau News has been published by 21 of the county farm bureaus this year. The extension division prepares the material for the two inner pages of a four page copy, and each farm bureau prepares material for the outer pages. Thus the Farm Bureau News serves to give state-wide and local publicity to the farm bureau work. Most all of the counties that first started this activity are still continuing and new ones are being added from year to year.

CONFERENCES

The sixth annual conference of county agents and extension workers of South Dakota was held January 26 to 31, 1920. Five to ten minute discussions on outstanding farm bureau activities were given by all county agents during the first two days of the conference. The county farm bureau and the county agent in relation to the county fair was given much emphasis and special discussions were lead by extension workers on this subject. Later a circular was prepared on this subject for use of the county agents. Livestock killing and meat cutting and curing demonstrations were conducted by Dr. Trowbridge of the North Dakota Agricultural College. That the county agents might secure more definite information on their special problems, the state was divided into three sections, viz., the southeastern or corn belt section, the northern or grain section and the western or range section. Each section of agents worked out farm, home and community problems in cooperation with extension specialists, and each extension specialist offered his suggestions for the year's work as he had outlined it. The results of the annual conference were very satisfactory.

A series of group conferences for all county agents was held from April 19 to 30, 1920, at Sioux Falls, Watertown, Aberdeen, Pierre and Rapid City. About two days' time was allowed for each conference. The following subjects were discussed at this series of conferences: Funds available for county agents during the fiscal year, county programs of work for 1920, membership campaign directed by the state federation of farm bureaus, the new office reporting and follow-up system, farm management problems and special activities in club work.

GENERAL RESULTS OF FARM BUREAU WORK

In tabulating the results of farm bureau work in the state, it is fully realized that the immense amount of work accomplished would not have been possible had it not been for the splendid cooperation of farmers and their families, extension agents, local and state organizations, the press and the departments and specialists of the state agricultural college.

Demonstrational Work Conducted by Bureaus

DEMONSTRATIONS	No. of Dem- onstrations	Total Units in Demons- trations	Profit Due to Results Obtained
LIVESTOCK IMPROVEMENT	404	777	106,435.00
Marine 1. g (Shipping Associations) -----	60		17,149.38
Sales Pavilions -----	6		
Breed Sales -----	22		
Wool Marketing -----		263,827	15,829.62
Poultry Culling -----	97	180	2,323.00
Dipping (Scab -----	16	3,380	33,800.00
(Lice -----	15	3,115	15,825.00
Blackleg -----	247	13,424	45,220.00
Anthrax -----	53	8,201	150,486.00
Hog Cholera -----	43	4,227	17,596.00
CROP IMPROVEMENT			
Crops -----	891		200,854.00
Rodent Control -----	318	163,230	202,497.00
Insect Control -----	11	52	1,344.00
Certified seed potatoes marketed -----	17	131	5,199.00
FARM ENGINEERING - - - -	45		3,354.00
SOIL DRAINAGE - - - - -	59	11,580	97,550.00
FARMSTEAD PLANS - - - -	101		
TOTAL -----			3915,462.00

The following tabulations show some of the more general results of the year's activities, which are not demonstrational in character:

General Statistical Summary of Farm Bureau Work

Extending the work—

Farm visits made by county agents -----	14,226
Number of farmers calling at agents' office -----	48,524
Press articles prepared by agents -----	4,518
Circular letters mailed -----	252,280
Personal letters of advice written by county agents -----	54,396
Meetings held in which agent took part -----	3,191
Attendance at above meetings -----	52,450
Extension schools assisted -----	112
Enrollment at above schools -----	7,773
Meetings held with assistance of experts from college or department -----	504

Work with crops—

Acres of crops planted following agents' suggestion on improved production:

Corn -----	320,574
Alfalfa -----	9,688
Wheat -----	19,223
Oats -----	22,828
Barley -----	2,320
Rye -----	2,233
Sweet Clover -----	3,654
Potatoes -----	7,116

Work with livestock—	
Registered male animals purchased	4,330
Breeders' associations organized	82
Silos constructed	153
Balanced rations figured	119
Animals involved in animal disease prevention work ---	122,200
Work in relation to soils—	
Drainage systems planned	80
Acres involved in above plans	18,950
Soils tested for acidity (farms)	62
Acres of hay and pasture land top-dressed	1,155
Work in relation to farm business—	
Farm survey records taken by county agents	394
Farms, modifying management as result of survey ---	55
Farmers keeping accounts	19,851
Buying or selling organizations formed	80
Value of business done by such organizations and others organized by agents in previous years	\$ 1,846 855
Approximate savings effected	\$ 94,062
Total number of laborers furnished to farmers	7,659

NARRATIVE SUMMARY BY PROJECTS

In addition to the demonstrational results and the statistical summary of farm bureau work, there has been a great deal accomplished of economic value to the county, state and nation which can in no way be tabulated, or upon which no definite estimates of values can be placed. These results can best be described under the headings of separate projects. One of the main activities, boys' and girls' club work, is fully reported by the state club leader in another part of this report.

Livestock Improvement

The county agent department conducted a livestock survey with the cooperation of 14 representative county farm bureaus. The survey was conducted through letters of inquiry to representative farmers in each township, through surveys obtained by the township assessors and through personal visits to livestock men in townships not otherwise reporting. A compilation of reports obtained in this survey shows that 65 percent of all the sires in the herds of cattle are grades or scrubs. About 25 percent of the purebred sires are inferior. Five counties reported an average of 52 percent purebred boars being used. A part of the survey brought out figures showing the superior value of purebred sires. The average herd of 20 grade cows returned \$540 more profits during 1918 where purebred sires were used than where grade or scrub sires were used. There are about 946 breeding herds of cattle in the average county where this survey was conducted. The profits on 65 percent, or 615 herds of cattle, could be increased \$540 per herd by using purebred sires. Thus, there would be an increased profit of \$332,100 by using all purebred sires in an average county, or \$21,626 500 for the state. Through the combined efforts of the farm bureaus, 4,330 purebred sires were secured for farmers in the state during the past year.

Encouragement has been offered in building of livestock sales pavil-

ions. This spring there were 15 livestock sales pavilions in South Dakota, which had generally received the cooperation of the farm bureaus in construction. There are about 15 more sales pavilions in the process of financing and being built. Assistance was given in arranging for a special train to the International Livestock Show at Chicago last December. The trip was made by about 200 farmers and their wives. Other livestock work is reported by individual counties.

Animal Disease Prevention

Animal disease work continued to require considerable time of the county farm bureaus. During the year the main work consisted of organizing campaigns to quarantine contagious disease outbreaks, dispose of such carcasses, practice sanitation and secure the vaccination of exposed herds. Three hundred and seventy-four animal disease demonstrations were held; 122,200 head of livestock were vaccinated or given some special treatment in the animal disease campaigns conducted. An example of a farm bureau's method of conducting a disease outbreak is well illustrated by the following:

"Animal Disease Prevention in Lyman County.—Two outbreaks of anthrax occupied the services of seven veterinarians at one time in early August and 16,400 head of cattle were vaccinated in 15 days. Four farmers' outfits were at work part of the time and several did their own vaccinating. The county agent proved valuable in organization work. The disease was checked with a loss of 100 head. Every farmer within three or four miles of an infected area vaccinated his herd. The county agent's office sent circular letters on carcass disposal and the selling of cream and cattle from vaccinated herds, to every farmer in the infected area. The danger of feeding dead animals to hogs was demonstrated on two farms, and the inadequacy of sulphur and fresh water as a preventative of disease on another. The fact that cattle in infected herds died 14 days after vaccination indicates the need of a vaccine that will give a quicker immunity."

Crop Improvement

The growing of sufficient feed crops for livestock has been the most important phase of this work. There were 404,677 acres of crops produced by improved methods suggested by the farm bureaus. One hundred fifty-three silos were constructed during the year following suggestions of the farm bureaus.

Five thousand five hundred seventeen farmers selected seed corn in the fall and 506,490 acres were planted with fall selected seed corn. Three thousand nine hundred twenty-four farmers tested their seed corn for germination and 393,613 acres were planted with tested corn. A considerable amount of good seed grain and grasses was secured for farmers. Four thousand five hundred seventeen farmers treated wheat and oats for smut, which resulted in the seeding of 182,087 more acres of these treated grains.

Insect and Rodent Control

Grasshoppers have given some trouble in a few counties. The poison bait was used successfully on 1,344 acres of crops.

Three hundred and eighteen rodent control demonstrations were held, showing how to prepare poison bait and effectively distribute it. Several counties exterminated pocket gophers.

Special campaigns to exterminate prairie dogs were carried on in four counties during the year. The United States Biological Survey co-

operated with the local county farm bureaus in organizing and supervising the work. Township men furnished maps showing the location of all prairie dog towns in the counties. The new South Dakota law provides that the cost of exterminating the rodents can be put on the taxes if 15 percent of the land owners petition the county commissioners for such action. The result of the campaign was that 163,230 acres of land infested with prairie dogs was covered with poisoned oat bait and effected a saving of \$202,497. In other counties where demonstrations were held, the people approved of the poison bait. Next year the work should be promoted much more in a large number of counties.

Farm Engineering

The interest in drainage work was very much increased this year. Several of the farm bureaus put on 59 demonstrations in this project and 11,580 acres of land were drained, which it is estimated, effected a saving of \$97,550. Much more land will be reclaimed and made more productive during the future years, as the results of these demonstrations become more generally known.

Twenty-four plans, specifications and suggestions were followed by farmers in constructing hog houses and barns during the year.

Water supply and sewage disposal plants were planned for 69 farmers. Assistance was given 57 farmers in selecting the best type of power machinery.

Farm Labor

Most of the county labor bureaus which were organized during the war have been maintained, as farmers have appreciated this service greatly. The demand for farm labor during the year has been taken care of satisfactorily. Wages continue to be very high. During the year 7,659 laborers have been furnished through the farm bureau offices.

Marketing

There were 80 marketing associations formed by the county bureaus in 1919. These consisted of livestock shipping associations, cooperative elevators, cooperative creameries and wool marketing associations. The total amount of business conducted by these associations in 1919 was \$1,846,855, making a direct saving of \$95,062 to the farmers. In addition to these associations, the bureaus have assisted in the marketing of 135 carloads of potatoes at a direct increase of 26 cents per bushel to the producer and a similar saving to the consumer. Twenty-four thousand four hundred and nine dollars more were received for 406,827 pounds of wool marketed cooperatively by pooling in 18 counties during 1919. The average price reported for the wool, according to the grade, ranged from 50 to 57 cents per pound. Previous to pooling, the price offered was from 3 to 10 cents less per pound. Assistance was given, in March, 1920, in perfecting a state wool growers' association. This organization is shipping wool in carload lots to Chicago, where it is being held for a better price.

A county and state exchange system has been developed by this department. Each month the county farm bureaus secure a list of the livestock, farm seeds, feed and machinery for sale or wanted. The

counties' lists are compiled and sent to this office by the 17th of the month where they are compiled into a state exchange and copies returned to each county farm bureau office by the latter part of the month. From the county office they are sent out to the various cooperators, such as banks, postoffices, elevators, etc., where the lists are placed on exchange boards. These boards were made up for all county farm bureaus desiring them so that the system would be uniform.

AURORA COUNTY—A. L. Bushey, County Agent to January 1, 1920

The farm bureau work in Aurora County was temporarily discontinued January 1, 1920.

Livestock Improvement:

The Purebred Livestock Breeders' Association was organized with 226 members. This association has built and paid for a \$15,000 sale pavilion. Three sales have been held in this pavilion by the local breeders with very good success. Twenty-nine purebred sires have been secured for farmers in the county.

Animal Disease:

Scabies in cattle became an acute problem during the year. Assistance was given in superintending three dipping vats. The infection is now under control and all herds have been cleaned up. One thousand nine hundred eighty-two head of cattle were vaccinated for blackleg. All vaccination work for this district has been made demonstrational so that most farmers are doing their own vaccination. Hog cholera has appeared several times in the past year and it has been gotten under control by vaccination and quarantine without many losses of hogs.

Boys' and Girls' Clubs:

One successful sow-litter club was organized and a public combination sale was held in the pavilion last fall.

Crop Improvement:

Seven demonstrations in growing soybeans with corn were started. These plots were successfully pastured with sheep. A large number of germination tests of seed corn were made for farmers, besides securing 250 bushels of seed corn for others. Six farmers seeded Rosen rye upon the suggestion of the agent. A number of other demonstration plots, including Sixty-Day oats, Acme wheat and alfalfa, were seeded.

Miscellaneous:

Mixed bacterians were used in vaccination of swine in 16 cases of infected herds. The results were satisfactory. Stomach worms were eradicated in three herds of sheep by special recommended measures. Eleven farmers were assisted in stamping out pinkeye in cattle. Other animal disease work included the recommendation of dipping sheep for ticks, procuring special tonics for livestock and giving general publicity on the control of contagious animal diseases.

BEADLE COUNTY—O. P. Drake, County Agent**Farm Bureau Organization:**

The farm bureau membership has been increased some during the year. One community has developed a special local program. The community committeemen did splendid work during the war. Influenza interfered very much with farm bureau meetings.

Livestock Improvement:

Assistance was given the Beadle County Breeders' Association in holding two sales. A mid-summer livestock picnic attracted a great deal of interest.

Drainage:

The drainage project demanded most attention of the farm bureau, which was due to the large amount of rainfall and lack of natural drainage. More preliminary surveys were called for than the county agent could take care of. Twenty-four preliminary surveys including an area of 4540 acres were run. Eight projects of 780 acres were completed. One hundred and twenty acres of swamp land was reclaimed and it is estimated it was worth \$60 per acre above cost of drainage or \$7200 for the improvement of the tract.

Animal Disease:

One outbreak of hog cholera in the county was fully controlled with little loss of animals.

Crop Improvement:

The production of pure seed grain varieties on the poor farm was put under the direction of the county agent by the county commissioners. Minnesota 13 corn, Odessa barley and Cole Sixty-Day oats seed were grown and sold to farmers of the county.

Club Work:

There were three sewing clubs, one canning club and one sow-litter club.

Wool Growers' Association:

Beadle County Wool Growers' Association pooled 10,330 pounds of wool at a direct saving of \$620.

BROWN COUNTY—W. C. Boardman, County Agent

The Brown county emergency farm bureau was permanently organized into the Brown county farm bureau July 1, 1919. The farm bureau is well established in the county and two paid leaders are being hired to conduct the work.

Livestock Improvement:

The Brown County Livestock Breeders' Association was permanently organized during the early part of the year. The association has as its motto "Purebred Sires on Every Farm." A combination swine sale was planned for November but due to the drop in prices of hogs it was delayed for a later date.

Animal Diseases:

Seven hundred fifty head of hogs have been vaccinated in coopera-

tion with a veterinarian in a campaign to prevent the spread of hog cholera. This is fully under control in Brown county at this time. One flock of 600 head of sheep was found to have hemorrhagic septicemia. The case was quite serious and vaccination was given. Fifty head of sheep had died before vaccination but no losses were found after vaccination. During the month of August, stomach and tape worms were prevalent in sheep. Two demonstrations for drenching sheep with gasoline and copper sulphate were held at which a large number of farmers attended. Publicity was given to this demonstration so that all sheep raisers could get the benefit of the method of exterminating these parasites.

Crop Improvement:

Five experimental plots of New Victory oats were established. The dry weather and grasshoppers reduced the yield to an average of about 30 bushels per acre. The Sixty-Day oats on the other hand yielded 40 to 50 bushels per acre. The Swedish Selected oats, which are comparable to the New Victory oats, yielded about the same as the New Victory. South Dakota corn No. 86 has proven to be a good variety for Brown county. Special samples were sent to the International Grain and Hay Show, Chicago. Six plots of certified seed potatoes were grown in the vicinity of Claremont. The seed was all carefully inspected and treated before planting. Very good results have been obtained from these plots. A sample of the potatoes won first honors at the state fair. Poisoned bran bait was recommended to a number of farmers for the extermination of grasshoppers. A few farmers also used the hopper catcher. The reports show that only about one-third of the grasshoppers were exterminated.

Boys' and Girls' Club Work:

A sow-litter club of 23 members, a poultry club with 23 members, a potato club with 3 members, a corn club with 19 members, a baby pork club with 6 members and a sheep club with 15 members were organized in the county. The pig club held a combination sale at Groton in the fall. The pigs sold for an average price of \$71.98.

Threshers' Insurance:

The Brown county threshermen organized an association to carry their own compensation insurance. During the season of 1918 it was found that this insurance cost the threshermen \$10.21 each. Under the old line system of insurance, it cost the threshermen from \$100 to \$250 each, depending upon the size of their pay roll. The organization was continued in 1919 and membership fees of \$100 collected. This organization was continued in 1919 and membership fees of \$100 collected. This organization was finally incorporated under the new South Dakota state law and they paid their required dues to the commission at Pierre. During the year 1919 the cost of insurance was less than \$15 for each thresherman.

Marketing:

Six livestock shipping associations have been organized during the year. Plans are made to assist each community in the county in perfecting such marketing associations. All the associations are progress-

ing nicely and their business is growing each year. Fifteen thousand pounds of wool were pooled at Verdon and sold to a commission firm at 50 cents per pound. Before this pool was perfected, 45 cents per pound was the best price offered for any of the wool.

BUTTE COUNTY—A. D. Ellison, County Agent since December 1, 1919

The Butte county emergency farm bureau was organized into a permanent farm bureau November 1, 1919. It now has 160 members.

Livestock Improvement:

Twenty-two purebred Hereford bulls have been imported for use on the farms and ranges. Twenty head of purebred Shropshire sheep have been imported as a farm flocks. Five head of Duroc-Jersey hogs have been imported for breeding purposes. About 100 head of purebred Duroc-Jersey hogs have changed hands within the county for herd development. Four farmers in the county, who are using all purebred sires, have signed up for better livestock.

Animal Disease Prevention:

All hogs coming into the county are held in quarantine, and all other imported livestock is inspected as a means of disease control. Several dipping vats for sheep and two privately owned dipping vats for cattle have been constructed for the purpose of controlling livestock diseases. More than 2,000 head of cattle have been inspected for cattle scab.

Boys' and Girls' Clubs:

Eighty-one boys and girls have been enrolled in the hog, sheep and sewing projects. One club camp for boys was held at the Newell experiment farm, June 28 to July 3. The junior extension work is an important feature of farm bureau activities.

Crop Improvement:

Eighteen crop demonstrations were planned with farmers who are cooperating with the farm bureau to improve crop conditions. Pure seed was sown on all demonstration plots, from which seed is later to be distributed among farmers in the county.

Marketing:

Through cooperation with the South Dakota Sheep and Wool Growers' Association, the farm bureau is assisting local wool growers in every way possible to market their wool to advantage. Through the efforts of the farm bureau many farmers were given assistance in obtaining hay and seed potatoes.

CLARK COUNTY—A. J. Dexter, County Agent

The Clark county farm bureau was permanently organized July 1, 1917, and has done very successful work during its operation. There are at present 307 farm bureau members in the organization.

Livestock Improvement:

This has been the major project of the farm bureau work in Clark county. The Clark County Breeders' Association was perfected. Three combination livestock sales, including 222 purebred animals, were held. Inspection of all animals is made before they are offered for a public

sale. All cattle are sold subject to the tuberculin test. Successful banquets were held in connection with two livestock sales, which 251 breeders attended. The Clark County Sales Pavilion Corporation was formed and stock sold at \$50 per share. A fine sales pavilion with a circular amphitheater 80 feet in diameter and a barn of 120 feet by 60 feet has been built. This building is equipped with all modern improvements and is a fine monument to the livestock work in Clark county. Twelve breeders were given assistance in arranging and holding purebred livestock sales. A number of farmers were assisted in purchasing purebred livestock, not only in the county but in other counties in nearby states. A total of 291 purebred sires of all kinds were transferred from one community to another. Much time was given to the Clark County Fair Association which held one of the best livestock fairs in South Dakota last fall. Thirty-three hog men were interested in feeding tankage. A carload was purchased cooperatively by these men. Thirty-five farmers were interested in making a trip on the special train from South Dakota to the International Stock Show in Chicago. A livestock survey was made to obtain the number of farmers using purebred and grade sires in the county.

The following is a summarized account of the survey:

Farmers where purebred stallions were used	686
Farmers where grade stallions were used	222
Farmers using purebred bulls	624
Farmers using grade bulls	638
Farmers using purebred boars	700
Farmers using grade boars	489
Farmers using purebred rams	87
Farmers using grade rams	69

Animal Disease:

Very close cooperation has been had with the local veterinarian in animal disease prevention work. Forty-two calls of suspected cases of hog cholera were received but only one proved to be serious. Quarantine and vaccination of five herds was necessary to prevent the spread of hog cholera. The testing of cattle for tuberculosis is a new campaign started in the county. At present 50 herds have been tested and 20 more breeders have applied for the test. The plan is to put every purebred herd of cattle on the accredited herd list.

Boys' and Girls' Clubs:

Most of the club work has been done by the home demonstration agent. The county agent assisted in the organization of a sow-litter club of 32 members. Seventeen finished the project. Forty boys are enrolled in the sow-litter club this year. Five boys finished the calf club project. Fifteen boys and girls were taken to the junior camp at Brookings. Twenty-five boys entered the judging contest at the county fair and a judging team was taken to the state fair to compete with other counties. Twenty-seven boys are enrolled in the corn club. Rally day club picnic was attended by 150.

Crop Improvement:

Forty-seven farmers seeded plots of Acme wheat. The experiment

was rather handicapped as the wheat only germinated 50 percent. A summary of the results obtained from the Acme wheat and other varieties grown in the county is given:

Variety	No. results	Yield	Percentage Rust Resistance
Acme	22	13½	97
Kubanka	6	12	76
Ordinary Durum	3	10	55
Marquis	14	10	10

Eleven soybean, 12 silage corn and six Grimm alfalfa demonstrations are being conducted.

Rodent Control:

Pocket gophers have done considerable damage to crops in various parts of the county. An eradication demonstration was put on by U. S. Ebner of the United States Biological Survey. This demonstration was very successful as every gopher was killed on the part of the field treated with the poisoned bait. Eight calls in the vicinity of the demonstrations were answered relative to exterminating pocket gophers. Five bushels of poisoned oats were distributed among a number of farmers to be used in exterminating flickertail gophers.

Drainage:

One complete system of tile drainage was planned for one farmer. Preliminary surveys were run for eight other farmers for tile drainage work.

Marketing:

Three carloads of potatoes were marketed through the farm bureau. Fifty-six thousand pounds of tankage were shipped in by the farm bureau for 60 farmers. One thousand three hundred forty-six farm account books were placed with farmers. Four and one-half carloads of wool were pooled and shipped to Chicago.

CLAY COUNTY—H. E. Skott, County Agent to January 1, 1920

W. D. Griggs, County Agent after January 1, 1920.

The Clay county emergency farm bureau was permanently organized into the Clay county farm bureau July 1, 1919. The board of directors of the farm bureau have taken a great interest in cooperating with the county agent in developing a strong program of work.

Livestock Improvement:

This project included aiding farmers to secure better livestock, reduce losses due to animal diseases, aid livestock breeders in buying or selling their animals and encouraging the most profitable feeding methods. The project was given great impetus through two purebred sow-litter clubs and one baby pork club. There were five outbreaks of hog cholera and the disease was promptly checked. For the first time in 9 years there was an outbreak of anthrax, occurring on four farms. The disease was held under control through quarantine, vaccination and sanitation.

Crop Improvement:

Four varieties of soybeans were grown by 19 farmers. In most

cases the beans were planted with corn. Early brown, early black and medium yellow proved to be good varieties of soybeans and made good yields with corn. Cowpeas were grown by four farmers with very little success.

Farm Labor:

Farm labor situation was much improved over last year and over 200 men were placed during the year on farms.

Boys' and Girls' Clubs:

Two hundred thirteen boys and girls were enrolled in 16 clubs. The city of Vermillion hired a club leader during the summer to cooperate with the county agent. The sow-litter clubs created much interest in purbred hogs in the community. A successful fair was held during October. Livestock judging contests were held at the county fair at which time three members were selected for a team to judge at the state fair. Two of them won high honors and were selected on the team to judge at the interstate fair at Sioux City, Iowa. A canning team of three members was also sent to the state fair. Two new sow-litter clubs were organized this last winter.

Miscellaneous:

Three orchard spraying demonstrations were held this spring.

CODINGTON COUNTY—A. W. Palm, County Agent to March 1, 1920**L. V. Ausman, County Agent after March 1, 1920**

The Codington county farm bureau was permanently organized and the first county agent hired March 1, 1913. This was the first farm bureau to be established in South Dakota.

Livestock Improvement:

The Codington County Breeders' Association conducted one combination cattle and hog sale and one combination hog sale. There has been marked improvement in the quality of livestock offered in the sales conducted by the breeders' association during the past six years. The Eastern South Dakota Sale Association was organized with a capital stock of \$50,000. Twenty-one thousand dollars' worth of stock was subscribed and plans were made for the perfecting of a sale barn. An old building was purchased and remodeled into a sale pavilion. This will be added to as needed in the development of the association. The county agent has cooperated with the local veterinarian in locating and stamping out hog cholera. Other livestock work that has been conducted by the farm bureau has been the securing of better livestock, promoting the Northwest Poultry association and conducting prevention campaigns for contagious animal diseases.

Marketing:

The Codington County Wool Growers' Association was organized and 15,000 pounds of wool were pooled by this association. A sale date was set at which time this wool was sold for 53 cents per pound. It is estimated that at least 8 cents more per pound was received for the wool from pooling.

Boys' and Girls' Clubs:

Ten boys completed the sow-litter club work and held a sale last fall. The sow-litter clubs were represented by three of the members at the state fair. One canning club was also represented and won second place in the state contest. The agent assisted in conducting the boys' camp at the State College, which has been held since 1914. The county agent has acted as scoutmaster for Troop No. 1 of the Watertown Boy Scouts.

Crop Improvement:

This project includes the campaign for securing seed corn in the fall, the testing of seed grain samples for germination, publicity for treating grain for smut and potatoes for scab and establishing standard varieties of grain.

Miscellaneous:

The county agent has taken part in most of the community activities of the county. This work has included raising funds for the Red Cross and Salvation Army and cooperating with the fair price committee, Chamber of Commerce and Rotary Club.

DAY COUNTY—J. A. Gunning, County Agent

Day county was one of the early counties to establish farm bureau work in South Dakota.

Livestock Improvement:

The farm bureau cooperated with the county fair in making it a success. There were 21 entries of sheep, 90 head of shorthorn cattle, 25 head Red Polled cattle, 20 head of Aberdeen Angus cattle, 16 head of Hereford cattle and 14 head of Holstein cattle exhibited at the county fair. The hog classes include 80 Duroc Jerseys, 68 Poland Chinas, 32 Chester Whites, three head of Hampshires and one herd of mule foot hogs. Much assistance was given the Webster Poultry Association which held a show in January. Eight breeders were interested in sending some poultry to the Chicago show.

Animal Disease:

During the year several cases of hemorrhagic septicemia broke out in the country. Vaccination and change of feed was effective in practically all cases. Over 1,600 head of cattle were vaccinated during the year for blackleg. Over 5,000 doses of vaccine were distributed to farmers. Three herds of cattle were tested for tuberculosis and reactors were found in each herd. Contagious abortion was found in five herds in the county for which special treatment was recommended. Over 1,000 hogs have been vaccinated by the local veterinarian and county agent. Necrobacillosis was found in three herds of hogs.

Farm Buildings:

Assistance was given three farmers in planning up-to-date hog houses. A silo survey showed that there were 79 silos in the county, and 17 more were erected during the year.

Crop Improvement:

A large exhibit of 10 ear samples of white and yellow dent varieties

of corn was shown at the county fair. A good exhibit of other grains was also made at the county fair. Four plots of 20 acres each were planted to New Victory oats. The seed was furnished by a New York seed house. Fifteen farmers have planted plots of Acme wheat. This wheat has out yielded all other varieties of wheat in the county and has resisted the rust. One plot of winter wheat made a good crop this year. A publicity campaign for treating wheat for smut has been carried on with good results. A demonstration for the extermination of quack grass and one for the extermination of Canada thistle have been carried on in the county. The summer fallow method has been used successfully in both cases. The barberry campaign was again carried on this year and every place where barberries were found last year was visited. Only on one farm where barberries were located last year were they found growing again this spring.

Rodent Control:

Several demonstrations for the extermination of gophers were carried on during the year with success.

Farm Labor:

Two hundred sixty-six farm laborers were supplied to farms during the year.

Boys' and Girls' Clubs:

Sewing, canning, poultry, corn and sow-litter clubs were perfected. Twenty-six boys and girls completed the sow-litter club work. A sale was held in the fall at which an average price of \$73 per head was received for the hogs. The canning club sent a team to the state fair to enter the contest.

Marketing:

Twenty-three thousand pounds of wool were pooled and sold at an average price of 53 cents per pound. The local dealers had offered from 40 cents to 42 cents per pound for the wool before it was pooled.

DEUEL COUNTY—D. C. Jones, County Agent

The first two county agents for Deuel county entered military service. A permanent county farm bureau was organized July 1, 1919. The farm bureau work has been further developed during the past year upon the petition of 1,000 farmers in the county. The county commissioners are putting the proposition of continuing the farm bureau work to a vote of the people at the general election.

Livestock Improvment:

A livestock survey was conducted in the county to determine the different breeds and grades of livestock. A large number of breeds of livestock were found in the county as reported by the survey. There are, however, a few good herds of cattle and hogs in Deuel county. Assistance was given the Deuel county fair board in promoting the livestock exhibit. A large number of animals were exhibited, but most of them were not in show condition.

Animal Disease:

Vaccination of sheep for a local farmer was being done by a local veterinarian, but the sheep continued to die. One of the sick lambs was

taken the veterinary laboratory at Brookings and found to have stomach worms. Treatment was recommended for this flock of sheep and good results were obtained. Later several lambs were treated for various farmers in the county with success. Only one lamb was reported dead after the recommended treatment was used. Several farmers lost a large number of pigs from necrobacillosis. After diagnosing these herds, in cooperation with the extension veterinarian, recommended treatment was offered.

Drainage:

Several thousand acres of land in the county could be reclaimed by the aid of tile. Four drainage projects have been completed with the assistance of the state drainage specialist. Last year the project included 5,000 acres. These farms, which were tiled, have served as good demonstrations in the county. There are more preliminary surveys called for than can be taken care of at this time.

Boys' and Girls' Clubs:

A sow-litter club was organized at Astoria and has done much to promote county agent work in Deuel county. Seventeen boys and girls entered this club last year and held a very successful sale in the fall. A livestock judging team was taken to the state fair. Four sow-litter clubs have been organized this year with a membership of about 93. The canning club of Clear Lake sent a demonstration team to the state fair which won fifth place.

Crop Improvement:

This project consisted in making germination tests of seed grain, giving demonstrations in the treatment of seed grains for smut, supervising two demonstration plots of certified seed potatoes and assisting farmers in marketing several carloads of potatoes. A Potato Growers' Marketing Association has been organized at Toronto.

Miscellaneous:

Plans were made for one septic tank and drainage system for a sewage disposal plant. A Farm Bureau News is printed each month and an exchange list is included with it. The farm bureau is cooperating in preparing the state farm bureau exchange. Twenty-five thousand pounds of wool were pooled at Clear Lake and sold for 35 cents per pound.

DEWEY COUNTY—Oscar Hermstad, County Agent

The Timber Lake district emergency farm bureau was organized December 20, 1919, and the county agent started work April 1, 1918. July 1, 1919, this organization was changed to the Dewey county farm bureau and was supported by Dewey county.

Livestock Improvement:

The first combination sale of purebred livestock was held April, 1919. Some very good stock was offered for sale. County livestock work has included meetings to promote dairying and building silos, suggesting rations for livestock feeding and campaigns to prevent the spread of animal diseases. Two thousand five hundred head of cattle were quarantined for scabies. Nine dipping vats have been constructed by

individuals and the county to be used in the campaign for cleaning up the cattle scab. There was one outbreak of anthrax in the neighborhood of Trail City. Four thousand head of cattle were vaccinated to prevent the spread of this disease, and as a result 40 head died. Seven hundred thirty-one doses of blackleg vaccine were secured for farmers and three blackleg demonstrations were conducted. Demonstration carcass disposals were also held.

Crop Improvement:

This project has included publicity campaigns to encourage farmers to grow cultivated seed crops such as Sudan grass, Amber cane and alfalfa. Six farmers seeded 230 acres to Acme wheat and reported an increase of three bushels per acre. Five thousand bushels of fall selected seed corn were harvested by farmers last year.

Rodent Control:

Six demonstrations for poisoning prairie dogs have been held in the county. These demonstrations covered 680 acres. Many farmers outside of the demonstrations have used poisoned bait for exterminating prairie dogs. A campaign to exterminate all prairie dogs in Dewey county has been started.

Miscellaneous:

Twelve men have been assisted in making out their income tax statements and 50 farmers were assisted in keeping farm record books. Assistance has been given Lone Tree in securing a rural mail route. Some effort was given in promoting the South Dakota Threshers' Association with the result that five threshermen have joined. Three demonstrations of the multiple hitch were given in the county to show the manner of utilizing horse power and a total of 96 farmers attended these demonstrations and were well satisfied with the multiple hitch. Five men plan to use them on their farms. Five demonstrations in the care and planting of trees have been given.

DOUGLASE COUNTY—J. M. Brander, County Agent.

The Douglas county farm bureau is well established in the county. The Farmers' Educational and Cooperative Union of America has a large number of locals in the county, which are actively cooperating with the farm bureau.

Livestock Improvement:

This project has included the vaccination of 875 head of swine and 214 head of cattle for hog cholera and blackleg respectively. An educational campaign to help control and exterminate animal disease losses is being conducted. The Armour Community Meat Ring has been one of the best projects the farm bureau has developed in the county. This organization has a membership of 68 which have paid a membership fee of \$5 each. One of the members who had had considerable experience in butchering was elected manager. Benefits derived from this meat ring are: It affords fresh meat at all times and in first class condition; no expense of curing; no spoiled meat or waste; it fosters the spread of community cooperation and education of the public in the cuts of meat. Comparison of prices of the meat from

their organization and the local meat market is given:

Community Meat Ring		Local Meat Market
Steaks	18c-25c per pound	40c-50c per pound
Roasts	15c-18c per pound	35c per pound
Boil meats	9c-13c per pound	28c-35c per pound
Soup bones	5c per pound	25c per pound
Heart	8c per pound	35c per pound
Liver	8c per pound	30c per pound
Tongue	8c per pound	30c per pound
Suet	5c per pound	20c per pound

Other meat rings have since been organized and naturally the price of meat at the local shops has lowered. A sow-litter club held a sale in the fall to dispose of its surplus stock. Forty livestock breeders were taken on a tour through the southeastern part of the state to visit good livestock farmers. A county livestock breeders' directory is being prepared.

Marketing:

Two carloads of potatoes and two carloads of apples were ordered for the farmers, and a substantial saving resulted. Four hundred bushels of certified seed potatoes were secured from farmers at a saving of \$1.50 per bushel. Later the farmers shipped in about five cars of potatoes at a saving of 25 cents per bushel or a total of \$1500. An exchange list of livestock, grains and feeds has been used very extensively in the county. Found a market for 6,000 pounds of alfalfa seed and purchased 800 pounds of pure alfalfa seed for a community.

Farm Engineering:

Preliminary surveys were made for four drainage projects which include 5,000 acres. Several small survey projects have also been made.

EDMUNDS COUNTY—Deane G. Davis, County Agent

The organizing of three farmers' clubs in the county has aroused a great deal more interest in farm bureau work. Local community clubs have offered a fine opportunity to get the county agent in close touch with the local people.

Livestock Improvement:

The Edmunds County Breeders' Association was organized and plans have been made to build a sales pavilion on the county fair grounds at Roscoe. Pasture was found for 6,600 sheep for Montana farmers. The livestock project has also included publicity for the control and prevention of contagious animal diseases, recommending treatment for various cases of animal diseases and assisting farmers in securing purebred livestock.

Marketing:

Six livestock shipping associations have been organized and they have handled most of the stock in their respective territories. The wool growers of the county formed an association for the purpose of promoting the sheep industry and marketing their wool cooperatively. Wool was shipped with the state pool to Chicago.

Boys' and Girls' Clubs:

The sow-litter club last year held a public sale with the result of an average of \$53 per head. There are four sow-litter clubs this year with a membership of 63. One cow and calf club has been organized with nine members. Three sewing clubs and one canning club have been organized in various parts of the county. Twenty club members attended the camp at Aberdeen.

Insect and Rodent Control:

Several demonstrations for the use of poisoned oats to exterminate gophers were held. The farm bureau purchased a large quantity of poisoned oats for farmers. Recommended measures for eradication of grasshoppers, scale insects and potato blight were offered and good results obtained.

Crop Improvement:

Six hundred pounds of sweet clover seed, 750 pounds of soybeans and a large amount of seed corn were secured for farmers in promoting the crop project.

Farm Building:

Two modern hog houses have been built with the assistance of the agent.

Miscellaneous:

Two hundred twenty farm laborers have been secured for farmers. Many threshermen have been interested in the state threshermen's association. Publicity for farm bureau work has been carried on through the four county papers and the Farm Bureau News very successfully. Exchange bulletin boards are used in all towns of the county for posting the state exchange.

FALL RIVER COUNTY—Ralph E. Johnston, County Agent to

March 1, 1920

Sam L. Sloan, County Agent after March 10, 1920

The Fall River county farm bureau has a membership of 379, which is about 60 percent of the farmers in the county. This large membership was secured by having local farmers to do the soliciting.

Livestock Improvement:

A livestock survey taken in the county showed that only 30 percent of the herds of cattle were headed by purebred sires. About 50 percent of the herds of hogs were headed by purebred sires. Less than 10 percent of the stallions in the county are purebred.

Animal Disease:

Forty-five demonstrations to show the people the use of the government blackleg vaccine were held. Nineteen hundred twenty-six animals were vaccinated, which, it is estimated, resulted in a saving of \$7,222.50. A total of 332 farmers were assisted in securing 15,647 doses of government blackleg vaccine other than that used in the demonstrations. The blackleg prevention campaign included publicity articles in every issue of the Farm Bureau News during the spring and fall

months, and the use of illustrated posters and demonstrations showing the proper disposal of blackleg carcasses. Vaccination is now almost universal and loss greatly decreased. Assistance was given in offering control measures to five farmers in connection with contagious abortion in their herds. One case of anthrax was located in the county and recommended measures were adopted immediately. The farm bureau secured vaccination outfits for eight farmers. Special recommended measures were given to a large number of farmers in regard to treating various other animal diseases. Two farmers were assisted in receiving aid from the state livestock board in securing accredited herds.

Rodent Control:

A general survey proved that pocket gophers, prairie dogs and field mice were doing considerable damage to crops in the county. One to three men were appointed in every township to locate on township maps the location and acres of rodent pests. The completed survey showed 100,000 acres of land infested with prairie dogs. The farm bureau secured the cooperation of the county commissioners in following the South Dakota rodent law, which provides for a tax upon the land where measures have not been taken for rodent extermination. Four hundred bushels of poisoned oats were ordered by the county commissioners and in addition the farm bureau purchased 145 bushels. The biological survey supervised a squad of men to distribute the oats purchased by the county and 241 farmers individually bought and distributed oats purchased by the farm bureau. The results of this campaign show that 38,780 acres of land were covered with poisoned oats which were infested with prairie dogs. It is estimated that the saving in crops was from 40 cents to \$1. per acre, or a total of \$17,612. Special community areas were organized this spring, one of 40,000 acres and one of 25,000. Plans are being made this year to complete the rodent extermination work on all infested land in the county. Eight demonstrations were held for the extermination of pocket gophers and special campaigns for their eradication are being planned. Six demonstrations were held for the extermination of field mice and kangaroo rats.

Boys' And Girls' Club:

There was a total of 31 clubs organized with a membership of 136. A majority of club members finished the projects. The second annual farm boys' camp was held at the Ardmore station with an attendance of 40. The annual farmers' picnic was held on the last day of camp with an attendance of more than 1,000 people.

Crop Improvement:

This project called for assistance in the distribution of proper varieties of seed grains and especially increasing the acreage of Dakota Amber Sorgo. Forty-two farmers in the country have grown an acreage of this forage crop. It yields a greater tonnage per acre than corn. A number of growers have also harvested good seed crops which have been marketed largely through the farm bureau exchange. Special samples of the various field crops grown in the country have been secured for the farm bureau office. Besides, several samples of insecticides and fungicides have been received for display. Publicity on the

growing of specially adapted field crops for the county and results from all demonstrational field work were published in the Farm Bureau News.

Grasshopper Control:

Demonstrations have been held to show the method of poisoning grasshoppers and using the hopper catcher. Some good results have been obtained by the use of the two methods in controlling grasshoppers.

Marketing:

Twenty-four farmers were interested in marketing 15,320 pounds of sweet clover seed. A large number of livestock was sold for farmers through the farm bureau exchange. One cooperative association was organized. Eleven exchange bulletin boards were placed throughout the county upon which the state exchange list is placed each month. The exchange column in the Farm Bureau News was remarkably well patronized; over 1,000 bushels of seed corn were advertized and sold mostly to local buyers, 855 bushels of potatoes, 212 bushels of Sudan grass, more than 600 bushels of Dakota Amber Sorgo, 4,549 pounds of alfalfa seed and a quantity of speltz, flax, oats and other farm seeds were sold.

FAULK COUNTY—Chas. J. Gilbert, County Agent

The Faulk county farm bureau has a membership of 325. The promotion of community program work has been very successful in the county and some definite results have been secured as very much interest has been taken by local communities.

Livestock Improvement:

A livestock breeders' association was organized and held a combination sale of 81 head of livestock on October 29, and a combination sale of cattle on June 8. The livestock survey which was conducted in Faulk county showed that the larger percentage of sires being used in the herds of cattle were still grades or scrubs.

Boys' and Girls' Clubs:

Fifty-four boys have registered sows for sow-litter club work this year. Thirty-six girls in four clubs finished their sewing project. One bread club is preparing for the fair. Three canning clubs are at work for the contest this fall.

Community Activities:

Four local communities have developed programs by the county agricultural analysis plan. By this plan the local people adopted their own programs by analyzing their local problems, and the special projects which needed immediate attention were definitely planned with the county agent and local leaders. The four communities have definitely planned their programs and are following them out for the year. Regular meetings are held and the committee plan for programs is being used.

Animal Disease:

There were only two outbreaks of blackleg in the county and vaccination was generally practiced by all farmers. Necrobacillosis and hemorrhagic septicemia appeared in a few cases. There was no spread

of hog diseases in the county. A few isolated cases of forage poisoning in horses caused a general warning to be issued.

Crop and Soil Improvement:

About 800 acres of alfalfa were planted as a result of the alfalfa campaign. Twenty-three hundred pounds of alfalfa seed were distributed through the farm bureau office. There were 10 demonstrations on Acme wheat, one demonstration on soybeans, and one demonstration on drainage.

Miscellaneous:

A very successful tractor show was held in the county seat. Each dealer in tractors in the county was invited to enter a plowing contest. A large crowd attended this demonstration and 14 tractors were sold as a result. There was one demonstration on cooperative marketing in the form of wool shipping.

GRANT COUNTY—J. I. Swedberg, County agent to March 15, 1920

H. M. Swift, County Agent after March 15, 1920

The Grant county farm bureau has a membership of 387. A number of farmers' clubs which are active have cooperated with the county farm bureau.

Livestock Improvement:

A large number of head of livestock has been sold through a farm bureau exchange; besides assistance has been given by the county agent in locating purebred livestock for many different farmers. The county livestock survey brought out the following results:

	Purebred	Grade	Total	Percent purebred
Bulls	249	454	703	35
Boars	199	286	485	41

Animal Disease:

Two hog cholera vaccination demonstrations were held at which 31 head of hogs were vaccinated. There were seven cases of hog cholera in the country during the year but by the adoption of vaccination and quarantine measures very few animals died. Six special hog cholera meetings were held with attendance of 291 farmers. Four farmers have asked to get their herds of cattle tested for tuberculosis so that they might get in the accredited herd list.

Boys' and Girls' Clubs:

Two pig clubs with a membership of 24 were organized and nearly all completed the project during the year. The boys in the pig club work made a tour to visit other members and inspect their pigs. Two sales were held last fall; one at La Bolt and one at Milbank, with an average sale price of \$57 and \$67 respectively.

Marketing:

The principal item in the marketing program has been the farmers' exchange list. The fact that the exchange has been used for 19 months and is increasing in size proves that it is of value to the farm bureau members. During this period 772 items have been advertised in the list. Three livestock shipping associations have been organized. Wool was

pooled at Summit last year and it was noted that local wool prices began to raise a few days before the wool was pooled. About 8 cents per pound more was received for the wool pooled than was offered in individual lots. In June, 1920, 4,946 pounds of wool belonging to 14 farmers were located at Summit and Milbank, in cooperation with the Roberts county agent, for shipment to the National Wool Warehouse & Storage Company.

Crop Improvement:

Eighty-four samples of seed grain were tested for germination and 7,400 ears of corn were ear tested. A large amount of alfalfa and sweet clover seed has been located for growers. Six demonstration plots in growing an early corn have been conducted with success. Northwestern Dent proved to be a good variety for the northern part of the county. Five rye demonstrations were seeded last fall; four with Rosen rye and one with Swedish rye. One demonstration with Odessa barley resulted with an increase of 12 bushels per acre over common barley. Two potato demonstrations for the treatment of seed for scab were held.

Miscellaneous:

Two demonstrations for gopher poisoning with oats were conducted. About 30 pounds of poisoned oats were sold at cost during the spring of 1920. Considerable time was spent in assisting at the county fair. Eighty-four farm laborers were supplied to farms during the year.

HAAKON COUNTY— H. M. Sanderson, County Agent

The Haakon county farm bureau has a membership of 438. A most successful annual meeting was held last year at which 223 people were entertained at a banquet by the farm bureau. Fourteen communities have been organized under the county agricultural analysis plan and each has adopted a special program of work. At a series of meetings held to organize these communities a total of 1,208 people attended.

Animal Disease Prevention:

This county is in the range district and has developed one of the best disease prevention organizations in South Dakota. C. L. Sheldon of Powell is the county director of all county disease campaigns. Each of the 14 communities appointed animal disease committeemen who were designated as deputy health officers by the county board of health. Disease prevention campaigns were planned from an educational and cooperative point of view and authority was only used as a last resort. Considerable publicity was given the appointments so that most everyone realized that these men could enforce their suggestions if necessary. The plan has worked very satisfactorily with the result that the communities especially interested succeeded in cleaning up all carcasses found, including those killed from exposure. Vaccination for blackleg has been quite generally followed in infested areas of the county. During 1919, 7,881 doses of the new germ-free blackleg filtrate, 380 doses of simultaneous anthrax vaccines and 400 doses of hemorrhagic septicemia vaccines have been distributed. Thirty-two post-mortem examinations have been held for farmers and in most

cases blood and tissue samples have been forwarded to the state health laboratory.

Rodent Control:

A survey showed that there is about 77,000 acres of land infested with rodents in Haakon county. Township committeemen were appointed to locate prairie dog towns on township maps. The county commissioners purchased the necessary poisoning bait and hired a squad of men to distribute the bait on such land that farmers did not take care of themselves. During the year 661 quarts of poisoned bait were distributed over 3,000 acres. The work is being completed this year to finally exterminate all rodents in the county.

Boys' and Girls' Clubs:

A paid leader has been in direct charge of this project but the county agent has assisted, particularly in carrying on the sow-litter club work. Twenty-six boys entered the sow-litter club project. The project was completed and a combination sale held last November. Twenty boys attended the junior camp at Rapid City.

HAMLIN COUNTY—A. W. Tompkins, County Agent

The Hamlin county farm bureau became a permanent organization July 1, 1919. A special farm bureau membership drive has been conducted in cooperation with the State Federation of Farm Bureaus. A membership of more than 700 was secured.

Livestock Improvement:

A Hamlin county livestock breeders' association has been organized. It has one set of general officers who act for the county and each breed of livestock is represented by one man on the board of directors. Committees are appointed to pass on all livestock offered at public sales. Breed sales only are held, as such have proven to interest more buyers for the particular breeds of livestock sold. During the fall of 1919 this association received the highest average price for a combination one breed hog sale in South Dakota. The event was celebrated by partaking of a banquet at Castlewood where some 500 people enjoyed the entertainment. It is conservatively estimated that 233 head of livestock sold through public auction through the breeders' association last year resulted in an increase of \$20 per head or a total of \$4,700. The county agent has attended a large number of sales and inspected many private herds of livestock in cooperation with the local breeders' association and assisted in securing good livestock. A livestock survey was conducted which shows the following result: 80 percent of the farmers in the county raise cattle, 66 percent raise hogs, 33 percent raise horses, eight percent raise sheep, and that only 35 percent of the sires in all herds of cattle in the county are purebred.

Crop Improvement:

A seed corn survey was conducted in the county to furnish lists to those wishing to buy seed corn. Special orders for flax, oats and grimm alfalfa seed were secured for different farmers. Fifty-five

acres of certified seed potatoes were planted and resulted in a profit of \$1,768 to the growers.

Boys' and Girls' Clubs:

During 1919, 33 clubs were organized with an enrollment of 297 members of which 215 finished the work. A sow-litter club made a profit of \$1,943. A stock judging team and a sewing team were taken to the state fair where the sewing team won the honors for the state and was awarded a trip to the interstate fair and there won first in the garment making. One of the members of the team was elected on the all-star team. Thirty-one boys and eight girls attended the junior camp at Brookings last year. The boys won the championship in the county track meet. A full time paid leader directs the club work.

HAND COUNTY—O. L. Anderson, County Agent July 1 to November

30, 1919. —E. H. Aicher, County Agent after April 1, 1920.

The Hand county emergency farm bureau was organized into a permanent farm bureau July 1, 1919. The county was without an agent from November 30, 1919, to April 1, 1920. The Hand county farm bureau has a membership of 175 members.

Boys' and Girls' Clubs:

Ten head of cattle and ten head of hogs were sent to the state fair by members of the junior livestock clubs. Prizes were awarded to the club members totaling \$261. Two baby beeves and five pork pigs were sent to the interstate fair at Sioux City. Several prizes were won by the club members at the interstate fair. Eighteen boys' and girls' clubs were organized with a total enrollment of 276 members.

Hereford cow and calf club with a membership of 10.

Aberdeen Angus cow and calf club with a membership of 10.

Shorthorn cow and calf club with a membership of 10.

Sow-litter club with a membership of 22.

Baby beef club with a membership of 5.

Baby pork club with a membership of 18.

Garden club with a membership of 121.

Corn club with a membership of 11.

Canning club with a membership of 63.

Potato club with a membership of 6.

Poultry club with a membership of 15.

The Angus and Shorthorn cow-calf clubs conducted tours this summer.

Arrangements have been made with the county superintendent of schools to give credit for club work.

Bulletin Library:

Bulletin libraries have been prepared for the rural schools. These sets have been made up of bulletins that will meet the requirements for agricultural work in the rural schools.

Farm Labor:

More than 85 farm hands were secured for the farmers of the county from July 1 to November, 1919.

Drainage Project:

Preliminary survey was started for two drainage projects.

Livestock Improvement:

Breed organizations have been perfected for Shorthorn cattle, Poland China and Chester White hogs. Five thousand head of cattle were dipped in the scab eradication campaigns.

Crop Improvement:

Assistance was rendered three farmers in obtaining seed for crop demonstrations.

HANSON COUNTY—George R. Mayland, County Agent to April 1, 1920

The Hanson county farm bureau was permanently organized July 1, 1919. Mr. Mayland resigned as county agent April 1, 1920. and as yet no one has been secured to take his place.

Livestock Improvement:

The Hanson County Livestock Breeders' Association incorporated to build a livestock sales pavilion which was completed at a price of about \$10,000. The small breeders held a combination sale of purebred livestock last fall which was very successful. The future plans are to hold breed sales in the new pavilion. The pavilion has been the means of creating much more interest in good livestock. The motto that is being followed by the association is to have purebred sires in all herds of livestock. Assistance has been given many farmers in selecting good purebred livestock.

Animal Disease:

The agent has worked in close cooperation with local veterinarians, the state animal health laboratory and the livestock sanitary board in promoting animal disease prevention work in the county. Publicity campaigns have been carried on for vaccination, sanitation and quarantine. Several cases of hemorrhagic septicemia were diagnosed and 1,500 head of cattle vaccinated. After the vaccination no losses occurred. There was one serious outbreak of anthrax a year ago. In cooperation with the livestock sanitary board vaccination and quarantine measures were adopted successfully. Only eight head of cattle were lost in this one outbreak which spread to three farms. A few cases of hog cholera occurred but vaccination and quarantine eliminated any losses.

Drainage:

Preliminary surveys were run for drainage projects totaling 2,880 acres. Many new calls are coming into the office for drainage work.

Boys' and Girls' Clubs:

One sheep club and three sewing clubs were organized and successfully carried out.

Marketing:

About one-half a carload of wool was pooled with the Davison county wool growers at Mitchell. Fifty-seven cents per pound was received for the wool. This was an increase of about 9 cents per pound

over what was offered by local buyers before the wool was pooled. Several carloads of potatoes were secured from Clark county for local farmers. From 25 cents to 45 cents a bushel was saved on all potatoes purchased for farmers.

Miscellaneous:

One hundred ten farmers were assisted in making out income tax reports. All farmers were encouraged to make out the report by the inventory method. A farm account book was given to each man assisted in preparing his income tax blanks, and he was also helped to start the year's records. Two farmstead plans and six building plans have been prepared for farmers. Much time was given to the re-establishing of the county fair which has not been held during the war. A large number of very creditable livestock exhibits were entered.

HUGHES COUNTY—N. F. Nelson, County Agent

The Hughes county farm bureau was permanently organized July 14, 1915. Seven community centers have been established which have aided very materially in promoting farm bureau work in the county.

Livestock Improvement:

Through the efforts of the farm bureau the Hereford Breeders Association of Central South Dakota was organized in March, 1919, with a membership of 15 Hereford breeders. Two sales have been held at which 116 head of cattle were sold at an average price of \$350. Sale pavilions are being promoted at Pierre and Harrold. The results of the livestock survey in the county show that 77 percent of the sires used in all herds of cattle are grades.

Animal Disease:

Sixteen hundred ninety head of cattle in 28 herds have been vaccinated for blackleg. There were nine outbreaks of anthrax during the last year, and 171 head of cattle were exposed to anthrax. To assist in cleaning up this disease 14 vaccination demonstrations were held in which all exposed cattle were vaccinated. After vaccination no further loss was reported. A year ago 227 herds of cattle with a total of 12,095 head were dipped for scabies. This year 10,125 head have been dipped for scab. Ten herds with a total of 4,520 head of cattle have been dipped for lice. Last year the farm bureau was instrumental in securing two additional county dipping vats. The care and management of the county vats has been given to the farm bureau by the county commissioners.

Marketing:

Fourteen thousand pounds of wool were pooled in the county. A market for 1,760 bushels of seed corn, 4,550 bushels of clean seed flax, 400 bushels of seed wheat and 495 pounds of genuine Grimm alfalfa seed have been secured for the members of the farm bureau.

Boys' and Girls' Clubs:

One hundred twenty boys and girls enrolled in club work which includes poultry sow-litter, garden and sewing clubs. Fifty-seven pigs raised in the sow-litter clubs were sold in a public auction last fall at an average price of \$65. The club work has been the means of

introducing standard bred poultry on 60 farms. Three club judging teams from the sewing, corn and sow-litter clubs were sent to the state fair to represent the county. A member of the stock judging team won a free trip to the International Livestock Show as a reward of his work at the state fair and as a member of the sow-litter club. Hughes county was also represented during the month of June at the boys' and girls' club camp at Brookings.

Crop Improvement:

Eight hundred thirty bushels of seed corn were fall selected last year as a result of the special campaign. A year ago 875 bushels of corn were tested for germination. A market for an additional 1,860 bushels of seed corn was also found. Reports show an increase of 1,496 acres of corn being grown in the county as a result of farm bureau efforts. Two hundred fifteen acres of sorghum and 120 acres of proso have been grown as the result of a campaign to increase forage production.

Insect and Rodent Control:

Recommended measures have been advised for exterminating grasshoppers, sugar beet worms, garden insects and tree borers. Prairie dogs that had infested 40 acres of land in the county have been completely exterminated. This was one of the few small prairie dog towns in the county.

Labor:

Twenty-one men have been placed on farms in the county.

Farm Records:

Six farmers in the county are today keeping a record of cost accounts.

JACKSON COUNTY—Leslie M. Carl, County Agent to Nov. 6, 1919

Ira S. Johnson, County Agent after May 1, 1920

The Jackson county farm bureau was permanently organized July 1, 1919. The county was without an agent from November 10, 1919, to March 1, 1920.

Animal Disease:

The farm bureau secured 3,885 doses of blackleg vaccine for 57 farmers. Five hundred doses of the new germ-free blackleg filtrate were secured for farmers. Twenty-five blackleg demonstrations, including the vaccination of 1,780 cattle, were conducted by the county agent. A blackleg survey of the county showed that there were only 20 losses of cattle during the year. One cattle dipping vat was constructed in the county last summer. Three thousand head of cattle were dipped for the prevention of scabies. Publicity campaigns have also been carried on to give the best approved methods for controlling contagious animal diseases.

Rodent Control:

Twenty-seven thousand one hundred acres of land were covered with poisoned oats in 62 demonstrations to exterminate prairie dogs.

The county agent personally superintended the distribution of poison on 20,000 acres. Reports show that from 85 to 95 percent of the prairie dogs were exterminated on these lands. It is estimated by farmers that it was worth 90 cents per acre to have prairie dogs exterminated, which would mean a total value of \$24,000 for all the work done.

Boys' and Girls' Clubs:

Two sow-litter clubs were promoted in the county and 50 purebred pigs were offered at public sale. A large delegation of boys was taken to the boys' Camp at Rapid City.

Marketing:

Five hundred bushels of good alfalfa seed were marketed for farmers during the fall. A number of fields have been inspected for the purpose of registering them.

JERAULD COUNTY—H. E. Rilling, County Agent

The Jerauld county farm bureau was permanently organized July 1, 1917.

Livestock Improvement:

The Jerauld County Livestock Breeders' Association has been organized and \$16,000 has been subscribed to build a sales pavilion. One carload of registered cows and calves, three carloads of registered bulls and six registered stallions were disposed of in the range country during the past year as a result of the cooperation between the farm bureaus of Jerauld and Mellette counties.

Animal Disease:

About 125 head of cattle have been vaccinated for blackleg through two recommendations of the farm bureau. Four herds of cattle were found to be affected with scab. The owners have cooperated in constructing a dipping vat. Five distinct hog cholera outbreaks were reported. Communities were notified and control measures recommended. Six hundred twenty-five head of hogs were vaccinated in the campaign to prevent the spread of this disease.

Crop Improvement:

A large number of samples of seed grain and grass seed have been tested for germination and purity. One thousand bushels of fall selected seed corn were located through the farm bureau office for different farmers in the county and composite germination tests were made in most of it. About 10 farmers have started a seed corn variety plot the past year. Twenty farmers have started oats demonstrations. It is estimated that the crop improvement work was worth \$2,780.

Boys' and Girls' Clubs:

Two boys were sent to the state camp last spring and a stock judging team and a canning demonstration team were taken to the state fair. One member won state championship in baby beef production. A canning club member won second on canned vegetables exhibited. The stock judging team ranked highest on cattle at the state fair. Four corn exhibits were sent to the state fair and three premiums

were won. Forty-seven boys and girls completed club work. The net profits of all club work during the year amounted to \$2,075.

Insect and Rodent Control:

Recommended measures have been given for the extermination of grasshoppers in several fields, garden insects in 15 instances, and webworms and cut worms at various times. Six prairie dog towns have been exterminated by the use of poisoned oats. The estimated annual damage of these pests is \$1,375.

Marketing:

One strong livestock shipping association was organized at the county seat. One carload of pooled wool is being shipped to Chicago and will be stored there until better prices prevail.

JONES COUNTY—W. P. Gamble, County Agent, assumed duties.

March 1, 1920.

Jones county organized a permanent farm bureau December, 1919, with 54 members.

Livestock Improvement:

Assisted 12 boys in the sow-litter club in securing purebred sows.

Animal Disease Prevention:

Held three blackleg vaccination demonstrations, vaccinating 100 head of cattle. Four hundred doses of government blackleg vaccine were secured for the farmers. Assisted cattlemen at dipping tank in testing dip. Six meetings were held with assistance of the animal disease specialist relative to dipping cattle for scab. One demonstration was held relative to vaccination for anthrax.

Club Work:

Two canning and two bread clubs were organized with the assistance of the club department. The total enrollment in the four clubs was 63.

Rodent Work:

Three demonstrations were held relative to poisoning prairie dogs.

Organization:

One community club has been organized at Van Metre.

Junior Club Camp:

Thirty-two boys from Jones county attended the four day club camp at Kennebec.

KINGSBURY COUNTY—Dick Lewallen, County Agent.

The Kingsbury county farm bureau was permanently established in 1915.

Livestock Improvement:

The County Livestock Breeders' Association held its third annual combination sale in 1918. The results of this sale showed that it was more desirable to hold individual breed sales. The Shorthorn and Hereford breeders have completed separate organizations to promote

their interests. Forty-three farmers joined the Shorthorn association and they held a breed sale last year. A special committee was appointed by the association to inspect all animals entered in the sale. The quality of animals entered in this sale was a great improvement over those in combination sales. All animals were tested for tuberculosis. Four cattle reacted from the tuberculin test and each one came from a different herd. This work put great impetus upon the eradication of tuberculosis in the county. Twenty Shorthorn breeders joined in a tour to Hurley, where they inspected several herds of fine Shorthorn cattle. This and other tours have done a great deal to promote livestock improvement in Kingsbury county. The county agent has cooperated very closely with the local veterinarians in controlling contagious diseases. During the year 156 requests for information about animal diseases were answered. Two hog cholera vaccination demonstrations were held in cooperation with the Bureau of Animal Industry. There have been a few outbreaks of hog cholera but the disease is fully under control in the county. Necrobacillosis has caused heavy losses during the past two years. Twenty-one requests for information on this disease have been answered and recommended measures given. Other animal disease work has included the recommending of treatment for thumps in pigs, poultry diseases, contagious abortion, hemorrhagic septicemia, and various other less common diseases of livestock.

Crop Improvement:

Fifteen hundred bushels of Kubanka seed wheat were secured for farmers. A large amount of seed grain and grass has been obtained for farmers through the exchange list.

Farm Labor:

One hundred nineteen men have been secured for farmers. The demand for labor has been heavy and wages high.

Farm Buildings:

Assistance had been given in the planning and building of three new barns. The agent has cooperated with the extension engineer in planning three modern hog houses. Assistance was given in building seven silos. The county agent of Spink county, in cooperation with the agent, brought nineteen farmers to Kingsbury county to inspect modern hog houses.

LAKE COUNTY—I. J. Bibby, County Agent to January 31, 1920

M. H. Shearer, County Agent after March 16, 1920

The Lake county farm bureau was permanently organized July 1, 1919.

Livestock Improvement:

The Lake county Purebred Breeders' Association was organized and has stimulated much interest in purebred livestock. The association is now promoting a sales pavilion. A livestock survey showed about one-half of the farmers are still using grade and scrub sires in their herds of cattle. Seven farmers were assisted in getting foundation stock for purebred Holstein herds. Fifteen farmers have been

aided in getting foundation stock for herds of purebred hogs.

Boys' and Girls' Clubs:

Two pig clubs were organized with a membership of 41. One-hundred sixteen entered the Holstein heifer calf club. Fifty-six have entered the cow and calf club and purchased their stock. Twenty-five boys attended the junior boys' camp at Brookings and five attended the state fair at Huron.

Animal Disease:

A large number of outbreaks of hog cholera occurred during the year and 850 hogs were vaccinated in campaigns conducted with the cooperation of a veterinarian. Necrobacillosis caused considerable loss in pigs last spring.

Marketing:

Twenty thousand pounds of wool were sold through a pool at 50 cents per pound. It is estimated that at least 5 cents per pound was made by pooling. Three carloads of potatoes were marketed for farmers. Aid was given farmers in getting three carloads of cattle from the drouth area in Montana.

Crop Improvement:

An extensive campaign for treating grain for smut and potatoes for scab was conducted with six demonstrations. About twice as many farmers treated their seed grain and potatoes as in previous years. Demonstrations in growing good varieties of corn, oats, rye, flax, alfalfa and Sudan grass were conducted. The results show that Minnesota 13 and Dakota 86 seed corn, Ohio oats 103 and wilt proof flax were the best varieties of the respective grains for the county.

LAWRENCE COUNTY—W. F. Kumlien, County Agent to March 1, 1920

E. W. Hall, County Agent after May 22, 1920

The Lawrence county farm bureau was permanently organized in August, 1915. Nine communities have been definitely organized, each having a special committee to cooperate with the farm bureau. Five committees developed definite programs of work for their respective communities. These programs were used by the county board of directors in adopting a county program for the farm bureau. The following table shows the increase in membership during the four years that the farm bureau has been in existence.

Farm Bureau year	1915-16	1917	1918	1919
Number of members	50	70	133	220
Percent of members to farmers in the county	10%	14%	26.6%	44%

Livestock Improvement:

A livestock survey of Lawrence county brought out the following results:

- 48 per cent of bulls in the county are purebred
- 48 per cent of bulls in the county are grades
- 4 per cent of bulls in the county are scrubs
- 40 per cent of cattle raised are Herefords

15 per cent of cattle raised are Shorthorns
35 per cent of Herefords and Shorthorns are grades
20 per cent divided among Holstein, Red Poll, Aberdeen
Angus and Jerseys.

There are 338 purebred bulls in the county and 345 grades. The average value of a purebred animal over a grade was \$116. The average value of a purebred bull over a grade bull used in a grade herd was \$180. The Black Hills District Breeders' Association was organized with a total membership of 46 which included 22 from Lawrence county. Farmers representing each breed of livestock nominate special committees to take charge of and inspect sales, tours, breed advertising, etc. A livestock breeders' directory was prepared for the association by the county agent who was elected as its secretary. The farm bureau has assisted in placing 27 purebred cows, 21 purebred bulls, 14 calves and 20 head of high grade Holstein cows. Assistance was given two farmers in establishing herds of Hereford cattle and one farmer in establishing a herd of Holstein cattle. The Roubaix Livestock Association was formed, which is a second forest reserve permittee's livestock association. It was formed for the purpose of requiring all members to use purebred sires. Assistance was given 37 farmers in marketing five carloads of feeder hogs. It is estimated that 3 cents per pound more was received for these hogs than could have been obtained at a central market. The hog survey showed that not more than 10 per cent of the boars in the county are purebred. The farm bureau office assisted in securing 34 purebred hogs for farmers.

Animal Disease:

During the year 5,625 doses of government blackleg vaccine has been distributed to 112 different farmers, which is about 22 percent of the total number of farmers in the county. Last year the first outbreak of anthrax occurred in Lawrence county. The disease was introduced through a shipment of young cattle through the Omaha stock yards. With the cooperation of the State Livestock Sanitary Board, the disease was definitely diagnosed and vaccination and sanitary methods were adopted. Seven head of animals died with anthrax, but no further reoccurrence of the disease has been reported. Seventy-eight head of cattle were tested for tuberculosis upon the suggestion of the county agent. Hog cholera has never been known to exist in the county. The State Livestock Sanitary Board has declared the agricultural part of the county as "hog cholera free area". Regulations controlling this area provide that no hogs may be shipped into this section without being thoroughly inspected, tested and dipped and quarantined for three weeks by a designated agent of the State Livestock Sanitary Board. No hog cholera virus may be shipped into this area.

Boys' and Girls' Clubs:

A ewe lamb club of seven members had been promoted for two years, and most of these juniors have foundation stock for small flocks. Ten clubs were organized last year with a total enrollment of 83. These clubs include corn, gardening, sheep, canning and hogs. Six boys and girls attended camps at Rapid City and Newell. It is estimated that

the club projects netted a profit of \$498.19.

Miscellaneous:

Five hundred farm account books were distributed to farmers through the banks. One woman's community club was organized. A Farm Bureau News has been published during the past two years. Two hundred thirty-three advertisements were run in the exchange column the past year. Twenty-three farmers were given assistance in making out income tax reports. Ten farmers were assisted in securing \$40,000 in loans through the State Rural Credit Board of South Dakota. Twenty one farm laborers have been secured for farmers. Standardization and proper grading of farm products has resulted in solving several marketing problems. Fifteen carloads of apples were marketed by one community through the assistance of the farm bureau office. Three demonstrations have been held in prairie dog poisoning and six on pocket gopher poisoning. Twenty-five farmers poisoned rodents on their farms. It is estimated that 1,600 acres were covered. The farm bureau office has furnished plans and suggestions for nine new silos.

LYMAN COUNTY—H. D. McCullough, County Agent.

The Lyman county farm bureau was permanently organized in 1915.

Livestock Improvement:

The Lyman County Purebred Livestock Breeders' Association was organized a year ago. It held a purebred hog sale in November, 1919. The Lyman County Sale Pavillion Association has been incorporated and a sales pavilion is being built at Kennebec. Two outbreaks of anthrax were reported in the county July 8, 1919. The agent secured the livestock sanitary board to diagnose these cases which proved to be anthrax. Sixteen thousand four hundred head of cattle were vaccinated during the 15 day campaign and the agent notified all farmers having exposed herds. Every farmer within three or four miles of an infected herd vaccinated. All carcasses were disposed of. About 200 head of cattle were lost from anthrax. Later in August, two small outbreaks of anthrax occurred and they were checked by vaccination and carcass disposal. A map of the county has been prepared showing farms on which cattle were lost from anthrax. Men on these farms and those having adjoining pastures will be advised to vaccinate next spring as a preventive measure. Hog cholera occurred on five farms in the eastern part of the county. The extension veterinarian assisted in diagnosing the disease. Vaccination and carcass disposal prevented the disease from spreading. Twelve hundred thirty-five doses of government blackleg vaccine were distributed.

Farm Labor:

A business man in each town of the county acted as a local labor agent. Through this organization 158 men were placed on farms during last summer.

Marketing:

Sixty-eight thousand pounds of wool were marketed through the wool growers' association, and an average price of 55½ cents per pound was obtained. This price was about 5 cents more than could

have been gotten from local buyers without pooling. All the good alfalfa seed in the county is being held for local buyers.

Boys' and Girls' Clubs:

One pig club and two canning clubs were organized and judging teams from each club were sent to the state fair.

McCOOK COUNTY—George L. Winright, County Agent

The emergency McCook county farm bureau was organized in the spring of 1918, and the permanent farm bureau was organized July 1, 1918.

Boys' and Girls' Clubs:

A sow-litter club was organized and a club sale of purebred hogs was held during the county fair. Special premiums were offered for club exhibits of livestock and this attracted a large number of entries.

Crop Improvement:

Demonstrations in the growing of corn, oats, hemp and wheat were conducted on a number of farms during the year. Successful results have been obtained in getting better varieties of grain started and getting a greater acreage yield.

Drainage:

Drainage systems were planned in cooperation with the extension specialist on 11 different farms. These demonstrations were located in 11 different communities.

Miscellaneous:

A labor organization with a representative in each town in the county was perfected. There were very few times during the season when the labor supply was insufficient. Much time was spent in giving assistance to the preparation of exhibits for the county fair and a county exhibit for the state fair. McCook county exhibit won first place at the state fair. A silo campaign was conducted during last August to develop more interest in a permanent type of silo.

MELLETTTE COUNTY—F. E. Lange, County Agent since Feb. 1, 1920

The Mellette county emergency farm bureau was organized into a permanent farm bureau July 1, 1919 with 275 members.

Mellette county was unable to locate a county agent from July 1, 1919 up to February 1, 1920.

Livestock Improvement:

Organized a boys' and girls' purebred Hereford cow and calf club with 12 members. Assisted ranchers in securing 42 purebred bulls to head their herds.

Animal Disease Prevention:

Secured over 11,000 doses of blackleg vaccine for the cattlemen in the county.

Crop Improvement:

Demonstrations were started with alfalfa, corn and cane.

Marketing:

Secured 4,000 pounds of alfalfa seed from outside the county and 4,500 pounds exchanged within the county for farmers of the county.

MINNEHAHA COUNTY—Geo. B. Kennard, County Agent, to

March 1, 1920

J. H. Hamilton, County Agent after March 16, 1920

The Minnehaha county emergency farm bureau was organized October, 1917, with a membership of 230. A permanent organization was perfected July 1, 1919, and a membership of 629 was secured.

Livestock Improvement:

A livestock survey showed the following results:

Percentage purebred sires in use		Percentage grade or scrubs in use	
Cattle	49	Cattle	51
Hogs	57	Hogs	43
Horses	85	Horses	15
Sheep	58	Sheep	42

The following purebred livestock was secured for farmers; 31 head of bulls, 25 head cows, 225 boars, 95 cows and 4 rams.

Animal Disease:

This project has included giving publicity to prevention methods, proper feeding, carcass disposal and community cooperation. Upon the recommendation of the agent, the following animals were treated either by the owner or a competent veterinarian: Hogs vaccinated for cholera, 2,475; hogs treated for necrobacillosis, 1,190; hogs treated for worms, 2,640; cattle tested for tuberculosis, 35. It is estimated that the hog cholera vaccination represented a saving of \$22,960.

Crop Improvement:

Eleven farmers grew standard varieties of corn as demonstrations. In nine cases out of the eleven the new varieties out-yielded any other on the farm. One oat variety demonstration proved that Iowa 103 was a better yielder than the common variety grown. A thorough campaign was conducted to encourage a fall selection of seed corn. At least 900 farmers selected seed corn early. Eight smut treatment demonstrations were carried on which resulted in preparing enough seed oats for 3,750 acres and seed wheat for 325 acres. There was an average of 5 percent as a result of treatment. Three potato demonstrations were conducted. Two rotation demonstrations are being carried on. Thirteen farmers were assisted in pruning and spraying their orchards. Nine hundred acres of alfalfa were seeded, due to the efforts of the farm bureau.

Marketing:

One livestock shipping association was organized. A county wool growers' association was perfected and 20,000 pounds of wool marketed through a pool. It is estimated that \$20,000 more was received by pooling the wool than by selling in individual lots. Eight thousand three hundred forty pounds of Grimm alfalfa and 2,040 pounds of sweet and red clover seed were secured for farmers. Three thousand three

hundred sixty bushels of seed corn, wheat, oats, flax, millet, barley and potatoes were secured for farmers.

Boys' and Girls' Club:

This work was conducted in cooperation with a paid county club leader. The total valuation of work done is \$30,377.

Agricultural Engineering:

Through cooperation with the state extension engineer assistance was given 34 farmers in planning farm buildings. Twenty-one farmers were given assistance in the installation of proper ventilating systems in old and new barns. Three demonstrations of septic tanks were installed under the direction of the farm bureau. Several farmstead plans were arranged for farmers.

Farm Labor:

Three hundred eighty-nine farm laborers were sent out from the farm bureau office. The local labor offices in small towns cooperated in this project.

Insect and Rodent Control:

Recommended measures were offered for the eradication of cutworms and grasshoppers. Thorough cultivation was practical and poisoned bait was used. A 20 acre field of alfalfa was practically cleared of pocket gophers by using poisoned bait.

MOODY COUNTY—H. B. Wilson County Agent

The emergency farm bureau of Moody county was organized into a permanent farm bureau July 1, 1919. There are at present 295 farm bureau members.

Crop Improvement:

Fourteen demonstrations, totaling 465 acres, of soybeans were sown. One hundred forty-five acres of Sudan grass were sown for demonstration purposes. Seven hundred forty-eight acres of alfalfa seed has been treated for inoculation. Nine carloads of potatoes were marketed through efforts of the farm bureau at 35 cents per bushel above the local market price. Four demonstrations of 64 acres of Rosen rye were sown. Fifty-six demonstrations, totaling 547 acres, of alfalfa and sweet clover were carried on in cooperation with the farm bureau.

Junior Club Work:

Eighteen boys and girls enrolled in the purebred sow-litter club. Fifty-two head of hogs were sold at the junior club sale in the fall at an average price of \$80 per head.

Agricultural Engineering:

Eighteen sun-lit hog houses have been built as demonstrations the past year. A large number of farmers from nearby counties have visited several of the demonstration hog houses.

Labor:

Four hundred seventy-nine farm hands were obtained for the farmers in the county.

Marketing:

Thirty-five thousand pounds of wool were marketed cooperatively at an average of 10 cents per pound above the market price.

Livestock Improvement:

Forty-nine self-feeders for hogs were put in as demonstrations in the county.

The estimated net saving to the county through the efforts of the farm bureau work is more than \$43,600.

PENNINGTON COUNTY—H. W. Smith, County Agent

The Pennington county emergency farm bureau was organized into a permanent farm bureau July 1, 1919.

Livestock Improvement:

Four thousand four hundred sixty-three head of cattle were vaccinated at demonstration meetings for blackleg. Twenty-five thousand doses of blackleg vaccine were secured for the ranchers of the county. One dipping tank for cattle was put in as a demonstration in a community where scabies had been found. Purebred sires have been secured to head herds that have always been headed by grade sires.

Marketing:

Seventy-five thousand pounds of wool were marketed cooperatively at an average of five cents per pound above the local market.

Labor:

Four hundred eighty-six farm hands were supplied to 147 farmers.

Rodent Control:

Prairie dogs on 2,860 acres of land were poisoned in cooperation with biological survey.

Junior Club Work:

Four clubs have been organized, two canning and two corn clubs. The total enrollment in the four clubs was 85.

The total net estimated saving to the county through the efforts of the farm bureau was more than \$14,400.

ROBERTS COUNTY—R. R. Buchanan, County Agent

The Roberts county emergency farm bureau was organized into a permanent farm bureau July 1, 1919.

Roberts county employed a county club leader during the summer months.

Livestock Improvement:

Organized the Roberts County Purebred Breeders' Association.

Animal Disease Prevention:

Eight hundred seventy-five doses of blackleg vaccine were secured for the stockmen. More than 4,000 head of hogs were vaccinated at the suggestion of the agent.

Junior Club Work:

Two junior pig club sales totaling 127 pigs averaged \$74 per head.

Crop Improvement:

One hundred sixty-five acres of Grimm alfalfa seed were sown for demonstration purposes in cooperation with the farm bureau.

Marketing:

Organized one livestock shipping association.

The net estimated saving to the county through the efforts of the farm bureau was \$24,000 for the past year.

SPINK COUNTY—E. W. Hall, County Agent

The Spink county farm bureau was permanently organized April 1, 1913. One hundred fifty-eight active farm bureau members were secured for the year 1919.

Livestock Improvement:

The Spink County Livestock Breeders' Association was organized with a membership of 260. Twenty-two sales have been held in the sales pavilion. One carload of tankage was secured for the farmers. The livestock sales pavilion burned, and sufficient funds have been raised to build a new one.

Animal Disease Prevention:

More than 650 head of hogs were vaccinated for cholera on the suggestion of the county agent. Three hundred fifty head of cattle were vaccinated for anthrax and 860 head of cattle vaccinated for blackleg at demonstration meetings. Forty-six specimens have been sent to the health laboratory at State College for examination.

Agricultural Engineering:

Building plans were furnished for 21 farmers. Six drainage projects have been surveyed.

Marketing:

Twenty-five thousand pounds of wool marketed cooperatively at an increase of 6 cents per pound above the local market price during the summer of 1919. Two carloads of wool totaling 51,000 pounds shipped this summer with the state association to Chicago.

Junior Club Work:

Forty-three boys are members of purebred sow-litter clubs. Twenty-eight of the boys sold 114 head of pigs at public auction for \$4,837.

Crop Improvement:

The following purebred grains were obtained for farmers:

Kind	Amount	Distributed to
Vivian corn	50 pounds	1 farmer
Alta corn	200 pounds	4 farmers
Shelly millet	1272 pounds	9 farmers
Kurch millet	300 pounds	2 farmers
Odessa barley	500 pounds	1 farmer
Brome grass	83 pounds	2 farmers

Other seed secured:

Kind	Amount	Distributed to
Alfalfa	11,630 pounds	115 farmers
Brome grass	3,387 pounds	26 farmers
Sweet clover	3,692 pounds	37 farmers
Timothy	1,002 pounds	
Rape	398 pounds	
Blue grass	134 pounds	
Alsike clover	100 pounds	
Red top	160 pounds	

Labor:

Nineteen hundred farm hands were secured for farmers in the county.

Rodent Control:

Distributed six bushels of poisoned oats to 100 farmers for gopher poisoning demonstrations in the county.

The total net saving in the county through the efforts of the farm bureau was estimated at more than \$32,000.

STANLEY COUNTY—H. Dale White, County Agent to February 1, 1920**E. C. Anderson, County Agent after February 1, 1920**

The Stanley county farm bureau was organized January 1, 1916. Several definite plans of work were outlined by directors of the association and Vey J. Valentine, who was county agent, at the time. Several of these projects were of the nature that required their continuance for a long period of time while others were merely temporary in their nature. It has been the plan of the two agents above mentioned to carry on the permanent program outlined at the inception of the farm bureau movement in this county and also to promulgate such lines of work of a temporary nature as may have come up from time to time.

Animal Disease Prevention:

Cooperating with the livestock sanitary board, the animal health laboratory and the county board of health, the Stanley county farm bureau has assisted in animal disease prevention in the following measures:

One thousand one hundred twenty-five doses of blackleg vaccine were secured for 100 ranchers in the county.

At demonstration meetings 585 cattle were vaccinated for blackleg.

One thousand three hundred five cattle were vaccinated for anthrax at the demonstration meeting which the agent attended.

In 1919 five county dipping vats were built in which 35,000 cattle were dipped for scabies during the fall of 1919 and the spring of 1920.

Several cases of hemorrhagic septicemia, ergot poisoning and necrobacillosis in pigs were diagnosed in conjunction with the deputy state veterinarian and preventive measures advised and outlined.

Livestock Improvement:

Stanley County Purebred Livestock Association, formed in the fall

of 1919, planned and constructed a sales pavilion which was built in the city of Ft. Pierre during the past winter. Survey of the county disclosed that 65 percent of the herds of the county were headed by purebred sires. Through this association 95 purebred sires have been secured for farmers within the county. A livestock breeders' tour was held at which time 50 men visited the purebred herds within the county, and demonstrations were held pointing out the types to be desired. The county agent acted as secretary of this association.

Marketing:

Fifteen thousand pounds of wool were marketed cooperatively through the farm bureau, at an increase of 10 cents per pound over local market price. Three thousand sixty-six pounds of Cossack alfalfa seed and 450 pounds of Grimm alfalfa seed has been marketed by local growers through the farm bureau.

Crop Improvement:

In 1918, 9,000 pounds of Early Amber cane and 2,300 pounds of Dakota Sorgo seed were secured for farmers within the county. Three thousand one hundred sixty-six acres of cane is being grown by 171 farmers. In 1919 this was increased as follows: 24,000 pounds Early Amber cane seed and 1,200 pounds Sudan grass seed secured for farmers within the county. It is estimated that 3,000 acres of cane and 200 acres of Sudan grass were planted from this amount.

Four demonstrations with Cole oats, two with Sixty-day oats; four with Acme wheat; three demonstrations with flax and one with Alta corn are now being carried on within the county.

Boys' and Girls' Club:

Four sow-litter clubs within the county number 54 members are doing effective work in the promotion of better livestock within the county. Two club sales held last fall netted 27 club members \$4,696 on 130 pigs. A club exhibit was held in connection with the county fair.

Farm Management:

Six hundred farm account books were distributed within the county and four men are carrying on cost account records from which it is hoped to get valuable information as to crop production in the west river area.

TURNER COUNTY—O. B. Dunbier, County Agent

The Turner county emergency farm bureau was permanently organized into the Turner county farm bureau July 1, 1919. The office of the county agent was changed from Hurley to Parker on October 1, 1919.

Livestock Improvement:

The livestock sales association has organized with plans for the building of a \$20,000 sales pavilion in Parker. Assistance has been given to a number of farmers in purchasing purebred livestock. The sow-litter club held a public sale on October 5. It was well attended and good prices paid for all hogs.

Farm Labor:

Eighty-five farm laborers were supplied to farmers for corn husking last fall.

UNION COUNTY—P. J. Crandall, County Agent of May 1, 1920**A. L. Haynes, County Agent after May 1, 1920**

The Union county emergency farm bureau was organized into a permanent farm bureau July 1, 1919.

Livestock Improvement:

Organized a swine breeders' association and held one purebred sale. Four livestock shipping associations were organized during the year. Six shipping associations in the county did \$1,200,000 worth of business during the year. Secured five carloads of feeder hogs for farmers of the county.

Junior Club Work:

Organized eight junior extension clubs. Seven clubs completed the work. A total of 117 members were enrolled and 89 members completed the club work.

Animal Disease Prevention:

More than 1,180 head of hogs have been vaccinated for cholera through the efforts of the farm bureau.

Labor:

Seven hundred ten farm laborers were supplied to 460 farmers of the county.

Crop Improvement:

Ten demonstrations with Soybeans, totaling 174 acres, were sown.

Orchard Improvement:

Six demonstrations of spraying, pruning and marketing of fruit were carried on with orchards with a total of 64 acres.

Poultry Development:

One hundred thirteen birds were shown at a poultry show at Beresford. Organized the Tri-County Poultry Association, including Lincoln, Clay and Union counties.

Farm Management:

One thousand six hundred farm account books were secured for the county.

Exchange:

Thirty thousand dollars worth of business was carried on through the exchange list.

Miscellaneous:

It has been estimated that the total net saving to the county through the efforts of the farm bureau is over \$37,000 for the past year.

WALWORTH COUNTY—Omer Mills, County Agent

The Walworth county emergency farm bureau was organized into

a permanent farm bureau July 1, 1919.

Livestock Improvement :

Production of purebred livestock has been encouraged and assistance given the farmers in starting new herds. Approximately 30 purebred herds have been founded in the county.

For the purpose of club work, 34 head of registered cows with calves were brought to the county and the number of club stock now numbers near 90.

Crop Improvement:

Five farmers conducting successful demonstrations of Sixty-day oats.

One farmer has a splendid 100 acre sweet clover demonstration.

Five farmers carried on demonstrations with rye, totaling 115 acres.

Club Work:

Two cow-calf clubs were organized, one a shorthorn club of 14 members, and one a Hereford club of 18 members.

Labor:

The county agent's office has been successful in keeping labor demands filled with unusually little delay.

Barberry Eradication:

Three barberry bushes were discovered and dug up early in the season. The bushes were used in two demonstration talks before a total of 73 farmers.

Shipping Associations:

Assistance has been given in starting cooperative shipping at one point.

Rodent Control:

No special campaign against rodents has been made but poison has been supplied to 57 farmers who have used it effectively.

Emergency Work:

In cooperating with the Selby Equity Exchange, a seed potato survey was made and seed potatoes were secured for 53 farmers.

YANKTON COUNTY—Dallas L. Keck, County Agent to Jan. 1, 1920

Carl A. Oppel, County Agent after Jan. 15, 1920

The Yankton county emergency farm bureau was organized into a permanent farm bureau July 1, 1919.

Livestock Improvement :

The Yankton County Livestock Breeders' Association has been organized. A sales pavilion was built costing \$45,000. A livestock breeders' directory was made for the livestock breeders of the county. Three livestock shipping associations were organized and a survey was made of the purebred livestock in the county. Assistance was given in placing 27 head of purebred livestock on farms in the county.

Boys' and Girls' Club:

One hundred eighty-three members were enrolled in the club work and 14 clubs in the following projects; Four poultry, one sow-litter,

three baby pork, three sewing and three garden clubs.

Animal Disease Prevention:

One thousand five hundred hogs were vaccinated for cholera. Eight meetings were held relative to hog cholera control and carcass disposal.

Crop Improvement:

Eight farmers carried on corn breeding demonstrations and three farmers conducted soybean demonstrations.

Barberry Eradication:

Eight hundred barberry plants were destroyed in the county.

Labor:

Six hundred ninety-two men and fifty women laborers were secured for farmers.

Drainage:

Two drainage projects were surveyed, which will be completed this fall.

Miscellaneous:

The total estimated saving to the county through the efforts of the farm bureau work was more than \$8,000. A county wool growers' association was formed and about 10,000 pounds of wool will be marketed.

Project No. 3 SHORT COURSES, H. E. Dawes, Leader

During the year 86 meetings were held with a total attendance of 11,355. Some of these meetings were jointly attended by men and women, and some were not. There were two meetings attended by women only, and 26 meetings attended only by men.

The following is a statement of short courses by counties:

County	No. of meetings held	Total Attendance	Avg. Attendance
Campbell	2	190	95
Charles Mix	5	420	84
Clay	6	256	42.6
Clark	1	325	325
Codington	3	1350	450
Corson	5	245	49
Custer	4	71	17.7
Beadle	5	1019	203.8
Brookings	8	508	63.5
Bon Homme	2	215	107.5
Davison	2	297	148.5
Edmunds	1	60	60
Fall River	8	2895	361.8
Hutchinson	1	37	37
Hamlin	1	124	124
Indian Reservation (Pine Ridge)	3	450	150
Kingsbury	1	150	150
Marshall	6	404	67.3
McCook	1	34	34

County	No. of meetings held	Total Attendance	Average Attendance
Minnehaha	4	363	90.7
Pennington	5	600	120
Stanley	4	125	31.2
Tripp	6	990	165
Union	1	140	140
Ziebach	1	87	87
TOTAL	86	11,355	

In all cases demonstrations were made. Each speaker or demonstrator was equipped to make convincing proof of the accuracy of the statements made. Samples of grain, corn, forage plants, vegetables, and specimens of poultry were brought before the audience and used to demonstrate the truthfulness of the things talked about. In the case of judging horses, cattle, hogs and sheep, interested parties were asked to accompany the speaker to the barn or lot where individual animals were provided for demonstration purposes.

In home economics, canning, cooking, baking or sewing demonstrations were made. If the subject was home conveniences, the things talked about so far as possible, were exhibited, explained and the saving accomplished by their use calculated.

The Portland Cement Association loaned us a man to discuss the use of cement in farm buildings. It was customary for this man to use the sand and gravel of the locality for demonstration purposes. This was examined, tested for dirt and foreign material, and advice given as to its use or rejection and the proper proportion of mixture with Portland cement.

The work on the Indian reservations has progressed in a gratifying manner. More work has been done on the Pine Ridge reservation than any other, but a good opening has been secured on the Cheyenne and Yankton reservations. The superintendents, teachers and "boss farmers" have cooperated in a most satisfactory manner. In this work stress has been laid on the production of food, garden plants and the growing of seeds of these plants.

In planning for the short courses, consideration is given to seasonal and sectional subjects. In the winter and early spring stress was given to the care of seeds and their preparation for sowing and their adaption to the locality, also to the soil and seed-bed. Later on, methods of cultivation, reasons for and purpose and effect of cultivation were brought out. Then the activities of the plant were discussed. What is the plant doing? What kind of weather is required to enable the plant to do this work? What kind of food supply? Where does the plant get the materials out of which it makes starch out of other food substances? What can the farmer do to help the plant produce a large yield? Is the farmer responsible for any part of the yield, or does nature alone give the increase? These and similar questions are a suggestive outline of work undertaken and accomplished. In all cases the plant or plants were used for illustrations before the audience, and in some instances the audience was taken into the field to actually observe what was going on among the plants. Field demonstrations of seed corn gathering were made and the reasons explained why some corn plants

were better parents of the seed ear than others, and why the knowledge thus obtained of the plant was valuable in the increase yield of corn due to the field selection of the seed. Methods of drying and taking care of seed corn was discussed and reasons given why this seed, more than other grains, requires special care and attention.

During the past six months there have been some requests from church societies to discuss the general subject of agriculture and its relation to the church, sometimes at the regular Sunday morning services, and sometimes at special meetings arranged by pastor and members of the organization. These requests have always been complied with and it is apparent that this method of cooperation is desirable, helpful and satisfactory.

During the past year we received some very efficient help from the state department of immigration and also from the state department of markets.

Cooperation was given to the state department of education in their educational drive.

Project No. 4 BOYS' AND GIRLS CLUB WORK

Paul J. Scarbro, State Club Leader.

A. L. Haynes, Assistant State Club Leader until May 1st.

Irene Dunne, Assistant State Club Leader.

Selma Rorgstad, Assistant State Club Leader until June 1st.

Geo. H. Valentine, Assistant State Club Leader from June 1st.

The extension work in the 44 organized counties is under the direction of the county farm bureau. Club work is a part of the program of each of the counties. The county agent, home demonstration agent and county club leaders are all assisting with the juniors and are club leaders in the county.

Leadership

The success of each club depends largely in the ability of the local leader. The past year we have had 464 volunteer local leaders. This leadership has been a great factor in the success of the work. Crops and stock breeders, teachers, bankers and homekeepers have made up the leadership.

State Poultry Show

With each of the club projects the year's work is completed by a large exhibit and demonstration at the state show. The poultry club class was well filled and was an excellent exhibit showing some constructive work in the poultry clubs. During the week club teams gave demonstrations in culling, breed types, trap nest and canning chicken.

State Corn Show

Corn breeding and development is one of the coming projects of club work. All champion county exhibits were sent to the state show and placed in classes with best corn growers of the state. Our state champion produced 83½ bushels in one acre, 70 bushels being selected for seed and contracted for at \$5 per bushel.

Boys 'and Girls' Club Camps

During the year seven club camps were held: One at State Col-Northern Normal, Aberdeen; one at Rapid City Indian School; one at lege, Brookings; one at the State University, Vermillion; one at the Newell experiment station; one at Aidmoie experiment station, and one at Kennebec high school and stock pavilion. A total of 658 club members were enrolled. A practical course in livestock, crops, farm accounts, farm machinery and rope work was given the boys. Demonstrations in canning, baking, sewing, and home conveniences were given for the girls. Every boy and girl that attended the camps went home with a new vision for leadership.

State Fairs

The state club leader was appointed superintendent of the state fair club camp. The champion girls' demonstration teams in bread making, sewing and canning and the boys' judging teams in crops and livestock, are entertained for the week by the state fair management. Exhibits of livestock, corn, potatoes, bread, wool, sewing and canning, were exhibited by the club people. Three hundred fifty champion club boys and girls were the guests of the state fair board and enjoyed educational benefits of a week at the state fair. Five thousand dollars was offered in premiums, special awards and educational trips.

Organization

The work is demonstrated through 14 different projects.

Canning Club: Canning at least 50 quarts of vegetables, fruits and meats.

Sewing Club: Practical lessons in sewing and making one's own clothing.

Bread Baking: Practical lessons in bread making. More home baked bread from home milled flour.

Hot School Lunch Club: A club in every rural school of the state and a good hot lunch every day of the year.

Garden Club: Cultivating, marketing and conserving garden products from two square rods to five acres.

Corn Club: One to forty acres in production of acclimated seed.

Potato Club: One to forty acres. Better methods of potato culture and raising certified seed.

Grain Club: Five to forty acres of grain. Demonstration of crops rotation and use of registered seed.

Poultry Club: Thirty chicks to managing the home flock.

Sheep Club: Two to twenty ewes or a small flock of sheep on every farm.

Sow-Litter Club: One to ten sows. Production of better hogs and more pork on the farm.

Baby-pork Club: Feeding project. More pounds of pork at a minimum cost.

Cow-calf Club: One to ten head of cows with calves. Improved livestock.

Baby-beef Club: Early maturity and economic beef production.

The following is a report of clubs organized, total enrollments and results. July 1, 1919—June 30, 1920.

Project	Clubs Organized	Enrollment	Value of Products	Cost of Production	Net Profit
Corn	38	384	\$ 38936.75	\$ 15360.23	\$ 23576.52
Potato	18	191	4803.65	2228.97	2574.68
Garden	107	1922	16158.25	6165.72	9992.53
Canning	63	671	18962.46	9300.06	9662.40
Poultry	79	988	29620.24	11856.00	17764.24
Baby-Beef	16	59	7854.67	3764.79	4089.88
Baby-Pork	36	339	7278.33	4230.72	3047.61
Sow-Litter	76	1155	808502.96	251613.75	556889.21
Sheep	11	60	6199.20	4154.40	2044.80
Sewing	81	841	10159.28	5634.70	4524.58
Cow-Calf	4	42	31500.00	17063.36	14436.64
Totals	529	6652	\$ 979975.79	\$ 331372.70	\$ 648603.09

HAMLIN COUNTY—E. A. Parker, County Club Leader

Hamlin county farm bureau has made the junior extension work one of the principal programs of work in the county. The work has been organized with the teachers of the county cooperating, which has added interest to the work.

The following clubs were organized:

2 Sewing Clubs	11 members
1 Bread Club	6 members
1 Canning Club	8 members
2 Garden Clubs	24 members
1 Potato Club	12 members
1 Poultry Club	14 members
1 Sow-Litter Club	37 members

A club achievement and exhibit day held at Hayti was largely attended and illustrated the utility of the club work.

In 1918 the canning club of Hamlin county won the state championship by its demonstrations at the state fair. At the 1919 state fair the sewing team from Castlewood, Hamlin county, won state championship honors. At the Interstate Fair, Sioux City, this team took first place in sewing demonstrations.

HAAKON COUNTY—Nellie Peterson, County Club Leader

Haakon county was one of the first counties to employ a county-club leader. Splendid results have been obtained and the boys and girls have put over a big program of work.

The following clubs were organized in Haakon county:

2 Corn and Crops Clubs	35 members
2 Garden Clubs	15 members
1 Poultry Club	7 members
5 Sewing Clubs	63 members
1 Sow-litter Club	21 members
1 Tree Club	18 members

The first corn and crops club in the state was organized by Miss Peterson and County Agent Sanderson. The club is working on a two year rotation plan, demonstrating the possibilities of raising Acme wheat and acclimated Alta corn.

The first tree club of the state has been organized in Nowlin, the club members demonstrating the results of cultivating and giving proper care to shade trees and wind breaks.

The county sent a delegation of 25 boys and girls to the club camp at Rapid City. This was the largest delegation from any county in attendance.

The county fair board has erected a club building on the fair grounds where the club members will have their exhibits and demonstrations. At the county fair, September, 1920, the club members will camp on the grounds, giving home economics and livestock demonstrations each day of the fair.

**MINNEHAHA COUNTY—Club Leader, J. H. Hamilton, January 1, 1919,
to April 1, 1920**

Club Leader, Eva Bickle, April 1, 1920

Minnehaha county, one of the first counties in the state to employ a full time county club leader, has had excellent success with club work. The executive committee of the farm bureau firmly believes in proper leadership for boys and girls through club work as it has seen the results.

The following clubs have been organized and are actively engaged in project work. They have a factor in the development of practical agriculture in the county.

2 Corn Clubs	15 members
1 Cow-Calf Club	5 members
1 Garden Club	7 members
2 Poultry Clubs	13 members
5 Canning Clubs	32 members
2 Bread Clubs	11 members
6 Sewing Clubs	41 members
5 Sow-Litter Clubs	53 members

The club members of the county have been leaders in demonstrating good farming methods and practices. The judging teams and girls' demonstration teams have been leaders in conservation of food products and clothing. Pearl Brush of the Brandon canning demonstration team took state championship as individual demonstrator. The corn clubs of

the county are demonstrating seed corn production. Don West, of Dell Rapids sow-litter club won first on a junior boar at Huron and Sioux City and fourth at the International at Chicago. Minnehaha county corn club boys won first and second on 10 ear samples and sweepstakes at the state corn show in the boys' class and third on single ear in open class.

GRANT COUNTY—Club Leader, May Kiethline, April 1919, June 30, 1920

Club Leader, Gladys Skouge, July 1, 1920

The junior work in Grant county under the leadership of a full time club worker has made very definite progress.

The following clubs have been organized:

1 Corn Club	12 members
8 Garden Clubs	108 members
3 Poultry Clubs	25 members
1 Baby-Pork Club	7 members
2 Canning Clubs	32 members
5 Sow-Litter Clubs	64 members
7 Sewing Clubs	87 members

The sow-litter clubs have been a factor in the program of livestock development in the county. During the year the members had one inspection tour. The two sales made an average of \$67. The highest for a Poland China, a gilt, was \$140. John Nord of the Milbank club was a member of the state champion livestock judging team.

The canning clubs have demonstrated the utility of the cold pack method. A community canning kitchen is maintained with a full time paid leader. Many of the club girls are contracting the canning for families in the city, one girl doing the work for 12 families. Sadie Heath of the Milbank club was state champion, canning 482 quarts of vegetables, fruits and meats during the year.

The sewing team of 24 members, at Strandburg, was the first clubs in the state to finish their work with a 100 percent record, each one of the girls finishing the project. Their exhibit at the county club rally day would do credit to any sewing exhibit in the state.

A county club rally day and exhibit was held at Milbank the last of May. All of the club members of the county attended. In the parade at noon each club represented their project with a decorated float. A banquet was served at the St. Hubert hotel. In the afternoon a program and demonstrations were given in the high school building. Senator Amsden, president of the county farm bureau, was the principal speaker.

Office Report

Total number of letters written -----	6,141
Total number of stencils cut -----	236
Records kept -----	28
Miscellaneous records -----	4
Project (reports and enrollments) -----	24
Enrollments -----	6,869
Pieces of literature mailed out -----	131,392

Single sheets run on mimeograph -----	119,337
Single sheets run on multigraph -----	88,075
Pieces of literature stapled -----	13,600
Number of pieces of literature received from the Wash- ington office and placed in mailing room -----	38,808

Project No. 5 HOME DEMONSTRATION WORK

Selma Rongstad, State Leader

The success of home demonstration work in South Dakota can best be seen in the number of homes adopting the practices and making them a daily habit, and not in the number showing interest only by attending the demonstrations and lectures given by the agent.

Demonstrations were carried on in 180 homes last year in the two counties having home demonstration agents. All of these housekeepers influenced their neighbors to better home making.

The home problems carried on are as follows:

1. Food Production.
 - Poultry
 - Gardening
2. Food Preservation.
 - Canning (fruits, vegetables, meats, game, etc.)
 - Drying
 - Curing of meats
3. Nutrition.
 - Child feeding
 - Hot school lunches
4. Clothing.
 - Remodeling.
 - Textiles
5. Home Management.
 - Household accounts
 - Household conveniences and arrangement.

Food Production

Poultry work has been promoted in South Dakota through demonstrations of poultry selection, breeding, raising, feeding, housing and culling. Twenty-six lectures and 19 demonstrations were given reaching 709 people. Many flocks have been improved when it is found through culling demonstrations that 40 or 50 percent of the flock is nonproductive. A poultry association was organized in Clark county during the poultry show this year.

Food Preservation

Seventy-four demonstrations and lectures were given on food preservation reaching a total of 1,804 housekeepers. Nineteen training classes with an attendance of 276 were held to train demonstrators, and 109 homes were visited. As a result 308,733 quarts of fruit, 302,937 quarts of vegetables, 227 quarts of poultry, 928 quarts of jelly, and 650 quarts of meat were canned, 9,454 quarts of vegetables were brined, 5,432 pounds of vegetables were dried, and 52,000 pounds of pork valued at

\$13,000 cured. The housewives are realizing the value of canning their own meats and vegetables. Several meat canning bees were held in Clark county this year where the entire beef was canned.

Nutrition

The hot school lunch project in which home demonstration agents have had a prominent part has been most successful. Sixty-five lectures reaching 1,820 people and 4 demonstrations with an attendance of 150 have been given. As a result 22 schools carried on the hot school lunches. Parents and teachers report from schools where the lunches were conducted that noticeable improvements are seen in scholarship, in health and desire to attend school.

An exhibit of hot school lunches was prepared for the state fair. This consisted of the equipment necessary, food containers, good and poor lunch boxes, good and poor lunches, and suitable hot dishes for the noon lunch. The exhibit attracted much attention and many questions were asked.

The hot school lunch has proved the opening wedge for the study of food selection not only for the child, but for the whole family. Through recent weighing and measuring tests it has been found that a large amount of underdevelopment and malnutrition exists among rural children. An effort should be made and as much money expended to safeguard the child life on the farm as to safeguard other life that builds up farm homes. Campaigns have been put on in the interests of culling poultry and cow testing, but a campaign to bring child life up to the standards of nutrition and development is far more important. It is hoped that a food specialist can be added to the state force to assist in this work.

Clothing

One hundred fifty-six demonstrations and lectures reaching 6,027 people were given on clothing. As a result 715 patterns on made-over garments were sent out. Thirty-five garments were reported made over with an estimated saving of \$1,094. This is only the beginning of a drive for "Clothing Efficiency and Better Buying", which will help the woman of moderate income who wishes to make her own garments. A number of exhibits of made-over clothing were held where demonstrations were given on cleaning and remodeling as well as testing fibres. This has helped to reduce clothing expenditure and helped to give better satisfaction for a given amount of money and given expenditure of time.

Home Management

One of the greatest needs in South Dakota is help in the house, which can best be met under present conditions by having convenient equipment and better arrangement. Five demonstrations were given and 14 homes were visited in regard to household conveniences. Exhibits have been held of labor saving devices. As a result 2 washing machines, 28 fireless cookers, 26 steam cookers, and 63 other conveniences (duplex forks, mop wringer, tray wagons, iceless refrigerators, dish drainers, etc.) were purchased. Two families installed water systems and 9 rearranged their kitchens, an important factor in efficient housekeeping.

Household Accounts

Seven lectures and 24 home visits were made in regard to keeping household accounts. Thirty-four housekeepers agreed to keep accounts. Those reporting state that this is the way of knowing that they are getting the most from a dollar. They also report that it is important that each member of the family know how much they are spending. An account book is being prepared to meet the needs of South Dakota.

General Summary

During the year the office had 728 office calls, and 280 telephone calls. Three hundred fifty-five letters and 190 press articles were written. Five hundred sixty-five homes were visited in regard to home demonstration work. Twenty-one thousand two hundred sixty-three bulletins from the United States Department of Agriculture, 1,213 from State College, and 4,493 circulars from other agencies have been distributed. Eighteen thousand eight hundred thirty-five people have been reached through lectures and demonstrations.

CLARK COUNTY—Mary A. Dolve, Home Demonstration Agent

Poultry:

A poultry show was held in Clark county. Considerable interest was shown, and in spite of weather conditions there were 255 entries. Ed. L. Hayes of the Dakota Farmer, gave a number of culling demonstrations. The dressing and canning of chickens were taken up at this time. Shortly after the show a poultry association was organized. This association has 35 community chairmen scattered throughout the country to secure members and carry out community programs. A series of 13 culling demonstrations were given with a total attendance of 156. As a result a number reported that they had culled their flocks and those of neighbors and found that 50 percent of their flocks were non-producers. A number of demonstrations were given in caponizing and raising of capons generally. Five lectures, 19 demonstrations and 30 home visits, reaching 415 people, have been given on culling, caponizing, preserving of eggs, and disease and poultry house construction.

Hot School Lunches:

The hot school lunch was carried on in three schools in Clark county last year. The lunches proved successful and these schools served as demonstrations and factors in stimulating interest in other schools. As a result 14 schools installed the hot lunch this year. The system that works out best is where the pupils are made to see the value from a health standpoint. In every case where the hot lunch has been conducted both parents and teachers report noticeable improvements in scholarship, health and desire to go to school.

Food Preservation:

Several meat canning bees were conducted by the agent and in these communities other bees were held by the women where an entire beef was canned. A pamphlet was prepared by the agent on cutting up beef and method of canning the different cuts. Twenty-four girls were enrolled in a canning club. A team of three girls won fourth

place in demonstration work at the state fair.

A community canning kitchen was installed in the Clark creamery. It was found that about 60 pounds of steam was carried at all times and by simply connecting the various fixtures with the main pipe, canning could be done with live steam. The total cost of equipment and labor in installing cocks and steam valves was \$50. For work the kitchen is very efficient with the exception of the following: not enough room, too much noise from creamery, and a rather wet floor. The kitchen was open on Tuesday with the home demonstration agent in charge. As the vegetables were not especially abundant, the most that was canned any one day was 100 quarts.

Clothing:

There were 21 girls enrolled in sewing clubs. The Clark sewing club finished 100 percent. A member in the sewing club work took third place in individual sewing exhibit at the state fair.

Community Enterprises:

The home demonstration club organized by the agent stimulated interest in beautifying the consolidated school and church grounds of the community. F. E. McCall, extension specialist in horticulture, was secured to landscape the grounds and to give an illustrated lecture pointing out what could be done. This resulted in 360 trees being planted on school grounds and a large number on the church grounds. Considerable tree planting was done in this community following the above demonstration.

Fairs:

At the county fair the farm bureau occupied about half the space in the educational building. The home demonstration projects shown were hot school lunches, household accounts, sanitation, labor-saving devices, and boys and girls club work. The club exhibits were canning, sewing and gardening. The club poultry was shown in the poultry building. The club canning team gave canning demonstrations.

Summary

One hundred forty-three and three-fourths days have been spent in the field and one hundred forty and one-fourth days in the office. Seventy-two conferences, 146 home visits, and 33 club member visits have been made. There have been 80 meetings of various sorts, and 32 demonstrations have been given. Two hundred forty office calls have been received, 2,856 letters have been written, 802 bulletins distributed, and 41 articles for the local papers and Farm Bureau News have been written.

SPINK COUNTY—Elva Cronk, Home Demonstration Agent from

May 1, 1920

Home demonstration work was started in Spink county June 1, 1918. It was discontinued in the fall of the same year because of lack of funds. It was taken up again this spring to continue during the summer. The people of Spink county have proven to be good cooperators. There is great need for home demonstration work in this county.

Work has been done along the following projects:

Food Preservation:

We have had a number of calls for canning demonstrations. The housewives are anxious to can their meats and vegetables. We have found that many housekeepers are still using canning compounds to preserve vegetables. The use of canning compounds has serious effects upon digestion and health, and the housewife is glad to learn of this and to get a better method of canning.

Home Management:

Help in the house is one of the greatest needs in Spink county. To solve this problem a number of demonstrations have been given on household conveniences and better kitchen arrangement. In communities where the homes have electricity, demonstrations have been given showing equipment run by electric power. As a result, washing machines, vacuum cleaners and manglers have been purchased. A lecture and demonstration was requested on household accounts in one community. During the meeting the housewives agreed to keep accounts. The result will be seen later.

Clothing:

Three girls' sewing clubs were organized in the county. They have held meetings and they will compete in demonstration work. The winning team will get a trip to the state fair.

There is a great need for instruction and demonstration on textiles and better buying and shorter methods of sewing.

Nutrition:

A girls' bread club was organized. The members of this club have held meetings during the summer and will compete in demonstration work for a trip to the state fair. The girls have seemed interested and enjoyed the work and noticeable improvements are seen in their methods of housekeeping.

It is planned to start hot lunches in a number of rural schools this year.

BROWN COUNTY—Edith A. Sloan, Home Demonstration Agent

Organization:

Campaigns have been put on to form clubs in the chief communities and choose programs of work. Organization has been furthered this year by holding community fairs. Exhibits at these fairs were of high quality and the interest shown was good. In each case steps were taken to crystalize the community spirit into community organizations.

Household Accounts:

To interest the women of the county in keeping accounts, the agent started a county contest. Mr. George Kemper, secretary of the farm bureau, offered \$30 to be used in purchasing prizes for the prize winning accounts during the year. In two communities there were women who have been working with a budget and keeping accounts for a year. One of these in each community was secured as a local leader to assist their groups. At the end of the year the account books were

called in and judged by the Clark county home demonstration agent.

Early in the next year a household accounts meeting was held. A program of talks and discussions on accounts, account book and budgeting had been arranged. Prizes were awarded as follows: 1st—wheel tray, 2nd—set of pyrex ware, 3rd—coffee percolator. The women were interested in having a more complete book for account keeping another year.

Household Conveniences:

From a survey taken in the county it was found that one of the greatest needs is help in the house. This can best be met under present conditions by having convenient equipment and arrangement of it for doing the work. Two exhibits of labor-saving devices were held, the articles exhibited being loaned by stores in the communities. As a result 2 washing machines, 1 fireless cooker, 5 steam cookers, 17 other conveniences, such as mop wringer, tea wagons, and dish drainers, were purchased. Two families installed water systems and five families rearranged their houses.

Food Preservation:

Preservation of fruits and vegetables was not a main project this year since it was carried on in almost every community last year. However, there were many calls for help in canning vegetables and meat. Teams from one canning club were of great assistance in demonstrating preservation. Assistance was given in canning 1,913 quarts of fruit, 324 quarts of jellies, 1,824 quarts of vegetables, and the drying of 113 pounds of vegetables. Estimated value of fruits and vegetables preserved is \$1,410.40; 216 quarts of poultry and 314 quarts of beef were valued at \$255.20.

A questionnaire was sent out after a visit from G. A. Anthony, Bureau of Animal Husbandry, to obtain data regarding curing of pork. Returns from this showed the following facts: 90 percent of farmers cure their own pork; 60 percent of curing was done by brine method and 40 percent by the dry cure method. The average length of time of keeping was six months. About one-fifth had difficulty in keeping meat with brine method, while difficulties with dry cure were very rare. Assistance was given in curing 52,000 pounds of meat valued at \$13,000.

Clothing:

Exhibits of made-over clothing were held in four communities, and at the same time demonstrations in cleaning and remodeling clothing and testing textile fibres were given. The eight girls' sewing clubs have been of great assistance in interesting the women in the clothing project. The county demonstration team took prizes on their exhibits and won fourth place in demonstration work.

Hot School Lunches:

The agent visited several schools where a hot lunch was being operated and exchanged suggestions with the teacher in charge. Accompanied by the county nurse the agent visited eight schools and assisted in selecting equipment, providing recipes, etc.

Publicity:

The means of publicity in the county is through the farm bureau

notes, a double column of which is furnished all county papers every week. By the use of this method the regular readers are reached.

General

During the year 427 letters and 44 press articles were written and 356 bulletins were distributed. The agent had 85 office calls and 35 telephone calls relating to home demonstration work. 46 lectures were given with a total attendance of 1,054, and 16 demonstrations were given reaching 461 persons. One hundred two families were visited and 1,587 families adopted suggestions from home demonstration work.

Project No. 7 FARM MANAGEMENT DEMONSTRATIONS

**M. R. Benedict, Farm Management Demonstrator from
November 15, 1919**

Purpose of the Work

The original and predominant purpose of farm management demonstration work is to demonstrate to farmers practical and businesslike methods of recording and studying their farms as business enterprises, and to show how the efficiency, profitableness, and general welfare of these farms may be increased through better organization and a broader knowledge concerning the factors affecting farm profits.

As the work has developed, it has automatically broadened out to cover many related phases of farm economics which are closely related to and interwoven with the study of farm management. For example, the securing of better methods of leasing, the keeping of cost records, the study of income tax problems, and the fostering of cooperative marketing organizations are so closely related to farm management that they can scarcely be separated from it.

The aim of the farm management demonstration work in South Dakota has been to give assistance on farm economic problems wherever this would afford the greatest service to the state without giving special consideration as to whether these problems were altogether in the farm management field. With this aim in mind, the principal purposes of the work during the past year have been as follows:

- A. To introduce throughout the state, a simple, practical and uniform farm account book.
- B. To teach farmers how to keep a record in such a book, and how to use this record in studying their business after it has been kept.
- C. To demonstrate to farmers the principal factors affecting farm profits, and to show how farms may be reorganized to increase their profitableness and efficiency.
- D. To gather a number of complete daily cost of production records to be used in showing how farm efficiency can be

increased, what farm enterprises can be chosen most advantageously, and to inform farmers and the public in regard to the cost of producing farm products.

- E. To discourage the use of the destructive and unprofitable methods of leasing farms now so common in the state, and to encourage the use in place of these, of the partnership plan of leasing in which the landowner, the land operator, and the farm are all given fair treatment, and usually a fair profit.
- F. To give as much assistance as possible to farmers' co-operative marketing organizations, especially livestock shipping associations; as the management of farms cannot be put on a thoroughly sound basis without suitable market outlets.
- G. To furnish farmers with needed information concerning income tax rulings from the farmers' viewpoint.
- H. To furnish as much information as possible concerning factors affecting prices, general farm economic problems, etc.
- 1. To cooperate with all organizations working for economic betterment of the farmer.

Problems Worked on During the Year

Some work was done on all of these projects, the largest amount of time being used on the first, fourth and sixth.

Methods of Work

It was found that the most effective means of teaching farm accounting, farm business analysis, and the principles of farm organization was through the one day or two day farm management school. This also proves to be the best means of furnishing information on production costs, income tax problems, general economics, etc. In fact this plan seems capable of almost indefinite expansion. In these farm management schools a group of farmers in a given community (usually from 20 to 60) gather at a central point where arrangements have been made for some chairs, tables, and a blackboard. Each farmer is furnished with a farm account book, and about two hours is spent in entering an actual farm record, and summarizing it. This record is then analyzed, and discussed; and income tax ruling applying to it are considered. The remainder of the time is taken up in discussion of cost of production, farm efficiency factors, land problems or whatever farm management problems are of greatest interest in the community.

The cost of production work is handled by securing a few representative farmers in each of a number of counties. Labor, feed, and cash records are kept by these men with the assistance of the farm management demonstrator.

The work with cooperative associations is handled principally through meeting with groups of men who are interested in forming such organizations; or wish to make changes in them. Help is also given through committee work in connection with the state wide organizations.

Better farm leasing is being discussed in group conferences of landlords and tenants, the evils of the ordinary short-time lease being shown in connection with their effect on farm management, and on the community life.

Further information is given on these and other farm economic problems through general meetings, newspaper items, and the farm papers.

Results of Farm Management Demonstration Work

The farm management work had to be discontinued during a part of the war period owing to the fact that no one was available to take charge of it. Consequently, it was badly broken up, and most of the projects had been discontinued at the time the present demonstrator a view to extending it gradually as the interest and cooperation of the county agents developed rather then to attempt to become familiar enough with it to handle it effectively. Since most of the work must be directly handled by the county agents, one of the first steps in the work must be that of developing a farm management viewpoint on their part; as the majority of county agents have not had farm management training.

Farm Management Schools were held during January, February and March in the following counties:

Minnehaha, Union, Clay, Edmunds, Faulk, Brown and Lyman. Total number of schools, 15.

General meetings covering farm management subjects were held in the following counties:

Minnehaha, McCook, Hutchinson, Codington, Edmunds, Faulk, Hughes, Pennington, Brown, Brookings and Beadle.

The total number such meetings, 15. In addition to these, three conferences of state organizations were attended, and assistance given.

Cost of production records have been started, and are under way in the following counties:

Minnehaha, Lincoln, Union, Clay, Turner, McCook, Codington, Beadle, Spink, Faulk, Brown, Lyman, Clark, Hughes, and Stanley. Total number such records 44.

Work on Better Farm Leases

This work has not yet been taken up in the field, as most landlords and tenants do not make their leasing arrangements till along toward fall. All details have been arranged for three meetings to be held during the coming month. At these meetings which will be held in Clay, Moody, and Minnehaha counties, a definite partnership lease will be discussed and advocated to take the place of the very undesirable one year leases so common at the present time.

This year's campaign is more or less experimental in nature. It consists of giving considerable publicity to the partnership plan of leasing through local newspapers, extension publications, and the farm press. This is to be followed by three meetings or conferences of land-

lords and tenants at which the comparative merits of the different forms of leasing will be discussed.

The importance of good and constructive farm leases is shown by the fact that, in several of the best counties in the state, between 50 and 60 percent of all the farms are operated by tenants. If such a large proportion of farms is operated on the ordinary cash or share rent plan with the very frequent moves and temporary type of farming which naturally accompanies a lease of this kind, the outlook for the future is not encouraging. These methods of leasing ordinarily yield little return to either tenant or landlord, and very rapidly run down the farm. Long time occupation of the land is a necessity if a profitable type of farming is to be built up.

Work with Cooperative Shipping Associations

Since the extension division does not have a specialist in marketing, assistance is given to farmers cooperative organizations by several of the specialists. The farm management demonstrator has given assistance in cooperative marketing as far as time and opportunity would permit.

Assistance was given in drafting the constitution and bylaws of the South Dakota Federation of Cooperative Livestock Shippers, and the farm management demonstrator has since developed, with the aid of a committee from that organization, a set of uniform record blanks for the use of cooperative livestock shippers.

A bulletin on the organization and management of livestock shipping associations has been prepared in cooperation with the livestock specialist, and is now ready for publication.

Help was given in starting organization for two associations, and work is now being done in these communities with a view of organizing in the near future.

Farm Account Books and Income Tax Work

Arrangements were made for printing and distributing the farm account books at cost to supply farm bureaus, bankers, and others. In this way approximately 19,000 books were distributed. More than 6,000 names of farmers receiving books have been listed with the farm management department, and circular letters are sent to these men once every two or three months. This material has been supported by publicity material furnished to the press.

In connection with this work, ruling on various points in connection with the income tax were secured from the internal revenue office, and disseminated among county agents, bankers, and others. Every assistance possible was given to farmers in the way of help and instruction on the filling out of income tax returns.

Other Activities

Five other meetings were addressed on subjects relating to farm economics, and four articles have been furnished to the agricultural press on topics of this nature.

In cooperation with the boys' and girls' club department, a club record book has been developed, and a plan of giving some farm management work in the club camps has been worked out with good success.

It is likely that this work will be developed further next year.

Cooperation has also been given to the home demonstration department in planning a household account.

The farm management demonstrator has also cooperated with the state federation of farm bureaus in developing a plan of work in farm economics, marketing, etc.

Statistical Report

Farm Management schools held -----	15
Number of farmers attending farm management schools ----	345
Other meetings -----	5
Farm account books disseminated -----	19,000
Farmers who received books and are on mailing list -----	6,000
Number of circular letters sent out -----	21-15,660
Number of personal letters written -----	765
Number of cost records started -----	44
Bulletins -----	1
Account books planned -----	3

Project No. 8 **LIVESTOCK IMPROVEMENT J. C. Holmes,** **Specialist**

The different problems in this project may be included as feeding, breeding, stock judging and marketing.

The chief projects worked on during the year were: cattle and hog feeding, including rations best adapted for South Dakota condition; "Better Sire Drive"; organization of breeders' association; judging demonstrations, marketing of purebred stock through cooperative auction sales; cooperative livestock shipping associations; and wool marketing.

Cattle and Hog Feeding

Two methods were used in the improvement of cattle and hog feeding. (1) The county agents were asked to secure farmers to put on feeding demonstration and keep a record of the cost of gain. This project was worked on only in the feeding district. (2) In the western part of the state the feeding demonstrations were made in a series of meetings. The stockmen were advised as to the kind of feeds to use to get the best results, and the value of the silo was demonstrated. There were 60 silos built as a result of our efforts. Self-feeders were also advocated, and many farmers now use these profitably.

Better Sire Drive

This phase of the work was pushed through by the aid of publicity and farm visits. The drive has not been as successful as was anticipated, but this was due partly to the fact that it was only put on for part of the year. The various breed associations are interested and will assist during the year 1920-1921. Forty-five emblems of merit in the better sire drive have been sent out, and therefore earned by that many breeders. The purebred animals secured by my assistance were not checked carefully, but as nearly as I can estimate it that number was 60. There were 41 meetings held where feeding and

breeding were discussed, with an attendance of 1,407.

Breeders Associations

A number of county breeders' associations were assisted by talks on livestock and advantages of cooperation, and they were assisted with the proper kind of by-laws. Seven breeders' associations were organized along my line of work. The various breeders of livestock show a desire to form an association. The South Dakota Improved Livestock Breeders' Association and the Poultry Breeders' Association are cooperating with each of the breed associations.

Judging Demonstrations

These demonstrations were given on farms, at picnics, at shows and fairs. The latter was the most common. After the animals had been placed in their individual classes reasons were given for this placing. The people who attended the fair were much interested in these demonstrations. Twenty-five fair associations want to stage stock judging demonstrations again next year.

Cooperative Marketing

Assistance was given the various livestock cooperative shipping associations in organizing their state association. Relatively little has been done aside from this on the cooperative marketing of livestock by this office. The cooperative marketing of livestock is pretty well on its feet and the commission men are pushing it. The county agents also have this phase of the work pretty well in hand, and they are quite successful in organizing cooperative livestock shipping associations.

Considerable has also been done in assisting in the cooperative livestock auction sales. This has found expression chiefly in the building of sales pavilions and the purebred stock sales. At these sales, stock was inspected upon request of the organizations.

The state wool pool was organized and each county is being interested to pool its wool. While this project is not finished now, half of the wool crop in South Dakota will be sold through the South Dakota Sheep and Wool Growers' Association. Twenty-three local wool pools composed the State Sheep and Wool Growers' Association. Thirty-five meetings were held in marketing along the lines of wool pools, and a few of these were on cooperative livestock shipping and selling of purebred cattle and hogs. Two thousand three hundred thirty-nine people attended these meetings.

Publicity

The publicity used for livestock improvement was sent out through the college journalism department, through the Farm Bureau News and by circular letters to the county agents and members of the state associations. The most widely read were the news articles sent to the weekly papers, but the definite results came through county Farm bureaus and county agent and the State associations.

There were 95 meetings held in cooperation with the county agents and club leaders, and 15 were held with associations connected only indirectly with the college and farm bureaus. Generally speaking, much better results were obtained where assistance was asked for, and this

latter has been the case in practically all of the work attempted. Where the best results were obtained the people were already associated together in the farm bureau, farm association, farmers' club, wool pool or something in common already working.

Thirty-four farms and associations conducted demonstrations under my projects affecting 961 animals, and they were studied by 3,056 people.

Illustration of Cooperative Marketing

The South Dakota Sheep and Wool Growers' Association is without a competitor in being the most outstanding piece of livestock extension work put into operation in the state this year. The only phase worked up so far is the marketing of wool, but the marketing of lambs, sheep clubs, and many other things pertaining to the sheep industry will be taken up in time.

This association was conceived early in 1920 after figures from 1919 from 16 county pools had been compiled showing 350,000 pounds of wool sold at an average of 52 cents per pound, and that this wool had been divided, with the exception of two pools, nearly equally among the wool dealers in the state. The price was about 10 to 12 cents less than Iowa received through its state association. There was a general dissatisfaction among the sheepmen who had the better class of wool, and a good many withdrew their wool not selling in the pool. In many pools, this bringing of the wool together was just playing into the hands of the small buyer.

The county agents in January, 1920, agreed to get behind a state wool pool and a meeting was called for March 25 with 20 county agents and 9 wool men present. The roads were very bad and prevented some wool growers from coming, and in a number of cases the county agent was present and voted as per instructions of wool growers.

I had charge of the meeting, and Mr. Tom C. Stone, secretary of the Iowa Fleece Wool Growers' Association told the meeting how Iowa had done, and Theo. Wade of the U. S. Bureau of Markets gave a talk on cooperative marketing. The association was organized and started off. Constitution and by-laws were drawn up and executive officers were elected in part. After this meeting and a meeting of the board of directors, a contract was secured from the National Wool Warehouse and Storage Company of Chicago to handle the association wool. After this was decided 35 counties held meetings at one or more times and talked over the marketing of wool through the state association. Over 1,500 letters were sent out to sheepmen, and I was called to explain the system of marketing to 30 different counties and organizations. On July 1, we had nearly a million pounds of wool promised or started on the road to the state pool.

Reasons for a Cooperative System of Marketing

First: Wool has no established open and free market like it should have.

Second: Wool as a whole is bought of small producers like junk and old iron, and no premium paid for an honest fleece and quality, and an association that will market wool on its merits is the only way it will ever be remedied.

Third: One-half of the wool used in the United States is imported and we might just as well raise it profitably at home.

Fourth: Other states were given credit many times for the good wool that is produced in South Dakota, thus discriminating against our general product, discouraging the production of better sheep and wool.

Fifth: To organize a sound, fair future market insuring the producer a minimum selling cost and the actual market value of each individual's wool and all there is in it. An honest grading, open market selling and individual accounts and grading of their wools with the most reliable commission firm doing business, was assured the growers. A South Dakota representative will be on the market to look after South Dakota interests and cooperate with the commission firm in getting the highest price and fair play.

Plan of Work

1. Feeding

Cattle

- Fattening demonstration and balanced rations.
- Dairy rations for milk and growth
- Stock cattle ration and show herd
- Ensilage feeds, vs. dry feed for all cattle

Hogs

- Self-feeder
- Best rations for fattening. Demonstrations
- Growing rations and forage crops

Horses

- Growing rations
- Work rations

2. Breeding

- Better Sire Drive
- Breed Associations
- Herd type and pedigrees
- Trips, picnics, dinners to study herd management

3. Stock Judging

- Shows, fairs, picnics and meetings to hold demonstrations on stock judging, giving reasons.
- Butchering demonstrations
- Farm and personal visits on the farms
- Teaching club boys stock judging

4. Marketing

- Sales pavilion
- Shipping associations
- Purebred stock sales
- Shipping in and selling purebred stock
- State wool marketing associations

Project No. 9 AGRICULTURAL ENGINEERING**Ralph L. Patty, Specialist**

Under the project we are to emphasize the following problems in our demonstrations:

- Farm building construction
- Concrete construction
- Drainage of farm land
- Farm sanitation and home modernization,
including sewage disposal, water supply,
heating and lighting.

Drainage Demonstrations Emphasized

We worked on drainage demonstrations more than the others the past year for two reasons, the first because the past two or three seasons have been very wet and a great deal of drainage work is being done. The importance of the drainage demonstration work is not altogether to encourage drainage, but of more importance to encourage the proper installation of the system so as to save the millions of dollars that have been wasted in the older states in putting in too small tile and following poor practices in laying out the system and laying the tile. The second reason for emphasizing drainage was because at this time it strengthened farm bureau work more than any other phase of agricultural engineering.

Better Farm Homes to be Featured Next Year

The coming year we expect to feature the work in better farm homes, emphasizing the septic tank which will enable the installation of running water and toilet facilities in rural homes.

Thirty-one demonstration tile systems were staked out, the size for the main tile figured, the systems laid out, the proper grade figured, and when necessary, help was furnished in securing a competent tiler who lays tile to an engineer's grade. These demonstrations were located in fourteen counties. Many preliminary surveys were run and estimates given on projects that will later develop into good demonstrations. Several of the above demonstrations were put on in cooperation with the county highway superintendents. All but three of these projects were carried on in cooperation with the county agent in the county.

Thirteen meetings, all out-of-doors and mostly field meetings, were held in connection with these demonstrations. Some of them were small, the total attendance being 221, with an average attendance of 17. In addition to the above demonstrations staked by ourselves we have used several projects staked by other engineers for demonstration purposes. We have held no meetings at them as yet, but expect to do so.

We took pictures of the projects before they were drained as far as possible, and have fairly good pictures of 12 of them. We expect to get pictures of the crops, inasfar as possible, of these same projects next year. We took a few such pictures last year on older demonstrations. We have used some of the "before and after drainage" pictures

in our farm paper publicity and are using some in a near issue of the Farm Bureau News for the state.

Publicity

Many newspaper articles of short length have been sent out to the newspapers in general over the state calling attention to the proper method of drainage, and articles have been furnished the local county papers calling attention to particular demonstration projects when we were in the county working on them. The nature of the tile drainage project is such that it furnishes a great deal of publicity in itself especially in sections where they are so common.

Of the above mentioned publicity methods the farm papers were probably most effective. We had a plan of work, but not written out.

Method of Getting Data

We will not get data on the above demonstrations until next year, but we obtained data from several projects of the year before. We arranged to get this data direct from the farmer so as not to throw the extra work on the county agent.

We have no paid assistants in this work.

We held three meetings to assist county agents along agricultural engineering lines during the year.

We use no local organizations outside of the farm Bureau in this work.

Farm Structures

We have not been able to keep as definite a record on the farm building demonstrations, and have not put as much time on this phase of the work as we did last year. Two thousand two hundred blue prints have been sent out during the year and many of these will undoubtedly result in demonstration building that we have no record of as yet. We ask that returns be made of them, but get few returns. We have specialized in hoghouses during the past year, having had a miniature model hoghouse on exhibit at the state fair last fall. We also had an available circular containing the plan of the house on the ground. Many demonstrations were started in this manner. Twenty-six demonstration hoghouses that we have record of, were added to our list during the past year, and pictures were taken of several of them. Ventilation of hoghouses has been emphasized.

Several barn plans were furnished during the year, and a circular on "A Good Farm Barn" was prepared and has gone to press. A circular on "Farm Building Ventilation" was also prepared.

As near as we can estimate, the number of hoghouses that have been affected in their construction by our demonstration houses is between 100 and 150. This is based partially on the county agents' estimates. These have not all been built exactly according to the plans furnished, but those that have not have incorporated good features from the demonstration houses.

We have not been able to get cost figures on enough demonstration hoghouses so as to serve our purpose in comparing them. As stated above the agents have kept approximate track of the number of buildings affected.

During the year we have made 40 personal visits to farms to confer with the owner about problems of construction, ventilation, etc.

In cooperation with our livestock specialist, Mr. Holmes, we have done considerable work on self-feeder plans during the past year. We have sent our 200 self-feeder plans. One of these feeders was the design of Mr. Holmes.

Our meetings were mostly devoted to the subject of hoghouses including hoghouse ventilation. They were few, but very good. Out of nine meetings addressed we had an average attendance of 126.

We planned four hoghouse tours during the year, and three of them were abandoned or postponed on account of extremely wet weather and bad roads. We hope to have one or two of them yet. The one tour from Minnehaha county to Moody county was carried on in cooperation with County Agents Kennard and Wilson, and was very successful. We have record of three houses that resulted from this tour, all of which will be used for demonstration purposes. The tour was given publicity in the local papers and in the Dakota Farmer.

There were seven county livestock sales pavilions built in the state and we aided in their planning in an advisory way. We met the directors in three of the counties and discussed different types of pavilions with them. In the other counties the help was given through the county agents.

Farm Home Modernization.

The value of modernizing the farm home has been emphasized. Demonstrations are carried on in connection with the demonstration septic tank for the disposal of the sewage. Since we go to the place, choose the best location for our demonstration septic tanks, and stake out the grade for the sewer pipe and tile we have a definite record of these demonstrations, and find they make a much more satisfactory subject for demonstration than heating and lighting plants for instance. We have done practically nothing on the latter this year.

Fourteen new septic tank demonstrations have been added in the state. These we have staked out. No doubt there will be many tanks that have been put in according to our blue print plan besides those that we staked out.

Eighty blue print plans of the septic tank together with the pamphlet to accompany it, have been sent out in answer to direct requests. Most of these requests are results of our demonstration tanks of this year or former years, and practically every plan has been used.

Water supply system and installations have been discussed in personal visits with county agents and otherwise in 17 instances.

Story of a Tile Drainage Demonstration. Put on in Kingsbury County, South Dakota

At the South Dakota state fair a year ago last fall the exhibition of the extension division contained a tile drainage demonstration exhibit made by the agricultural engineering section. This exhibit consisted of a true to life miniature of one of our demonstrations "before" and "after" draining with tile. It was this exhibit that started the tile drainage demonstration, finished during this past year, about which this story

is written.

Mr. Swartz while visiting the fair was attracted by the exhibit and was drawn into conversation by the engineer. The conversation brought out the fact that tile drainage demonstrations systems were being installed all over the state and their purpose was explained. Mr. Swartz then told us that he had already started to do some drainage but was a little doubtful of the project and asked us if we would come out with their county agent, look the project over and see if we could make a demonstration project of it. We got in touch with the County Agent Dick Lewallen, and arranged to go out of this place on the next trip to Kingsbury county. Bad weather intervened and we were unable to get out until March 20, the following spring.

We found approximately 40 acres of land under water. It was not in one big slough but divided into five or six bodies of water which cut off the farmstead from the farm land on the place and nearly surrounded the lots. The total drainage basin contained approximately 280 acres of land. We found that the tiler who professed to be a "surveyor" had recommended tapping the basin of 280 acres with an 8 inch tile on a grade of 1-8 inch per 100 feet or a trifle over .01 percent, and had already laid a few hundred feet of tile.

Recommendations

After looking the ground over we recommended 14 inch tile for the outlet, gave them a grade of .10 percent and tapped the slough at a depth of four feet so as to be able to have the minimum depth for any lateral at three feet or a little better. We staked the main ditch of 1,200 feet at this time but were unable to stake any farther in the first big slough as the water was over our hip boots. We recommend a concrete bulkhead at the outlet for protection, and showed Mr. Swartz how to construct the same. We estimated the size and number of additional tile, and they were ordered at once.

Favorable Location for Demonstration

This project was especially favorable for a demonstration as it was located on both sides of the C. & N. W. railroad and the largest slough was cut by the Black and Yellow trail, the principal automobile road through the central part of the state. A high grade was built here but was practically impassable every spring and very expensive to maintain.

Highway Superintendent Interested

A few days later we had a telephone call from Mr. Loyd, the Kingsbury county highway superintendent, who, by the way, is a banker and not an engineer. Mr. Lloyd said he was interested in the project and that if we could guarantee that we were really going to drain that grade he was willing to help Mr. Swartz with the expense. He was assured by him that we intended to drain it and consequently the highway funds were contributed.

Work Started

Work on the main ditch started under the tiler mentioned above but Mr. Swartz soon became uneasy about his work and at the first opportunity we stopped and checked up the first few hundred feet. The

tile was found off grade and some had to be taken up. Another experienced tiler who understood setting targets for an engineer's grade was secured from Minnesota and the work proceeded in fine shape.

Laterals Tile Staked

As soon as the big slough was tapped the main was staked on through and parallel laterals were staked on the "gridiron" system every 100 feet in the bottom of the slough and along the grade. As soon as the next slough was tapped the laterals in it were staked. It necessitated four or five trips to this demonstration before it was finished but it is worth it.

A picture was taken of the first slough after it was tapped by the big tile and a foot or two of water run off. After the lateral tile were all laid last fall another picture was taken showing the parallel lines.

Story in Farm Paper

We drew a plat of the system and made a blue print of it for Mr. Swartz and County Agent Lewallen, last fall, and then sent this plat and the pictures to our principal farm paper in South Dakota, the Dakota Farmer, together with a story which would bring out the main points in the good practices of farm drainage. This story appeared, but the pictures were not clear enough to print.

Meeting

Up to this time no good time for having a meeting had presented itself. We had called attention to the work being done on the project once or twice in the local papers. But we found that nearly every one in the country knew about it. The project was along the bad grade of the main highway and was close to town. The tiles were hauled along the road and the tilers boarded in town. This spring we were asked to look over a large drainage system south of this demonstration and see if it was feasible. We did this, after which Mr. Lewallen called a meeting at which we reported on the feasibility of the big projects, recommended a county ditch and gave them a rough estimate of the cost. We then gave a talk on tile drainage. We intended to refer to our demonstration close by, but before we got to it a gentleman broke in on the meeting and stated "that tile would not work in our soil here as the water would not get to them." (I mention this because it is a common opinion held by the old settlers here.) It happened this man lived eight miles in the opposite direction from our demonstration. We did not argue with him but told him we had put in this demonstration to show just what tile would do, that there were no surface inlets in the system. Several men immediately said they had been watching this system and assured the gentleman that the system was working fine.

On the 30th day of March this spring we stopped at this project and walked on dry ground, tillable at the moment, where we could not wade it with hip boots the year before.

We were handicapped somewhat in giving proper attention to other phases of agricultural engineering work because of having so much call for drainage demonstration work during the last two extremely wet years.

The work is altogether encouraging. The farm bureau work is

getting better established and we find that we are better able to choose good demonstration material and find better cooperation in carrying them out. The work is very greatly appreciated by the land owners.

Project No. 10 HORTICULTURE, F. E. McCall, Specialist

The duties of the extension horticulturist were divided between extension work and regular college teaching—six months July 1 to November 1 and the months of May and June following, were devoted to the extension activities. The balance of the year, November 1 to May 1, was devoted to the college routine.

However, during the winter months many demonstration meetings were held and three days were spent in short courses in Sully county.

Following is a summarized report of the year's activities:

Days in the office	44		
Days in the field during extension period	112		
Days in field during college year	22		
Lectures delivered	22	Att'd	682
Demonstrations	116	Att'd	2304
Total			2,968

Potato Improvement

Seed Selection Demonstrations

Bin selections	30	Average Attendance	10
Field selections	24	Average Attendance	45
Spraying	9	Average Attendance	14
Seed treatment	12	Average Attendance	6

While the attendance at the demonstrations seems small yet they mean more than the figures indicate. As an instance, the seed treatment demonstrations were poorly attended. In several instances the only persons present were those who owned the potatoes and the demonstrators. Yet this work was definitely followed up with the result that a large percentage of the neighbors round about treated their seed potatoes this past spring.

Marketing

One hundred fifty-seven cars marketed for growers, netting an average saving to the growers of 26 cents per cwt. These were sold in communities in the state where potatoes were scarce, reducing the price to consumers 64 cents per cwt.—An increase to growers of \$14,864 and a saving to consumers of \$36,544.

In this connection 137 growers were assisted in the purchase of spray material with a total of 28,770 pounds with an average saving of 21 cents per pound or \$6,041.70.

The assistance in securing spray materials was of far greater significance than the mere saving of a few thousand dollars on materials. It ment that above 40 percent of the purchasers used spray material when they would not, had they depended on the local supply at local prices.

Assistance was given to 20 potato growers toward potato seed

certification and market was found for 5,280 bushels of certified potato seed.

During the year 3 potato growers' associations were organized as follows:

Toronto Potato Growers' Association—Membership 75

Brandt Potato Growers' Association—Membership 37

Hamlin County Cooperative Certified Potato Growers' Association, with a membership of 9 but has recently increased to about 25. The State Potato Growers' Association was revived and the membership was increased from 50 to 176 with a definite program adopted along the following lines:

Potato Standardization

Seed Improvement

Potato Seed Certification.

The following emblem was adopted as official of the association and every local organization is urged to use it:

A SYMBOL OF QUALITY



Farmers Planning

Twenty-one demonstration farmsteads were started during the year. Assistance was given to 246 others as follows:

Arrangement of building	26
Arrangement of drives	19
Arrangement of fences and lots	30
Arrangement of windbreaks	70
Arrangement of ornamental planting	120

Blueprints were made of the 21 demonstration farmsteads. Carbon and pencil drawings of the others. A set of blueprints of model farmsteads was for each county agent.

There is a steady demand for landscape work among the better farmers who want to permanently improve their premises and is a type

of work that should not go by default.

During the year 4 parks were laid out for small towns of the state. These were so planned as to include the better classes of trees, shrubs and flowers, in order to demonstrate varieties better than the ordinary, also a good arrangement for group and color effect.

Minor Projects

The resident college duties interfered with the orchard pruning and spraying demonstrations, and these latter were abandoned.

Six demonstration shelter belts were started according to plans outlined in the project, and 39 that had been started in previous years were followed up.

The vegetable garden project was carried on and the 12 demonstration gardens that had been running for three years were brought to a most satisfactory close. The results secured are as follows:

Before Demonstration

Type of garden	Gross return per acre	Cost per acre	Net return per acre
Irrigation	\$ 75	\$ 17	\$ 58
Dry land	50	18	32
Humid	85	21	64
Average	70	18.66	51.33

During Demonstration

Irrigation	450.00	68.00	382.00
Dry land	205.00	51.00	154.00
Humid	369.55	57.90	311.65
Average	341.51	58.76	282.55

In conclusion the work has progressed quiet satisfactorily considering the division of time between the purely extension activities and the college duties. There is a decided interference in the work of both by such an arrangement, and the recommendation of the present specialist in horticulture is that the division of time between extension and college duties be discontinued after the present season. The incumbent must be wholly extension or wholly college.

Potato Improvement

Early in March, a farmer near Toronto, S. D., became interested in the improvement of his potatoes. To assist him in this work and to make a public demonstration in this section, a definite program was outlined and carried out as follows:

First, a uniform and desirable type of seed tubers was selected from his bins early in March. Fifteen bushels were thus selected. These were set aside for a seed plot. All his other tubers were sorted, only the more desirable were saved for seed. All diseased tubers were thrown out. This second selection, however was not as closely graded and selected as were the first fifteen bushels. All other tubers were treated in a corrosive sublimate solution for 1½ hours to disinfect from scab, blackleg and black scurf.

The fifteen bushels were planted in an acre on one side of the general field. The second selection was planted in this general field. Careful selection was made of the fields so as to secure the best type of soil and to follow approved rotation of crops.

Special cultural practices were followed as follows: First, dragging three times before the plants had become more than three inches high; then very deep cultivation with a disc cultivator virtually burying the young plants; then weeders were used for two cultivations; the disc cultivator was again used to ridge up the plants; and a surface cultivator was used for a final cultivation. This provided eight cultivations which kept the soil in the very best of condition. The plants were sprayed three times with a combined bordeaux arsenate spray to protect them against bugs and blight.

From the special acre selection, the most desirable hills of tubers were hand dug. These were saved for seed purposes for a seed plot in 1921. The balance was dug with machine diggers and saved for seed for the general field. Practically all the tubers of the general field were sold on the general market.

In hill selecting the seed tubers, only those hills were saved which had more than six marketable tubers of the desired type and were selected only from the healthy vigorous hills.

Comparison of yields were made which showed that this year's selection was a profitable proposition.

The seed plot yielded 246.5 bushels per acre.

The general field yielded 183.6 bushels per acre.

This grower and other potato growers in this community plan to follow this selection plan for a series of years which will add some definite data on potato improvement under South Dakota conditions.

Project No. 11 ANIMAL DISEASES Dr. G. S. Weaver

Specialist

The farm problems of this project deal with the prevention of animal diseases. Ordinarily the prevention of disease is handled under three headings, namely, education, sanitation and vaccination. Education means to teach the owner of the animal as to the characteristics of the disease. It is necessary for him to be familiar with the disease if he uses his knowledge intelligently to control the same. Information must be given him concerning the history of disease, the cause, symptoms, post mortem lesions and preventive measures concerning each individual disease.

The owner of the affected animals must be taught the essentials and meaning of sanitation. Prevention of disease is far more important than trying to cure. Sanitation means to preserve health. This can be done only by keeping the animals in a high state of resistance. It is well understood that any animal is more susceptible to disease if his resistance is lowered. For instance, a hog wallow is a hindrance in the life of a hog, and the owner of the hog must be taught that this is a fact.

The third principle in the prevention of animal disease is vaccination, and should be resorted to when the other two are exhausted.

Vaccination, or better immunization, is an unnatural way of preventing disease. Very few farmers understand the principles of vaccination and the number is not large that understand the technic of the various operations. Therefore, it is frequently necessary to give out that information, and in some cases to demonstrate by actually doing the operation.

Major Problems

All three of the above methods were used at different times. In some cases it was necessary to use only the educational method. At other times it was necessary to use education coupled with sanitation, while in some cases it was necessary to use all three methods in order to fully demonstrate that animal disease could be prevented. The most important diseases that were handled in 1919 were hog cholera, cattle scabies, anthrax, blackleg, necrobacillosis, and hemorrhagic septicemia.

The plan of work is usually carried out as follows: The specialist is notified by the county agent or local leader that a contagious disease exists in his locality. The specialist visits the county and the general survey of the conditions are made in company with the county agent or local leader. Farm visits are made at which post mortem demonstrations are held and the proper diagnosis given. Owners of exposed herds are next notified of the existence of the disease in the community and warned to isolate their own herds. One or several community meetings are immediately arranged for. At these community meetings lectures are given concerning the disease existing in the neighborhood. The lecture consists of giving information as to the history, the cause, symptoms, post mortem lesions and preventive measures. A circular letter is written by the specialist and sent out by the county agent to all farmers in the vicinity, warning them of the existence of the disease, its contagious nature and advising them to stay at home as much as possible. Along the circular letter usually a bulletin concerning the disease is sent out. This system of course is supplemented by follow-up visits by the county agent and in some cases the specialist. Cooperation is always encouraged with the local veterinarian. The State Live-stock Sanitary Board is notified of the contagious disease. A Vaccination demonstration is frequently necessary in connection with this plan of work and may in some cases be put on by the county agent, and in other cases by the specialist.

The writer was instrumental in helping to bring the veterinarians of the state in closer cooperation and in organizing a state association. This association has been used in many instances for the betterment of this work. Several lectures have been given to this body of men on the subject of different contagious diseases, and their cooperation has been secured. It has been the policy of the specialist to cooperate with many of the different breed associations. For instance, a lecture and demonstration on contagious or infectious abortion was given at the dairy association meeting, and another on contagious abortion at the livestock breeders association meeting. The specialist has appeared at many of the conferences held by county agents and outlined plans for the control of many of the contagious diseases. Cooperation has

has been established with the head of the veterinary department of the State College, and also other officials in the state such as the livestock sanitary board and the Federal bureau of Animal Industry.

The very fact that a contagious disease breaks out is evidence that the work should be started. In some cases the specialist was notified by the farmers themselves, but in most cases by county agents. Generally the services of the specialist were requested by the county agents, but, nevertheless, there were some instances where the specialist on his own initiative took action in the various outbreaks of disease. It was seldom necessary to form any other organization than the farm bureaus, but in one instance it was decided to form an organization to help to prevent the disease in Haakon county.

Contagious Diseases Fought Successfully

The animal disease project as carried out in Haakon county during the past year has resulted in a decrease in the number of cattle lost from contagious diseases. Blackleg, hemorrhagic septicemia and anthrax were the important diseases combatted by organization, proper disposal of carcasses and vaccination.

The organization consisted of fourteen animal disease committeemen elected by their respective communities. Each committeeman was appointed a deputy health officer for his community with instructions to make the campaign largely educational and use authority only at a last resort. It was the duty of the committeeman to do every possible thing to reduce the cattle losses in his community. The appointments were given publicity and news of the campaign were spread over the county. Community meetings of interested stockmen were held and resulted in definite action by those concerned. Where cooperative spirit existed the community succeeded in cleaning up all carcasses without resorting to law. Considering the whole experiment, the results have been satisfactory. The idea of the organization was conceived after considering that it was impossible for one health officer to properly look after a county of fifty townships. Cooperation was received from the State Livestock Sanitary Board.

The method of vaccination as first practiced did not give a lasting immunity and it was often necessary to vaccinate the animals three times a year in the badly infected territories. This worked considerable hardship and was frequently neglected with the result of the loss of one or two head. Even with three vaccinations a year many stockmen reported losses. After a thorough investigation it was decided to use germ free blackleg filtrate. Accordingly, over 8,000 doses were obtained for the ranchmen during the last seven months. The results from the new treatment have been satisfactory and no losses have been reported. Simultaneous anthrax vaccine and hemorrhagic septicemia vaccine have been distributed to the extent of 390 doses and 400 doses, respectively.

Another organization was formed in Jones county for the purpose of dipping cattle to prevent cattle scabies. A meeting was called by the county agent and the specialist was invited to be present. The farmers gathered in and heard a discussion concerning the characteristics of the cattle disease, scabies, and decided it would be a benefit to the community to have a dipping tank. After considerable discussion it was definite-

ly decided to have the tank and they preceded to form a local company. Stock was sold at so much a piece, similar to any other stock selling organization, and a manager appointed. It was the manager's business to make arrangements to have the tank built and after that time it was his duty to see that the tank was properly handled and the dips applied and everything in running order around the tank while it was in operation. Several of these cooperative dipping tanks have been built under the indirect influence of the specialist in animal diseases.

Although not an organization the local veterinarian has in a big sense been a great help to the specialist in carrying out work in the various communities. Very frequently the specialist is called upon by the local veterinarian for consultation in diagnosing various contagious diseases. In many instances the specialist has conducted post mortem examinations for the information of the local veterinarian, and frequently demonstrations have been carried out merely to inform a local veterinarian as to the proper way of administering the treatment.

It has been the object of the writer to continuously keep in touch and cooperate wherever possible with the local veterinarian and the livestock sanitary board of the state. Very frequently we hold conference in discussing the ways and means of controlling contagious diseases. It has also been the object of the writer to keep in close touch with the Federal Bureau of Animal Industry. More cooperation has been received from the Federal Bureau of Animal Industry than from the State Livestock Sanitary Board. As previously mentioned, many of the breed associations have cooperated with the specialist in control of animal diseases. At the request of several farmers' clubs the writer gave addresses and demonstrations at their various meetings concerning contagious diseases.

Publicity

The publicity methods used in putting over this work were circular letters, agricultural papers, local papers, posters, public meetings, moving picture shows, farm bureau papers and press notices.

Short Courses

At the request of the short course leader, H. E. Dawes, the writer gave considerable time during the winter months to short courses. The short courses were held in counties that did not have county agents. Lectures and demonstrations were given at these various meetings on several different contagious diseases. Addresses were given on hog cholera, tuberculosis, cattle scabies, hemorrhagic septicemia, contagious or infectious abortion of cattle and several other diseases too numerous to mention.

Club Work

During the year five weeks were given over to helping the boys and girls club department with their work, that is, lectures were given to the cow and calf clubs, sow-litter clubs, etc. on the various phases of preventing disease in those animals. Active part was taken in three

different boys' camps, at which lectures were given on the prevention of animal diseases.

Example of Animal Disease Control

The county agent of Jones county, W. P. Gamble, notified this office on April 10 that a contagious disease, known as cattle scabies, existed in his county, and he was not receiving the proper cooperation from the farmers concerned, to get the disease cleaned up. In fact they did not believe in many cases that the real genuine cattle scabies existed in that county. It was suggested by this office that Mr. Gamble immediately arrange for a number of farmers' meetings the following week. The specialist arrived in Jones county on Monday afternoon, April 12, and immediately in company with the county agent, made a visit to farm of E. B. Townsend. An investigation of his cattle was made and several were found to be diseased with cattle scabies. The neighbors were warned in that community of the existence of the disease. The following day the county agent and the specialist visited the farm of E. Z. Wood, demonstrated the infestation of the scab mites on 43 head of cattle. The same evening a meeting was held in Vera township and the discussion was confined to cattle scabies. A great many questions were asked and the farmers seemed to be quiet interested, yet some of them were skeptical. On the farm where we demonstrated the scab mites on 43 head of cattle, there were eight farmers present, and in the evening at the meetings there were 14 farmers. On Wednesday a farm visit was made to the farm of C. F. Brackett and the scab mite was demonstrated on 23 head of cattle. Another meeting was held that evening in Highland township school, and a discussion of cattle scabies was given. On Thursday afternoon the county agent and the specialist had a meeting in Washington township. At this meeting contagious abortion was slightly discussed, but the main subject was "scabies in cattle". After a thorough going over, the farmers organized a company for the purpose of putting in a vat to dip the cattle to prevent the scabies. Stock was sold in the company and a manager appointed to look after the details. It was his duty to see that the vat was built and to see that the cattle were properly dipped. Also, on that day a visit was made to a tank that had not been in use for two years and the owner was encouraged to repair the vat and again put it in operation. It was later learned that this suggestion was carried out. On Friday morning a number of farm visits were made, but only two of the number were found to have cattle scabies present. A dipping vat was also visited in the upper part of the county during this day, and the owner encouraged to start the vat immediately. On Friday evening another lecture on cattle scabies was given at Van Meter, and many questions were asked. Saturday seven farm visits were made in Jones county in the interest of controlling cattle scabies and two farms were found to be infested with the disease. On Saturday evening an address was given at Murdo, concerning cattle scabies. A number of circular letters, in fact about 500, were sent to farms in the county, notifying them of the characteristics of the disease, scabies, and also advising them to dip their cattle as soon as possible. The livestock sanitary board at Pierre was notified of the condition in the county and

they immediately placed a quarantine on the section that was most badly infected. The latter part of June the county agent notified this office that all cattle that were exposed or infected in Jones county had been dipped. Although it had cost a great deal of money for the dipping of these cattle the farmers were very glad and satisfied that the work had been carried out. Another proposition that was straightened out in this county was the use of nicotine dip. Many farmers were prejudiced against nicotine dip and would not use it saying that lime and sulphur were better, but it was fully proven that nicotine dip is just as good as lime and sulphur.

Statistical Report

Days in office -----	103½
Days in field -----	166½
Press articles -----	38
Letters written -----	529
Circulars sent out to county agents and others -----	668
Miles traveled by rail -----	14118
Miles traveled by auto -----	2,212
Farm visits made -----	129
Attendance at all meetings -----	3,662

Diseases diagnosed:

Hog cholera -----	8
Pneumonia -----	5
Ring Worm -----	1
Enteritis in sheep -----	1
Rickets in hogs -----	1
Tuberculosis in hogs -----	1
Lung worms in sheep -----	1
Hemorrhagic septicemia in cattle -----	7
Infectious abortion in cattle -----	5
Infectious abortion in hogs -----	2
Emaciation in cattle -----	13
Cattle scabies -----	19
Lumpy jaw -----	4
Pink Eye in cattle -----	3
Stomach worms in sheep -----	5
Blackleg -----	2
Tuberculosis in chickens -----	1

The number of outbreaks of hog cholera has been steadily decreasing for the last year. In fact, there is probably a smaller number of outbreaks of hog cholera in this state at the present time, than has occurred since the year 1914.

The condition of the state in regard to cattle scabies is not so favorable, because a great number of outbreaks of scabies now exists in the state. These are rapidly being taken care of as fast as the authorities can get to them.

The number of outbreaks of necrobacillosis are small as compared with the previous year.

As contagious abortion of cattle is a disease of long standing, there is not much difference between this year and the past year in regard to the number of outbreaks in existence.

Only one outbreak of any consequence of the disease of anthrax has occurred in the last year.

Blackleg is about the same as usual.

During the year 68 local leaders aided, 103 meetings were held. The specialist worked in 36 different counties. The number of animals affected directly were 450 hogs, 1,500 cattle, 1,100 sheep, 35 horses and 100 chickens. The number affected indirectly cannot be told.

Project No. 12 SOILS AND CROPS Manley Champlin, Specialist

During the year just closed the extension agronomist devoted about five and one-half months time to extension problems, although only one third of the salary came extension funds.

Farm Problems in Agronomy

The farm problems covered include:

1. Kind of seed to use.
2. Crop rotation to follow.
3. Methods of combating disease.
4. Methods of maintaining soil fertility.
5. Cultural methods including:
 - a. Time, rate and date of seeding.
 - b. Soil preparation
 - c. Inter tillage.
6. Emergency methods.
 - a. Grass seeding for flooded lands.
 - b. Special crops for late seeding.
 - c. Utilization of drouth injured crops.
 - d. Reclamation of alkali spots.

Methods of Procedure

1. The county agents have cooperated in the local work, and where there are no county agents, former students of the school of agriculture have helped without pay. The agronomy department maintains a soil survey and a seed laboratory and produces seeds for distribution on the experiment farms. Hearty cooperation has been maintained.

2. There have been twenty-one demonstrations and meetings held with a total attendance of 2,457.

3. Answer all inquiries received as promptly as possible by personal letter or circular or both.

4. Acted as secretary of the South Dakota Experiment Association which has for its object the increase and dissemination of the best varieties.

Development of Work in Counties

County agents call for assistance. Could usually be in three places

at once if that were physically possible. Local arrangements are left to the county agents. State wide projects are suggested and assistance is given the county agents and club leaders in carrying on the work.

Work Through Organizations

Sufficient organization already exist including the experiment association in 53 counties, farm bureaus in 39 and farmers' clubs and boys and girls' clubs in hundreds of communities.

Relationship of consultation is established with farm bureaus, experiment association, farmers' clubs, etc.

Publicity

The college maintains a department of journalism which furnishes items to the daily, local and farm press. Such items are written frequently by the agronomist. The farm bureaus publish the Farm Bureau News which goes to all members.

A series of circulars has been gradually prepared covering most of the farm crop and soil problems. These are mimeographed. They are revised frequently.

Methods of Securing Data

To demonstrate the value of good seeds, blanks are sent to all who secure special seeds and they are requested to report on them in comparison with any other seed that they may happen to have. No attempt is made to lay out regular sized blocks or experimental plots.

Three thousand five hundred one letters were written in answer to inquiries. This does not include circulars.

Thirty-nine county agents have cooperated. Twenty-one meetings have been held and assistance reduced at three boys' and girls' club camps lasting one week each. Work was conducted either in person or by correspondence or both in 55 counties.

Owing to shortage of clerical help, no attempt has been made to devise a system for keeping record of all field work and demonstrations under way. However, it is conservative to estimate that there are at least 3,000 demonstrations in progress on farms. A total of 2,457 attended the meetings. Practically every farm home in the state has been indirectly affected. The accompanying statistics show that some progress has been made during the time that systematic effort has been given to disseminating better varieties of grain and improving methods of corn culture. The increased average yields are not long, but sufficient to show progress. Note especially the effect on oat yields due probably to dissemination of the Sixty-day variety.

Seed Registration

It is of little use to talk about using better varieties of farm crops unless seed sources are available. In order to try to establish enough seed sources to supply the demand, a system of seed registration has been established. The procedure is as follows:

1. County agent sends out application and announcement blanks to people whom he thinks might be interested.
2. Seed growers sign application and return to county agents.
3. County agent files applications and dates them according to

receipt and then visits as many of the fields as possible, using field book entitled "Seed Registration Field Note Book".

4. County agent makes three copies of the report on each variety visited, gives one to the owner, keeps one for himself and sends one to this office.

5. Owners of the fields that pass must send two quart samples of grain or one quart sample of alfalfa or grass seed to county agent's office as soon as possible after threshing.

6. County agent splits these samples in two equal parts, keeps one for exhibit and sends the other to this office for purity and germination and weight per bushel test.

7. This office will prepare seed lists in sufficient numbers to furnish all experiment association and farm bureau members and others upon request.

8. Names of experiment association members will be starred.

9. The lists will be distributed to farm bureau members through the county agent's office in each county.

10. This is only state in which the county agents are cooperating in seed registration. Minnesota, Michigan and Wisconsin do the work with a special force of inspectors paid out of special funds for that purpose. South Dakota has no such fund, but we believe the results to date indicate that our plan will succeed well. Five or six registered seed growers in each county will be far better than none and will enable us to find sources of seed for any number of agronomy demonstrations in the future.

The above brief report will give a fair idea of the work thus far accomplished. Plans for the future include:

2. Demonstrations with the best varieties of grain by the planning of small fields, five to forty acres in size.

2. Preparation of original material for lantern slides and charts.

3. Preparation of illustrated, printed circulars as rapidly as possible to take the place of those now mimeographed.

4. Preparation of "Riker" mounts of the leading varieties of grain and the most important noxious weeds for exhibits in the county agents' offices.

5. Arrangement of demonstrations in the proper use of barnyard manure.

6. Phosphate and lime demonstrations wherever or whenever the soil survey indicates same to be desirable.

7. Field demonstrations on the state experimental farms and farms of the best seed growers.

8. Cooperation in boys' and girls' corn and potato club work.

AVERAGE YIELD PER ACRE OF STAPLE CROPS FOR YEARS INDICATED IN SOUTH DAKOTA

Crop	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
								27.8								32.8
Oats	39.0	39.0	36.4	24.7	23.0	30.0	23.0	7.4 28.4	33.8	26.5	27.5	42.0	30.5	34.0	39.0	29.0 28.8
Corn	28.1	31.8	33.5	25.5	29.7	31.7	25.0	22.0 11.4	30.6	25.5	26.0	29.0	28.5	28.0	34.	28.5 12.2
Wheat	9.6	13.7	13.4	11.2	12.8	14.1	12.8	4.0 16.7	14.2	9.0	9.1	17.1	6.8	14.0	19.0	8.1 16.8
Rye	16.5	19.0	18.8	17.0	17.5	17.5	17.0	10.0	19.5	13.2	17.0	19.5	18.0	16.0	18.0	13.0
Flax						9.4	5.0	5.3 22.5	8.6	7.2	7.5	11.0	9.3	7.0	9.5	8.0 25.0
Barley	28.0	30.0	29.0	23.0	26.5	19.5	18.2	5.4	26.0	17.5	23.0	32.0	22.7	27.0	29.5	22.0

Averages for the period underlined in last column.

A systematic seed distribution of the best varieties has been in progress since 1912. Note that each important crop shows an increase in average yield per acre for the eight years beginning 1912 as compared with eight years preceding 1912 as follows: Oats, 5 bu.; Corn 0.4 bu; Wheat, 0.8 bu.; Rye, 0.1 bu.; Barley, 2.5 bu.

**Project No. 13 PLANT PEST CONTROL A. L. Ford,
Specialist**

The present plant pest specialist did not take over the duties of this office until May 10, 1920. Only seven weeks of work are reported here, which fact explains why it is impossible to give any actual figures on results at this time. It is intended, however, to state what has been done in this short time and what results can be expected.

Scope of the Project

This project deals with the control of plant pests in general. This includes extension plant pathological and rodent work as well as insect control. Since the pathological and rodent work is already well taken care of, and since insect control in South Dakota has in recent years assumed such large proportions, most of the time has been used in insect control work. The project takes in a large field from the insect side alone, some of the problems being as follows: cereal and forage insects, orchard insects, stored grain insects, garden insects, and insects affecting the home. Since the cereal and forage insects, especially the grasshoppers, have done so much damage in the past in South Dakota, practically all of the specialist's time was spent on the problem. It was also planned to work on the cut worm and army worm problems, but this year there was very little complaint from these insects in the state.

Report of the Work Started

Upon going out into the state it was soon learned that there had been very little grasshopper poisoning done in the past in spite of the fact that this pest had caused much damage to alfalfa, small grains and flax. Very few farmers knew anything about the poison and many of the county agents had very little experience along this line. It was deemed advisable to hold demonstrations and meetings in the infested counties, also to personally visit the larger producers who were troubled with this pest and go over their grasshopper troubles with them.

Work on grasshopper control by the poison bran mash method has been started in the following counties: Edmunds, Brown, Walworth, Stanley, Haakon, Pennington, Lawrence, Lyman and Jones. Twelve demonstrations and two meetings were held with a total attendance of 302. Considerable poisoning is under way in all of the counties worked in. Although the poisoning is not extensive this year, it will act as a practical demonstration for each of these counties and for other counties as well. As far as can be learned at this time all poisoning has been very successful, the county agents reporting that the farmers who have used it are very much pleased.

During the period covered by this report the specialist sent 24 days in the field and 21 days in the office. He traveled 2436 miles by rail and 565 miles by auto in the performance of his work. He made 51 farm visits, wrote 7 press articles and 76 letters and sent out 74 circulars.

An Illustration of What the Work Is

The following is offered as an example of a piece of extension work in grasshopper control in order that the duties of the specialist will be

better understood by the people of the state.

Several alfalfa growers along the White River bottoms in Lyman county have lost their seed crop due to grasshoppers for several years. This year the young hoppers showed up as numerous as in previous years. It was evident that unless something was done another seed crop would be lost. County Agent McCullough asked the specialist to come to his county. He was taken to the infested community and met the farmers at a meeting called at the country school house. The farmers were told what the poison was, what it would do for them, and what it would cost per acre. All agreed to poison. They were informed as to the amount of material they would need for each individual farm. The material was totaled and an order for the lot was wired to the wholesale houses by the local dealers at Presho. By sending in one large order these farmers got white arsenic for fifteen cents per pound cheaper, and black strap molasses for forty cents per gallon cheaper than if it were bought in small amounts.

Arrangements were then made to hold a community mixer at Presho where all the material for the first application would be mixed by the specialist. The farmers agreed to come in on the day of the mixing to see just how it was done. Upon seeing it mixed they could handle it thereafter themselves on their own farms.

The material arrived, the specialist was informed, and the mixing took place. Twelve farmers were present representing about 450 acres of alfalfa. About a ton and a half of the poison bait was mixed and given to the farmers in a moist condition ready to be put out in the infested fields. Each farmer took home enough unmixed material for a second application should it be necessary later. This is the first poisoning that has been done in this part of the state and it will act as an excellent demonstration for the alfalfa seed growers of the surrounding country.

The same sort of a community mixer was held south of Reliance in Lyman county on the day following the mix at Presho. In this community about 500 acres of small grain were treated with the poison bran marsh.

Legislation on Grasshopper Eradication

Several western states have legislation on grasshopper eradication. This has been tried and has proven a great success. South Dakota is one of the greatest states in the production of alfalfa seed and this great crop is threatened by this pest. The small grains and flax have also suffered heavy losses. It is high time that a systematic fight be waged on the grasshopper menace. It is plainly evident that South Dakota cannot conduct a general systematic fight on grasshoppers, as some of her neighboring states have done, until she has some sort of legislation whereby the county commissioners can make special appropriations for the purchase of materials for poison bran mash. Also every farmer in an infested district should be compelled to poison as those who do not simply act as a source of reinfestation for those who do. Work has been started on the drafting of a grasshopper bill for South Dakota.

EXTENSION FUNDS

STATEMENT OF EXPENDITURES BY PROJECTS, 1919-1920

Project	Total	Smith-Lever		State	County
		Federal	State		
Administration -----	19,179.31	10,294.00	8885.31		
Printing of Pub'l. -----	2,414.58	2,227.79	186.79		
County Agent Work -----	145,991.70	13,265.38	2134.14	48,972.38	81,619.80
Short Courses -----	3,761.02		3761.02		
Boys' and Girls' Clubs -----	14,759.47	7,589.42	7170.05		
Home Demonstration Work -----	4,739.85	2,883.39	1856.46		
Farm Management -----	2,533.58	905.03	1628.55		
Livestock Improvement -----	3,848.86	3,848.86			
Agricultural Engineering -----	3,311.45	3,311.45			
Horticulture -----	2,260.01	2,260.01			
Animal Disease Control -----	4,289.62	3,188.77	1100.85		
Agronomy -----	1,640.08	1,640.08			
Entomology -----	726.20	726.20			
Total Expenditures -----	209,455.73	52,140.38	26,723.17	48,972.38	81,619.80
Unexpected Balance -----	18,635.70			3,937.82	14,697.88
Total -----	228,091.43	52,140.38	26,723.17	52,910.20	96,317.68

Summary Statement of Expenditures for Extension Work by Items of Expense and Sources of Funds, 1919,1920

To balance on hand -----	8,134.00				8,134.00
Receipts for 1919-1920 -----	219,957.43	52,140.38	26,723.17	52,190.20	88,183.68
Total -----	228,091.43	52,140.38	26,723.17	52,190.20	96,317.68

EXPENDITURES

Project	Total	Smith-Lever		State	County
		Federal	State		
Salaries -----	142,296.39	31,409.77	17,780.99	34,914.63	58,191.00
Labor -----	4,522.38	1,172.08	1,157.45	822.55	1,370.30
Printing -----	2,414.58	2,227.79	186.79		
Stationery, etc. -----	6,761.15	2,550.64	643.55	1,337.75	2,229.21
Postage, etc. -----	4,940.96	739.12	627.14	1,340.50	2,234.20
Heat, light, etc. -----	271.39	5.00		99.89	166.50
Supplies -----	1,071.33	645.64	152.42	102.49	170.78
Library -----	195.85	169.00	1.35	9.70	15.80
Tools, etc. -----	883.31	880.12		1.29	1.90
Furniture and fixtures -----	2,234.36	1,559.27	478.19	73.80	123.10
Scientific apparatus, etc -----	849.60	811.15	19.25	7.10	12.10
Livestock -----	79.35		52.30	10.14	16.91
Traveling expenses ---	41,300.82	9,848.56	5,623.74	9,685.72	16,142.80
Contingent expenses -----	1,634.26	122.24		566.82	945.20
Balance -----	18,634.70			3,937.82	14,697.88
Total -----	228,091.43	52,140.38	26,723.17	52,910.20	96,317.68

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