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UNITED STATES DEPARTMENT OF AGRICULTURE
BULLETIN No. 269

Contribution from the Office of Experiment Stations
A. C. TRUE, Director

Washington, D. C.



July 31, 1915.

FARMERS' INSTITUTE WORK
IN THE UNITED STATES IN 1914, AND NOTES
ON AGRICULTURAL EXTENSION WORK
IN FOREIGN COUNTRIES

By

J. M. STEDMAN, Farmers' Institute Specialist

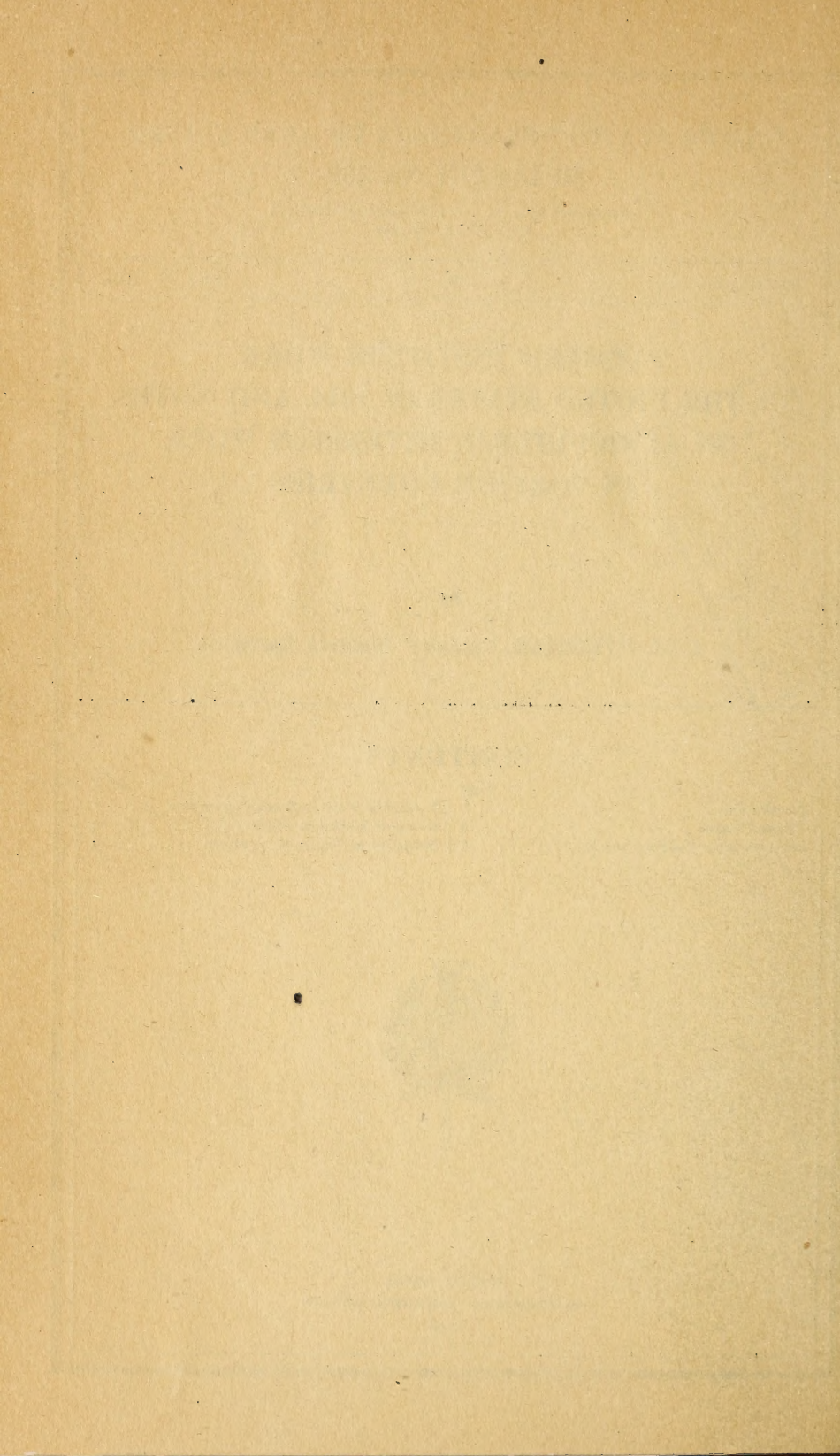
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By J. M. STEDMAN, *Farmers' Institute Specialist.*

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INTRODUCTION.

In 1902 the United States Department of Agriculture gathered and compiled the first statistics regarding farmers' institute work in the United States and each succeeding year it has published a report of the Farmers' Institute Specialist showing the extent and progress of this movement. A review of these reports shows a continuous and steady growth in the number of institutes held each year and also in the attendance at the meetings. Until recently, the farmers' institute was the great and for 25 years practically the only organized movement for carrying on agricultural extension work. In the majority of States this work was originally under the direct control of the State departments of agriculture, but in other instances it was vested in the agricultural colleges. In either case the agricultural colleges were active in contributing to its support and have always furnished a large proportion of the institute lecturers. A few years ago the agricultural colleges began to devote an increasing amount of attention to farmers' institutes, and, later, to other phases of agricultural extension, and thus gradually become a major factor in the organized agricultural extension movement carried on by agencies other than the United States Department of Agriculture.

NOTE.—This publication is of interest to farmers' institutes and other agricultural extension workers in the United States and Canada.

Meanwhile a much broader system of agricultural extension work has been developing in the United States through the work of the United States Department of Agriculture and the State agricultural colleges. In consequence of the passage of the Smith-Lever Act closer cooperation between the department and the colleges has been effected and the organization and scope of the extension work of these institutions is being changed and strengthened in many ways. This is affecting the relations of the colleges with the farmers' institutes and will undoubtedly modify in a broad way the future character and status of farmers' institute work in this country.

This report covers the progress of farmers' institutes conducted by the States and the agricultural colleges during the fiscal year ended June 30, 1914, and also contains notes on agricultural extension work in foreign countries. It brings the history of farmers' institutes in the United States up to the time of the inauguration of the Smith-Lever Extension Act.

GENERAL STATUS OF FARMERS' INSTITUTES IN THE UNITED STATES.

Farmers' institute reports for the season of 1914 were received from all the States except Iowa, and institutes were held in all the States except Louisiana, Nevada, New Mexico, and Oklahoma.

The total number of sessions of farmers' institutes held during the year was 25,238, which is a 22 per cent increase over any previous year, while the total attendance at the same was 3,656,381, which is an increase of 26 per cent over that of any previous year. The total number of days devoted to institutes, exclusive of independent, round-up and special institutes, and railroad specials, was 52,354, while about 3,000 days additional were devoted to the other activities. The institute organization employed 759 regularly paid lecturers, in addition to which the agricultural colleges and experiment stations contributed the services of 528 members of their staffs a total of 7,142 days. Institutes especially for women were held in 13 States a total of 880 days and 5 States held special institutes for young people a total of 241 days.

The farmers institute organization conducts its work under many different forms, thus making it impossible to summarize all its activities under single heads. Hence, a clear idea of all its activities can only be had by consulting the detailed tables (pp. 16-21) accompanying this report. Thus, besides ordinary farmers' institute meetings, the farmers' institutes in 13 States conducted a total of 219 movable schools, lasting a total of 1,464 days, with a registered attendance of 112,498 different people. In 15 States they also carried on field demonstration meetings for which purpose 185 demon-

strators were employed a total of 40,084 days. Likewise, in 17 States, the institute organizations also conducted a total of 34 railroad specials which covered altogether 17,766 miles, during which 1,141 stops were made and lectures and demonstrations given a total of 474,906 different people.

It should be noted that the attendance at field demonstration meetings has not been recorded at all; that the attendance at movable schools contains no duplicates of individuals whatever, neither does the attendance at railroad specials, but that the total attendance at ordinary institute meetings represents the sum of the attendance at each half-day session and therefore may include an indeterminate number of duplicates of individuals in attendance at each institute if more than one session was held. The statistics of farmers' institutes has always been gathered and compiled in a similar manner, and hence a comparison of the activities of one year with those of another are rendered possible.

The total cost of conducting all forms of farmers' institutes was \$447,897.51, which is \$62,886.49 less than was spent last year. Since this reduction in the cost of institutes was accompanied with a large increase in the number of sessions and the people instructed, it clearly indicates a great improvement in the financial management of the institutes.

STATE FARMERS' INSTITUTE REPORTS.

Numerous items of interest showing the progress of the work, but which are incapable of tabulation appear in the reports of the directors. In order that these features may be known by the body of workers, the principal points presented are referred to in the following accounts under the names of the respective States:

ALABAMA.—At all institutes the boll weevil and live-stock industry were considered. A one week's round-up institute was held at the college of agriculture with an attendance of 716, which represented every county in the State.

ALASKA.—No institutes were held in Alaska. The agricultural resources of the Territory are as yet undeveloped, and the few farmers are so scattered that it is considered impractical to try to get them together. There is need for itinerant instruction.

ARIZONA.—Institutes were held in each county in the State. Three railroad instruction trains also covered a large part of the State. The following subjects were discussed at all institutes: Household helps, good roads, live stock on the farm, and dry farming. Boys' and girls' clubs, field demonstrations, and special institutes for women were new features on the institute program.

ARKANSAS.—No appropriation was made for farmers' institute work, but contributions amounting to \$1,421 from various sections of the State, together with some college funds made it possible to hold 20 farmers' institutes with an attendance of 1,610 and 24 movable schools with an attendance of 5,132, and to cooperate with three railroad-instruction trains. Twelve members of the college faculty gave 488 days of service. Hog cholera and Texas fever ticks were discussed at all institutes.

CALIFORNIA.—Owing to difference in climate, institutes were held every month in the year and in 41 of the 58 counties of the State. A feature of the work was the organization of young people's agricultural clubs. Forty members of the college and experiment station staff gave 300 days of service. Fourteen thousand five hundred students at educational institutions received instruction from the institute staff.

COLORADO.—No appropriation was available, but college funds and contributions for local sources made \$2,596 available, which was used in the conduct of 59 days of institutes. One instruction train made 31 stops with an attendance of 15,821.

CONNECTICUT.—Thirty-three lecturers addressed 50 farmers' institute sessions with an attendance of 2,750. An appropriation of \$700 was available.

DELAWARE.—Consolidation of rural schools was the leading topic at all of the 36 institutes held in Delaware. An instruction train carrying 11 lecturers, with exhibits, made 13 stops and was attended by 2,000 people.

FLORIDA.—The State appropriation was increased from \$7,500 to \$10,000. One hundred and thirty-two institutes, with an attendance of 15,676, were held. Twenty members of the agricultural college gave 692 days of service to farmers' institutes. Plans are being made for holding special institutes for farm women during the coming year.

GEORGIA.—Farmers'-institute work is closely related to other extension activities of the college. Twenty-five college and station men gave 1,426 days of service. The use of motion pictures was introduced into the institutes and proved a profitable feature. Seven movable schools enrolled 4,710.

IDAHO.—Farmers' institutes were held in every county in the State except one, which is wholly a mining county.

ILLINOIS.—The appropriation for farmers' institutes was increased from \$21,000 to \$33,179.50. This will make possible material enlargement in the scope of the work. Sixty-five lecturers were engaged in farmers'-institute work in the State during the year. An annual conference of farmers'-institute workers lasting for one week has proven a profitable feature in organizing the work.

INDIANA.—In Indiana 428 institutes were addressed by 50 State and 200 local speakers. Special attention was given to perfecting local organization, to the organizing of boys' and girls' school clubs, and to enlarging the usefulness of the institutes for farm women. Four conferences for farmers'-institute workers were held preceding the institute season.

IOWA.—No report has been received.

KANSAS.—The Kansas farmers' institutes are permanent organizations, with a total membership of about 15,000 farmers. In 1913 these organizations held an average of 3.38 monthly meetings in addition to the annual meeting, at which State lecturers are present. Eight women's institutes and eight young people's institutes, with an aggregate attendance of 8,721, were held.

KENTUCKY.—The live-stock industry was emphasized in all institutes during the year, also a larger place on the program was given to subjects of particular interest to women. Considerable attention was given to strengthening local institute organizations. Fruit-spraying demonstrations were a feature of a large number of the institutes.

LOUISIANA.—Farmers'-institute work in Louisiana is placed by statute under the direction of the commissioner of agriculture and immigration, but no appropriation has been available, though some work of similar nature has been done by the State college of agriculture and the experiment station.

MAINE.—Two institutes were held in each county in the State, at a cost of \$2,300. Sixty-four State lecturers, in addition to local speakers, addressed 73

institutes with 138 sessions. Also 248 special institutes of one to two days were held with granges, cow-testing associations, breeders' associations, and other organizations.

MARYLAND.—Fifty-six general institutes and nine women's institutes were held during the year, with a total attendance of 24,934. Three railroad instruction trains made 58 stops and carried 12 lecturers, who gave instruction in dairying, live stock, soil fertility, truck gardening, horticulture, corn, tobacco, alfalfa, and home economics. An extension department of the agricultural college has now been organized, and the institute work will become a phase of this department under a regular farmers'-institute director.

MASSACHUSETTS.—During the year the rules of the State board of agriculture were changed so as to require only one instead of three local institutes. This resulted in a number of places holding one big institute instead of a number of smaller ones. A continuous schedule for institutes increased effectiveness and reduced the per capita cost. Ninety-two State lecturers were engaged in institute work during the year.

MICHIGAN.—There was a substantial increase both in the number of institutes and in the attendance. Special attention was given to alfalfa in the institute program. Special institutes for farm women continued to be successful. Study clubs for women were also inaugurated. A round-up institute at the agricultural college had an attendance of 12,300.

MINNESOTA.—No farmers' institute organizations are maintained, but there are over 900 farmers' clubs which cooperate in the farmers' institute program. Special attention was given by the institute management to the organization and maintenance of these clubs. Institute workers gave 62 days' service as judges at agricultural fairs and 234 days' service as instructors in movable schools.

MISSISSIPPI.—Institutes were held in 69 counties in Mississippi. One railroad instruction train was run which gave instruction in the various phases of the live-stock industry. The entire institute force was in attendance at the Mississippi-Alabama Fair and the Mississippi State Fair, with an agricultural exhibit. Very effective work was done in promoting better agriculture.

MISSOURI.—Owing to a change of administration complete data for farmers' institute work is not available, but silage and alfalfa were discussed at 240 institutes. Two hundred pounds of ground limestone were furnished free to each farmer who applied to the State board of agriculture. A State-wide campaign for the use of home products was conducted and illustrated lectures were introduced into the institutes. Much agricultural literature was distributed.

MONTANA.—Institutes were conducted in each county in the State with a total attendance of 20,962. Twenty-one movable schools for men and six for women were held with a total attendance of 380. The county agents assisted greatly in increasing the efficiency of the institutes. Local leadership is given as the greatest need of the institutes in the State.

NEBRASKA.—Nebraska held institutes in 71 of its 92 counties. Twenty-eight movable schools, most of which were for women and young people, enrolled 2,532 persons. Short courses for women are being conducted during the summer months. A dairy train was also operated. County demonstrations, hog cholera, and dairying were discussed at a majority of the institutes.

NEVADA.—No farmers' institutes were held in Nevada during the year.

NEW HAMPSHIRE.—Farmers' institutes were held in every county in the State. The State institute law was revised to provide for the holding of short courses in agriculture, under the direction of the institute force. Illustrated lectures and demonstration work were introduced in the farmers' institutes.

NEW JERSEY.—Five thousand two hundred and twenty-nine dollars were used in conducting 52 general institutes and 16 special institutes with an aggregate attendance of 12,657. Seventeen members of the agricultural college and experiment station gave 204 days of service. A successful farmers' week was held at the agricultural college.

NEW MEXICO.—No institutes were held in New Mexico, but an extension department has been organized at the agricultural college, and it expects to organize a number of institutes during the coming year.

NEW YORK.—Institutes were held in all the counties of the State except those comprised in greater New York and one mountain county. One hundred and twenty-six special sessions for women were held with an attendance of 6,003. A successful feature of the work was sheets containing questions on the topic being discussed. The questions were numbered and the audience called for answers to whatever questions they were interested in. One hundred special institutes were held in cooperation with the granges and the other agricultural association meetings.

NORTH CAROLINA.—An association for the conduct of institutes for women was organized to hold monthly meetings. Eight institutes were held for negroes with a good attendance. Institutes were held in 98 of the 100 counties of the State.

NORTH DAKOTA.—A new feature of the institute work was the introduction of farm inspection work.

OHIO.—Institutes were held in each county in the State. A successful feature of the work was the holding of preliminary conferences with the officers of the farmers' institutes of each county with a member of the farmers' institute staff, at which time the people decided where institutes should be held and laid plans for conducting them. The total attendance at farmers' institutes was more than 110,000.

OKLAHOMA.—Owing to an unusual situation in the State no appropriation was made for farmers' institute work, though some work along this line has been done by the agricultural college.

OREGON.—Special sessions of general institutes were held for women. Many special agricultural lectures were also given to fairs, commercial clubs, women's clubs, improvement associations, and to other organizations throughout the State. The institute work is closely related to the extension work.

PENNSYLVANIA.—Institutes were held in each county in the State. The 10 county agents in this State gave three months of their time to farmers' institute work. In addition, 11 members of the agricultural college gave 55 days of service. One hundred and fifty-four State lecturers were employed. Two railroad trains gave instruction in dairying, poultry, horticulture, and home economics. Large use was made of illustrated lectures at all the institutes.

RHODE ISLAND.—Sixteen institutes were held at a cost of \$445. The institute staff also gave field demonstrations in the care of orchards and held an annual corn show and industrial contest for adult boys and girls.

SOUTH CAROLINA.—In South Carolina the institute season is during July and August. A new feature of the work during 1913 was the holding of institutes on the farm, using the stock and field crops as illustrative material. All the work of instruction is by members of the faculty of the agricultural college and by county demonstration agents in the various counties.

SOUTH DAKOTA.—In addition to holding institutes in every county in the State, movable schools were a prominent feature of the work. Fifty-two of these were held, one-half of which were for women, with a total attendance of 58,948. A railroad instruction train carried 15 lecturers and gave instruction

in alfalfa growing, hog cholera, and silo construction to 20,000 people. Ladies' auxiliaries to the farmers' institutes have been organized which, in the future, will hold institutes simultaneously with the regular institutes.

TENNESSEE.—Six thousand two hundred dollars was available for the holding of 126 institutes, including 27 for women.

TEXAS.—Three hundred and eighty-five thousand, four hundred and forty people received instruction from the institute force during the past year. Special attention at the institutes was given to dairying, silos, hogs, poultry, and other live stock, insects and plant diseases, orchards and gardening, and marketing. Two demonstration trains made 225 stops and were visited by 140,000 people.

UTAH.—In Utah the farmers' institute work is a part of the extension work of the college. Fourteen members of the college faculty gave 168 days of service and conducted 577 farmers' institutes. A railroad instruction train gave instruction in measurement and proper use of irrigation water, dairying, silo construction, and stock raising.

VERMONT.—Twenty-four general institutes with an attendance of 5,095 covered all the counties in the State except one, at a cost of \$592.45. Special lectures in agriculture were given at grange meetings, picnics, clubs, and other gatherings of farmers.

VIRGINIA.—One hundred and thirty-one farmers' institutes with an attendance of 20,650 were held in 100 counties of the State. In addition, a large number of lectures on agriculture were given at special meetings with an estimated attendance of 11,000. Soil improvement, alfalfa feeding, hog raising, and home improvements were discussed at all the institutes. Agricultural literature was also distributed at the meetings. Four railroad trains made 77 stops and gave instruction in live stock, fruit growing, seed improvement, tobacco culture, trucking, and home economics.

WASHINGTON.—The farmers' institute work is carried on by the regular extension staff of the college. Seventeen thousand five hundred dollars was available for agricultural extension. No figures are available as to what part of this was spent on farmers' institutes.

WEST VIRGINIA.—Two hundred and forty-four institutes, with 61 separate sessions for women, were held in 41 of the 55 counties of West Virginia. Thirty movable schools, 10 of which were for women, enrolled 1,354. The use of lime was discussed at all of the institutes, and demonstration work was also a feature of the meeting. Seven thousand five hundred dollars was expended for farmers' institute work.

WISCONSIN.—Wisconsin held institutes in 68 of the 71 counties in the State. Special institutes in hog cholera and alfalfa were conducted, also normal institutes for teachers. Forty two-day institutes for women enrolled a large attendance. A railroad instruction train was run in cooperation with the Live Stock Breeders' Association of the State and gave instruction in dairying, alfalfa, and silage, hogs, sheep, and beef cattle industry.

WYOMING.—Wyoming has no department of farmers' institutes, but farmers' institutes are conducted by the officers of the college and experiment station. Silo construction and home-economics subjects were features of the institutes held during the past year.

AGRICULTURAL EXTENSION WORK IN FOREIGN COUNTRIES.

The experience of foreign nations in conducting agricultural extension work is of special interest to those in charge of similar work

in the United States, since this method of fostering agriculture has been in successful operation for many years in the older countries. The following notes, which are incapable of tabulation, were translated and abstracted from current foreign journals received since the last report was written:

FRANCE.—Considerable emphasis is given to what is called the feminist movement in agriculture in France.¹ In addition to the extension of instruction in agriculture for girls in the regular schools, clubs of farm girls and women are becoming more and more numerous. The great agricultural societies are opening their ranks to female collaborators. Everywhere rapid progress is being made in the technical and general education of the women who live on the farm. In 1914 there were 38 movable schools giving housekeeping instruction to 2,800 young girls. The program of these schools is arranged according to the needs of the region in which they are held. In addition to housekeeping subjects, the care of milk, the making of butter, and aviculture are taught. When a course is finished in a community, the teachers assemble the mothers and farm women for evening courses and lectures.

Clubs of farm women are organizing institutes for farm women along the lines of those conducted in Canada and the United States. Also numerous competitions for farm women are held in aviculture and other lines of agriculture in which prizes valued at from \$70. to \$200 are awarded.

The women's section of the Society of French Agriculturists is now two years old, having been founded in 1912 to interest women in country life and to enable them to work out more efficiently their economic, moral, and social education. The first work of the section was to conduct a survey to ascertain the condition and needs of farm women, and its inquiries show clearly the gravity of the rural crisis for which the "distaste of women for rural life" is largely responsible. This survey revealed the growing distaste of the young country woman for farm life; her extreme ignorance of housekeeping and farm work; her loneliness and her desire for recreation; and the need for her mental improvement. The section has founded five traveling housekeeping schools. Many clubs of farm women which were among the first independently established in France have associated themselves with the section.

The National Society for the Encouragement of Agriculture, through a happy innovation, has just begun to allow female competition. In organizing the congress of the farm home, an effort has been made to show clearly, by the choice of the subject as well as by the personnel of the committee of organization, that the rural crisis is worthy of consideration from the female point of view.

BRAZIL.²—Brazil has conducted its first agricultural institute train. The Argentine Central Railway, with the cooperation of a provincial agriculturist fitted up two passenger coaches, one for lecture purposes and one for an exhibition car.

The conferences and demonstrations are held in the rural centers on Sundays and holidays. They are thus carried on without taking the farmers from their work. When extraordinary occurrences, such as sudden plagues and the like, make the work of the school necessary, it is moved to the place indicated to give advice and practical teaching as the case may demand.

¹ *Vie Agr. et Rurale*, 3 (1914), No. 23, pp. 625-628; *Bul. Soc. Agr. France*, 75 (1914), No. 1, Sup., p. 248.

² *Bol. Min Agr. Indus. e Com.* [Brazil], 2 (1913), No. 2, pp. 104-107.

The work of the train has been so satisfactory that it has been decided to make it a permanent institution for the following purposes:

Holding public conferences on agriculture in rural centers; answering inquiries, verbal or written, on subjects of interest to farmers; distributing agricultural literature; making demonstrations of agricultural machinery; visiting agricultural expositions; cooperating in the improvement of animal industry; cooperating in the diffusion and knowledge of laws relating to hygiene and labor for farmers, as well as diseases of plants and animals; furthering the establishment of societies and cooperative associations for agricultural improvement; and inspection of public and private agricultural estates.

AUSTRIA.—A regular agricultural school education is available only for a limited number of prospective farmers in Austria, therefore, other methods of disseminating agricultural instruction are necessary, such as traveling lecture-ships and special courses. Lectures are given by the teachers in the regular agricultural schools and by traveling lecturers appointed especially for this purpose. They keep in close touch with the rural population and are expected to give personal attention and advice to individual farmers in their territory. They also hold courses which last for several days in order to instruct farmers in certain branches of agriculture, such as dairying, live stock, poultry keeping, fruit growing, etc. Teachers in the agricultural schools also hold such courses during vacation either at the school or elsewhere. Lectures in cooking and domestic economy are also given for the women and girls.

In Upper Austria three itinerant teachers in cooking and housekeeping are employed, and they have conducted 47 movable schools in housekeeping for 564 girls. The length of the course is six weeks. The number in a course is limited to 12 girls, who must be over 14 years of age.

The courses are under the direction of the Royal Agricultural Society, in cooperation with a local society or board, which must furnish the meeting place and guarantee an enrollment of 12 girls and their tuition fee.

In these courses are taught buying of food materials; the preparing of foods; the preserving of provisions; setting and waiting on the table; washing dishes and linen and house cleaning; making recipes; and estimating the cost of food. The management of the house and the care of clothing are also taught. Instruction is likewise given in the care of the health, feeding children, care of the sick, mending, patching, and darning. There is also instruction in feeding domestic animals, the care of the dairy, the raising of poultry, and in the culture of fruit, vegetables, and flowers.

Two women are chosen to supervise each cooking course and hold themselves in readiness to assist the teacher, keeping her informed as to the proper markets for provisions, and discussing with her the arrangement of the daily work, the regulation of the house and of the kitchen, and to give necessary help to the pupils.

PRUSSIA.—In 1912 there were in Prussia¹ 250 rural traveling housekeeping schools in full working order, divided among 243 districts (Landkreise).

A total of 817 courses were held, as against 564 in the previous year. The number of the eight weeks' courses has risen from 407 to 638, the number longer than eight weeks from 67 to 103, while the courses of less than eight weeks' duration have fallen from 90 to 76. The 817 courses were attended by 13,581 girls and young women who had left school, an average of 21.3 per course.

Of the 250 schools 168 were supported by the District Communal Association, 5 of them being under the supervision of women's unions, 65 were entirely man-

¹ Ztschr. Ländl. Fortbild. Schulw. Preussen, 5 (1913), No. 2, pp. 47-61.

aged by women's unions, and 17 by private individuals and others. The whole maintenance cost amounted to \$146,520.

GERMANY.—The West German Agricultural Board, after a tour of inspection of the rural itinerant home economics schools of the region under its jurisdiction, reports¹ that the instruction given by these schools is confined very largely to needlework and to cooking, and that instruction even in elementary agriculture is given to only a very limited extent. The board deprecates this situation and points out the necessity for teaching agriculture to at least a limited extent in the housekeeping schools, emphasizing the fact that this is particularly necessary in the flat sections of west Germany, where the farms are usually small and the wives and daughters have charge of the stable, yard, and garden, as well as the housekeeping, and where an income can be assured only when all of the farm work is done with expert knowledge. The board therefore holds that the housekeeping courses will be more useful if the needlework is limited to mending, darning, and repairing, and to the making of simple linen articles, and the time thus saved devoted to instruction in some of the simpler farm operations. Another argument in favor of such agricultural instruction is that it might tend to create a different attitude toward farm life among the young women of the region who at present show very little interest in agriculture and prefer to marry those engaged in other occupations.

The insufficient agricultural instruction is thought to be due in many cases to lack of knowledge of farm life and farm work on the part of the teachers in the schools. It was also found that the teachers were frequently unfamiliar with the household and farming conditions of those taking the courses. It is stated that the plan of giving agricultural instruction in the home economics schools as recommended by the board has been approved by the minister of agriculture and appropriations will be granted to these schools only on condition that this plan is followed.

BELGIUM.—Movable housekeeping schools were established in Belgium² in 1890, in which year 13 of these schools were started. Over 6,000 girls have received diplomas in these schools since their organization. The primary design of the school was to elevate the national dairy industry and to teach better methods of utilizing milk and of making butter and cheese. The length of the session is four months, and the schools are moved two or three times a year from one community to another. Courses are now offered in agronomy, zoology, dairying, cheese making, domestic economy, and bookkeeping.

A movable school is established at the request of the community or an agricultural association. The budget of the school amounts to about \$500 for a session of four months. This sum is borne by the State, the Province, and the agricultural societies. The instruction is given without expense to the students.

The instruction is theoretical and practical. The courses are conducted six days a week. Two hours are devoted to theory and three to practical work. All the pupils are day scholars. The maximum number of pupils admitted to the school does not exceed 20. To be admitted to the school, girls must be 15 years of age, must have had good primary instruction, as shown by a certificate, and must be physically able to do the work.

The teaching personnel is composed of a principal, who has charge of the courses in agronomy; he also attends to the organization of the school. Two female teachers living at the school have charge of the courses in domestic economy, dairying, cheese making, and bookkeeping, and they direct the practical

¹ Ztschr. Landw. Kammer Schlesien, 18 (1914), No. 8, p. 343.

² Rev. Gen. Agron., n. ser., 9 (1914), No. 2, p. 84.

work of the pupils. The teachers have a fixed salary paid by the State. When the school is not in session they hold conferences or public courses for farmers' wives.

All of the schools are supplied with suitable equipment for practical instruction, such as churns, separators, refrigerators, cheese-making utensils, cooking utensils, washing machines, sewing machines, etc. At the end of each session an examination is held in the different branches taught.

The success of movable schools is generally much greater than that of permanent schools, because the small and middle class farmers can not easily send their children to school for one or two years. The temporary schools, which last only four months, come to the pupils in their homes and are, therefore, more easily established.

ARGENTINA.—Agriculture in Argentina¹ is handicapped because those who follow it are frequently ignorant of its most fundamental principles, many of them being immigrants who have recently taken up farm work to meet the necessities of life and are not familiar with their new conditions. This explains the important place that extension instruction occupies in the agricultural development of the country.

The extension service is in direct charge of the regional agronomists, who at present (1912) number 20. They expedite their work by means of consultations, temporary courses, inspections, competitions, and expositions.

The following table gives a summary of the work of the regional agronomist in 1912:

Summary of work of regional agronomist, 1912.

Date of taking charge.	Location of regional agronomists.	Consultations.		Conferences.	Experimental fields.	Temporary courses.
		Verbal.	Written.			
1912.....	Mercedes.....	1,960	155	63	10	.....
May.....	Olavarría.....	505	286	12	9	.....
April.....	Campana.....	20	10	5	0	.....
1912.....	Entre Ríos.....	589	383	38	20	.....
1912.....	Corrientes.....	392	83	6	5	.....
October.....	Chaco and Formosa.....	.....	.....	.....	.....	.....
1913:	.....	.....	.....	.....	.....	.....
January.....	Posadas.....	.....	.....	.....	.....	.....
November.....	Tucuman.....	.....	.....	.....	.....	.....
1912.....	Jujuy.....	187	48	4	9	1
May.....	Santiago del Estero.....	122	62	.....	8	.....
July.....	Catamarca and La Rioja.....	106	42	2	5	.....
November.....	Mendoza.....	.....	.....	.....	.....	.....
1912.....	San Luis.....	4,747	977	14	70	2
June.....	Cordoba.....	220	6	6	10	.....
May.....	San Juan.....	185	20	.....	11	.....
June.....	Rafaela.....	8	2	.....	.....	.....
May.....	Rosario.....	124	5	5	.....	.....
June.....	Pampa.....	105	4	5	11	.....
December.....	Rio Negro.....	57	.....	.....	.....	.....
1912.....	Bahía Blanca.....	110	46	3	6	.....
.....	Total.....	9,427	2,138	163	173	3

The agronomists of Tucuman, Posadas, Chaco and Formosa, Mendoza, and Rio Negro took charge at the end of 1912, devoting all their time to surveying their respective districts to find out their real needs. The vast and complex duties of the regional agronomists has not allowed them to give much time to developing extension courses, but the General Board of Agricultural Instruction is contemplating remedying this by the appointment of special teachers under the supervision of the agronomist. Agricultural instruction has been introduced into the army.

¹ Min. Agr. Argentina, Mem. Cong. Nac. (1912), pp. 33-36.

ENGLAND.—The Board of Agriculture and Fisheries¹ has made arrangements in England and Wales for providing technical instruction in agriculture to small holders. It appears that in spite of recent advances there is still much room for the small holder to improve his condition with the help of suitable instruction.

Out of a total of 435,700 holdings in England and Wales above 1 acre, 292,400 are under 50 acres, while in addition there are over 118,000 allotments under 1 acre belonging to local authorities apart from a large number of allotments leased by private landowners. Thus there is an extensive field of work for the teacher, and it must be remembered that of all classes of the rural population the small holder and rural laborer have the least opportunity of obtaining instruction and skilled advice.

Small holders and allotment holders are usually to be found in groups or colonies, and these afford a convenient center for organized day and evening classes, and for courses in such subjects as horticulture, poultry keeping, and dairying. Such a colony is also a most appropriate center for demonstration fields or plats to illustrate the best methods of growing and manuring market garden crops, fruit, etc. These demonstrations are used by the instructors to introduce crops not usually cultivated by the holders, and when well managed are of greater use in educating the small holders than class-room instruction.

CANADA.—In Canada² women's institutes have powerfully contributed to improve the position of farm women, while also raising their intellectual level, and justifying the interest they have aroused, even beyond the limits of the country in which they had their origin. They have been copied with excellent results, especially in the United States, where similar associations have been very successful.

Women's institutes were first founded in Ontario, and their development has been most remarkable. At present there are 800 of them, with about 25,000 members. In 1912-13 lecturers were sent to 1,377 meetings, and 6,204 meetings were held without the assistance of outside lecturers. In 1912-13, 1,667 persons attended the demonstration lecture courses.

In Manitoba these institutes are called home economics societies. Their progress has been very rapid recently. The department of agriculture has directed the work and appointed special inspectors and lecturers to travel through the Province, organize new societies, give courses of instruction in those already existing, and supervise their work.

There are 35 women's institutes in British Columbia with a membership of over 2,000.

In New Brunswick there are 1,000 members in 41 local women's institutes.

In Saskatchewan and Alberta domestic-science courses have been held, though not directly in connection with women's institutes.

ITALY.—In Italy³ a considerable number of so-called itinerant chairs of instruction in agriculture and viticulture are scattered throughout the Kingdom. They are under the oversight of the ministry of agriculture and for the most part are autonomous; that is, they are founded and administered by local bodies of interested persons and are maintained by the communes and Provinces and by the State. Each of these have their own subordinate institutions (sections).

¹ Jour. Bd. Agr. [London], 21 (1914), No. 6, pp. 571, 572.

² Internat. Inst. Agr. [Rome], Mo. Bul. Econ. and Soc. Intel., 5 (1914), No. 6, pp. 17-19.

³ Land u. Forstw. Unterrichts-Ztg., 27 (1913), No. 1-2, pp. 125, 126.

The chairs of instruction are usually provided with professional agricultural teachers having charge of the itinerant instruction in the adjoining communes. About 80 communes are assigned, on the average, to one itinerant teacher.

The object of itinerant instruction is to disseminate agricultural knowledge through immediate contact with the rural population by holding lectures and conferences.

The itinerant teachers are also bureaus of information on all agricultural questions.

The number of itinerant chairs of instruction is 94, that of the sections 86.

The total expenses for itinerant instruction in 1910 amounted to \$50,000.

ROUMANIA.—In Roumania¹ the itinerant agricultural teacher is usually a national-school teacher with practical agricultural knowledge, besides a knowledge of gardening and orcharding. He is allowed a seven months' furlough yearly, during which time he is obliged to visit a certain number of rural national schools which have school gardens or experimental fields. During his stay at the school the teachers and the advanced pupils work one or two days under his superintendence and according to his direction. After the itinerant teacher has visited all the schools in the district assigned to him, he goes back to the first one to assist in a new line of work. He controls the results obtained and records his observations in an inspection book. In this way a single itinerant teacher can give practical agricultural instruction to 10 or 12 schools, from which not only the schools but the teachers derive advantage.

BAVARIA.—In Bavaria² itinerant instruction has been introduced, and it is primarily the duty of the royal agricultural teachers appointed as directors and head teachers in the winter agricultural schools to supervise and further it. By establishing winter schools and filling the position of directors with properly trained permanent teachers competent persons have been provided, who are better able to supervise itinerant instruction. There are now in Bavaria 40 agricultural itinerant teachers, highly qualified in the subject of agriculture. With a small circuit it is possible for the itinerant teacher to get in close touch with the farmers of the district, and not simply to be present sporadically in this and that place for the purpose of delivering a one-hour lecture. Lecturing is only a small part of the work of the itinerant teachers. Their principal duty is to travel regularly over their districts, remain in a community long enough to obtain definite information, enter into agreement with the authorities, suggest improvements, undertake experiments, and aid those interested by personal advice.

The itinerant teachers keep in close touch with practical fertilizer and cultivation experiments on the farmers' fields, in order to demonstrate the advantages of proper fertilization, the selection of good seed, the adaptability of certain kinds of plants to regions in question, and to encourage imitation; in the same way new machines and tools are introduced.

Courses of considerable duration—perhaps three to eight days—do more good than lectures, and great importance is attached to them. Such courses are given for every branch of farming, and have hitherto been principally organized and directed by associations. In order that the work of the societies may be made as practical as possible in all regions, the district officers encourage the holding of housekeeping courses.

BOSNIA AND HERZEGOVINA.—In Bosnia and Herzegovina³ itinerant teachers travel over the entire agricultural districts, chiefly for the purpose of giving

¹ Land u. Forstw. Unterrichts-Ztg., 18 (1904), No. 3-4, pp. 212, 213.

² Land u. Forstw. Unterrichts-Ztg., 18 (1904), No. 3-4, pp. 204, 205.

³ Land u. Forstw. Unterrichts-Ztg., 25 (1911), No. 1, pp. 119-121.

popular agricultural lectures and practical demonstrations for instructing the farmers in proper farm management as well as making suggestions for the advancement of agriculture.

The agricultural societies are exceedingly active and successful in all agricultural lines. They have thus obtained very satisfactory results in agriculture by encouraging the members to fall plow, to properly fertilize, as well as to use modern implements of cultivation, and to establish model farms. In the advancement of cattle raising they have rendered great service by providing breeding stations and by their influence on better feeding and care of animals. The establishment of district granaries is also due to the efforts of the itinerant agricultural teachers.

Besides the itinerant teachers, the agricultural officials take part in the technical instruction of the rural population to a considerable extent. This is particularly true of the officers who are specially appointed for instructing the farmers in the proper cultivation of sugar beets. To each of these officers a special district is assigned and he is obliged to give popular lectures throughout his district. During these lectures the work of the season is freely discussed. These officers have rendered a valuable service to agriculture which should not be underrated.

OFFICIALS IN CHARGE OF FARMERS' INSTITUTE WORK IN THE UNITED STATES.

ALABAMA.—C. A. Cary, Alabama Polytechnic Institute, Auburn.

ALASKA.—C. C. Georgeson, Agricultural Experiment Station, Sitka.

ARIZONA.—S. F. Morse, director of extension, Tucson.

ARKANSAS.—W. C. Lasseter, director of extension, Fayetteville.

CALIFORNIA.—W. T. Clarke, superintendent of farmers' institutes, Berkeley.

COLORADO.—C. A. Lory, acting director of farmers' institutes, Fort Collins.

CONNECTICUT.—H. J. Baker, in charge of farmers' institutes, Storrs.

DELAWARE.—Wesley Webb, secretary State board of agriculture, Dover.

FLORIDA.—P. H. Rolfs, director of extension and superintendent of farmers' institutes, Gainesville.

GEORGIA.—A. M. Soule, president and acting director extension State college of agriculture, Athens.

HAWAII.—William Weinrich, jr., secretary and treasurer farmers' institutes, Honolulu.

IDAHO.—O. D. Center, director extension work, Boise.

ILLINOIS.—H. A. McKeene, secretary Illinois farmers' institutes, Springfield.

INDIANA.—W. C. Latta, farmers' institute specialist, Lafayette.

IOWA.—A. R. Corey, secretary State board of agriculture, Des Moines.

KANSAS.—Edw. C. Johnson, superintendent of farmers' institutes, Manhattan.

KENTUCKY.—Harry McCarty, director of institutes, Frankfort.

LOUISIANA.—W. R. Dodson, director of extension, Baton Rouge.

MAINE.—J. A. Roberts, commissioner of agriculture, Augusta.

MARYLAND.—R. S. Hill, director of farmers' institutes, Upper Marlboro.

MASSACHUSETTS.—Wilfrid Wheeler, secretary State board of agriculture, Boston.

MICHIGAN.—L. R. Taft, superintendent of farmers' institutes, East Lansing.

MINNESOTA.—A. D. Wilson, director of farmers' institutes, University Farm, St. Paul.

MISSISSIPPI.—R. H. Pate, director of farmers' institutes, Agricultural College.

MISSOURI.—Jewell Mayes, secretary State board of agriculture, Columbia.

MONTANA.—F. S. Cooley, superintendent of farmers' institutes, Bozeman.

- NEBRASKA.—C. W. Pugsley, director agricultural extension service, Lincoln.
- NEVADA.—C. S. Knight, director of extension.
- NEW HAMPSHIRE.—Andrew L. Felker, commissioner of agriculture, Concord.
- NEW JERSEY.—Alexis L. Clark, director of farmers' institutes, New Brunswick.
- NEW MEXICO.—A. C. Cooley, director of farmers' institutes, State College.
- NEW YORK.—Edw. Van Alstyne, director bureau of farmers' institutes, Albany.
- NORTH CAROLINA.—T. B. Parker, director of farmers' institutes, Raleigh.
- NORTH DAKOTA.—G. W. Randlett, superintendent of farmers' institutes, Agricultural College.
- OHIO.—A. P. Sandles, president agricultural commission, Columbus.
- OKLAHOMA.—W. D. Bentley, director of extension, Stillwater.
- OREGON.—R. D. Hetzel, director extension work, Corvallis.
- PENNSYLVANIA.—A. L. Martin, director of farmers' institutes, Harrisburg.
- PORTO RICO.—R. S. Garwood, dean agricultural college, Mayaguez.
- RHODE ISLAND.—John J. Dunn, secretary State board of agriculture, Providence.
- SOUTH CAROLINA.—W. W. Long, State agent and director of extension, Clemson College.
- SOUTH DAKOTA.—H. H. Stoner, superintendent of farmers' institutes, Highmore.
- TENNESSEE.—T. F. Peck, commissioner of agriculture, Nashville.
- TEXAS.—J. W. Neill, director of institutes, Austin.
- UTAH.—E. G. Peterson, director agricultural extension division, Logan.
- VERMONT.—Elbert S. Brigham, commissioner of agriculture, St. Albans.
- VIRGINIA.—J. J. Owen, director of institutes, Richmond.
- WASHINGTON.—J. A. Tormey, director extension division, Pullman.
- WEST VIRGINIA.—C. R. Titlow, director of agricultural extension, Morgantown.
- WISCONSIN.—C. P. Norgord, director of farmers' institutes, Madison.
- WYOMING.—H. G. Knight, director agricultural experiment station, Laramie.

New Hampshire.....	20	1	.....	21	22	46	2,500	46	54						
New Jersey.....	48	5	.....	53	58	150	10,257	.....	68					
New Mexico ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York.....	324	40	.....	370	422	1,190	102,594	.....	86					
North Carolina.....	260	.....	1	261	263	514	34,798	23,007	57						
North Dakota.....	25	31	.....	56	87	182	16,868	.....	93					
Ohio.....	.....	414	.....	414	828	2,070	486,450	.....	235				
Oklahoma ¹	205	2	.....	207	209	632	50,291	.....	80					
Oregon.....	23	193	.....	225	430	1,103	174,260	.....	138					
Pennsylvania.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Porto Rico ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rhode Island.....	14	1	.....	15	16	20	2,400	.....	120					
South Carolina.....	105	143	.....	105	105	210	35,000	.....	167					
South Dakota.....	95	141	.....	238	381	626	54,734	15,740	92						
Tennessee.....	45	.....	3	48	54	99	20,000	3,000	183						
Texas.....	1,048	211	.....	1,071	1,104	1,315	385,440	.....	293					
Utah.....	408	11	6	423	446	571	36,977	8,004	54							
Vermont.....	24	.....	.....	24	24	48	5,095	.....	106				
Virginia.....	131	.....	.....	131	131	262	20,650	.....	79				
Washington.....	15	29	.....	72	157	421	47,366	.....	113					
West Virginia.....	14	115	.....	129	244	552	50,771	.....	92					
Wisconsin.....	15	110	40	125	235	580	111,773	.....	193						
Wyoming.....	19	19	.....	40	63	122	8,363	60	67						
Total.....	5,554	724	241	1,791	128	.....	.....	.....	.....			
				7,740	880	241	9,001	1,064	241	19,431	1,451	60	2,964,769	78,237	7,145

¹ No institutes.

² No report.

Financial statistics of the farmers' institutes for the year ended June 30, 1914.

State or Territory.	Funds appropriated.		Cost of institutes.		Appropriation for the season 1915.
	By the State.	By the college and received from other sources.	Total cost.	Cost per session.	
Alabama.....	\$600.00	\$800.00	\$1,400.00	\$31.11	\$600.00
Alaska ¹					
Arizona.....	4,400.00	408.30	4,808.30	85.86	4,400.00
Arkansas.....		1,421.10	1,421.10	118.42	
California.....	10,000.00		10,000.00	17.54	10,000.00
Colorado.....		2,596.00	2,596.00	20.60	
Connecticut.....			916.95	18.34	
Delaware.....	1,000.00	150.00	1,150.00	13.37	1,000.00
Florida.....	10,000.00		10,000.00	50.76	10,000.00
Georgia.....	2,500.00		2,500.00	11.47	
Hawaii ²					
Idaho.....					
Illinois.....	24,500.00	8,679.50	35,179.50	38.66	24,500.00
Indiana.....	10,050.00	12,000.00	22,050.00	17.42	10,000.00
Iowa ²					
Kansas.....	13,500.00	2,000.00	15,500.00	14.54	14,000.00
Kentucky.....	7,025.82		8,525.82	19.67	
Louisiana ¹					
Maine.....	2,300.00	500.00	2,800.00	19.45	
Maryland.....	6,000.00		5,345.00	29.53	6,000.00
Massachusetts.....	6,000.00		2,076.91	13.57	6,000.00
Michigan.....	8,500.00		12,000.00	8.10	8,500.00
Minnesota.....	23,000.00	3,265.00	26,244.73	76.74	23,000.00
Mississippi.....	7,500.00	2,000.00	9,500.00	17.46	9,000.00
Missouri.....	8,500.00		8,500.00	27.86	
Montana.....	10,000.00		10,000.00	48.31	
Nebraska.....	25,000.00		25,000.00	46.73	25,000.00
Nevada ¹					
New Hampshire.....	1,200.00		1,186.00	25.78	2,000.00
New Jersey.....	4,229.00	1,200.00	5,429.00	36.19	3,500.00
New Mexico ¹					
New York.....	20,000.00	19,760.52	39,760.52	33.41	25,000.00
North Carolina.....	12,000.00	2,000.00	13,500.00	13.31	12,000.00
North Dakota.....	6,000.00	915.00	5,376.00	29.54	6,000.00
Ohio.....	26,400.00	4,472.95	30,872.95	14.92	26,400.00
Oklahoma ¹					
Oregon.....	2,500.00		6,700.00	10.60	2,500.00
Pennsylvania.....	22,500.00	4,000.00	26,500.00	24.03	22,500.00
Porto Rico ¹					
Rhode Island.....	700.00	200.00	645.31	32.26	
South Carolina.....	2,500.00		2,200.00	10.47	
South Dakota.....	20,000.00		20,000.00	26.08	20,000.00
Tennessee.....	5,000.00	1,200.00	5,000.00	39.68	5,000.00
Texas.....	17,500.00		16,903.97	12.85	17,500.00
Utah.....	10,000.00		10,000.00	11.98	10,000.00
Vermont.....	592.45		1,192.45	24.84	600.00
Virginia.....	5,000.00		5,000.00	19.09	5,000.00
Washington.....	17,500.00		8,750.00	41.57	25,000.00
West Virginia.....	7,317.00		9,317.00	16.88	7,500.00
Wisconsin.....	20,000.00		20,000.00	34.48	20,000.00
Wyoming.....	1,050.00	750.00	2,050.00	16.14	1,050.00
Total.....	382,364.27	67,518.37	447,897.51	20.43	363,550.00

¹ No institutes.² No report.

Number of lecturers employed by the State directors of farmers' institutes and reports of proceedings published for the year ended June 30, 1914.

State or Territory.	Total number of lecturers on the State force.	Number of members of agricultural college and experiment station staffs engaged in institute work.	Number of days contributed to institute work by agricultural college and experiment station lecturers.	Number of State lecturers giving agricultural instruction at—				Reports of proceedings.	
				Teachers' institutes.	High schools.	Normal schools.	Common schools.	Published.	Number of copies.
Alabama								No.	
Alaska ¹								No.	
Arizona	19	15	356	2	1		1	Yes	
Arkansas	15	12	488	15	5			No.	
California	125	40	300	8	10	1	24	Yes	20,000
Colorado	17	17	120	3				No.	
Connecticut	33							No.	
Delaware	22	6	32					No.	
Florida	18	20	692	2		2	6	Yes	20,000
Georgia ¹	25	25	1,426	5				Yes	2,500
Hawaii ²									
Idaho		20							
Illinois	65							Yes	50,000
Indiana	50	9	49					Yes	1,000
Iowa ²									
Kansas	38	14	163	9	156			No.	
Kentucky	10		10					Yes	5,000
Louisiana ¹									
Maine	64	10	27					No.	
Maryland	20	11	50					No.	
Massachusetts	93	22	37		5			No.	
Michigan	42	6	20					Yes	12,500
Minnesota	24							Yes	50,000
Mississippi	19	12	130	3	3	5	3	No.	
Missouri								No.	
Montana	29	18		3	19			No.	
Nebraska	65	18	89		6		6	No.	
Nevada ¹									
New Hampshire	10	7	14					Yes	
New Jersey	41	17	204	1	1	1		No.	
New Mexico ¹									
New York	97	39	98					Yes	10,000
North Carolina	52	15	286					Yes	35,000
North Dakota								Yes	10,000
Ohio	43	20	192					Yes	
Oklahoma ¹									
Oregon	11	51	1,052	1	6			No.	
Pennsylvania	54	11	55					No.	
Porto Rico ¹									
Rhode Island	15	4	4			1	1	No.	
South Carolina	12							No.	
South Dakota	15							No.	
Tennessee	15							Yes	3,000
Texas	16	20	150	50	135	5	158	No.	
Utah	15	14	168					No.	
Vermont	5	1	2					No.	
Virginia								No.	
Washington	20	31	650					No.	
West Virginia	38	13	156	2	1	11	1	Yes	
Wisconsin	16	5	19					Yes	60,000
Wyoming	9	5	103	3				No.	
Total	1,287	528	7,142	107	348	26	200		279,000

¹ No institutes.

² No report.

Year	1900										1901										1902										1903										1904									
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
1900	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
1901	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
1902	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
1903	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
1904	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10