

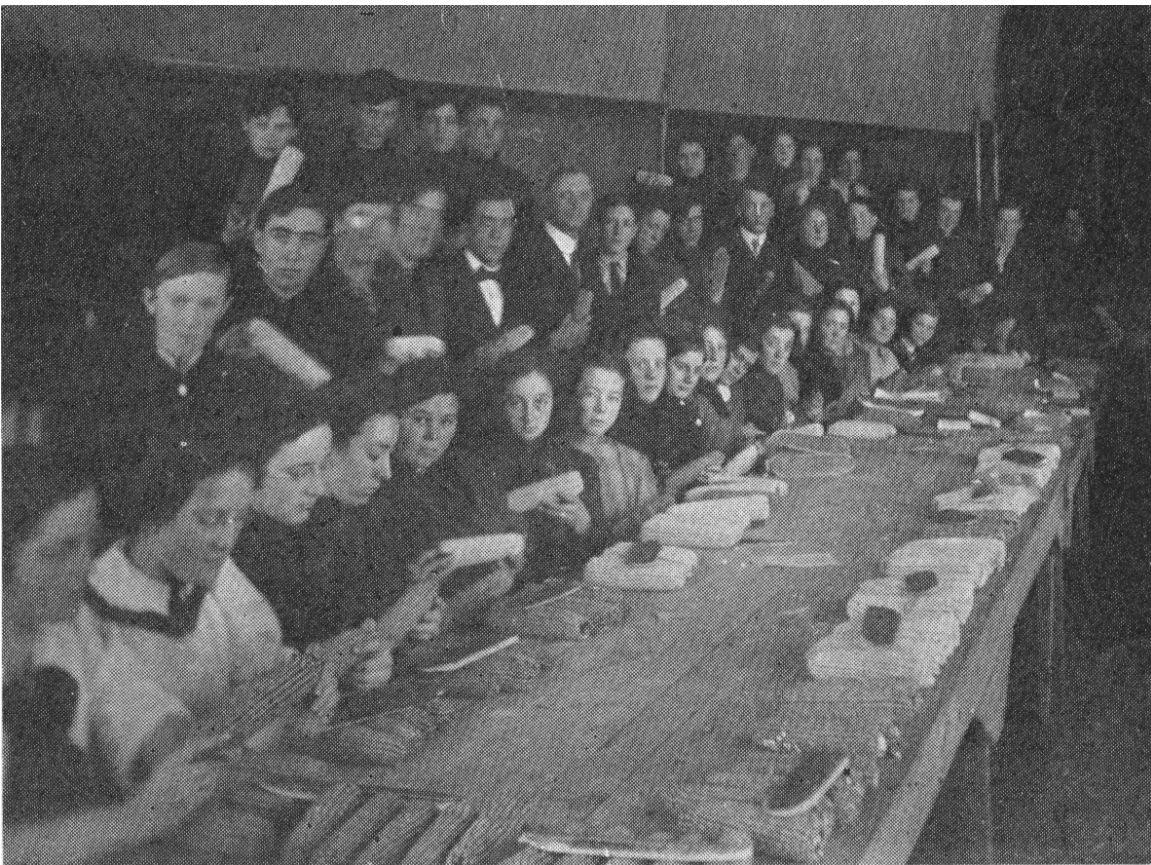
Department of Public Instruction

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What the Public Schools of Indiana Are Doing in Pre-Vocational Agricultural Work



Class in Agriculture judging corn, Winamac, Ind.

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DEPARTMENT OF PUBLIC INSTRUCTION
VOCATIONAL DIVISION

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FOREWORD.

This bulletin deals with the pre-vocational agricultural work in the public schools of Indiana. No attempt has been made to discuss fully all that is being done in this line of work.

Nothing is said in this bulletin about the vocational agricultural departments that have been organized and put into operation under the provisions for state aid.

Z. M. SMITH,
State Supervise of Agricultural Education

WHAT INDIANA SCHOOLS ARE DOING IN PRE-VOCATIONAL AGRICULTURE.

The Story in Brief.

Great progress has been made toward good agricultural practice on Indiana farms as a result of the work of the public schools in pre-vocational agriculture. The pupils of the seventh, eighth and high school grades have demonstrated that scientific agriculture is profitable. Boys who have followed the instructions obtained in school on the problem of corn growing have produced annually for the last three years from sixty to one hundred and twenty-eight bushels of corn per acre. The average production of corn per acre by the boys has exceeded the average production of the State by forty-seven bushels. The increased production has been obtained without a proportionate increase in the cost of production. The boys have produced their corn at an average cost of twenty-one cents per bushel as against thirty-five cents for the State.

In many school districts in the State farmers will not plant corn that has not been tested. For the most part the corn is tested for the farmers by the agricultural class in the home school. A great deal of prejudice on the part of parents had to be overcome before the value of testing seed corn could be demonstrated in a practical way by the boys. Gradually the rag doll and sawdust or sand testers have come into common use on the farms as a result of the work by the public school pupils.

The schools have done a notable work in the improvement of the dairy interests of the State. Many unprofitable cows have been sent to the block as a result of the records which school boys have kept of their Babcock tests for butter fat and of the amount and kinds of feed used. In many cases good cows have been discovered by the boys and have been made even more profitable by the care given them and the rations fed in accordance with information obtained at school.

Fruit and vegetable growing have received a great deal of attention in the schools in all parts of the State. Budding, grafting, pruning, and spraying of fruit trees have been practiced extensively by pupils, and in many instances the entire management of the home orchard has been entrusted to the boy who has studied

agriculture in school. The home gardens have been planned, cultivated, and managed in detail by pupils who have done the work as a part of their regular school course. The gardening work is not confined exclusively to country boys and girls. Last year twenty thousand pupils in town and city schools in Indiana cultivated home garden plots under the direction of the public schools.

The important problem of poultry raising has not been neglected by the public schools of Indiana. Many schools have constructed poultry houses on the school grounds and have hatched chickens and fed hens for egg production. But a greater work than this has been done with poultry by the pupils in their management of



Pupils gathering the fruits of their labors.

poultry at home. The practical management of poultry which is limited to the flock on the school grounds has comparatively little value. But when pupils react to the school instruction by managing the home flock on a practical basis then the work performed at school becomes of inestimable value.

The care and management of all classes of live-stock have been interesting subjects for study in hundreds of schools in Indiana. Pupils have learned that pure bred live-stock is more profitable than scrubs. They have had actual practice in judging all classes of stock. The lessons learned at school have given many boys confidence in their judgment to the degree that they have mustered up enough courage to propose to their fathers that scrub stock be replaced by pure bred, and that more economical and nutritive rations be fed. Parents have learned to respect the work of the



Interest in agricultural education is carried home by the pupils, and fathers take up the work in practical ways.

schools because of the profitable results obtained by following the suggestions which their boys have made.

Purity tests with clover and alfalfa seeds which the public schools have made have netted the farmers of the State an amount equal to a snug fortune. In one town in the State the seed dealer was elated over the fact that farmers would no longer purchase second grade seed because the boys had demonstrated in their agricultural work that high grade seed is cheaper, and in addition to its being cheaper it is free from the seeds of obnoxious weeds which have been distributed far and wide in Indiana by sowing impure clover and alfalfa.

More could be added to this general statement. Enough has been said to give the reader an idea of the magnitude and importance of the agricultural work which the public schools in Indiana are doing.

We are fortunate in being able to give specific information about the work that has been done in several different communities. While the following brief statements are definite yet they do not give in an adequate way an account of all of the home problems worked by the pupils of the several teachers referred to.

Home Problem Work.

The pupils of W. G. Kitchen, Columbus High School, worked out the following problems at home: Classification of soils on home farms; best method of management of home soils; listing types and breeds of farm animals at home; classification of feeds produced on farm; working out of feeding proper rations; measuring and planning home gardens; identification and control of injurious insects.

Seventy-five pupils of the seventh, eighth and high school grades will cultivate and manage home gardens this summer under the personal supervision of Mr. Kitchen.

H. M. Walker of Corydon has a class in agriculture composed of high school boys. These boys have tested seed corn for their Fathers and their neighbors and have made a special study of the soils of the home farms and gardens.

The eighth grade and high school boys in the agricultural classes at Zionsville have tested seed corn and milk for the farmers in the community.

Otis Calvin of Matthews had one boy in his class who sowed five acres of alfalfa, and tried out the effect of lime, manure, inoculation,

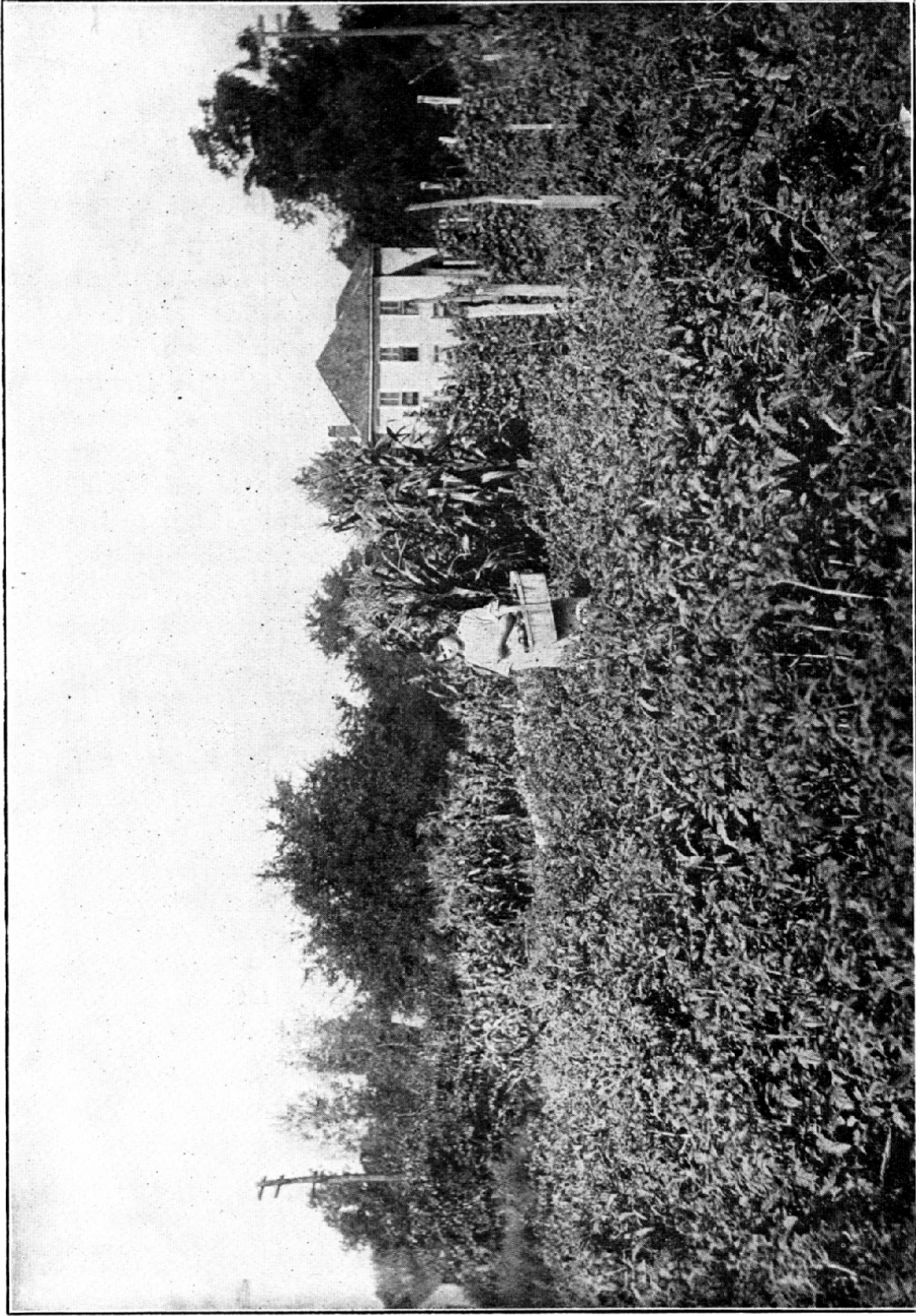
and drainage as compared with plots without one or more of these. Another boy gave special attention to the problems of growing oats and corn. He grew twenty acres of corn and five acres of oats. The seed oats were treated for smut. Two brothers fed fifty-five head of beef cattle. The boys with the aid of Mr. Calvin figured the rations used. The cattle topped the market and the father of the boys considered the project a success. One boy induced his father to send a scrub bull to the block.

At Waveland the pupils of H. V. Raquet did a great deal of spraying and pruning for the townspeople and the farmers in the community. They had to refuse many on account of lack of time. A small charge was made to cover the expenses incurred by the school in purchasing the pruning and spraying outfits and spray material. Each of the boys of the high school who took dairying kept a record of the milk production of one cow for sixteen weeks. The milk was weighed and samples were brought to school and tested. At the beginning of the year a Community Club with a membership of two hundred-fifty was organized. Meetings were held every month. Late in the winter a Junior Civic League was formed. Its members were composed of pupils from the fourth to eighth grades inclusive. As a result of the work of the school and these organizations a large number of boys and girls are working out home problems in farm and garden crops.

As a result of practical work done by the pupils in the Valparaiso schools, under the direction of Audrey Skomp, the farmers of the community became interested and organized an evening class which met every Friday night. Mr. Skomp directed the work of this class along practical lines. Several members of the class were so thoroughly convinced of the soundness of the instruction which they received as to make practical use of it in seedbed preparation, and drainage projects. One farmer made experiments with alfalfa and reported to the class. He proved conclusively that alfalfa could be grown in that community. Up to the time of the carrying out of this demonstration, the farmers of the Community did not believe alfalfa could be grown in that locality.

The agricultural class of Edgar Rogers of Mooreland weighed and tested the milk of their home herds. Seed corn was tested by the rag doll method. Clover seed bought by the fanners was tested for impurities and germinable qualities.

The agricultural work in Jackson Township, Hamilton County, is under the supervision of C. O. Tuttle. Mr. Tuttle places but little emphasis on text-book work in agriculture, but lays great



A public school pupil who made a profit of \$50.00 on her home garden of $\frac{1}{10}$ acre.

stress upon the working out of actual farm problems in connection with the school work. Books are used for reference purposes and are consulted when information on specific problems is needed. Sixty boys and thirty or more girls are engaged in home problem work under the direction of Mr. Tuttle and Miss Marian Lane. During the summer of 1914 Mr. Tuttle was employed to supervise club work and to act as township agricultural advisor. The principal lines of his extension work were hog cholera, alfalfa and orchard demonstrations. Under his direction the schools have complete supervision of an orchard of fifty trees and advisory charge of three others.

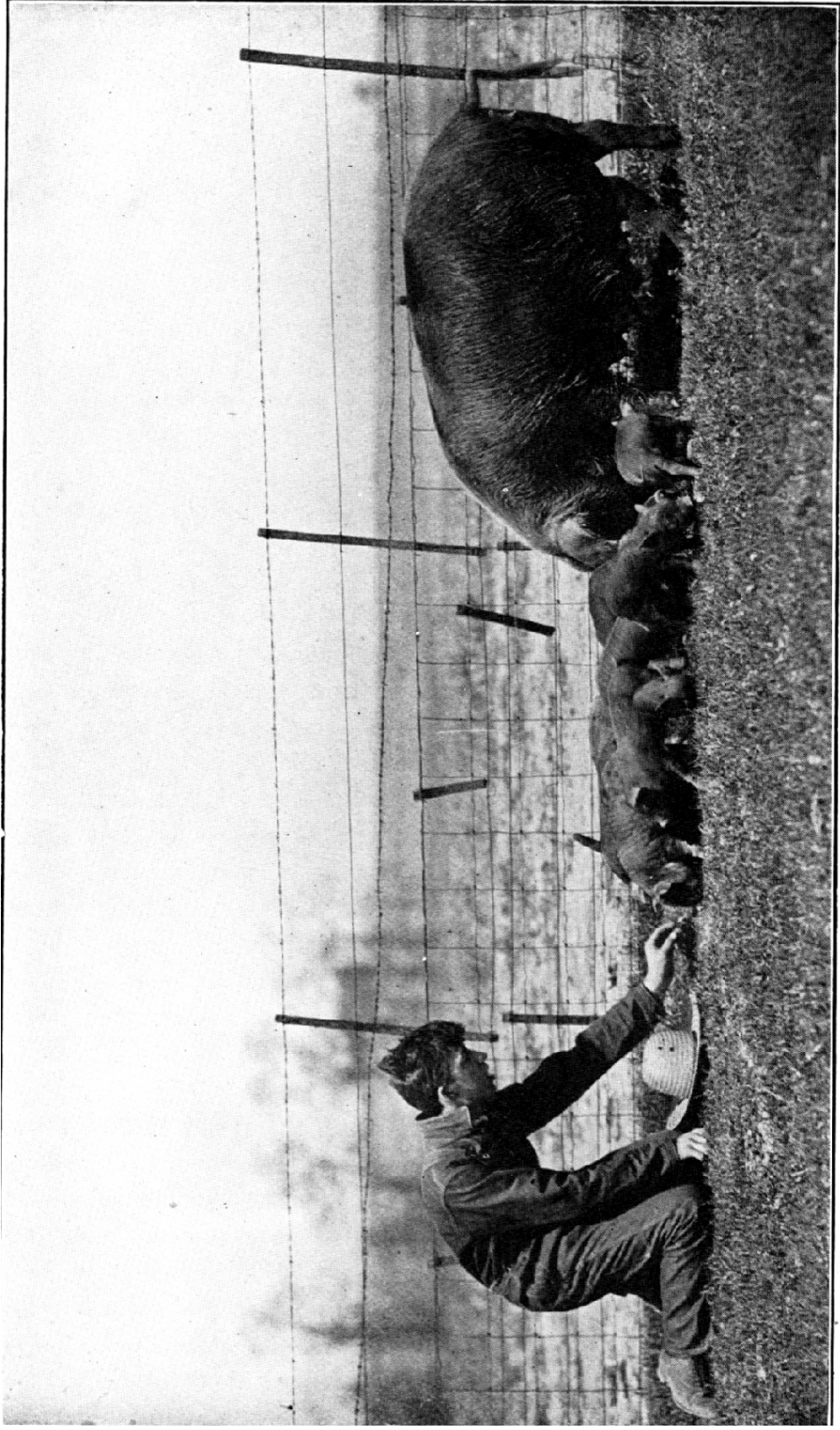
The Mount Auburn schools, Jackson Township, Shelby County, under the supervision of R. M. Craig, have tested seed corn for farmers, have tested milk, and have conducted corn shows. The agricultural classes are composed of boys of the seventh, eighth, and high school grades.

The agricultural class in the seventh and eighth grades at Brownstown, under the direction of Hale Bradt, have laid emphasis on the study of the soils of the home farms. The home problems for this summer are inoculation of soil for alfalfa by the use of commercial inoculations and soil from fields of legumes.

The eighth grade boys at Westfield studied grass seed and small grain collected from the farms in the community, and made field and laboratory tests of the soils on the home farms. The high school boys in their, work in animal husbandry carefully studied forty horses under the personal direction of the instructor, W. E. Furnas. The studies were fairly comprehensive, including judging, diseases, blemishes, age, breeding, care and feeding. This class also studied dairying and did a great deal of practical work in testing the home herds and in making personal inspections of silos.

W. P. Smith at Oxford has agricultural classes in the seventh, eighth, and high school grades. Members of the high school class have had charge of the home poultry and have managed and fed file flocks in accordance with instructions worked out in class. The boys of the seventh and eighth grades and their teacher selected seed corn from the field last fall and stored it in the school building. This spring they tested the corn for germination.

C. W. Jack has charge of the agricultural work in the Crawfordsville high school. Each boy in one of the agricultural classes sowed alfalfa at home. The soil was limed and fertilized and the seedbed was carefully prepared. The class in poultry is doing



Public school agricultural work creates an interest in lives'ock production.

work at home. Each boy has culled his flock and set eggs from pure bred stock. Pupils who are studying horticulture have charge of the home gardens. The instructor inspects each garden once per week. The boys tested their garden soils for acidity and applied lime when necessary. Two boys are growing two acres each of tomatoes for a canning factory.

As a result of the agricultural work in the seventh, eighth and high school grades at Worthington, seven boys will have collectively 546 acres of corn which they will plant, cultivate, and manage in general this season in accordance with information obtained at school. Other pupils are working out home problems in poultry raising and tomato growing. The work done this summer will be carried on under the personal supervision of E. B. Rizer, who will visit each pupil and inspect his work at least once every ten days.

During the past year the boys in the agricultural class in the consolidated school in Union Township, Johnson County, kept records on dairy cows at their homes. These records showed the amount of feed used, the kind, weight of milk per day and the butter fat tests. One boy has been keeping a record during the year on pure bred ducks. His record includes the kind and amount of feed used, the income, and the profit or loss for each month. Farmers in the community have had their corn tested by the school. The agricultural teacher, Bert E. Tapp, is a practical farmer and believes thoroughly in using the problem method in teaching agriculture.

Frank Woerner, who is the teacher of agriculture in the Center Grove consolidated school in Johnson County, has directed his classes in the study of soils and crops. The soils of the home farms have been studied, seed corn has been selected, stored and tested, and the boys are now engaged in carrying out their project in corn growing.

Results of a practical nature are being obtained through the work of the agricultural classes at Trafalgar. M. F. Kennedy, the teacher, has won the confidence of the farmers in the community. As a result of the lime tests made by the pupils one farmer bought a car load of lime for use on his acid and clay soils. Another came to the school for information about legumes, and others asked for information on the problems of growing clover and planting Fruit trees. The pupils planted an orchard for a farmer in the community. The boys did all the blasting, cultivating, setting, and pruning.

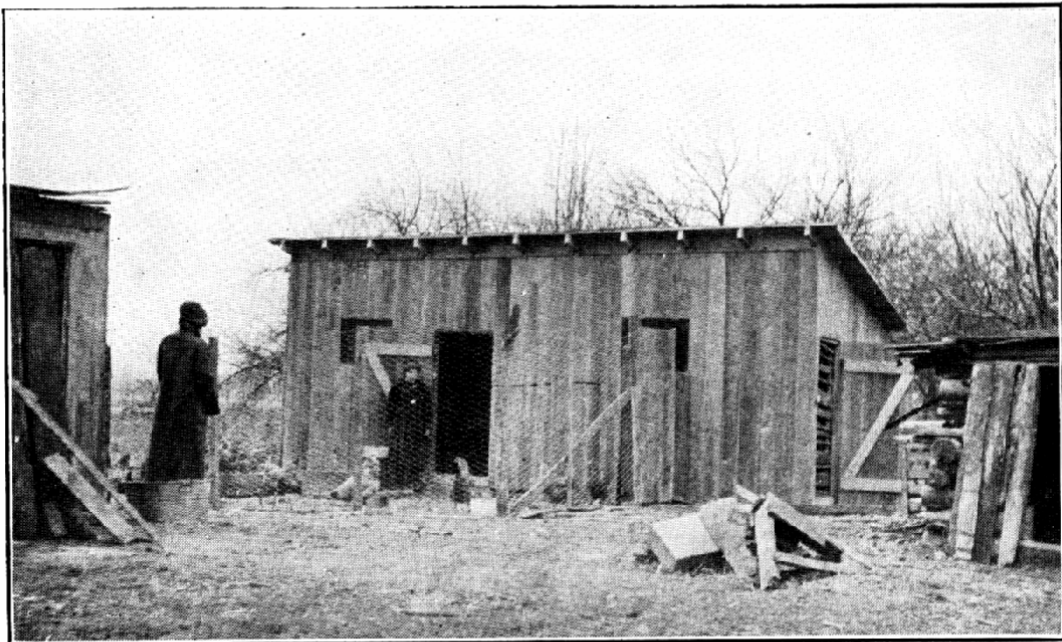
F. A. Ogle of Star City has accomplished excellent results through his work with pupils in agriculture. His pupils have carried out two hog feeding and several poultry feeding experiments. In conducting the hog feeding experiments rations were figured, the hogs were weighed at regular intervals, daily gains in weight were determined and the cost of production per pound was found. The feeding of lot No. 1 covered a period of thirty-three days. The hogs gained 2.7 pounds each per day at a cost of \$.0461 per pound. One of the boys who conducted poultry feeding demonstrations at home prevailed upon his father to divide the home flock from which they were getting no eggs and permit him to feed one-half in accordance with instructions received at school. The half of the flock which the boy fed yielded a 40% egg production during the winter while the other half produced no eggs. A merchant in Star City said that the poultry work in school had demonstrated the value of pure bred poultry so conclusively that farmers were replacing their scrubs with pure breds. For this reason he said the eggs which the farmers brought to him were uniform and large to the extent that he paid two cents per dozen more for eggs than could be paid for eggs in neighboring towns, because the eggs produced in his community brought in the eastern markets a much better price than those brought in from other neighborhoods. Pupils have budded trees at home, and pruned and sprayed fruit trees in the home orchards.

The agricultural classes in the school at Sandborn have tested seed corn for farmers. There has been in the school laboratory at one time as many as ten bushels of seed corn. The boys have pruned and sprayed fruit trees at home. They have studied the soils on the home farms and have carried out practical demonstrations in corn growing and poultry raising. The teacher, A. M. Wheeler, has succeeded in arousing the interest of farmers in better agriculture.

A class of girls in the Pendleton schools has done splendid work in the line of poultry. Each girl has had entire control of twelve pure bred hens at her home. Throughout the year the hens have been fed for egg production and careful records have been kept. The importance of the proper housing of hens as necessary to egg production was impressed upon the pupils and their parents by reason of the fact that the chickens sheltered in the house shown on this page did not produce eggs until after they had been housed in February, whereas the hens properly sheltered at the homes of



Shelter provided for the poultry up to February.



Poultry house completed in February.

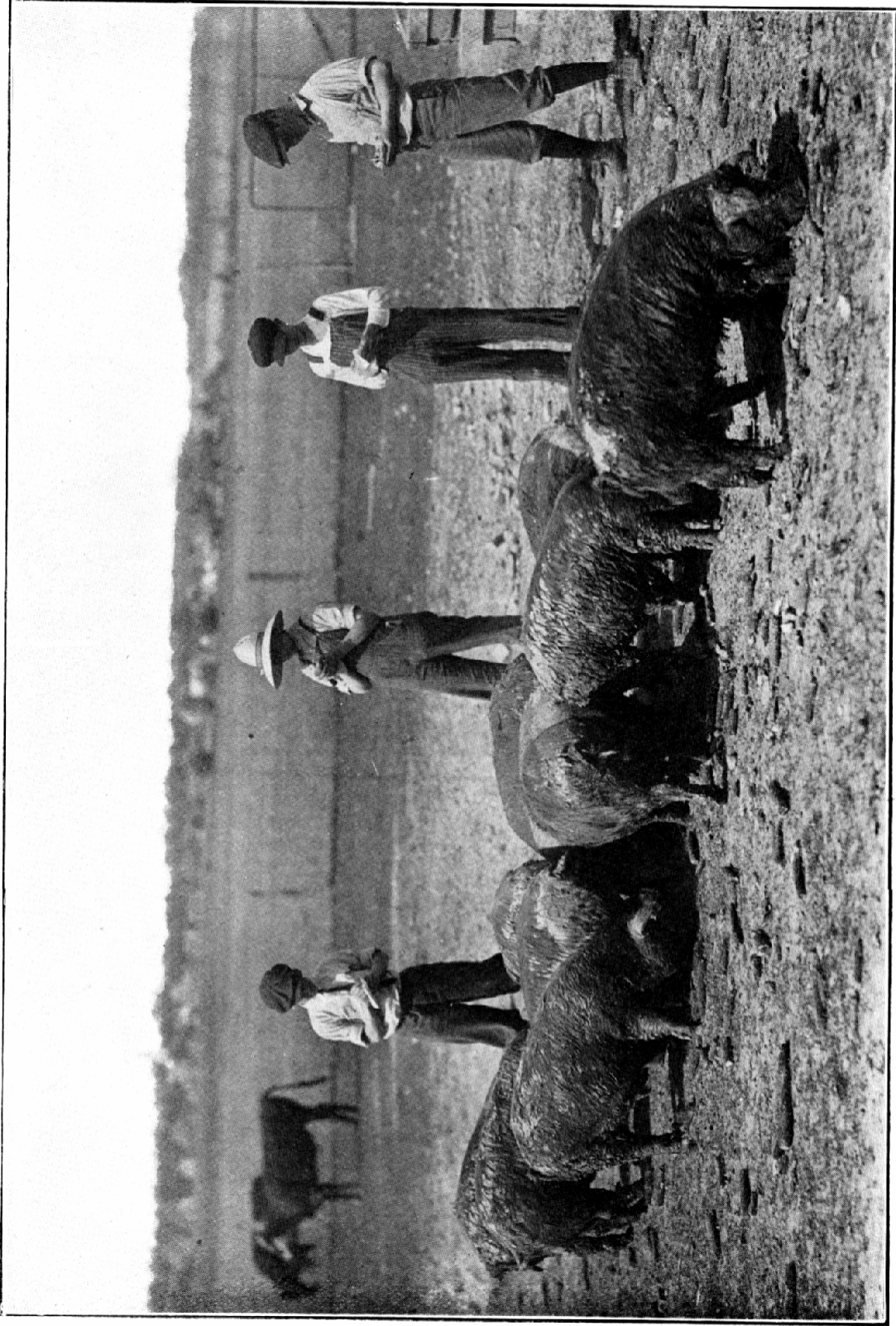
other members of the class produced eggs regularly during the winter.

Early this spring the members of the class took up the hatching problem work in addition to the management for egg production. Each pupil tried out both the natural and artificial methods of incubation.

The teacher, Miss Florence Knipe, has visited the pupils at regular and frequent intervals throughout the year for the purpose of studying actual conditions under which each was working. The information thus gained enabled her to plan and direct the class work along practical lines and in such a manner as to meet the needs presented in the home problems of the pupils.

Mr. D. H. Ashley of Warsaw had each of his pupils carry out a project of their own selection. Some chose chickens; others steers, hogs or dairy cows. The pupils were required to make reports which included initial weights, ages, rations, costs, drawings of buildings with suggested modifications for improvement. The final reports gave results showing gross receipts and net returns. Some were surprised at the cost and attempted to find means of reducing same. Members of the class in horticulture took jobs of spraying fruit trees on city lots. Old trees were pruned and renovated. The money obtained for the work was used in buying agricultural books for the school library. Most of the boys pruned and sprayed their home orchards.

The high school classes in agriculture at Brazil have been required to do one hour of field or home work per week. This work as a rule has had direct relation to the topics being studied in school. The boys did such work as selecting, scoring and testing seed corn, testing milk for butter fat, preparing balanced rations for live stock at home, planning better arrangement of farm fences, etc. The members of the class were encouraged to bring home problems to the school and at least one such question was considered daily. The boys in one class cleaned up the home orchards and helped spray and prune the trees. A number of strawberry beds were started and other small fruits received attention. The class made plans and carried them out with a will when given a chance to help improve conditions on the lot on which the domestic science building is located. The agricultural teacher, Arnold V. Doub, has personally visited the boys and supervised the home problem work as far as possible. He feels that a great deal more time could be spent in this way to the advantage of his school work.



An agricultural class studying hogs.

The agricultural work in the schools at Middlebury has been extended into the community by A. T. Marvel through the pig feeding demonstrations carried out by some members of his class, through a Farm Betterment Club and a six weeks evening class in soils for farmers.

Mr. C. R. Jackson's class in agriculture at Cortland helped the farmers of the community by testing the seed corn, grass and clover seed for them.

This sort of work appealed to the farmers and was a success. Some of the farmers do not buy seed now until after it has been tested by the school.

The greater part of the work in agriculture in the high school at Pine Village is carried out on the home farms of the pupils. After some instruction in the school and some demonstration in a field with a class the boys pick seed corn on the home farm and store it. Toward spring, after some instruction in scoring, they test seed corn at home and usually pick the very best ears and plant on the west side of a selected field. As a result of the first year's work in agriculture over 1,500 acres were planted with tested seed where seed had not been tested before. Since that time testing has become the rule in the community and it is only here and there that a man is found planting untested corn. Then it is always a man who is not a patron of the schools.

During the summer the boys have continued to cultivate the corn and maintain the dust mulch after the corn was too high for two-horse cultivation. Where the father doubted the benefit of this practice check strips were left uncultivated.

In connection with the study of the subject of drainage, maps were made of the home farms showing all drains. Where the farm shows considerable diversity of soil type (a common occurrence in this neighborhood) the boys have collected samples from different parts of the farm and studied percolation at home in this way.

Feeding experiments have been carried on at home. An especially interesting and profitable study along this line has been the raising of the calf by hand as compared with allowing; the calf to run with the cow.

When any of the fathers have put a bunch of cattle on feed the boys have made use of their practice in scoring, by picking the best steers in the lot, then watching them test their judgment. At butchering time the boys have judged the hogs to be butchered at home, then determined the actual dressing percentages.



Planting the home garden



Cultivating the home garden.

In the study of milk production they have tested the home cows and kept accurate account of their rations. At first they brought samples of the milk to school and tested there, but before long they were asking to take the testing outfit home so that "the folks" could know all about it. The school has an outfit in a traveling case and loans it to pupils for use in testing milk at home.



Agricultural pupils are taught to keep accurate records of amount of vegetables produced.

Value of Home Problem Work.

One can readily see from the work done at home by pupils of the teachers referred to above that the home problem method of teaching agriculture gives meaning to the class discussions and laboratory exercises. Without such a practical treatment of the subject there is lack of interest, and comparatively little value is attached to the work. These teachers of whom we have given information and hundreds of others have demonstrated that home problem work can and should be carried on during the winter as well as during the summer.

Continuation Work During the Summer.

The home problem work will be continued during the summer by thirty thousand Indiana boys and girls. The work will be supervised in many communities by teachers who have been employed for the purpose.

In case a supervisor is not employed the work is directed by local organizations under the supervision of the county superintendent of schools or the county agricultural agent, and the township trustees. The number of pupils who continue this school work during the summer in the form of home problems is increasing from year to year, and the work is becoming more practical and thorough.

Number of Agricultural Teachers in Indiana.

A great army of teachers in Indiana is engaged in the splendid work of inspiring boys and girls to find keen enjoyment in doing worth-while things like those described in the foregoing pages. To tell of the work of each would require a large volume. Since August 1, 1914, representatives of the State Department of Public Instruction in cooperation with the Purdue Agricultural Extension Department have visited every county superintendent in the State. Data collected by these representatives show that during the year 6,368 teachers were engaged in teaching agriculture in the one-room schools of Indiana; 830 in the consolidated schools, and 400 in the high schools. It is impossible to measure the value of these 7,600 teachers in their noble work of educating the boys and girls of the State along such lines as will insure better farming and a fuller country life in Indiana. As a result of their splendid achievements in teaching agriculture we may confidently believe that country boys and girls who enjoy the luxuries of automobiles and country homes supplied with every modern convenience will cease their exodus from the country to the city where they may be surrounded by appalling conditions of ignorance, squalor and want, and may become dependent upon charity organizations for support.

We admit that many of the 7,600 teachers who have classes in agriculture are not doing their work along practical lines. But those who are real teachers, wide awake and efficient, are teaching boys and girls and not text-books. The text-book slaves are diminishing in numbers. Leaders in educational progress are increasing and are teaching boys and girls to see and use the educational tools lavishly supplied by nature.

Helps from the State Department of Public Instruction.

The State Department of Public Instruction has endeavored to render helpful service to teachers of agriculture. If one may



Farmers' boys receiving practice instruction preliminary to cement construction work.

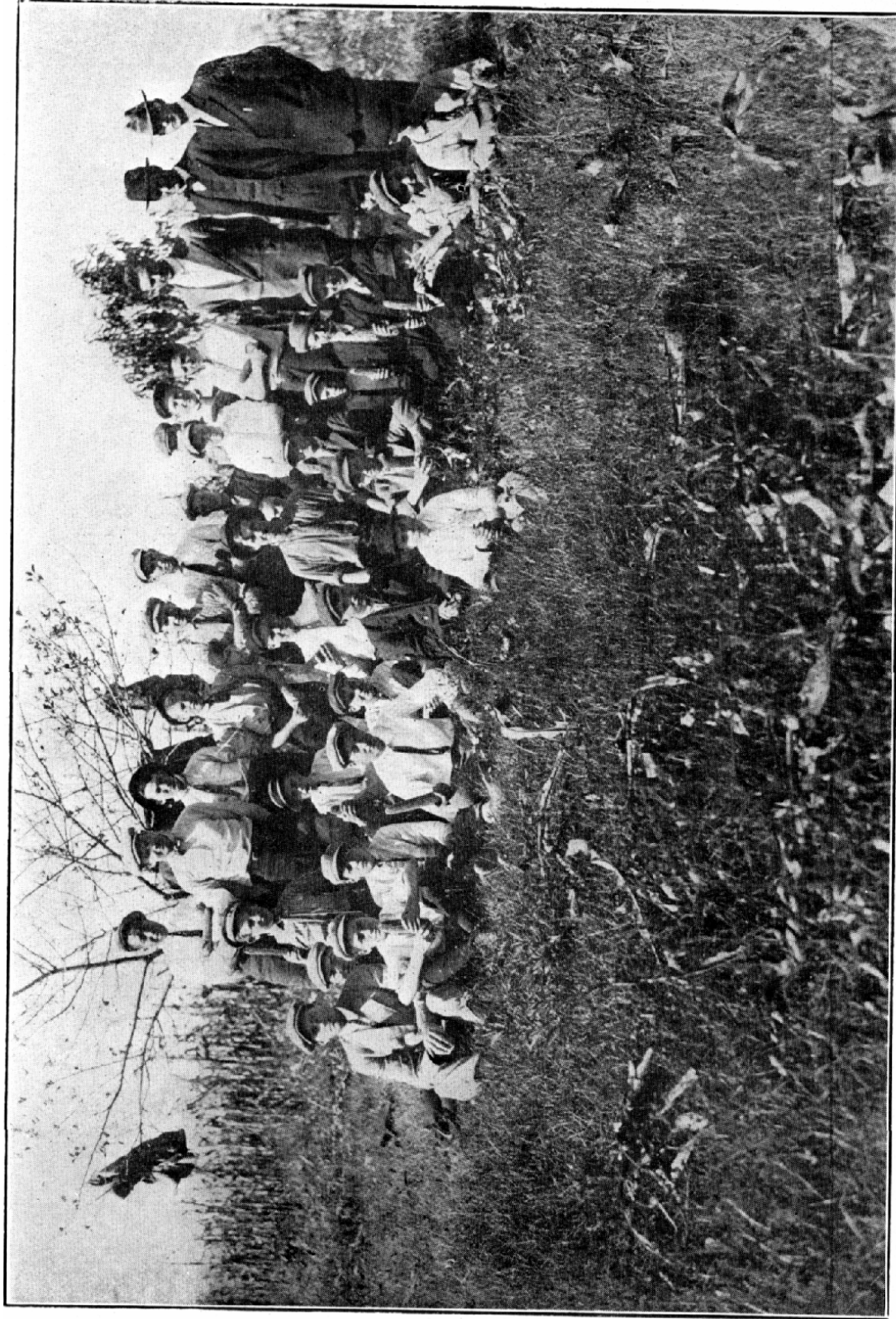
judge from the progress that teachers have made in the work and from the hundreds of expressions of commendation of help given by the Department, there is no question about the success of the efforts of the Department along this line.

The Department has issued bulletins giving helps for teachers in agriculture. The State Supervisor of Agricultural Education and his assistants, supplied by the Purdue Agricultural Extension Department, have spent 85 days in county and township teachers' institutes since August 1, 1914, and have given to the 6,859 teachers in attendance 151 practical demonstrated lectures' on teaching agriculture. Other men supplied by the Purdue Agricultural Extension Department have given to 1,757 teachers 54 lectures of the kind given by the State Supervisor and his assistants, and the county agricultural agents have given 212 of the same kind of lectures to 11,578 teachers. It is impossible to estimate the real value of these 417 practical lectures which the State Department and its cooperative agencies have given to the 20,194 teachers in attendance. These lectures constitute only a small part of the work of the State Supervisor of Agricultural Education and his assistants and cooperative agents.

There must be taken into consideration the hundreds of school visits, general meetings, personal conferences with teachers, superintendents and school officials, visitation and inspection of the normal schools and colleges, which train teachers of agriculture, and thousands of letters written in answer to personal requests for information.

The courses of study in agriculture issued by the Department in April, 1915, furnish the most complete and helpful outlines for teachers of seventh, eighth and high school grades that have been published in bulletin form. In these courses is a wealth of suggestive material based on practical farm and community problems. The bulletin is replete with helps on the home farm problem method of teaching agriculture.

During the summer the State Supervisor of Agricultural Education will personally supervise the work of twenty-one teachers who through the cooperation of the State and the Purdue Agricultural Extension Department have been employed to continue throughout the summer their agricultural work with their pupils. The pupils will not attend school, but will be visited at their homes at regular and frequent intervals by these teachers, who will give instruction and directions relative to the agricultural demonstrations which the pupils are engaged in carrying out. It is confidently



Class in agriculture on field trip to select seed corn under the direction of the teacher and the county agricultural agent.
Wayne County.

expected that the number of these supervisors will be increased from year to year. Those who have been employed as supervisors for this summer are: (1) Under State aid: C. O. Tattle, Atlanta; L. R. Romine, Pentleton; John Little, Fairmount; F. A. Ogle, Star City; W. E. Furnas, Westfield; Bert Tapp, Trafalgar. (2) Under Purdue Agricultural Extension aid : Bertha Cook, Osgood; Mary E. Smith, Goldsmith; Anna Noel, Star City; Marian Lane, Arcadia; Ida Pippenger, New Paris; E. B. Rizer, Worthington; A. T. Marvel, Middlebury; Z. M. Smith, Greenwood; W. G. Kitchen, Columbus; F. B. Hopkins, Danville; Otis W. Calvin, Matthews; Roy P. Wisheart, Pendleton; Alfred Hesler, Veedersburg; C. E. Eash, Topeka.

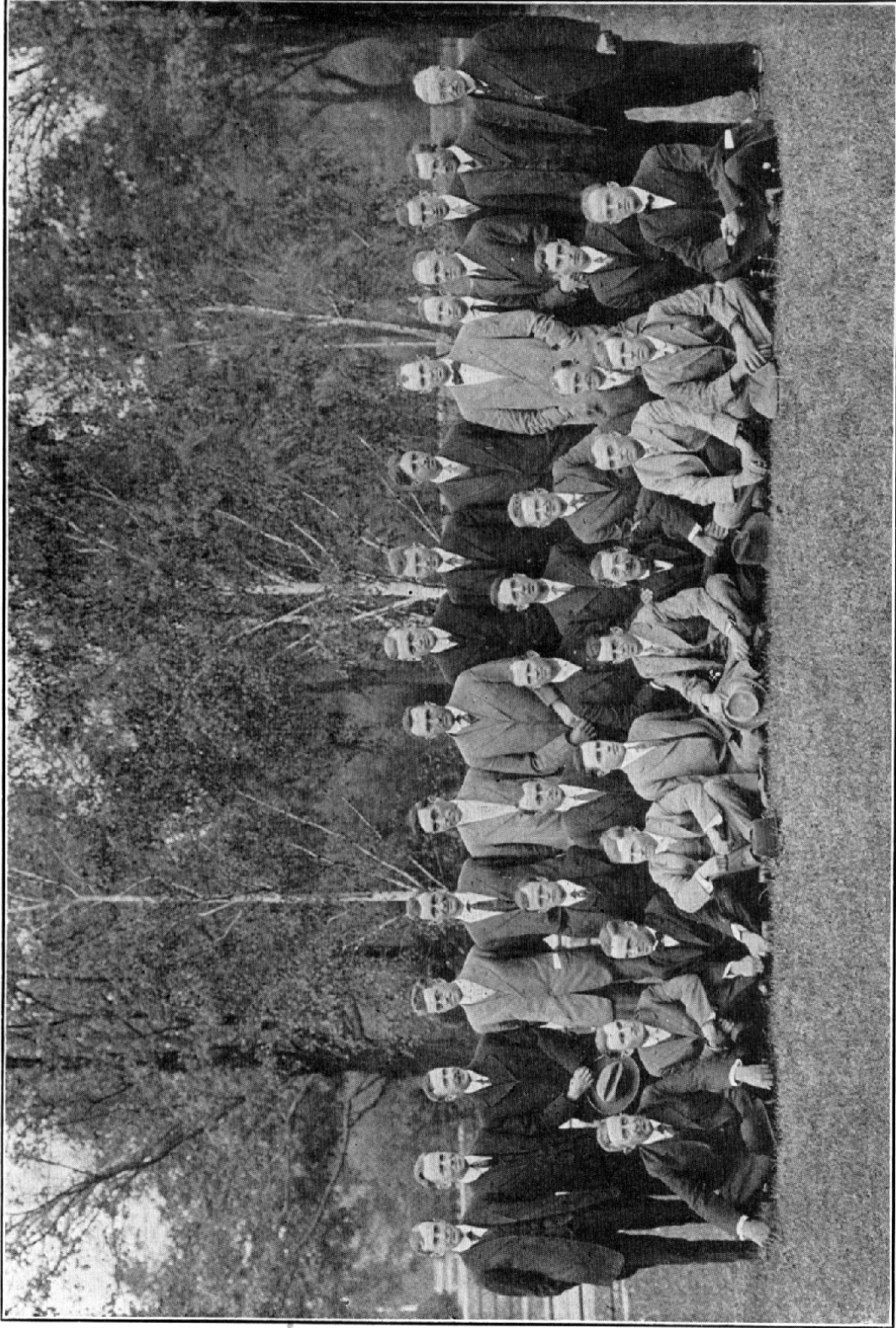
County Agricultural Agents.

County agricultural agents working under the direction of the Purdue Agricultural Extension Department and of the State Supervisor of Agricultural Education have rendered valuable assistance to agricultural teachers. They have issued special bulletins and leaflets designed especially to aid the teachers in working out agricultural problems peculiar to the communities in which they are teaching. From September 1, 1914, to May 1, 1915, they gave 249 lectures to 12,653 teachers at county and township institutes. They have given 1,218 talks at general school meetings with a total attendance of 40,880, and 106 talks at boys' and girls' club meetings with a total attendance of 4,002. As a means of creating an interest in and due respect for the school work in agriculture, the work of the county agents, since September 1, 1914, in their 1,993 general community meetings, in addition to the school and teachers' meetings, with a total attendance of 195,319, in their 5,730 farm visits and their 22,915 official calls, has been of inestimable value.

Short Courses and Demonstrations.

Other agencies that have given aid to teachers are the Purdue Short Courses and demonstrations conducted by extension workers. This year the short course work has been localized to a greater extent than formerly. The courses have been given in school buildings in many cases. The effort to extend the work into communities that are not easily accessible by rail was gratifyingly successful.

The demonstration work done by the Purdue Extension specialists in crops, soils, animal husbandry, horticulture, dairying



Some of the Indiana County Agricultural Agents. These men render valuable assistance to teachers of agriculture, although they can devote only a small part of their time to this line of activity.

and poultry has reached the schools in a helpful way. These demonstration and short course meetings have been attended by hundreds of teachers and pupils.

Colleges and Normal Schools.

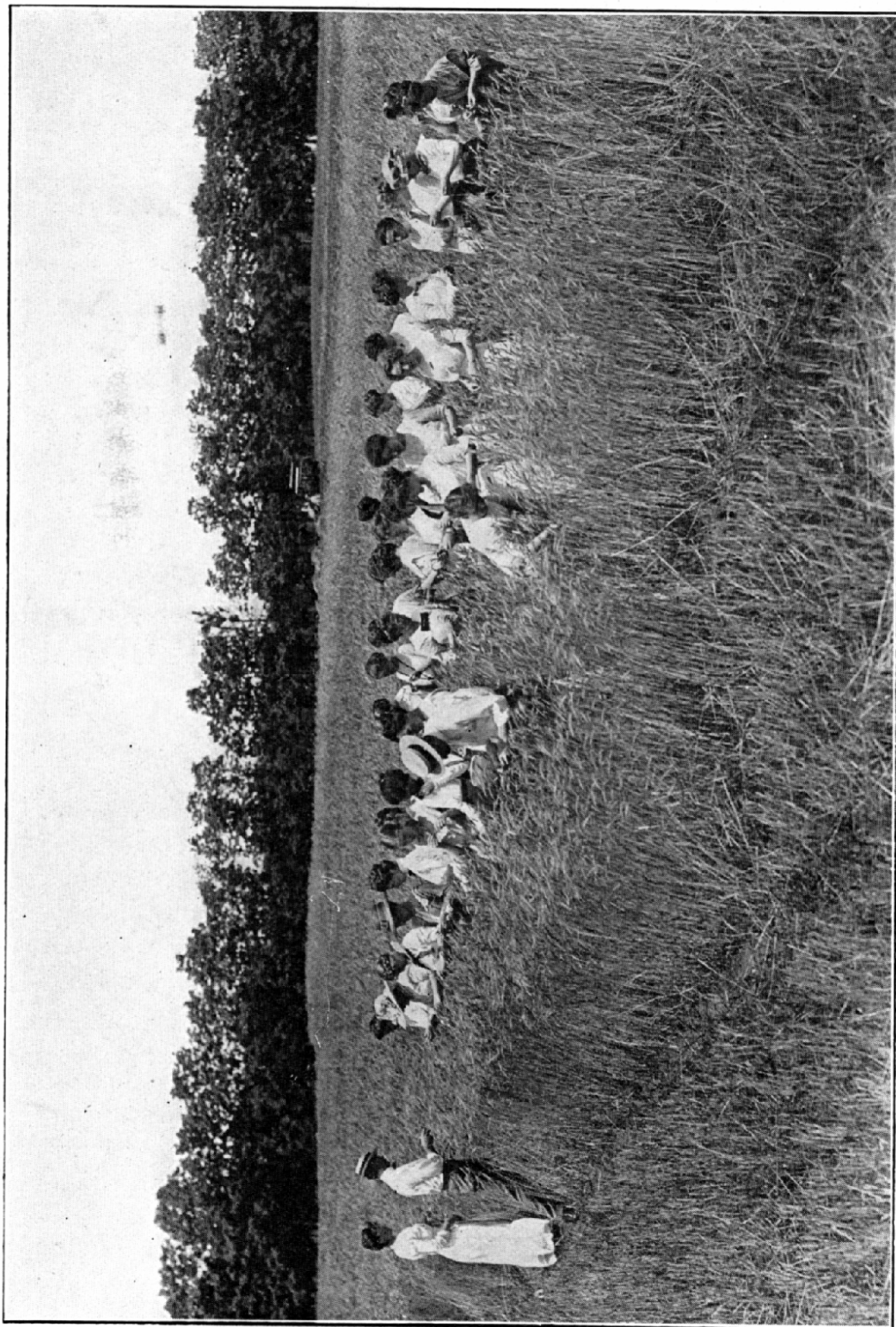
The State Supervisor of Agricultural Education has visited the normal schools and colleges in the State several times and has assisted in working out plans for training teachers of agriculture.

The colleges and normal schools deserve to be commended for the attitude they are showing toward the problem of training teachers in agriculture. These schools are getting away from the "school-boy" idea of helping teachers "cram" for examinations. They recognize that an institution that is worthy of being intrusted with the duty of training leaders of boys and girls has no place in its program for the "we will prepare you for the teachers' examination." These schools are endeavoring to inspire teachers with the spirit of community leadership and social service. They know that such leadership and such service as rural communities need and demand can not be given by teachers who have been "preparing for examinations" and who in twelve weeks' time have been getting a smattering of information covering the whole field of agriculture.

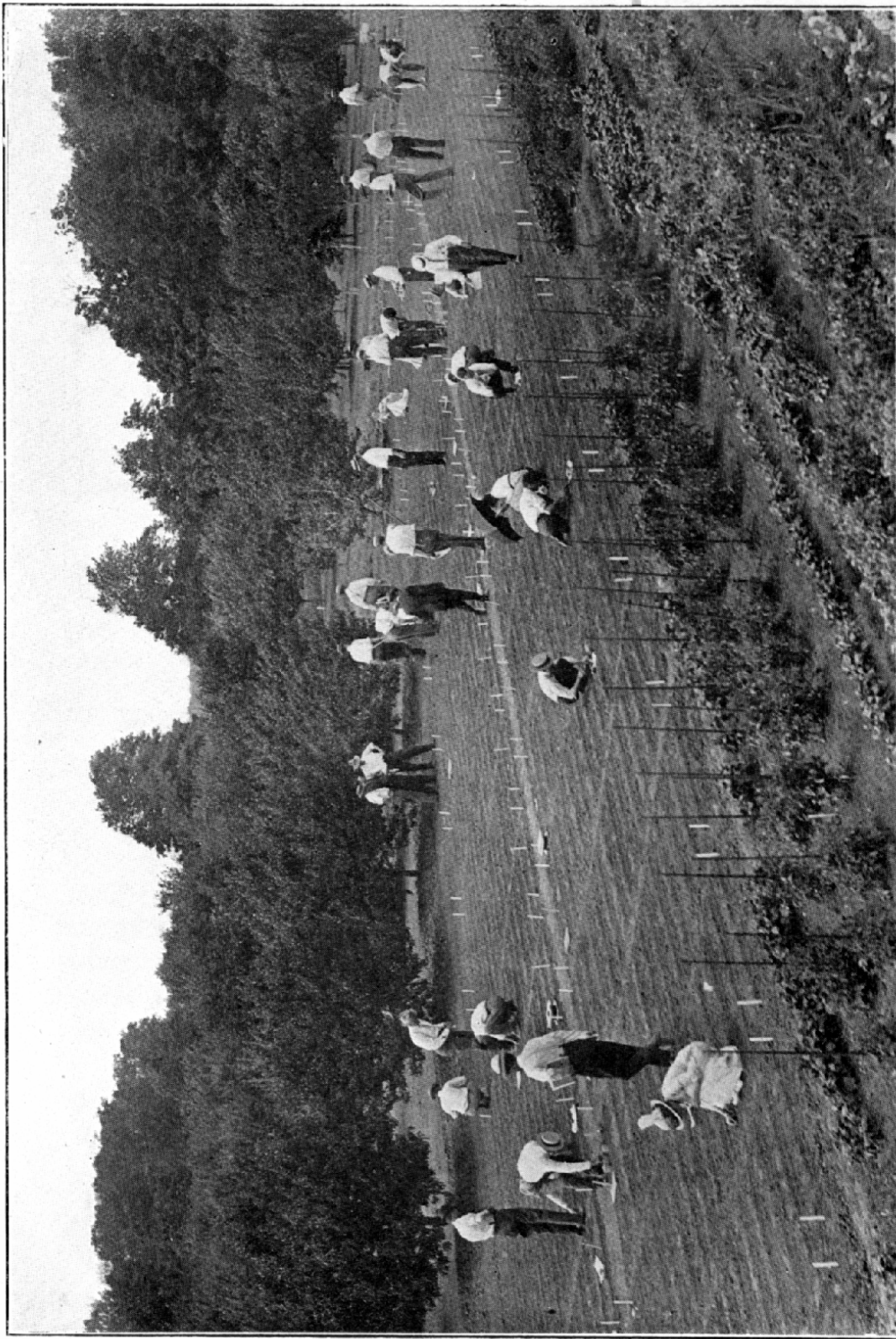
Nor are these schools attempting to develop specialists. They are beginning to get at least a first glimpse of the magnitude of the field of agriculture. They see that the field naturally divides itself into several divisions and that any one of these divisions constitutes a subject equal in content to what is usually known as botany, or physics, or chemistry, or zoology, or geology, etc. They know that it is, therefore, impossible to cover in a superficial manner the entire field in twelve weeks or in one or two years even. Furthermore the problem of training teachers in agriculture involves a great deal more than gaining a knowledge of the subject, and so the colleges and normal schools are endeavoring to get at the heart of the problem by leading teachers to feel the spirit of their profession and aspire to the ideal of preparation for service.

Purdue University Department of Education.

Among the helpful cooperative agencies of the State Department of Public Instruction is the Purdue University Department of Education. Professor George L. Roberts, head of this Department,



Rural teachers studying wheat smut and methods of prevention. Summer School for Teachers, Purdue University.



Training teachers for practical work in home gardening. Summer School for Teachers, Purdue University.

has provided special courses in education for those who expect to teach agriculture.

Professor Roberts and his assistant, S. S. Cromer, have planned and administered these special courses along lines requiring a great deal of practice teaching. The field for the practical work is supplied through the public schools of West Lafayette, Dayton, Delphi and Battle Ground, which maintain regular courses in agriculture. These courses are of such a character as to emphasize the working out of home problems through field and laboratory exercises.



High school pupils preparing seed bed for flowers.

Outlook.

The outlook for worth-while agricultural work in the public schools of Indiana is far more promising now than it has been at any previous time. The teachers and all the educational agencies of the State are working out the problem together in a spirit of intelligent cooperation that insures success in their efforts to bequeath to posterity a fuller, richer and more satisfying country life.