AGRICULTURAL EDUCATION IN WISCONSIN.

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The economic side of school work is at present absorbing the attention of all interested in educational and industrial progress. The changes in our industrial and social life have brought sharply to the attention of the people the question of the efficiency of the present school system and the courses of study administered herein in preparing pupils to meet intelligently and effectively conditions which will confront them when they leave school.

The culture side of education has been heretofore and still is largely the dominant force in determining the selection of studies for school curriculums and has determined, to a large extent, the manner in which the subjects chosen should be presented by the instructor and pursued by the pupils.

The standard of school instruction was largely set for this country by the schools early established in New England and has dominated the minds of all who since that time have been connected with our public and private schools of this country.

Teachers, as a rule, have been obliged to put all children, no matter how diverse their talents or abilities, through the same educational hopper. There has been little or no discrimination allowed in the choice of subjects or in methods adapted to the needs, abilities, and life purposes of the individual children. We have steadfastly set our faces away from the introduction of subjects having a direct bearing on the food and shelter problem of the child when turned loose upon the public. Our reverence for the old has caused us to shut our eyes to the crying needs of the present.

The utilitarian movement has gained ground inch by inch, wrestling its gains from the unwilling hands of those who think that the future of democratic institutions rests on the ability to preserve in its traditional forms the education fixed in the early days of our Republic by those who were trained in the atmosphere of the New England colleges or in the universities at Oxford and Cambridge.
An educational system to meet present conditions must do more than to merely supply the pupils’ minds with a knowledge content and to form habits of right thinking and feeling. No matter how valuable this character training may be, a pupil’s education must go farther than this if it is to be efficient. A man may be learned and have character, but until he can apply his knowledge to a useful vocation his education is not doing for him all that it ought to do. He must be able to use the knowledge which he has learned and let the character which has been created show itself in works. Vocational studies must be made a part of the common school course of study in order that the present day needs may be met. Studies bearing upon the dominant interests of the locality in which schools are located must permeate the life and atmosphere of the school, shape its course and influence teachers if the common schools are to lead pupils to take an intelligent interest in the life to which they have been born. This is not a mere dollar for dollar proposition, but an effort to stop trying to educate pupils of diverse heredity, temperament, inclinations, and personality in the same manner. It is the effort of reason trying to assert itself in the midst of the unreasonableness of studies constituting the curriculum of the common school system. A farmer does not attempt to drive an unevenly matched team on an even evener, but that is what we have been doing in the schools, whipping up the slow and holding back the fast in order that all may come out even at the end of the row. The world does not treat its children in this manner, but lets each one rise or fall according to his talents and stamina.

The proof of a completed, well rounded system of education is in the character of work which the pupils who have completed it are able to do. I respect most highly men of great intellectual power and literary attainments, but I honor and respect more highly men who are able to do things that are of service to their fellowmen. We respect our savants and men of deep learning, but we honor those men who have made the world a better place in which to live, or who have by their achievements enabled men to live more fully and more competely. The whole world recognizes the great worth of a man like Edison and is ready to do him homage and honor. The agricultural world honors the name of Professor S. M. Babcock, who has
made his knowledge serviceable to farmers the world over. The doctrine of service to mankind must enter more and more into the ideals of educators and must be consulted in the making of courses or study for the common schools of the country.

According to the statistics of the year ending June 30, 1907, there were 771,992 persons of school age residing in the State of Wisconsin. Of this number 289,363 resided in cities, while 482,629 were reported as living in country and village surroundings. Of the total number of pupils in the state, 464,763 were enrolled in the public schools, and of this number 313,928 were reported as having been to school in rural communities. Very nearly one-half the total number of children in the state are obtaining their education in country communities and of this number the large majority will remain at or near the place where they obtain their education.

Since few of the pupils in the district schools will attend higher institutions of learning, and whatever vocational training is to be given to the bulk of our school population must be offered in the rural school, it is pertinent to inquire concerning the subjects included in the common school course of study, investigate the kind of material in the text books used by the pupils, the manner in which these subjects are presented to the pupils by the teacher, and the preparation of county teachers to teach special subjects.

Up to 1905 there was no subject included in the common school courses that had any direct bearing upon the life interests of the pupils enrolled in the country schools. Arithmetic, Geography, History, a little Language, Reading, Writing and Spelling, made up the major part of the common school course. The text books found in the country schools are nearly always of the same kind as are used in the neighboring village or city schools. There has been no distinction on the part of text book makers in the character of books to be sold to city children and those prepared for use of pupils of entirely different surroundings and aim in life. One can not overestimate the influence that books have in forming the ideals and fashioning the thoughts and aims of children. Practically all of the books used by country pupils have been prepared and written by men who have had in mind the needs of city children. I doubt if any author has conscientiously tried to prepare a book directly suited
to the needs, conditions, and circumstances of rural pupils. The majority of authors of text books are teachers either in higher institutions of learning or are connected with the public school systems of the larger cities. Necessarily they have been influenced in their work of preparing books by the conditions with which they are surrounded and by the experience which they have obtained in teaching city children. There is much material in the text books unsuited to the needs of country children, and which might be eliminated by the discriminating teacher. I have often questioned the wisdom of presenting to country pupils topics as outlined in some of the more modern text books, as it always seemed as though I were carrying coals to Newcastle. The topics were entirely legitimate and proper to be made a subject of study by city children, but were not worthy to be made a part of the work prescribed for a country boy. Arithmetic has long occupied the first place in the estimation of country pupils and their parents. This is somewhat surprising in view of the fact that arithmetics are written by city authors and the problems which they contain are such as deal with the business situations of city life. The country boy from the time he commences school until he leaves, studies the mathematical side of problems which he will be obliged to solve when he becomes a worker only in some business of city dwellers. In measurements and in denominate numbers the material chosen by the authors of the books will be such as will be of service to those who will find their life work in the cities. In percentage the farm boy learns how to estimate per cent. of profit and loss of the grocer, the merchant and the banker. He is given thorough instruction in the business of the insurance agent, the stock broker, and the commission merchant. It is also somewhat surprising that in the majority of all the problems which constitute the subject matter of the ordinary arithmetic, transactions usually show a balance in favor of the credit side. In this way the country boy by suggestion become early impressed with the ideas that city occupations are the ones in which to engage if you wish to easily make money. It seems as though a time has come when text books might well be prepared by men having directly in mind the needs of country children. There is no reason why an effective arithmetic could not be prepared, including among its problems those dealing with
the industries of the farm. The business of the farm abounds in problems that would be especially attractive to farm boys and girls for the reason that they would be taken from within the scope of the experience of the pupils themselves. It is an easy matter to form problems showing gain or loss in cutting corn, examples in computing the price of milk, cream, butter and cheese, problems determining rations for dairy cattle, cost of installing ditches and tiling, problems in fencing, constructive problems in erecting buildings, derricks, etc. In fact, there is no limit to the number of problems that might be made bearing on farm life, so rich is this field in mathematical material.

Not only in Arithmetic, but in Geography as well, little attention is paid to presenting the subject in such a manner as to show the relation which it bears to agriculture. There is no good reason why Geography could not be presented to country children in such a manner as to show the direct relation which exists between the farm and the life and industries of people in the city and in other countries.

It is an easy matter to make a relief map of the neighborhood near the school. The drainage of the district and the character and the nature of the soils found nearby could be made a profitable topic of investigation. Transportation facilities of the community could also well be studied, and pupils would be interested in determining just the relation that the industries of the immediate neighborhood bear to the life of the people in the neighboring cities. The history of the production of all the articles that are used on farm and in the household would acquaint children with the occupations of men in other parts of the world.

In the teaching of English in the country schools there is a wealth of material pertaining directly to farm life, that could be drawn upon as the subject matter for Language work. Rural life abounds in incidents within the knowledge and experience of the child that are suited for Language and Composition work. A grammar with its illustrations taken from rural life, would appeal more quickly to country children than would selections from Milton’s Paradise Lost, and Greek mythology. Is it any wonder with the kind of an education provided for rural pupils and with the ideals constantly held before them at school, and often, I fear, at home, that the young people of the farms come early to think that the cities hold all that is worth while
in life, and that wealth, happiness, social distinction, and prosperity are the heritage of the city youths? The unpleasant features of city life, the stress of competition that allows a city worker no respite from certain daily toil, the artificialness of community life, are never held up to view. He hears only of the success of the one man who prospers in the city, but hears nothing of the toil trouble, and sometimes abject poverty of the 99 who do not attain success. If the country boy knew of the thousands of lives that have been sacrificed to feed the unsatiable fire of cities, the reflection of which so dazzles his eyes, he would not be so anxious to give up his life upon the farm.

This steady flow of farm boys city-ward has been one of the factors which has created the scarcity of farm help. When we consider that the number of cities in this country containing a population of 8,000 or over, has increased from 6 in 1790 to 473 in 1900, and remember that while in 1790 there was one person in the city for every 30 residing in the country, while today our population is about evenly divided between the cities and the agricultural communities, we can account in part at least for the scarcity of farm help. There must be, however, some strong and powerful reason which causes a boy living in the country to forsake the home of his forefathers and the tasks of his boyhood for city life, and the results of investigations that have been made as to the reason why our boys leave the farm, may be grouped under three heads:

First, The lack of social opportunities.
Second, The unprofitableness of farm industries.
Third, The long hours of labor.

The first is one that can almost be eliminated through the socializing influence of the telephones, free rural delivery and the formation of local societies for social as well as for the purpose of furnishing an opportunity for a study of problems of interest to farmers.

The second reason may be traced to the suggestive influence of the reading of books and periodicals which have come into the life of the farmer boy.

But a true comparison of the profits made by the farmer and that of the city worker will result in favor of the rural laborer.

Farmers fail to take into consideration when estimating the
gains for any one year, the fact that they have had rent, fuel, vegetables, milk and butter practically free, and of such a quality and in such quantities as would be practically impossible for them to buy were they living in the city. These items are the major ones in the monthly account of a person living in a city and in a large measure wipe out his monthly income. Farmers never figure that they have made anything unless at the end of the year, the balance sheet shows a profit without any living expenses having been credited to the income of the farm. Many a person living in the city would be well content if at the end of the year he could have his bills for ordinary living expenses equalled by his annual income. The moment a laborer in the city stops work all income ceases and when sickness or loss of situation occurs he perforce must live out of his accumulations or become an object of charity. On the other hand, the farmer seldom sees the time when he cannot take a vacation for a day without serious loss, for his crops and stock keep on growing, increasing in value even though he may be enjoying a day’s freedom from toil.

In regard to the long hours on the farm, a careful comparison of the hours of work of all classes of city dwellers would show that the farmer works no more hours in the day throughout the year than do the toilers of the city. During the busy season the farmer may work long hours, but many a doctor, lawyer, or merchant is obliged to call frequently sixteen and eighteen hours an ordinary day’s work. Life in a city is not all a bed of roses, and only recently a competent observer made the statement that at least fifty per cent of the population of Chicago did not know what it was to have three square meals a day.

The time has come when the assertion that the farm holds no remuneration, nothing but work and no social advantages should be disputed. It is not true, and should be refuted in season and out of season, as it tends to create wrong notions in the minds of young people who hear nothing and know nothing of the real life in the city.

America has been a factor in supplying the people of the world with food product. We have boasted of the ability of the American farmer through the use of his improved machinery and his fertile land to help feed the people of the old countries, but that condition is fast passing away.
Is it any wonder that a sturdy race of men suddenly presented with a virgin fertile soil lying in the sub-tropical and the north temperate zones unrivaled in richness and fertility, should be able to furnish food and clothing for people of the densely populated and worn out soil of European and Asiatic countries? The raw material, however, in the shape of free land is no longer at the disposal of the American farmer. It is less than a generation since our government was offering free land of excellent quality to those who would comply with its homestead laws. A quarter section of land was within reach of any person twenty-one years old, at practically no expense. Our cities were small, our population scarce, and all excess foods grown on the farm beyond that required for the support of the farmer’s family was ready to be sent to foreign markets. From exporting a large share of all that was raised, we have steadily progressed until today America is using at home a large share of all its farm products. With the departure of free land and the consumption more nearly equalling the production of the country, the price of farm lands has risen during the last decade by leaps and bounds. No longer can the young farmer on his becoming of age start out for himself and by driving a hundred miles to the west begin life free of debt on 160 acres of fertile prairie land. Under present conditions and with present prices of land, make-shift methods of farming will not allow men to become owners of farms. If farming is to be made profitable today and if young men of brawn are to be able to convert their ability to work into freeholds, it will only be accomplished by having a class of farmers who are able to give to the farm operations that same degree of accuracy that is employed in the other industrial operations. The farmer of the future will, of necessity, be obliged to understand the scientific principles which underlie all farm operations, to know the physiology of plant life; to apply scientific principles of feeds and feeding of farm animals, to know somewhat of Geology, Chemistry, Physics, Botany and have a knowledge of the principles of Veterinary Science, Animal Husbandry and Horticulture.

If we hold to the theory that public school education is the mainstay of our industrial system, and that the future of democratic institutions rests upon the ability of the public schools to train pupils of diverse talents and inclinations in
such a manner that each pupil may go into the world with correct ideals and with a body of knowledge fitting him to enter a vocation for which he has a decided bent, then we must turn to the public school system as being at fault if for any reason it fails to train a class of citizens competent to supply apprentices for any of the occupations of human industry.

During the last decade the importance of placing instruction in agriculture and domestic science within the reach of farm boys and girls, has been growing in the minds of those interested in educational work in Wisconsin. The agitation culminated in the appointment of the state superintendent of public instruction by the legislature of 1899 as a commissioner to investigate and report upon industrial training in this and other countries. The report of the superintendent recommended the equipment of two county schools of agriculture and domestic science, and in accordance with recommendations the legislature authorized the establishment of two schools of agriculture and domestic science. Dunn and Marathon counties immediately availed themselves of the liberal terms offered by the legislature, and the schools were opened for work in October, 1902. Since that time the legislature has authorized the establishment of eight schools of this character and at present four schools are in active operation, the last two having opened their doors for the reception of students in the fall of 1907. Each school has an attendance of about 60 pupils, and there were graduated by the two schools then in operation in June, 1907, sixteen boys and sixteen girls. The privileges of the schools are free to residents of the counties in which the institutions are located, and offers instruction in plant life, soils, farm black-smithing, and carpentry, animal husbandry, dressmaking, home nursing, cooking and a course in home economics. The schools aim to train the pupils in attendance to be able to successfully manage farms and farm homes, and that they are eminently successful may be proven by the fact that the last legislature authorized the establishment of four additional schools.

It is not only to the pupils of the school that the institution is of service but to the community at large. The county schools of agriculture have become a sort of a local clearing house, where the farmers of the county having problems to
settle may secure expert advice free. Many a farmer about to erect a new barn has received helpful and practical suggestions by consulting the principal of the agricultural school, and oftentimes he is furnished complete working plans, specifications and blueprints of the projected building. It is not uncommon for farmers to bring or send seed corn, grain and milk to be tested. In order to make the influence of the school of as great and practical a value as possible to the county the principal of each school has held evening meetings in school houses and town halls in the different parts of the county, at which have been discussed such topics as “How to grow and care for alfalfa,”—“Tuberculosis in farm animals,”—“The architecture and ventilation of farm buildings and the feeding and testing of dairy cattle.”

It is in this way that the County Agricultural Schools have secured such a place in the esteem of the farmers of the several counties.

But while the county schools of agriculture and domestic science have been doing a great and efficient work, their influence is necessarily limited to those who live near enough to come within the sphere of their activity. Some other means must be taken to reach the great bulk of the rural population if they are to secure a knowledge of scientific agriculture. Accordingly the legislature of 1905 was induced to pass a law requiring agriculture to be taught in every district school in the state. It was expected that in this way each pupil in the district schools would be given an opportunity to obtain a knowledge of the terms used in agricultural bulletins and papers, to learn the elementary scientific principles underlying farm operations, and desire and read intelligently agricultural literature. It was not expected that the teachers in the rural schools would be able to teach practical agriculture, but it was thought that it would be possible to teach farm boys and girls the elements of agriculture, the technical terms used by writers and about farm operation. In accordance with the provisions of this law, the present state superintendent prepared an outline for the use of teachers in presenting this topic to the pupils in the rural and graded schools, and at the present time elementary agriculture is being taught more or less successfully in all rural schools of Wisconsin. The success which has attained the introduction of this branch
into the common school course of study has been all that was expected by the friends of the movement and greater than was predicted by those who doubted the wisdom of requiring this study to be taught in one room rural schools. While it is true that there are many things left to be desired in the preparing of teachers for this work, and in the manner of presentation of the topics to the pupils, nevertheless the introduction of the study has done much to provide a vocational branch for the children in rural communities.

There are two difficulties that must be overcome before teaching Agriculture in the rural and grade schools will be a success. One is the lack of upper form pupils to study Agriculture in its larger aspect. The other, the lack of a teaching body having such a knowledge of the subject as will enable them to efficiently present the subject. The former difficulty is the one that cannot be overcome in one room rural schools except in so far as the offering of instruction in a study that bears directly upon the work with which they are familiar will appeal to the older pupils of the district and cause their attendance at school for a longer period of time. If the pupils in rural districts knew that a teacher was employed by the district board, competent to teach Agriculture not only as an informational study but in such a manner as to show its relation to the economic agricultural problems of the district, and if the other subjects of the country schools were taught in such a manner as to show their relations to the industries of the farm, it would, in my judgment, materially tend to improve the attendance in country schools. The advent of the consolidated rural school would solve the problem of attendance of the older pupils at school, but I do not wish at this time to enter into a discussion of the consolidation of rural schools, as that is a topic which has no place in this meeting. I am accepting a situation as it is with the hope that something may be done to further agricultural interests in common schools as they now exist.

The second and chief difficulty to be met before agriculture will properly be taught, is to secure a body of teachers able to give efficient instruction in the subject. Since 1901, teachers of Wisconsin have been obliged to pass an examination in agriculture before receiving a county teacher's certificate, and the subject has been presented for a number of years, to all
teachers attending the summer institutes. As a result, the teachers of the state are fairly well informed in the text book side of the question. To be able to teach properly a study of the magnitude and importance of agriculture, requires not only definite and accurate knowledge, but an appreciation of the relation the branch bears to the other subjects of the curriculum; to the industries of the world; to transportation problems; to social conditions; and to the prosperity of our institutions. Teachers must also know what parts of other studies to eliminate, what are essential and what non-essential to boys and girls who are to live upon the farm. It is essential that teachers know enough of the practical agriculture to be able to successfully care for a school garden, where may be exemplified the principles learned in school. It is not too much to expect the teacher to be able to direct the older pupils in experiments to be carried on at home and during the growing season on the farm. It is not impossible to teach children in any school how to select and test seed, how to know and eradicate the different kinds of weeds found in the neighborhood, how to test milk, to calculate rations, etc., etc. All such teaching, however, demands more on the part of the teacher than mere text book knowledge.

Agriculture is better taught to future teachers in three classes of schools,—County Training Schools, State Normal Schools and High Schools. County Training Schools for Teachers were established for the purpose of preparing teachers for work in the rural schools of the state. No attempt is made to give instruction in the higher branches of learning, but the effort is directed to thoroughly acquaint the pupils with those studies which they will be called upon to teach when they return as teachers in the rural schools, and with the best methods of presenting those studies.

In order to learn just what was being done in the County Training Schools for Teachers in preparing pupils to teach agriculture, I addressed a letter to the principals of the schools and received replies from nearly all of the twelve principals now engaged in this work. I find that a twenty-weeks' course is given in agriculture in all of the schools and the replies from the principals relating to the manner in which the students take up the study, show that the pupils are enthusiastic over the subject, and nearly all report that the farmers look
with favor upon the teaching of agriculture in the country schools. I can do no better than to quote from the letter from one of the principals. He says in part as follows: “Our course of study in agriculture for those taking the two years’ course covers twenty weeks; ten weeks in the fall of the junior year and ten in the spring of the senior year. The work in the fall is adapted to fall plants and to processes taking place in the fall. We teach in the identical way we wish the students to teach when they go into the country schools. To illustrate: thirty common weeds are collected by students and hung over the blackboards on which the name of each weed is written underneath it. The same is done with the branches of the native trees. Seeds of weeds and grains are placed in bottles or in cardboard boxes made by students. At the present time our room looks like a young horticultural garden and remains so for some time. Excursions with students after school to identify and collect specimens and study the effects of erosion and simple experiments made in the school room supplement the exhibits and texts.”

Another superintendent says: “I know that the farmers in this county are in full sympathy with the work, for in frequent talks with many of them at evening meetings they tell me that is what the children need. We try to make clear to the farmers that we are not attempting to teach them the “how”, but the “why” of agriculture.”

These are but samples of the replies received from the principals of the training schools.

In addition to the instruction in agriculture given by the training schools, it would be well if another branch of our public school system could be brought into closer touch with the purposes and scope of the agricultural work for rural schools. I speak of the high schools of the state. From my observation and knowledge I know that agriculture in districts maintaining a free high school is not receiving that attention on the part of the principals of the schools that it deserves. It is natural for the vocational interests of the village or city to dominate the minds of teachers of the village or city high school, and consequently the importance of properly teaching agriculture is not paramount in their minds. An effort should be made to interest the principals of high schools and the board of education in the proper method of presenting agri-
culture to high school pupils who expect to teach in the rural schools. According to the outline prepared by the present State Superintendent, agriculture is to be taught as a textbook study in the last half of the eighth year, but may be deferred until the ninth year in districts maintaining a ninth grade. Unfortunately it appears many principals are teaching agriculture incidentally in connection with the study of Botany. This procedure has been countenanced, I think, by our University and State authorities and has in a measure, I fear, tended to lessen the importance of agriculture as a separate study in the opinion of high school teachers. The time has come when there should be a renewed united and persistent demand made upon all school authorities by those interested in agricultural education that a training shall be given in high schools that will fit teachers to carry on this work in our rural schools.

The State department and the University ought to make it clear to the principals of high schools that the relegation of agriculture to a place of secondary rank will not be countenanced.

There will be no trouble in getting high school authorities to concede agriculture in its proper place in the curriculum. If the Department of Agriculture at the University and the State Superintendent insist that a training in agriculture of a specific and definite character shall be given to all pupils entering the high school expecting to teach in the country schools, I am sure that a more vigorous teaching of the subject would result. But before this can be accomplished there must be courses established in this State whereby those expecting to do work in Science in high schools can receive that kind of training which will fit them to give agricultural instruction in a proper manner and of a proper kind to high school pupils. To this end the Agricultural interests of the State should demand that our University prepare teachers especially for this purpose.

The time is auspicious for the agricultural interests of this State to request the Board of Regents of the University of Wisconsin to authorize the President of the University to outline a course of instruction that will prepare graduates of the University to teach not only Botany, Physics, Zoology, and Physiology, but Agriculture. If such a course should be offered students of the University, and if those expecting to
teach Science in the high schools could be made to understand that the educational authorities of the State would not for a moment countenance the side-tracking of Agriculture, but would insist that it be made a study of equal rank with that of Physics, History or Latin, the teaching body of the high schools of the State would instantly feel the necessity of preparing themselves to teach Agriculture as it should be taught.

Last summer the Dean of the Agricultural College provided a course for teachers of Agriculture during the summer session of the University, but owing to the indifference which teachers feel towards Agricultural instruction owing largely, I think, to the lack of insistence of those in authority that this study must be taught in an intelligent way, not many of the high school teachers of the State took advantage of the opportunity offered. Until teachers come to feel that agriculture is in the curriculum for some other reason than as a peace-offering to the demands of the farmers for a study allied to their interests and that the proper study of Agriculture not only offers an opportunity to instruct in a scientific study, but also furnishes a knowledge content that will be of a decided cultural and economic value, will summer courses in Agriculture be attended by the Science teachers in the high schools of the State.

I well remember when the University undertook to revolutionize the teaching of Botany in our high schools. The necessity for improved methods of teaching, the new view points from which to attack the subject, the new knowledge content necessary to be acquired were presented to the students about to graduate from the University to those actively engaged in the work at Teachers’ Meetings and Associations, and by the men inspecting the high schools. Immediately the teachers felt the stimulus of this demand and the Botany courses at the University summer school were largely attended by those who felt the necessity of keeping in line with University requirements. A marked change immediately took place in the character of Botany taught in the high schools of the State. If a similar demand in favor of Agriculture could be made and enforced, there is no question in my mind but that Agriculture would immediately take its place as a subject of first rank in the estimation of all those engaged in secondary education. That it does not occupy the place to which it is entitled by
virtue of its inherent worth, is due not to the lack of interest on the part of the teachers, but because the demand that it be given its rightful place has not been enforced. Teachers are the servants of the people by whom they are employed and must naturally give preeminence and greatest attention to those subjects considered necessary by the hiring bodies. Teachers like Agriculture and would welcome the time when it could be given its rightful place in the hierarchy of studies.

While Agriculture is being offered as part of the regular courses of instruction in the seven State Normal Schools, inasmuch as these institutions do not furnish many teachers for country school work, it is not necessary at this time to discuss the influence which Normal Schools are exerting on the teaching of Agriculture. Normal Schools were designed to prepare teachers for all classes of schools, but so marked has been the growth of our villages and cities that the supply of normal trained teachers has been exhausted in furnishing teachers for the cities of the State. Comparatively few normal trained teachers are to be found in the country schools.

The influence of agricultural training as given by the state normal schools will be felt in the villages and cities of the state, but to the care of the county training schools and the high schools the preparation of teachers for the country schools must be committed, and if improvement in the teaching of home and farm economics is to come it must be hastened by improving the quality of such teaching in those schools.

In the past two or three years the attention of the United States Government has been emphatically called to the necessity of taking steps to place agriculture on a strong and broad basis. The government is interesting itself in this subject not only from an economic standpoint, but from a desire to have a numerous, prosperous and contented body of farmers as the sure foundation for our democratic institutions. If this country should suddenly be plunged into war the government realizes that it would not find in the cities men of the independence, character and calibre necessary to fill the ranks of its armies. City life does not nourish the thoughtful minds, the frames of oak, the endurance, the nerves of steel, from which conquering armies may be formed. The dissipated, nerveless, disease-racked youth of the city are not fittest subjects upon which to rely in a time of national peril. The
country life is practically the life of the nation, for it is in the
country that we find American manhood, American char-
acter, and American ideals at their best, and if the stability
and prosperity of the Nation is to continue, it behooves the
government to take every means possible to create a satisfied, in-
telligent yeoman citizen body.

Several bills have been introduced in the present session of
Congress with the view of providing means for spreading
Agricultural teaching and Agricultural research among the
people of the different states of the Union. Among these is
one introduced by Congressman Charles R. Davis, of the
Third Congressional District of Minnesota, and which, if it
becomes a law, will provide a fund equal to not more than ten
cents per capita of the population of each state and territory.
Money accruing from this law is to be expended for distinct-
ive studies in Agriculture and Home Economics in agricultural
high schools and for distinctive studies in Mechanic Arts and
Home Economics in city high schools, provided that all States
accepting these funds shall provide other funds and pay the
cost of the necessary lands and buildings and the cost of in-
struction in such other general studies of secondary grade as will
complete a well-rounded high school curriculum. The bill
also carries a provision for the expenditure of a certain sum of
money in maintaining branch experiment stations in connec-
tion with the agricultural high schools to be conducted under
the authority of the State Agricultural College. If this bill be-
comes a law, Wisconsin will be quickly able to take advantage
of its provisions for the reason that it already has in operation
four county Agricultural schools, each located in a community
adjacent to a four year high school. Wisconsin also has
twenty-seven township high schools and it would be easily
possible to frame a state law whereby the conditions of the
Davis Bill could be met by the town free high schools and the
county schools of agriculture and domestic science. Wiscon-
sin under the provision of this bill, would be entitled to two
million dollars annually from the United States Treasury as
an aid to teaching agriculture in this state. The United
States has also recognized the necessity of providing teach-
ers' courses in agriculture and a law is already on the
statute book of the United States, authorizing each state to
expend all or a portion of $5,000,00 annually in the mainte-
nance of a course of instruction in connection with the agricultural schools of the state colleges designed to prepare teachers of agriculture.

Alabama and Georgia have already taken advanced stands in providing agricultural education for their children. Alabama has an agricultural school in each of its Congressional Districts and has appropriated the income from certain of its excise laws to the support of its schools. Other states are rapidly falling into line and it will not be long before it will be a nation-wide movement in favor of recognizing the importance of having all our rural citizens thoroughly versed in the principles of scientific agriculture.

During the last year I have read frequent editorials in agricultural papers of the recognition which Agriculture is receiving in other states. I have yet to read an article in any of the Wisconsin bulletins giving to the public the idea that there is any movement of this kind in the progress of the State of Wisconsin. We are the pioneers in the County Agricultural School movement, and Wisconsin is one of the first states to require agriculture to be taught in its common schools. It is high time that the attention of the editorial writers of Wisconsin agricultural papers be called to the progress which is being made in this work in our own state. It is time for all interested in the welfare of our farm communities to get together and with a long pull, a strong pull, and pull all together, bring agriculture so prominently before the people of this state, before the teachers in our schools, before the University and State authorities, that the demand for intelligent, effective and adequate teaching of Agriculture in the public schools will be recognized and promptly met.

DISCUSSION.

The Chairman: Gentlemen, are there any questions upon this paper, or is it so exhaustive that it has covered everything?

Mr. Borden: There is one other topic I omitted that I will speak of. There are several bills in Congress at the present time, appropriating money for the purpose of agricultural
in the various States of the Union. I think the more prominent one is the Davis Bill, authorizing a tax of ten cents per capita to be raised and paid in the State for the purpose of agricultural education, and if that becomes a law, Wisconsin will have over $2,000,000 to assist us in agricultural education.

There is another law authorizing the State University to use $5,000 a year for the purpose of establishing courses of instruction in agriculture for teachers, and I understand that that $5,000 may be increased $5,000 each year for five years, making a total of $25,000 available for this purpose. There is another bill in Congress granting $5,000 to State Normal Schools, to maintain teachers in courses of agriculture. So you can see this movement is wide; the government is interested in it. We must do something, gentlemen, to bring back to its former state of health, the agricultural conditions in this country, and I believe it is time that bodies like this start out to make a forcible campaign in favor of a better recognition of the subject.

Capt. Arnold: Who makes up the curriculum of the high schools?

Mr. Borden: It is made up by two authorities; the local school board makes out a high school course of study, but before it can be approved, it must be submitted to the State Superintendent of Public Instruction.

Capt. Arnold: Hasn't it been a fact, or wasn't it a fact years ago that the high schools were gotten up, not only to educate people, but as a feeder to the State University?

Mr. Borden: No, sir, I don't think so. I know that question has been threshed out time and again and is in the minds of people in the country who thinks that the high schools were established solely for the purpose of supplying students to the University, but I have always come back at them with this question: The high school course of study contains algebra, geometry, history, physics, that is all. What study is there there that you would eliminate, that you would not have your boy learn even if he never should go to the University?

Capt. Arnold: There is no opportunity for the student in the high school to select the studies that he wants to take. He has got to take the whole of those or nothing.

Mr. Borden: Not now; that was true six years ago. Un-
der the present high school conditions, we have what we call the "core" of the course of study. We must have two units of mathematics, two of history, and one in science and two in English. Outside of those eight required units, the other eight the boy may select.

Capt. Arnold: I know that we have had a good deal of criticism and a good deal of scolding before we could work up a proper sentiment in this respect. Now, inasmuch as only three per cent of the school children ever attend a State University, it seems to me that we are spending on the State University an immense sum in proportion to the benefits to be derived. There is a large tax for maintaining the University, out of all proportion to the tax for general schools.

Mr. Borden: Seven-tenths for the schools and I think three-tenths of a mill for the University.

The Chairman: We will have to close this topic.

We are always proud of Wisconsin products, particularly when they are good products, and there is no product of which we are prouder than of the boys from our Wisconsin farms. To-day it gives me great pleasure to introduce to this audience a product of a Wisconsin farm to talk upon the subject of Industrial Alcohol.

Dr. True: I assure you it is a great pleasure on my part to be able to be with you, and I realize that it is one of the greatest gifts of fortune that I was permitted to grow up on a Wisconsin farm. It seems to me the farm is the place for the development of what might be called a sound, physical apparatus; that it gives us the foundation also for the development of the other side of us when we get beyond the physical development.

26—Ag.