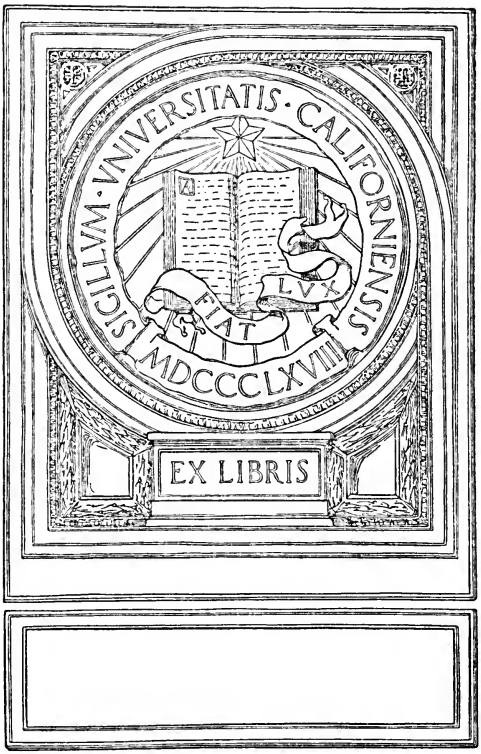
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CHRISTIAN EDUCATION MONOGRAPHS

No. 1.

EDUCATION

AND

CHINESE AGRICULTURE

KENYON L. BUTTERFIELD, A.M., LL.D.
President of the Massachusetts Agricultural College,
Member of the China Educational Commission

1921-22

THE CHINA CHRISTIAN EDUCATIONAL ASSOCIATION
SHANGHAI

1922

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LETTER OF TRANSMITTAL

Shanghai, China
January 24, 1922.

F. D. GAMEWELL, LL.D.,
The China Christian Educational Association,
5 Quinsan Gardens, Shanghai.

My Dear Dr. Gamewell:—

When that part of the report of the China Educational Commission dealing with agriculture was under consideration, conference was had with a group of agricultural workers. It appeared that they desired a somewhat fuller discussion of the agricultural problem in China and the relation of the Christian forces thereto, than seemed possible within the limitations of the regular report of the Commission. The Commission, therefore, authorized the preparation of a pamphlet and its presentation to the China Christian Educational Association for such use as the Association deems best.

This statement is divided into three parts:—

(1) A discussion of some reasons why the Christian educational enterprise should include agriculture.

(2) An outline of the rural problem in China and the way these difficulties may be met, especially by education,—this being a report to the Government, also authorized by the Commission.

(3) Some suggestions concerning what the Christian educational forces can do to help meet this problem.

The pamphlet follows the recommendations of the Commission. In fact, all of the material was gathered as part of the work of the Commission. Under the limitations of time and method it was not possible to make a detailed study of Chinese agriculture nor of Chinese agricultural educational institutions. But both Chinese and foreign agricultural experts have been consulted and have checked the report at all points. Doubtless some duplications will be noted as between that part of the material which is a report to the Government and that part dealing specifically with Christian education; no attempt has been made to eliminate these duplications.

Yours very sincerely,

KENYON L. BUTTERFIELD

Note.—The full Report of the China Educational Commission is published in China by The Commercial Press under the title "Christian Education in China."]

PART I.

AGRICULTURE AND THE CHRISTIAN CHURCH

I. Work Under Way

Agricultural education under Christian auspices began in China at least as early as 1907. At present Canton Christian College maintains a college of agriculture, and the University of Nanking a college of agriculture and forestry; Peking University has organized an agricultural and animal husbandry experiment station and offers college-grade instruction in the same field; Yale-in-China has several courses in forestry. In addition there are:

3 missions offering agricultural work in middle schools;

13 ,, supporting work for the improvement of crops, animals, farm practice, or forestry;

36 ,, seeking to create an interest in agriculture by means of lectures, practical work, relating general subjects in the curriculum to agriculture, short courses in agriculture, and the like;

52 ,, with school gardens, either for teaching the dignity of manual labor, as an aid to nature study, or as furnishing financial self-help to students; and

11 ,, growing seeds, nursery stock, or vegetables for sale.

The American Presbyterian Mission North has 11 stations doing some type of agricultural work; the Methodist Episcopal six; the Canadian Methodist five. There are in Mission Service at least 15 foreign agricultural specialists in China who hold degrees from agricultural colleges; 13 returned students educated in agriculture; and seven who are graduates of institutions in China—a total of 35 trained men already at work in the agricultural field under the auspices of Christian institutions.*

*These facts are taken from the manuscript of an article by Professor J. Lossing Buck, of the University of Nanking, prepared for "The Christian Occupation of China," the survey volume published by the China Continuation Committee in 1922.

II. Evidence of an Increasing Interest

There is abundant evidence of a rapidly growing interest in agricultural missions in China. A resumé of many items in this evidence may be found in a chapter in the China Mission Year Book for 1919, describing recent developments in agricultural education under missionary auspices, giving numerous instances of new work started or called for, and quoting resolutions by many mission associations in various parts of China strongly favoring agricultural work. A typical report on the subject was made last year to the East China Christian Educational Association, which presented fresh calls for the establishment of agricultural enterprises and urged a rapid development of the work. Even more recent requests for aid in beginning agricultural work, especially in the lower schools, have been received by the agricultural leaders. Perhaps the strongest evidence of the growing demand for this phase of mission work in education is a resolution adopted by nine Christian Educational Associations in China, as follows:—

"That the Executive Committee of the China Christian Educational Association be empowered to appoint a committee on agricultural education, whose duty it shall be to prepare an 'All China' program looking toward the introduction of agriculture into our mission schools through the development of provincial normal training centers for the suitable preparation of teachers. This committee shall also prepare a list of factors that shall be used in determining the location and establishment of such teaching centers."

The China Christian Educational Association appointed a committee as suggested, which has already drawn up a preliminary statement, and which is preparing a fuller discussion of a plan of active enlargement of agricultural education. The Committee on Economic and Industrial Problems of the forthcoming National Christian Conference is including agriculture as an important part of its report.

The interest in China is shared by other mission fields—India, Burmah, Syria, Macedonia, Africa, South America, and has been reflected in America by the organization of an International Association of Agricultural Missions. A section of the last World Student Volunteer Convention, 1920, was devoted to Agricultural Missions; and in the Spring of 1921 there was held a conference on Agricultural Missions, for New England College

students. At the 1921 session of the Foreign Missions Conference Dean Reisner of Nanking gave an address on "The Relation of Agriculture to Mission Activities," and the discussion, participated in by some ten or twelve persons, not only contained no note of disapproval, but seemed to assume the significance and validity of this phase of mission educational activity.

III. Objections

Many phases of educational endeavor under Christian management call for no argument on their behalf. But agriculture is not yet so fully established that its extension has become a part of the accepted policy of all the missions. The facts just stated relative to enterprises under way, and the cumulative and important evidences of a growing interest in further development, do not of themselves meet all the objections that can legitimately be made to an inclusion of agriculture in the scheme of either the present or of a greatly enlarged system of Christian education in China.

Some of the objections made to agricultural missions in China are as follows:—

(1) The development of a great industry like agriculture is peculiarly a public function.

(2) China has already organized a scheme of agricultural education. There is danger of duplication.

(3) The task of agricultural education in China is so huge that the Christian forces can, at the best, do only a fraction of what needs to be done.

(4) The cost of agricultural education is too heavy to be borne by the limited funds at the disposal of Christian institutions.

(5) Well trained man are exceedingly difficult to get, both foreigners and Chinese.

(6) It is doubtful whether technical education of any kind is a function of Christian education in China.

All these objections have weight and cannot be ignored; but they are not conclusive for failing to press agricultural education as an organic part of the Christian enterprise in China. And for these reasons:

1. All education, except that for training religious leaders, is universally regarded as a government function. Indeed, the

very significance of farming and of the farming people constitutes a reason for assistance from the missions rather than avoidance of this service.

2. There *is* danger of duplication. This is true potentially of all types of Christian education except theology, for all types will be carried on under public control. The main safeguards against duplication, applicable in all departments of the Christian educational enterprise, lie in the uniqueness of the work with respect to quality, emphasis, and outlook.

3. The objection that the contribution of agricultural education must of necessity be relatively so slight as to render it not worth while, holds for many Christian enterprises in China if it holds for this one. Again, the test is not that of quantity. The work already done by Canton and Nanking, in silk and cotton improvement alone, has probably contributed more financial benefit to Chinese farmers than the institutions have cost. It must be remembered that agricultural education is directly productive. The work of the investigator frequently solves a difficult problem for a million farmers.

4. The cost of agricultural education must necessarily be considerable, though not so large as is sometimes assumed. It is probably quite impossible for the mission boards to finance, out of ordinary funds at their disposal, a full-panoplied system of agricultural education. But it is believed that there are sources of income thus far untouched that will be available in the course of time for so important and useful a piece of service as stimulating China's rural advancement.

5. Trained men of the first order are scarce everywhere. The opportunities for expert service in agriculture in Western lands are multifarious. But there is no reason to suppose that the missionary appeal may not meet a response among trained agriculturists as quickly as in any other group, once the call is made with distinctness and breadth of purpose. As a matter of fact, most of the agricultural specialist in America at least, make financial sacrifice in order to carry on their present service. The missionary spirit is not unknown among them.

6. It cannot be claimed for technical education that it has the same rank, among types of work to be taken up by the Mission forces in China, as, for example, has preaching or teaching, especially if limitations of money and men compel choices among these types. But one of the demonstrations

which Christian education should endeavor to make in China is that *all* education may be made Christian in purpose. Moreover it must be clearly understood that agricultural education, defined in any full sense, is far more than technical in content and application. It is essentially humanitarian, and it may be wholly Christian.

But the case for agricultural missions must be much more strongly buttressed than by meeting possible objections. Unless there are powerful positive reasons for its inclusion in the scheme of Christian education it had best be omitted. It is believed that there are at least two fundamentally valid reasons for its inclusion. The first reason lies in the vital connection between the growth and power of the Christian Church and the occupation of the rural field and the improvement of the rural people. The second reason is the really Christian desire to help China develop an essentially democratic and sound rural civilization. The first reason should appeal to those who conceive the work of missions to be mainly that of erecting a strong church; the second should convince those who desire that the missions shall serve China at her places of greatest apparent social need. Both reasons should at least stir the mind and heart of all who sense the fact that the farming people of China constitute the largest and in some respects the most significant phase of the Christian enterprise in this country. Let us, therefore, develop these two considerations at greater length.

IV. Agricultural Education and the Chinese Church

The question suggested by this title is whether the relationship between the development of a strong Christian Church in China and the service of a system of agricultural education managed by the Church, is of sufficient significance to warrant such a system. First of all, we must see just how important this rural field is.

It is usually stated that 80 per cent. of the people of China are farmers. Recent estimates made with great care indicate that about six per cent. of the people of China live in cities of 50,000 and above and another six per cent. in places of 10,000 to 50,000 population; leaving 88 per cent. in towns of 10,000 or less and in rural communities. Doubtless many residents of the smaller towns and even of the farm villages are not farmers; doubtless also there are many farmers living within the population areas of small cities and even of large cities. Probably 80

per cent. is none too high for the proportion of farmers, while the percentage living under an essentially rural environment is nearly 90. Out of the 400,000,000 people of China only 50,000,000 live in communities larger than 10,000 population. The remainder are rural.

From sheer weight of numbers then it is evident that the rural people constitute a major item in plans for the Christian occupation of China. And they are not at present being reached in large numbers. It is significant that when the Central China Conference of the Methodist Episcopal Church formulated plans for broadening the base of mission work by proposing "to build and equip a sort of primary unit," or "typical village plant," it defined villages as "communities of from 1,500 to 20,000 people," and said that "so long as we still have many compact communities of from 10,000 to 20,000 people without Gospel approach, we are far from the time when we can locate chapels and schools in small villages or homesteads or farmsteads." It appears, therefore, that in an effort to push out into *untouched* fields, an important and aggressive mission finds it necessary to confine its enlarged effort to small cities, with only out-station work in the farm villages. And yet 350,000,000 people are living in communities smaller than the "compact communities of 10,000 to 20,000 people." The rural field in China is still a vast empire to be won for the church.

It must be noted further that these villages are a multitude in number. It is stated that India has 700,000 of them. No one seems to know how many China has. During the floods of last summer in the lower Yellow River, in one district of the relief committee, over 6,000 of these hamlets and villages were completely wiped out. Statistics rather carefully gathered in three hsien in Anhwei show the following groupings:

3 small cities, averaging	20,000	people, have	60,000 population
400 villages, averaging	750	people, have	300,000 ,,
20,000 hamlets, averaging	82	people, have	1,640,000 ,,
		Total population	2,000,000

This classification suggests the following scheme of grouping the Chinese population:

(1) The hamlet, with a population from 10 to 250 people
(2) ,, farm village ,, ,, ,, 250 to 2500 ,,
(3) ,, town ,, ,, ,, 2500 to 20,000 ,,

(4) The small city, with a population from 20,000 to 100,000 people

(5) ,, large interior city, population from 100,000 and up

(6) ,, port city

The farm village is usually or often a market center. The farmers of Szechwan province live on their separate farms, and this is the case in some other areas. But the farms are small and the farmsteads close together. It has been estimated that China must have not less than 100,000 (perhaps 125,000) farm villages, containing 100,000,000 people; and 1,000,000 (perhaps 1,500,000) hamlets, containing 200,000,000 people. Each of these villages, with its hamlet satellites, is a community of perhaps 3000 people, and a possible area to be served by a Christian church. And they are not at present being reached in large numbers.

Moreover, these villages are distinct social units. They live unto themselves; govern themselves; possess all the limitations that arise out of social isolation. Chinese civilization is deeply rooted in this village population. Traditions, customs, superstitions, modes of life, the economic structure,—all find their strength in the village. Village organization is the basic social organization of China. Indeed Chinese cities are in general merely huge villages. Urban opinion still reflects, and for a long time to come will continue to reflect village opinion. China is essentially democratic because each village is a little democracy.

Mr. J. H. Reisner concludes, after a study of the figures, that in China "the Church is recruiting its workers, those on whom she is placing the greatest share of responsibility for the propagation of the Christian message, from country-bred folk," and he cites one mission group of 175 paid workers, 75 to 90 per cent. of whom came originally from small cities and villages.

The rural Chinese Church must be largely, if not wholly, self-sustaining financially. City churches will for a long future have a sufficient task to maintain themselves; Chinese home missionary work will be a late development. But the village people are poor—fearfully poor. They are constantly on the margin of life. They have practically no surplus. In the flood regions whole villages are repeatedly destroyed and have to be built over again. Hence, the rural church can be sustained only

as a better living comes to the farming people. The Missions have a concern nothing less than vital in the permanent economic improvement of Chinese farmers. Education offers the chief means by which this improvement can take place.

Reiterated testimony from the Chinese themselves, as well as from the more experienced missionaries, is almost unanimous in stating that the Chinese are inclined to measure the value of Christianity by its practical, useful, helpful results to those who embrace it; and are sure to measure it, at least in part, by the way in which it helps them where they most need help as human beings. Now, it is clear that the one absorbing need of the farmers of China is the ability to obtain an economic surplus. One can hardly dispute the reality of the Christian service that could be rendered individual farmers by helping them to a more efficient economic life. Writing some years ago of the sad conditions existing in certain areas of South China, Rev. Stewart Kunkle said: "But must the struggle go on? Is there not something we can do for the betterment of the economic conditions in these villages? Give them a school with instruction in dry farming and you will put 23 per cent. of them in the way of making an adequate living. An industrial school would do much to rescue the 41 per cent. of uncertain employment from the worst phases of the struggle for life."

Is there then any other conclusion than that the Church needs the support of a system of agricultural education if she is to find a place of power and stability among the overwhelming majority of the Chinese people, the rural four-fifths of this great country?

V. Christian Leadership and the Development of the Chinese Farm Village

But there is another approach to the question of making agricultural education organic in the system of Christian education in China. There are many who believe profoundly in building a strong Christian Church in China and who are deeply interested in all enterprises that affect the church, and yet who place the main emphasis of Christian service in China upon what they believe to be the larger aud fuller task of "Christianizing" China. And, they assert, China cannot be Christianized unless rural China is Christianized. An article in a recent number of "The Chinese Recorder," by Tai Ping Heng,

a theological student, puts this point of view forcefully and on broad lines. Some quotations will be most suggestive:

> "It is widely accepted that the task of the Christian church is two-fold, the Christianization of China and the Sinization of Christianity. Neither of them can be accomplished if the villages are left out of consideration. But of real social control the villages are the source."

Now, as Mr. Tai says, if we are really hoping that China shall become wholly Christian in the largest sense of the word, we must regard the significance of agriculture in China. Note these fact, briefly stated:

That the number of people involved is not less than 300,000,000;

That China is sustained by her farmers. Her food supplies her raw materials for manufacturing, her whole economic and social structure hang upon her farmers;

That indeed, her perpetuity as a civilization has depended in no small degree upon the skill with which her farmers have for forty centuries maintained the fertility of her soil;

That for generations to come, Chinese industry and commercial progress are inextricably intertwined with the development of her agriculture; and finally;

That she can never attain national democracy, or even a stable, central government on democratic lines, except as her farmers are prosperous and intelligent citizens.

It is evident that the Christian conquest of China involves a statesmanlike consideration of her rural policy and program. We should understand that while the ultimate goal of Christianity is to build a Kingdom of God on earth, all experience goes to emphasize the fundamental need of Christianizing *local groups*, so that each group becomes in a real sense a self-contained, veritable Kingdom of God. The Church itself is built upon that principle, for the local church unit is the strength of the Church, and the fully Christianized local communities are the units of which the larger Kingdom is composed. In China these farm villages are true social units, the very tissue of Chinese civilization. If this civilization is to be dominated by and permeated with the principles of Christianity, these rural groups, these farm villages, are to be made true Kingdoms of God. But the specifications of the Kingdom are that it must be

economically sound and effective; intelligent in its manhood and citizenship; socially clean, wholesome and solid; permeated by the religious spirit and motivated by Christian ideals.

To quote Mr. Tai again: "The Kingdom of God cannot be easily established unless the Church takes into consideration everything that ultimately relates to men's spiritual life. The ideal for a Church is to make itself a factor in building up as perfect a community as possible. The present difficulty with the church, or rather the great hindrance to the Church's progress, lies in the fact that the Church has preached a great deal, but not done enough in actual production work for the people."

The Church too is profoundly interested in the total quality of the life of the farming people, how they live, their health, their morals, their complete welfare. This is both end and means so far as the Church is concerned. The Church has a special concern in developing and maintaining the intelligence of the farm people. Christianity is a religion of intelligence—not of superstition. Left to itself, the farm village will lag in respect to schools, literacy, progress. Rural life everywhere lacks leadership, incentive, the power of self-direction toward a program of improvement. The remedy lies largely in an adequate education in the farm village.

It would seem from these considerations fairly clear that the Church cannot make conquering headway in China except as it can master rural China. Also clear that we must recognize the significance of the work of missions among rural folk in China, and on broad lines of economic and social improvement. We realize that the establishment and maintenance of Christian farm villages is essential to the Christianization of China. Let it be noted, therefore,

(a) That education is fundamental to other opportunities of development among rural folk. Organization is important, but in its turn depends largely on education. Better farming, better living, better business, all rest ultimately on education.

(b) Religion itself cannot have full weight among these rural folk except as the farmers are fairly intelligent and reasonably prosperous.

(c) But this education must be intimately and vitally related to the life of the people—all of their life, as they have to live it from day to day.

(d) Any adequate definition of agricultural education makes it as inclusive in scope as all the needs of the rural people—just as broad as the rural problem itself. It is often thought of as teaching farmers better farm practice and being wholly technical, quite unrelated to intellectual and spiritual interests. But that is a narrow definition of agricultural education. The problem of agricultural education is to meet all the needs of the farming people. In fact, it becomes apparently an essential element in the development of a truly Christian rural civilization in China.

(e) Moreover, it is in itself a Christian contribution to China, because of the importance of agriculture and because of the difficulty that China will find in doing the work alone.

What shall be the Scope and the Limitations of Agricultural Education in the Christian Educational Enterprise in China?

To answer this question we need to consider several matters:

(1) We should attempt to analyze the rural problem in China, because only so can we

(2) Reveal the character and significance of efforts to solve the problem or indicate the objectives of any work to be done.

(3) We should outline the task and method of agricultural education in China as a whole: because we must understand not only the objectives of this educational scheme, but its machinery and method.

(4) We should try to develop a program for Christian education based on some principles of limitation as well as of extent. We need to review briefly the present efforts of public enterprise, in order that we may know the terms of Christian effort and co-operation.

(5) We must necessarily consider financial costs, and possibilities of support.

PART II

EDUCATION AND CHINESE AGRICULTURE

A Report to

His Excellency, the Vice-Minister of Education, Peking.

LETTER OF TRANSMITTAL

The Vice-Minister of Education,
Peking, China.

Your Excellency:—

I am herewith transmitting to you, at your request, a report based upon a study made as a member of the China Educational Commission. In making this study I was obliged to consider the whole agricultural problem, the relation of the Government to it, and especially the place of Government agricultural education in helping to solve the problem. Wherever possible I visited Government institutions, and conferred with agricultural experts in the employ of the Government; I have also had the benefit of the criticisms and suggestions of foreign agricultural experts now in China.

I am authorized by a vote of the China Educational Commission to place at your disposal that part of the material thus collected which relates to a statement of the rural problem of China, with suggestions as to how the problem may be met by Government agencies.

I trust that this brief summary will at least furnish an outline for further consideration of a question so vital to China's future, I am,

Respectfully,

KENYON L. BUTTERFIELD.

Shanghai,
Jan. 24, 1922

VI. The Rural Problem in China

The rural problem in China has not as yet been carefully studied. There are no authorities, few data, and little is accurately known. The present survey is scarcely more than an outline of the question. It is based on a few books, some observations, many interviews and conferences with specialists who have also furnished important and suggestive memoranda, and some of whom have had the opportunity to criticize the statements here attempted.

The skill of the Chinese farmer is proverbial. Professor King many years ago paid a deserved tribute to the intelligence used in handling plant and soil and in adapting means to ends. The farmer's thrift of time; his constant saving of the most minute resources, as well as his refusal to waste fertility that the West constantly wastes; his hard labor, his skill in devising methods adapted to conditions are characteristic of multitudes of Chinese farmers, especially those engaged in gardening, and apply in a measure over all China.

One proof of this skill of the farmers is the fact that for many centuries they have supplied food for a huge population and are still doing it to-day. On the whole soil fertility has been well maintained. No country in the world has succeeded over so long a period of time in retaining its national integrity and civilization. In all fairness, a large share of credit for this marvelous record must be given to the farmers of China. It is small wonder that the farmers has stood next to the scholar in Chinese opinion.

But new conditions are rapidly arising. As never before population in China is requiring increased food production. During the past two generations the western farmers have learned to apply science to agriculture, and thus have revolutionized their farming. There is, therefore, supreme need of the application of science to the farming of China, as difficult problems show themselves; for from science both physical and economic must come to the rescue. It is highly important from the national point of view that these problems be recognized and fairly faced by all and that a solution be found if possible.

The following is little more than an attempt to state in outline form those questions that seem to be most important.

A—The Land Question

Land Tenure: There are supposed to be not less than 50 million farm holdings in China. The holdings of the peasant owners vary widely in size. In the best tea and rice regions they run as low as two mow to perhaps ten mow; in areas of less intensive farming, from 20 mow to 60 or even 100. Holdings vary with the size of families as well as with types of farming. A large percentage of farmers rent land in addition to what they own. Tenantry is wide-spread. Landlords are sometimes local gentry, sometimes absentees. Few large landholders manage their lands. Rent is usually in kind, the most common arrangement being for the owner to furnish the land and one-half the seed and fertilizer, and to receive half the produce. It is believed that tenantry is increasing. Methods of acquiring ownership by peasants, fair terms of permanent rental by tenants, and greater interest in both the land and the tenant on the part of the landlord, are, therefore, problems of prime importance.

Land not used for agriculture. In view of the enormous population of China and its density in some regions, the amount of land unused for strictly agricultural purposes is nothing short of amazing. It consists of several types:

(a) Grave lands. Burials occur on the land owned by the family, wherever possible. Often the best farming land is used in this way and thus good fields are broken up; the graves take far more room than is really needed for the purpose. The amount of land thus used is more than incidental; it doubtless amounts to millions of acres as a total.

(b) Large areas of land are used to grow fuel instead of food, especially such fuel as grass.

(c) Thousands of lower hillsides are bare that should be growing wood fuel.

(d) Vast tracts of mountain country that could grow trees for timber or for oil and nuts, are not being used for any purpose.

(e) There are immense amounts of good grazing land, both on the hills and on the mountains, that are practically unused.

(f) Wide areas of natural grazing land are not fully used, especially in the northwest. Lack of transportation accounts for this in part.

(g) There is much more of miscellaneous waste lands found in "driblets," but still large in total, than one would suppose could exist in so thickly populated a country.

Not all of these areas are "waste" land. The graves grow grass for fuel, and some of the hills devoted to fuel grass bring a larger income to the owner than would come from ordinary farming in the same region.

B—Labor Efficiency

Surplus of Labor. So vast are the labor resources of China that even large additions to or subtractions from the number of workers seem to effect production only slightly. This surplus of available labor is the great outstanding agricultural fact, for not only does it make higher standards difficult, but many believe that higher standards of production and comfort will be at once absorbed by a further ratio of increase in population, and so a maintenance of the vicious circle of poverty, over-population, low-standards of life. The labor surplus constitutes, for agriculture as indeed for all industry in China, the basic problem.

Hand Labor and Machinery. One consequence of labor surplus is hand labor; it is the cheapest power at present available. Tools are used of course and are simple and effective. Of farm machinery there is very little, and there are sharp limitations to its use, though doubtless experiment will reveal many adaptations of western farm implements that can be made to the advantage of labor efficiency on Chinese farms. In North China, and on large holdings on the great flood plains, modern machinery can be used freely. Importations of American farm machinery are steadily increasing.

Effectiveness of the labor. A careful western observer states that, while cotton-picking in China is necessarily a slower process than in the United States, the average Chinese day's picking is not over one-quarter of that in some parts of America. Judged by western standards the "rate" of work is slow and the product per worker exceedingly low. This may not be typical. There is no way at present of making accurate comparisons with farmers in other lands.

Scattered holdings. Not only are the holdings small but they are often widely scattered. In some cases this method of allotment causes much waste of time and effort.

Labor Income. Perhaps $50 (Mexican) a year is the net income of the average farmer. In some provinces it is estimated that farmers can "get along" on $3 a month, or even less. In other provinces the income may be as high as $120 a year. The writer was given one instance of a tea farmer in Chekiang who probably netted $300 a year from 3 mow or ½ acre of land. It is not known how much income will buy, as compared to North America or Europe.

Standards of Living. Necessarily, however, the standards are low, the wants simple and even primitive. There is virtually no surplus or savings at the end of the year.

Self-Sufficing Families. The typical farm family not only has meagre wants, but it grows and makes most of what it needs and uses in the way of food, clothing and shelter.

Theft and Brigandage. Protection against theft of crops is a serious drain on the time and energy of the farmers. This is a rather curious fact in so pupulous a country. Brigands and menacing secret societies are a serious pest in many provinces.

Diet. It is impossible to state accurately the effect of the farmer's diet upon labor efficiency. But the diet is necessarily of rather narrow range, somewhat monotonous in character, and probably in some cases suffers in cooking.

Health. Any pronouncement upon this subject would be mere guessing. It is known, however, that a large proportion of the farmers are afflicted with hook-worm, especially those who work with bare feet in the rice paddies. Tuberculosis is a scourge in China. Infant mortality is high.

Superstitions. The farmers, highly skillful within certain lines are constantly handicapped by a multitude of superstitions that unfavorably affect farm practice.

Expensive Customs. They are also economically handicapped by relatively costly customs. A frequent excuse for borrowing money is for weddings, funerals, ancestral worship, and so on. These expenditures are out of all proportion to farm and home needs.

There is no way of measuring the importance of these various items of labor efficiency or lack of it. The total impression is that of a seriously handicapped farmer, who lives constantly on the margin of a scanty livelihood, with little chance to learn new methods or to practice them if he knew them.

C—Possible Improvements in Production

The Maintenance of Soil Fertility. In many areas soil fertility is remarkably well preserved, due to such practices as the large use of nightsoil, of flood silt, of canal and pond mud, and of vegetable waste in the compost. In other areas there are, however, much washed soil, wide spaces of erosion, a serious lack of organic matter, and a comparative lack of animal manure. All these defects, except the last, can be remedied, but only by radical changes among large groups of farmers and over wide areas.

Farm Practice. It is difficult to pass judgment on Chinese farm practice without much study of the problem. The gardeners use minute care, work steadily, and are extremely skillful handlers of plants and in adapting means to ends. Among the farmers probably better methods of fitting the land could be developed and possibly better organization with reference to general farm management could be successfully introduced.

Improving Plants and Animals. In this field lies one of the largest opportunities for improvement. Both by seed selection and by the breeding of new and better varieties and types, great results will accrue. For, although China has contributed largely to the list of edible plants, there is at present practically no attention paid by the farmers to improvement, and deterioration rather than advance is, on the whole, the characteristic situation. These improvements bear vitally upon both quantity and quality of product, upon grading for market, and upon resistance to disease.

Combatting Diseases and Pests of Plants and Animals. There is no way of estimating losses from these causes, but they must be enormous, and the farmers are practically helpless at present. They have no knowledge of these matters, and few to tell them. There are no laws to protect.

Animal Husbandry. It is not at all probable that the use of animals for any purpose can increase materially in the regions of densest population. But there are possibilities for animal husbandry in some areas. It is believed that grazing is better for sheep and goats than for cattle. The winter feed problem is a serious one, and the prevalence of such diseases as rinderpest, anthrax, foot-and-mouth disease, even more serious. But the grazing of hillside, mountain, and forest; the use of the soy bean for supplementary feed; the wider utilization of vast natural grazing areas in North China, are nevertheless all possible developments.

D—Some Economic Problems

The Market. The local markets absorb huge quantities of the major food products. Food for the larger cities is, of course, transported some distance, although surprisingly large amounts are grown on areas near or even in the cities. Rice, wheat, and meat for export, as well as most of the cotton and silk, seek the market distant from the place of origin. Direct sale from producer to consumer is common.

Transportation.

(a) The canal system is most remarkable; there is nothing like it in the world on a similar scale. It is estimated that China has 200,000 miles of canals. These canals, however, require improvement and better maintenance than now prevails.

(b) China has scarcely made a beginning in building modern highways. The task of remedying this deficiency will be an enormous one. Lack of material on the plains, the prevalence of mountains and high hills over great areas, the serious encroachment that highways will make upon farm lands, the difficulty of maintenance due to heavy rains—to say nothing of the initial difficulty of getting the money to build—constitute a series of difficulties. But the absence of highways is a major defect in the progress of farming.

(c) A question of even greater moment is that of railways. China has not over one-tenth of the minimum mileage she needs. Whole provinces could be opened for agricultural production if transportation for the product to the outside market were available.

(d) Now, and for generations to come, beasts of burden must be used freely for transportation of farm products.

(e) At present, however, main machinery for transport is human shoulders; yet it is believed by statisticians that, in spite of the cheapness of labor; the present transport cost is five to ten times what it should be with a good system of railroads and highways.

Farmers' Co-operation. In general, the idea of organized co-operation may be said to have made little headway among the farming people. We find here then one of the largest fields of improvement in all the list of rural problems. A few words about each of the forms of co-operation characteristic of some of the European countries will suffice to indicate

the situation in China. *For Land Tenure.* Apparently there is none except as illustrated by family ownership. The village clan and family life, however, form a basis for co-operative land tenure, if it should seem to be desirable. *For Production.* There is much co-operation in the way of exchange of labor, but doubtless this could be extended. The whole field of organized co-operation in farm work, as well as in the use of power and farm machinery, still remains for the future. *For Credit.* There are now village societies for credit, but they are used largely for non-economic purposes. It is doubtful if for some while to come there will be much purchase of land; if so, there will not be much demand for long term credit, except for rebuilding and replenishing after floods. Interest rates run from 2% to 6% per month. Borrowing for non-economic needs is a great bugbear to a successful credit system. On the other hand, the clan custom of assuming liability for members of the clan ought to be a good basis for co-operative credit. *For Plant and Animal Improvement.* After the scientist has done his work, the farmers must co-operate if they are to make improvement possible on a practical scale. It cannot be done by individual farmers. *For Purchasing of Supplies.* At present not much is purchased by the farmer. But as his requirements increase he will need co-operative purchasing societies if he is to buy to advantage. *For Manufacturing.* There is probably very little local manufacture of soil products on a co-operative basis. There is a large field here, but experiments and demonstrations should be undertaken first. The village industries would lend themselves admirably to the co-operative method; there are those who believe China offers the best opportunity in the world for applying the co-operative idea to small manufacture. *For Selling.* At present the farmers have a relatively small surplus to sell. Middlemen are few, and direct sales are the common practice. The need, however, is beginning to be felt in the sale of cotton and silk, and, as industries and cities develop, will be felt keenly in food products. It is none too early to experiment with co-operative sales societies. *For Insurance and Protection.* There is now co-operation against thieves, but apparently no insurance against fire, flood, or other similar catastrophe.

Experience seems to show that agricultural co-operation depends upon pressure and habit. The Chinese farmers already have the habit of co-operating for certain ends, but

pressure for new enterprises will come only as the farmers become conscious that co-operation is the only way to gain their ends. The success of both India and Japan in starting farmers' co-operation, indicates that the principles is as applicable in the East as in Europe or America.

There can be little doubt that the great mass of unorganized, unprotected, illiterate farmers suffer from the impositions of other groups, more intelligent and organized. Instances may be cited as follows:

Were landlords have associations and agree upon terms of rental or other matters of similar concern to them.

Where a fruit guild buys of the farmers over a large area and of course fixes the price.

Where the law, by forbidding farmers to have silk-cocoon ovens, compels them to sell when cocoons are ready, at buyers' prices.

Where farmers are obliged to sell rice at low prices in order to pay rent to the landlord, who demands rent as soon as the crop is gathered.

Where cotton buyers offer a low price to growers, at a date considerably before picking time, advance small payment toward the crop, and thus secure the product at a figure really below its value. It is said that mills would willingly buy of the farmers if the latter would co-operate in grading and handling the crops properly.

E—Some Major Problems Briefly Stated

Flood Prevention. Great floods, over vast areas, are recurring disasters in China, in the face of which the farmers are practically helpless. The main cause is, in part, excessive rain fall during a brief period, in part the too rapid filling of rivers by water from denuded hills, in part the silting up of rivers with soil washed from the hills and the plains. It is a joint problem for the engineer and the forester as experts; and only the government can supply remedies at all adequate.

Reforestation is another of the great needs of China. There seem to be three main problems.

(a) The reforestation of river sources, both for timber and for the prevention of floods.

(b) The growing of trees for oils and nuts, with a subsidiary use for preventing floods.

(c) On the lower ridges, using trees distinctly for fuel, in order to supply more and better fuel and to release land for growing food.

Irrigation and Drainage. These two are also problems for the engineer and the government, but the need is apparent. Irrigation in the drier areas, both by reservoirs and by wells tapping underground water, would multiply several fold the productivity of immense areas. Provision for drainage after excessive rains and after floods is a matter of great consequence.

Power Development. There are many uses of electric power in agriculture, and especially for supplementing village industries. But this can become available only as the great streams of China are harnessed.

F—Social Life

President Roosevelt, in his letter appointing the Country Life Commission in 1908, emphasized these words: "Agriculture is not the whole of country life. The great rural interests are human interests, and good crops are of little value unless they open the door to a good kind of life on the farm." Can China's farmers look forward to a better "kind of life?"

Family Life. Here we reach, of course, one of the fundamental social problems of China. Questions of the small unit family, the age of marriage, care of the old, ancestral worship, all must be worked out in the farm village and among these farm people if they are to be worked out for China. There is in the West a wonderful welding of home and farm life. Has the West a contribution to make to Chinese farmers at this point?

Education. The village school must serve as a social center, as a real community school, and of course must be universal to be fully effective. The theatre and the tea-house may be made effective by means of education for the adults.

Health. The field of personal hygiene and community health must be studied first of all from the medical point of view, supplemented by definite governmental activity; but dissemination of information and stimulus to improvement can be aided by school and local government.

Recreation. There seems to be a relative lack of what would be defined in the West as recreation; there are few facilities for it. Perhaps the absence of music is one of the most significant of these lacks. The development of play in connection with the school would be a real contribution.

Local Government. Apparently the farm village is the stabilizing influence in Chinese political life, and is bound to be a most effective factor in Chinese political development.

The Isolation of Villages. These villages are out of the currents of life. They are a law unto themselves. All the evils of rural isolation are here in spite of the fact that people live in groups. Village life is both strength and the weakness of China.

G—Agriculture and National Life

There are many problems arising among farmers that concern the nation as a whole even more intimately than the farmers themselves. Among them are matters such as those now to be mentioned.

Famine. Famines are due to floods, to drought, to the lack of transportation, and to the lack of a surplus with which to buy when the local supply is scarce. Mr. J. H. Reisner has stated the remedies as: river conservancy; reforestation; irrigation, both from streams and by tapping underground water supplies, especially in North China; development of transportation facilities; distribution of population through colonization; industrial development to reduce surplus village population; installation of granaries; increase of agricultural production and food surplus; and the establishment of rural credit and saving societies.

Population and the Food-supply. The density of population in China as a whole is not excessive, about 250 to the square mile, (in 19 provinces.) The province of densest population has nearly 900 to the square mile. This may be compared with the population density of England (670), Belgium (650), and of Holland (540). There are, however, huge dense spots. It is said that the Chengtu Plain, with an area of 2000 square miles, has a population of 2,300 to the square mile. Other areas of extreme density are on the lower Yellow river, both in Honan and in Shantung; at the mouth of the Yangtsze, and in and about Canton. There are also many and large sparsely populated areas. In some cases the densely populated areas feel the pressure of food supply. On the other hand, it is stated that the Chengtu Plain is self-sufficing with a fair standard of living.

There is much testimony leading to the belief that on the whole the production of Chinese land could be materially increased, both by better methods and by colonization. Cheap

transportation would materially aid. In this connection there should be begun a study of the national dietary with reference not only to health but as bearing upon the relation of population and food supply. Such possible changes as the use of unpolished rice, and the possibilities of green vegetables, are illustrations. It is also interesting again to note that there are many who hold that amelioration of economic conditions and prevention of starvation in famines would simply lead to even more rapid increase in population.

The Factory System and the Food Supply. The factory system is growing and is inevitable. It will call for workers and for cheap food. The query is, can China supply this food and spare the workers? It has been said that there is strong likelihood that she can, because of a vast surplus of labor, and the possibilities of unused areas, of better farming, of flood prevention, and of irrigation. However, in all industrial countries the development of the factory system and of cities has drained off the surplus farm workers, and, for a time at least, taken too many of them. Is this likely to be the case in China? The Chinese seem to avoid isolation and they may flock to the cities readily.

Village and Home Industries. The domestic and village industries help the farmers materially by offering work for spare times and for certain members of the family, and will survive the introduction of the factory system. But they should be encouraged, if possible co-operatively organized, and at any rate the aid of education given to them. Of course, the factory system will crowd certain village industries and eventually supplant them perhaps. All the more should aid be given the villagers in the way of intelligent advice and helpful suggestion.

Transportation and the Food Supply. This is the key to all industrial development both to the getting of cheap raw material and the transportation of the finished products, as well as to the supplying of cheap food. In the development of railway systems, the canals should not be ignored. Railways are already assisting in reforestation; they could be of very great service in agricultural experiment and popular education, as well as in assisting farmers to market their products. As a mere matter of business it would pay the railroads to enter the field vigorously.

Land Development and Colonization. This is proceeding slowly. It is not organized and the Government has done little in the way of aid. Transportation is difficult, and the ownership of available land is often in the hands of large land-owners who hold for the future. But there is a substantial current both into Mongolia and into Manchuria.

Chinese Agriculture and Chinese Business. It is stated that 85% to 90% of Chinese exports are soil grown. As in most other countries the products of the soil furnish the major part of the raw materials of industry and of articles of domestic commerce.

Chinese Agriculture and World Agriculture and Industry. Already cotton, silk, oils, and certain food products like rice and wheat flour are appreciable factors in both world agriculture and in the development of industry and commerce. Eventually China must be a prime factor in the supply of the world's food and other products of the land.

Chinese Agriculture and Chinese Political Life. The only hope of a true democracy is an intelligent and reasonably prosperous farm population, with a fair amount of literacy, fully supplementing the democratic development of the cities.

Legislation and Agriculture. Agricultural progress will be slow in China until the provincial governments at least can make laws for the benefit of the farmers that will be steadily enforced. Some of the needed laws are as follows:—(a) The State support of schools for children, adequate aid for educating adult farmers, and substantial support for fundamental agricultural investigation; (b) A scientific land survey, and the establishment of farm boundaries. (c) Uniform taxation; the taxation of idle land; the abolition of likin, which is a transit tax on agricultural products and in some cases is little short of robbery. (d) Protection against imported pests and diseases of plants and animals, and against their local spread. (e) Laws encouraging the establishment of credit societies and co-operatives. (f) Means of obtaining accurate records of weather and climate, securing data as to crops, yields, prices, etc. and in general securing the information about Chinese farming that is necessary to intelligent public interest and wise legislation.

VII. The Suggested Solution of the Problem

In one sense the farm problem can never be solved in any country. It is a very difficult and complex series of situations that the farmers continually face. The analysis of the rural problem in China just given does nothing but attempt to make us realize the complexity and gravity of this question. The most that we can do is to show if possible how difficulties may be met by developing organization and in general considering improvements in the farmers' conditions. First of all we must seek for some large general principles that can be utilized in our attempt to bring about this amelioration. This report will suggest the use of two major means; namely, organization and education. But under organization must come two other important aspects of co-ordinated effort; namely, the formation of an All-China agricultural program in order that the whole problem may be approached as a unit; and second, a program for the development of the Chinese farm village, in order that the masses of the people themselves may be effectively reached. We may now discuss each of these suggestions briefly.

A.—The Organization of China's Agriculture and Country Life

Technically organization is the correlation of the factors that enter into the methods of solving a given problem. In agriculture it means an effort to utilize all agencies, institutions, and efforts that can assist in improving the conditions of the working farmer and that will help meet the difficult problems that these farmers have to face.

There are two main phases of organization, both of them of prime importance.

1. The association of farmers themselves for various ends of special importance to them.

2. The co-ordination of government, educational and administrative agencies, together with important bodies of business men, managers of railroads and similar agencies, in order that large plans may be laid and effective work undertaken in lines that will assist the farmers to help themselves.

Farmer's Associations. These by all means are to be encouraged. This century is a century of organized activities. The farmers of the world were the last group to make use of this principle. But it was found years ago in Europe and is now being found in the United States to be true that the better

the farmers are organized, the better both for them and for the country at large. Farmers need associated effort in order to secure the right sort of education and in order to learn reliance and self-help. The power of the farmers to organize shows, in a measure, their capacity as a class. Doubtless there will be opposition to these associations of farmers from interests that prey upon the farmers; hence the government and good citizens should encourage and help the farmers in their organizations. At present there is a sad lack of rural leaders in China just as there is apt to be in any country. It is highly to be desired, therefore, that intelligent leadership shall, at the outset, be found among the better educated groups, possibly among business men who see the need and are willing to help.

Other types of Organization. In addition to the Farmers' Associations there must be some sort of Agricultural Council, made up of representatives of the Government, of farmers' asssociations, of educational agencies, perhaps of chambers of commerce, and of individuals who are interested. The Council should endeavor to formulate wise programs and secure the means of carrying them out; it should be a clearing house for the agricultural problems in China, a body that can study the problem in its wider aspects and plan accordingly, a group that can speak on behalf of Chinese agriculture as a whole.

There are two phases of a comprehensive agricultural program for China, one that has to do with the country as a whole and one that has to do with each village by itself.

B.—An All-China Agricultural Program

It is almost impossible to secure the most rapid and most complete development of Chinese agriculture unless there is a definite program of advance. The processes in making this program are as follows:

1. Make an analysis of the problems; that is, the difficulties and defects that Chinese agriculture now has to consider. Find out the facts with respect to each one of these problems and make sure that sufficient is known about each problem so that this knowledge may form the basis for plans and remedies.

2. Discover the most effective ways in which these difficulties may be met and these defects remedied. Undoubtedly the study of western agriculture will help to answer these questions, but the suggestions must come largely from the knowledge and experience of those here in China.

3. Arrange definite projects for improvement in a few lines that seem most pressing and important. Determine what it will cost to carry out these projects, either in some given region or through China as a whole, and provide the money necessary to make sure that the projects once started will be carried through.

4. Indicate what each agency can do to help in these projects and how the results may be conserved.

A program of this sort is more or less ideal, and it must not be simply a paper plan. First of all, however, there must be a paper plan, and then what is most pressing and what is within range of carrying out should be agreed upon for the immediate projects.

As a practical suggestion it is recommended that there be held under proper auspices in the near future a national conference on agriculture and country life and that the first steps be taken to form an agricultural program for all China. This conference should include representatives of the government, of government and private educational institutions, and of any organizations or associations that are actively at work, and should possibly include business men interested. It might be well if the foreign experts now in China should be asked to help. The results of this conference ought to be an encouragement to have annual national and provincial conferences, as well as the establishment of a permanent national council of agriculture.

C.—The Development of the Chinese Farm Village

In order to make the comprehensive program really practical, some means must be found to reach the working farmers with the best advice available and to stimulate them to act upon the advice. The best way to achieve this is to make the fullest possible development of the farm village the very core and center of the agricultural movement in China. Let us consider some of the elements of an aggressive village movement.

1. It is important numerically. It will be convenient to classify Chinese population somewhat as follows:

The farm hamlet, consisting of from 3 to 4 families up to 50 families.

The farm village, consisting of 50 to 500 families. (This village is usually, though not always, a market village.)

The town, consisting of a population of 2500 up to 20,000.

The small city, consisting of a population of 20,000 up to 100,000.

The large city, consisting of a population of 100,000 and above.

Now, it is believed that there must be in China at least 100,000 farm villages and approximately one million hamlets.

In Szechwan the farmers do not live so much in hamlets and villages but they live so close together that they form virtual communities. Recent statistics indicate that out of the Chinese total population 6%, or say 25,000,000, live in cities having a population of 50,000 or over; that about 6% more live in towns and cities having a population of 10,000 to 50,000. It is doubtful if over 12% more live in towns having a population of 2500 to 10,000; if so, this would leave 75% of the total population of over 300,000,000 living in farm villages and farm hamlets.

2. The Village in Chinese Civilization. One is impressed with the Chinese village as a characteristic feature of Chinese civilization. Family life seems to be rooted in the village. The village is thoroughly democratic, largely self-contained, settles its own difficulties and is, in all respects, a remarkable institution. The economic and social development of China depends largely upon the economic and social development of the village. Doubtless the leadership for great movements will come from the city, but, ultimately the village must be reckoned with in an advancing China.

3. The Community idea in rural affairs. The community idea simply is this: That all the interested members of a local group of people shall work on a common program for the common good of all. This idea has been applied to Europe for many years; the great co-operative movements among farmers of the western European countries, and indeed of Russia, are based upon this community idea. The idea is rapidly spreading in the United States where, more and more, the local groups of farmers are working together for common ends. Now, the Chinese village is a natural community. The people know one another, have common problems, common difficulties, work under similar conditions. Apparently the community idea in order to vitalize the Chinese village simply needs a program

and the gradual enlistment of these villagers for the common good.

4. The Best Village Program. What is needed is a movement that shall inspire the villagers in each village to make their village the best village possible. There are three lines through which improvement can come.

a. The improvement of farms and farming

b. Improvement in the economic field

c. Improvement in the social field or in the conditions of life.

No one from outside of China can make a program for each village or even for the villages as a whole. This program must be made by those who know the problems and who know the people. Indeed, each village has its own special problems and must have its own program. The program must not be too big but it must be very practical and important for the village. An example of what might be a working program in a village where a large amount of cotton is grown, would be,—

a. A project to improve the strains of cotton grown in the village, both for yield and for quality.

b. A project for enabling the growers of cotton to sell together in order that they may get a fair price for their cotton.

c. A project to educate the boys and girls, as well as the older people, in the best methods of growing and selling cotton, but to do this as a part of a general schooling for the boys and girls and if possible of an effort for teaching the older people to read.

5. To Make the Village Program Effective. In order to make the village program a reality several conditions are necessary, somewhat as follows:

(a) The program must be "set up" by some outside expert, presumably from the Agricultural College or school, who will furnish the latest information and give suggestions as to how the program can be carried out.

(b) There must be a group of local leaders who have the confidence of the farmers; who have an intelligent understanding of the program and who are willing to give some time to the program. These men must be honest both with the farmers and with the outside experts.

(c) It will be desirable that the Government of the province should aid by giving prizes, or in some other way encouraging competition between villages so that each village will do its best.

(d) Wherever possible make the village school a center for promoting this program, both among the pupils of the school and among the youth and adults out of school.

D.—The Province of Education

It has already been stated that education, as well as organization, must be utilized in solving the problems of agriculture and country life. Indeed, education underlies all other effort. It is useless to organize unless adequate knowledge is at hand and trained leaders are available. In this day applied science is what we must have in every country the world around if farmers are to progress.

The main purposes of a system of education that meets the needs of a farming people are at least these:

1. To give a minimum schooling to the children of the village, reasonably commensurate in quality with that given to the children of the cities, and adapted to the special needs of the rural groups.

2. To train leaders of all ranks, competent and willing to help in solving the problem of the farm folk.

3. To gain by research and experiment that knowledge of facts and principles that is necessary to an intelligent approach to these problems.

4. To educate adult farmers in modern farm practice, cooperative association, betterment of living conditions, and useful citizenship.

We are now prepared to discuss in more detail the task of agricultural education in China.

VIII. The Task of Agricultural Education

The task of a system of agricultural education in China is to help solve the rural problem that has just been outlined—all parts of it and all of it. It must always be kept in mind (1) that education is an absolute essential to any real amelioration and improvement; and (2) that the scope of agricultural education is as wide as the agricultural problem. It is true that legislation and class organization must be invoked before the

largest measure of progress can ensue; but wise legislation and intelligently conceived and properly directed organization in turn depend upon education.

But what is involved in the process of endeavoring to educate the farm people of China?

1. The Village School. This is the largest and most important single item in an adequate educational system for the rural people of China. It is basic, not alone because of the elemental need of schooling for boys and girls, and because of the overwhelming preponderance of farmers in the population, but also because in China, as in most countries, rural education may easily be neglected. The cost of small schools in small centers, the procuring of efficient teachers willing to teach in the villages, the securing of effective supervision, the unresponsiveness of the people, the unique character of the schooling required, the centralizing of wealth and authority in the cities, all conspire against the steady maintenance of a really good system of rural schools. It is all the more necessary therefore, to insist upon a consideration of such questions as these: Is the village school in China to be of the right sort? or an even more elementary question, is it to provide universal compulsory schooling for the village children? Can it be intimately related to the life of the people? Can it be provided with good teachers? Are the village boys and girls to be given both a chance to leave and a chance to stay in their native village? Are the farming four-fifths of China to be given as good schools as the urban one-fifth? Moreover, such considerations as the school as a community center; the teacher as a community leader and guide of the people; the permanent need of men teachers to supplement women teachers, are all matters of significance in the attempt to place and keep village education in China on an effective level.

These questions are of the utmost importance to China, for they lie at the very root of her possibilities of progress. The village school is the chief means by which not less than 300 million people are to be given the elements of an education during the next half century. It is a task big enough for any statesman, vital enough to thrill every lover of his country—this little village school, almost the key to the future of democratic China.

2. Agriculture as material in general education. It is necessary that the village school shall relate itself to the life of

the people whom it serves. These people are for the most part farmers. The material of their lives is agricultural or rural. Soil, plant, animal, sky, weather, work, play, farm and village life, are constantly with the people. In the case of the boys and girls in their farm hamlets and villages, the use of this agricultural material becomes simply a phase of education from environment, and justifies itself on that ground. It is practically what we mean in the West by "nature study." The value of this work for training observation, securing interest and giving a sense of reality to the school life does not need argument. But the method must be sound, and *things themselves* must be used, instead of what has been written or pictured about things.

There will not be much objection to this use of agriculture in the lower elementary grades in city as well as in village. But a good case may also be made for its use in the higher elementary grades, and indeed, in the middle school, and for much the same reasons. The manual work involved in agriculture is of great educational value to farm boys and to other boys; to farm boys because it can be made to illustrate how intelligence and manual labor can be combined, and to other boys to show how manual labor is really educative. The larger phases of agriculture should be considered in all colleges, such as study of the economic and social problems of rural China. These things are part of the fundamental training of citizens of China, for, as long as agriculture maintains its present importance, the educated man should know something about the national implications of the rural problem.

The character-value training as well as the mental training growing out of the right use of agriculture in general education must be fully appreciated, especially when the subject is taught by means of practical projects. It develops initiative, "grit," "stick-to-it-iveness," as well as brings one close to realities. It is a splendid corrective of false views of what constitutes an educated man.

3. Vocational Agriculture. The main use of agriculture, however, is to train boys and youth for occupations that have to do with farming and farm products. The grades in which vocational agriculture should be introduced as a prominent feature of the course must be determined in part by the time when the majority of boys leaves school. As a general principle, it should be given as late as possible. But in China it

would have to be begun in the upper primary years, and doubtless even before that. It must reach the boy before he leaves school and give him a year at least of interesting, vital, vocational training. Indeed, it may be necessary to introduce agriculture with a vocational tinge almost at the outset in the elementary school, partly to help keep the boy in school. It is doubtful whether there should be special schools of elementary grade for agricultural training.

4. *Middle School Agriculture.* Here the query is largely one of the present ability of China to use the "product." Evidently, middle school graduates will not go onto farms, except in cases in which holdings are managed directly by the owners and not rented. Nor can they be used in research; it takes well-trained men for investigation of any sort. Probably the graduates of courses in Middle School agriculture could be used as teachers of agriculture in villages, and as teachers of adults in the extension service. In both cases it is highly desirable that those thus trained should be farm bred, or, at least, boys willing to learn the art of farming.

It must be admitted that it is unwise to try in advance to be too specific concerning the time and manner of teaching agriculture below the college. The main groups to be reached in these years are:

1. Farm boys who should be reached as late as possible, but while still in school.

2. Boys staying in school for a longer time, and given agricultural training as late as will still make farmers of them.

3. Boys who cannot go to college, but who can be training for village teaching and for assistants in extension work and other expert service, where they can work under the direction of college trained men.

It has been suggested that travelling teachers should be employed to serve groups of village schools as teachers of agriculture in these schools. Larger villages can perhaps employ a teacher capable of teaching agriculture both to the pupils and to the farmers. The village school should be made an educational center for youth who have left school and for adults, by having night school, winter courses, lectures, and in general serving as a center of community advancement.

5. Agricultural Colleges. These, of course, are a prime necessity. There should be, and probably will be, one in each province. There are four main functions of such institutions:

(a) To investigate

(b) To train leaders and experts

(c) To carry on extension service or adult education

(d) To assist in organizing Chinese agriculture and country life.

The question as to junior or senior grade for these institutions is largely a matter of ability to develop. The ideal would be the senior college. At present, however, the junior college is perhaps about as far as China can go, for present institutions are practically a combination of the last two years of the middle school and two years of junior college. South-Eastern University, is on a senior college basis, and probably each main region of China will support senior agricultural colleges as soon as sufficient funds are available for support.

As teaching institutions, the main purpose of these colleges is to train specialists. As soon as China can give employment to them there should be specialists in each of the major farm problems we have described. No headway can be made until science applied by trained men can be brought to bear upon every one of these problems.

The agricultural college should emphasize the whole rural problem, and give a large place to economic, social, and governmental aspects of that problem, as well as sound training on the technical and managerial sides.

6. The Teaching Method. All agricultural schools of all grades should keep in mind at least the following considerations in teaching:

(a) Use wherever possible the problem or project method. Correlate agricultural material with other subjects in the course. Use concrete material without too much dependence upon text books. Let pupils deal with real things with a chance to test farm methods themselves.

(b) Give sufficient practice in hand work so that the student at least appreciates the manual skill involved in the process. One of the complaints made by experienced Chinese observers is that graduates of agricultural schools and colleges are "too theoretical," they do not know the farmers' problems

as realities, but only as abstract generalities. This should be corrected at all hazards. Hand work will help.

(c) Recognize rural psychology. Rural people as a rule do have the "rural mind." It is important that men who are to influence farmers shall learn to know instinctively how the farmer thinks.

(d) Liberalize vocational agriculture of all grades. Technique forms only a part of the training required. The social implications of agriculture, and as far as possible, its cultural possibilities should be recognized in the course of study and in the training of the teacher.

7. Training of teachers of agriculture. Those who teach agriculture as a part of general education will usually be the teachers of science. But they must have had some work in agriculture. Teachers for the lower and higher primary grades will probably be trained in normal schools of middle school grade. Teachers for middle schools will be trained either in higher normals or agricultural colleges. It is important to recognize the need of training in teaching method as well as in subject matter.

8. Graduate work. Graduate work should center largely around research, and it should be developed in China as rapidly as research develops. This means that each research man will have a few advanced students who will assist him and also study advanced work. As soon as the work can be put on a high enough plane, advanced degrees may be given.

9. Training Abroad. It is recommended that, generally speaking, students go abroad for graduate work only, and for rather highly specialized work at that. It is important chiefly in order to get in touch with the ablest men in particular lines, and should be accompanied with much travel both in the United States and in Europe. Even the specialist in agricultural science should study his subject in relation to economic and social conditions in the country where he studies.

10. Adult Education. We must take as the definition of "adult" any person permanently out of school. With this in mind, adult education becomes more hopeful in China than otherwise would be the case, for there is a fair possibility that persons between the ages of 15 and 30, permanently out of school, provided they have had some schooling, can be

continuously interested in the educative process, especially in technical lines. And it is desirable to have the extension service or adult education begin its work as soon as possible after the child or youth leaves school. Indeed, the maintenance of literacy can probably best be assured through reading connected with one's daily work.

The following are suggested as the main types of adult education that may be expected to succeed among the villagers:

(1) Continuation schools will probably be necessary in lieu of full time schools for the majority of boys and girls 12 to 18 years of age.

(2) Demonstrations are vital, because the farmers are not likely to have much faith in the spoken or printed word alone; they must be shown that the thing described actually does the work. So that demonstrations in farming practice, and even in co-operation and welfare work must at all hazards be developed.

(3) *The itinerant teacher* is a fixture in all lands that have well-developed systems of agricultural education. He will deal first of all with agricultural matters, but must also be interested in other village interests and in citizenship and public questions. The theatre and the teahouse, and eventually the school, will be his instruments.

The space here given to the discussion of adult education or extension work, does not fairly represent the relative importance of the subject. It can be said once for all, that an effort must be made to reach the great masses of farmers with the message of improved agriculture and country life. It is a tremendous enterprise. But it is not sufficient to have Experiment Stations and Agricultural Schools; the working farmers must be influenced, or else no real progress can ensue. *The goal of all agricultural endeavor is the farmer.*

11. Illiteracy. This, of course, is a serious bar to adult education, but is not fatal, for two reasons. In the first place the handicap it imposes can be overcome in part through ocular demonstrations; by moving pictures and exhibits. In the second place, once the agricultural expert has gained the confidence of the farmer, up to a certain point the farmer can be reached by word of mouth. And, finally, it is worth while to see if adult illiteracy may not be decreased by concentrated educational work. The use of placards is very common in China and could

be utilized in agricultural work. The village elders may become a tower of strength in this enterprise of adult education.

12. Girls and Women in relation to Agricultural Education. In China women do less farm work than in many European countries. Household maintenance and household industries seem to be the chief occupation for women. There is more likelihood that the education of girls in farm villages will be neglected than in the cities. There are many difficulties in the way of giving as wholesome an occupational education to girls as to boys, especially in the lower grades; the vocational enterprise is more uncertain. But this ought not to blind us to the importance of trying to find a solution of this problem because (1) general intelligence is determined as much by the women as by the men. It is probable, indeed, that superstitions are kept alive by the women fully as much as by the men. It is probable also that if as many girls as boys could be taught to read more of them might be induced to keep up the habit of reading; (2) the care of the home and the proper mothering of children occupy too prominent a place in civilization to need any argument on behalf of education in these lines. Here ignorance brings in its train terrible social consequences; (3) household industries will for generations be a part of the farm village and farm home, and they should be recognized in any scheme of education for village girls and women.

13. Investigation. Underlying all effort in agricultural education and precedent to substantial agricultural progress, stands the need of a system of investigation into *all the aspects of the rural problem* as outlined, technical, scientific, economic, social. The should be ample provision for,

(1) Genuine scientific *research,* in the economic and social fields as well as in the physical and biological sciences.

(2) *Experiments,* to see how the principles will apply in actual operation under existing conditions.

(3) *Tests,* by the multitude, in order to adapt applications to meet varying conditions of soil and climate.

Farmers cannot be given good advice until the experts know the truth. Investigation reveals the truth. Every agricultural college and middle school should be well equipped for investigation into the real problems the farmers have to face.

14. World Agriculture. The day has come when each country must consider its agriculture in relation to the agricul-

ture of all other countries. This must be especially necessary in a country with such huge farm interests as China possesses. Her agricultural leaders, therefore, may well make a special study of these wider agricultural relationships.

Some Suggestions for Early Endeavor

1. Provide more liberal and more certain financial support for the agricultural schools and colleges already established.

2. Insist upon a program of research that will get results in terms of helping to solve some of the problems that trouble the farmers and cause them loss.

3. Provide means for reaching the working farmer with a message that he can understand. Remember that *the farmer is the real object of all efforts in agricultural education.*

4. Have a national conference and permanent council to discuss an all-China program of agricultural development, and ways and means to carry out the program.

5. Organize a "best-farm-village" program in each province, and try to get at least 100 villages in each province to use the program.

6. Get the help of foreign agricultural experts now in China. They are able men, ready and eager to help.

7. Establish good village schools as rapidly as practicable. This is vital.

The Call for Chinese Leadership in Agricultural Affairs. Apparently few educated men among the Chinese are paying any serious attention to agriculture. But in every progressive country agriculture is now the concern of economists, publicists, and statesmen, and perhaps especially of business men, and this must be true in China if the vital need for agricultural development is to be met. There is a peremptory call for trained Chinese leaders to point the way toward the solution of the many phases of this complex and important rural problem in China. China needs a statesmanship of rural affairs.

PART III

THE PLACE OF AGRICULTURE IN A SYSTEM OF CHRISTIAN EDUCATION

IX—A Program of Agricultural Education under Christian Auspices

The dictum that neither the Missions nor the Chinese Christian Church can educate China applies with special force in the field of agricultural education. The field itself is enormous in extent. The costs of even a partial covering of the field are prohibitive. The case for including agriculture in the system, however, has been already argued, and it remains now to try to discover the terms on which and the methods by which a program of agricultural education can be developed as a part of the system of Christian education in China.

In general it is recommended that a system of agricultural education be developed as rapidly as possible; that the generally accepted tasks of agricultural institutions—teaching, investigation, and extension—be included in the plans; that the ideal shall be to build a modest but model system; and that every possible effort be made to co-operate with publicly supported agencies of agricultural education and development.

It is also necessary that some well-defined objective or objectives be accepted as goals of all this endeavor, specific enough to seem a practical guide to projects of work, broad enough to justify all the various types of effort, and wholly in keeping with the main task of the Christian educational system in China. The "slogan" of the agricultural work should be, "*To help Christianize the farm villages of China.*" We need to define the word "Christianize" in the fullest sense possible in order that it may include the economic and social reconstruction of these social units, the villages, under the leadership of the finest available ideals,—that is, the *Christian* ideals—of the personal and collective welfare of humanity.

A.—The Village School

The village school is the most important single item in an adequate educational system for the rural people of China. It seems imperative that the Christian forces shall maintain a

sufficient number of village schools to demonstrate the best sort of education for the farm children, to train intelligent leadership in the village life, to send on to the middle schools and colleges those children that can profit by more advanced schooling, and to serve in general as allies to the church in the development of the villages under Christian ideals. The Christian village school should help China to answer such questions as those discussed under the head of "Village Schools," in Part II, but particularly to show what Christian leadership means.

B.—Agricultural Education Specifically

The regional areas that may be adopted in the plan recommended by the China Educational Commission for co-ordinating the work of the Christian colleges should be followed with respect to agricultural education. It is assumed that the main areas will be:—

(1) North China
(2) East China
(3) South China
(4) West China
(5) Central China

Standard Development for each Region. In each of these areas we would have:—

1. A College of Agriculture, of Senior Grade if possible; connected with the College should be an Experiment Station to carry on needed investigations, and an Extension Service. These three agencies are not as a matter of fact separate institutions. An agricultural college has three distinct functions,—teaching resident students, investigation, and teaching those out of school. The experiment station is the college doing research, and the extension service is the college teaching those who cannot come to the college. (Special suggestions for West China and Central China will be made).

2. Also in each *regional area*, it is advised that there be one middle school of agriculture, preferably not connected with the college, and probably developed out of an existing middle school and covering the new middle school grades. This school might also include industry and home making, as well as agriculture.

3. In each *province* it would be well to have at least one good agricultural vocational school, with a course of one year at

the outset. This school should be of as high grade as will reach youth who become working farmers. An effort should be made to have it cover the beginning year or years of the new junior middle school grades.

4. Each *mission* should, as an experiment or demonstration, in at least one primary school in a distinctively farming village, aim to provide definite vocational work, to begin at whatever grade or age seems necessary in order to keep the boys in school for at least one year of training for life-work.

5. Agricultural material should be introduced as a regular part of the course into all Christian schools, elementary and middle schools, as rapidly as teachers can qualify for the work.

It is necessary to discuss briefly each of these items in the suggested plan.

The Agricultural Colleges. It is assumed that the agricultural work in the Canton Christian College and in the University of Nanking will continue and enlarge. Peking University is making only a beginning in agriculture, but is justified in this step because it can serve a vast territory lying at a great distance from Nanking, an area wholly distinct in its physical features and agricultural character from that of *any* other part of China. If, however, the larger part of the financial support for this work in Peking, including salaries of foreign staff, could be contributed by Chinese, very great advantages, too obvious to detail would ensue. The province of Szechuen is in itself an empire, the bulk of its population farmers. It would seem inevitable that this dominant interest of the people would be recognized; but it might be wise to build a first-class middle school of agriculture before attempting work of college grade. Central China presents a problem to be reserved for discussion in a subsequent paragraph. One school of forestry will suffice for all China so far as the Christian forces are concerned; though forestry as a subject will probably be offered in a number of places.

The purpose of the agricultural college should be specific. It is to train prospective leaders, thoroughly Christian in spirit and outlook, who will become rural problem solvers. The particular occupations for which training will be offered must depend upon the opportunities for service actually existing or in early prospect. But specialists in various branches of agriculture are now needed in government service, as teachers, investigators, extension workers and administrators. The col-

lege can co-operate with normal departments and theological schools respectively, in training teachers and preachers who will seek service where a knowledge of the rural problem is an important part of their equipment.

The Course of Study should be strong, solid, practical. In quality it should be quite equal to any other courses offered in the college. The student should become a true scientist. But the fact must not be ignored that students may easily become mere theorists. Many factors in China probably accentuate a tendency in all countries for the agricultural scientist to get out of touch with real problems. Hence, it is highly desirable to induce farm-bred boys to come on up to the college, and at least to require all agricultural students to have done much practical farm work, and, even while in college, to get very close to the farmer and his every-day work.

But the agricultural course should be as varied and broad as is consistent with effective preparation for a definite field of work; for every agricultural specialist should have some grip upon the economic, social, and political aspects of the rural problem in China. Indeed, the time will soon come when specialists in these fields will be in demand. Science and technique should never be so emphasized as to obscure the main purpose of the institution to train men for *service to the farmers of China;* nor so as to prevent the requiring of some courses that deal with the problems of citizenship in China, and others that open the doors of the mind to the meaning of life as interpreted by the great minds of the human race. The possibilities of one's vocation, both as real service to fellow men as well as a nucleus of sound personal culture, should be clearly revealed in the course of study and particularly in the method and spirit of the teaching.

Much attention should be paid to teaching method, especially to discovering what is actually "fundamental" to the specialized occupational study. There are many who believe that the conventional requirements of certain sciences as prerequisite to agriculture itself may have to give way to the problem approach. Changes doubtless should be made with caution. But it would be much worth while to see if freshmen in a course of agriculture should not first be brought into contact with the problems the farmers have to face, before they attempt the analysis and synthesis of the application of science to the solution of these problems.

Investigation. From the standpoint of practical efficiency little real progress can be made in either teaching or extension work in agriculture until the results of investigation are available. Certain scientific data are as applicable in China as elsewhere. But the moment science is expected to affect practice, it becomes essential that the specialist is certain that he speaks the true word of practice when he attempts to teach the student or advise the farmer. Those in charge of education cannot be too strongly impressed with this basic term in successful education in agriculture.

Agricultural surveys of various sorts will be one of the most fruitful methods of investigation. To discover how the farmers work and live, what their real problems are, the conditions under which they are compelled to labor—these will furnish material for teaching, suggest problems for scientific investigation, give first-hand touch with realities, arouse true sympathy with the worker, pave the way for helpful advice to him, and help to break down prejudice, allay suspicion, and root out superstition.

Genuine research in a few fundamental lines should be undertaken. It can hardly be expected that the whole field can be covered; although work in farm management, agricultural economics, and rural sociology should be regarded as just as necessary as that in physical and biological sciences.

The Extension Service. No agricultural college functions properly that fails to try to reach the working farmer with the word that shall be suggestive and perhaps authoritative for better method. It is quite impossible for the Christian agricultural colleges to build an extension system commensurate with the need, or comparable with that now in vogue in the best organized systems of agricultural education. But the same general methods are probably applicable. The following are suggested: Lectures, demonstrations, testing stations or farms, travelling exhibits, motion pictures, charts, bulletins, placards. A booklet on "What the Chinese farmers should know" would not be out of place to go with the booklet issued by the famous governor of Shansi on "What the Chinese citizen ought to know." It is clear that the amount of extension work that can be done by individual members of the teaching or research staff is limited; also the number of men that can probably be employed solely for extension work. Hence some method must be devised for multiplying the service of the college staff by

utilizing teachers in schools throughout as wide a territory as possible, who in turn will act as extension teachers in the areas in which they are located.

Illiteracy is a serious bar to the best extension work, and suggests the great need of extension work to combat illiteracy itself. It is strongly recommended that efforts be made to *render certain whole villages literate*, by teaching the people to read about the things that affect their daily lives and matters that are distinctly improvable.

The demonstration must be relied upon chiefly as a method of securing change of practice; demonstration by the farmer himself, if at all possible to induce him to try the new plan; by the gentry, who have larger holdings and presumably a substantial measure of intelligence; and by the local school, on its own land or on rented land.

The plan already being used, of sending out survey parties, to make inventories of farm conditions in given areas, and at the same time to talk to farmers about better methods, has everything to commend it. In this way the central staff discovers at first hand the conditions under which the farmers work, gains a multitude of suggestions for investigation and learns how to reach the ear of the farmer. The farmers, on the other hand, learn that there is someone who can help them and is willing to aid, that there is room for improvement, and that a new hope for better things is not a mere dream.

This paper cannot possibly go into detail with respect to extension method. Both European and American experience should be fully drawn upon as bases for experiments in methods that will "work" in China. As already stated, the Christian agricultural colleges can hardly hope to reach the great masses of Chinese farmers; but they have no better service to render than to demonstrate successfully how the working farmer, with his tiny farm, his utter lack of education, his narrow horizons, his reliance upon superstitions, can be inspired to faith in applied science and to hope for a fuller life, economically and socially.

2. *The Middle School of Agriculture.* Only one school of this type is recommended for each region, for two reasons; the first being that of cost, the second that of uncertainty as to whether the graduates of many such schools can find positions just at present. Except in cases where graduates might be employed by rather large landholders, it can hardly be expected

that the farm itself will furnish employment—the unit in China is too small. As extension work increases, a number of assistants, of middle school training, can be utilized, provided they are young men who have had a goodly amount of practical experience.

On the other hand eventually the majority of well-trained teachers in the elementary schools must come from schools of middle school grade. It is also probable that to a large extent the preachers who serve the farm-village churches must be trained in schools of similar grade. Both teacher and preacher in the farm community should have knowledge of the rural problem, should have studied some agriculture. But the question whether they shall get this work in special agricultural schools, or in connection with special types of normal and theological schools, is one that cannot be decided alone by those responsible for agricultural education.

One of the most difficult matters to adjust in the agricultural school of this grade, is to persuade students to take a course that is not intended to lead to college, but that is avowedly a "finishing" course. This fact constitutes still another reason for proceeding slowly with agricultural middle schools. College faculties must consider seriously the admission of graduates of these schools on terms not too difficult; and the schools themselves must weigh carefully the content and scope of the course. In Europe the tendency has been to make the agricultural school of this grade highly specialized and highly technical. In America the pressure is to make the work really a "fit" for the agricultural college, and hence to retain in the curriculum a large proportion of conventional high school subjects. Neither course appeals to one as quite the solution. Why not utilize much the same principles as in the case of the college course, as to both vocational emphasis and breadth of teaching? Emphasize the project method, and take special pains to bring the student close to the real problems. In these schools pupils should perform a great deal of manual work.

A school of this grade can not do investigational work of a really scientific character, but it should make surveys of actual farm conditions, carry on some experiments, and especially test varieties and methods, both in order to get the students into the spirit of investigation and to gather local facts as a part of the survey efforts of the colleges.

The Middle School of Agriculture should do all the extension work possible with its own staff, and should serve as a center through which the college of Agriculture shall be able to reach the farm-villages in the area within the influence of the middle school.

3. Agricultural and Industrial Institute. In making plans for middle school agriculture, it is quite possible that a combination of agriculture and industry on the one hand, and of the training of rural teachers and preachers as well as of technical leaders on the other hand, may be a better plan than for a school of agriculture alone, particularly in several regions that will be mentioned.

The wonderful history and remarkable achievements of Hampton Institute, Virginia, as well as the religious quality of its leadership and purpose have been for many years an inspiring guide to industrial educators in all parts of the United States and in Europe, and at once suggest the value of its experience as a guide for Christian education in China. There can be no doubt that the Chinese would quickly respond to institutional ideas and methods such as emphasis upon the practical arts; character development through training in and for worthy work; the stimulus of the religious motive and the power of the religious appeal to guide self-development and social relationships; a close approach to the problems of the people, sympathy with their aspirations, and a purpose to furnish trained and consecrated leadership for the masses of men.

There is one region in China in which such an Institute would seem to fit with peculiar appropriateness—Central China. Yale may enlarge its forestry work, but there is no institution contemplating full agricultural college work in that area; at present it would be unwise to build such an institution. But the area is too extensive and too important to be entirely without high-grade agricultural leadership. It can be served to an extent by the existing agricultural colleges, but not adequately. The three provinces of Honan, Hupeh, and Hunan have an area somewhat larger than that of France, and a population nearly three-fold as large. While the area is not so rich agriculturally as some other parts of China, its farming industry is one of huge proportions.

But this area is also one of wonderful potential development in manufacturing. Large enterprises already attest its advan-

tages and probable future, and are regarded as but small beginnings. Now Hampton has always had trade work as a part of its plan and has found no incongruity in combining this work with that of agriculture; it has, moreover, stressed teacher-training—particularly for teachers of rural and village schools. Agricultural and industrial work is right at hand as a part of the education of the teacher. And while no effort has been made at Hampton to erect a theological school, many graduates go into work specifically religious.

It would seem wise, therefore, that all the interests involved in Christian education in Central China consider the advisability of developing—possibly out of an existing school—an institution which shall stand definitely for the training of leaders in agriculture, industry, rural school teaching and preaching. It is recommended that the grade of work at the outset be not higher than that of the middle school—and not so high as that if the student material probably available for such a school does not warrant it. In time the school might become a college.

If the Shantung institutions are to stress the preparation of teachers and preachers for country work, here again this combined agriculture—industry—teacher—preacher—training idea might be utilized; so also in Szechwan, rather, at the outset, than a college of agriculture or engineering.

The suggestions relative to the various aspects of this problem of agricultural middle schools, do not at all contravene the plan for provincial training centers, projected not long ago by some educational leaders in China, if funds are forthcoming and the center plan seems the best one to those nearest the problem to be solved.

4. Higher Primary School of Agriculture. In case it seems best to establish special schools for agriculture of elementary grade, there should undoubtedly be one of as high grade as will still educate farmers. One such school in a province should be planned and located by agreement among the missions, but managed by a single mission; this precaution should be taken even if the school is an enlargement of an existing school. It requires land for field work by the students and for tests and demonstrations of varieties and methods. The course at the outset would probably be for one year, but with continuation classes during the winter for those out of school. The types of farming prevailing in the area which furnishes pupils for the

school will govern the technical side of the course of study. There should be much farm practice, free use of projects, and the work in every way adapted to practical ends and needs. The pupil should be led into some understanding of the economic and social problems of the farm village group and even questions of citizenship should not be omitted. Instruction should be in the vernacular and Chinese literature should be made somewhat familiar. The aim of the school is to educate boys to become successful farmers and Christian leaders in the farm villages.

Obviously such a school can do no research and little formal extension work. But it can make studies of actual conditions, assist the college in making surveys, and its teachers can demonstrate and otherwise reveal to the farmers the best practice based upon science. Such a school should be a vital factor in village reconstruction, a real leader toward a new day for the farmers of the region it touches.

5. *Elementary Schools of Agriculture.* It is to be hoped that each mission, having a field of responsibility that includes farm-villages, will speedily establish a vocational course in connection with one of its lower primary schools. It should take the boys at a point early enough to keep them in school, but as late as possible. The work will of necessity be of the most elementary character, but the advice given with respect to the higher primary work may well apply here. Such a course will require a specially prepared teacher, and possibly an additional teacher; in this case the agricultural teacher might also serve as pastor of the local church, or as an extension teacher for the college. He should make the school a center of interest and influence among the farmers of the surrounding country.

Short Courses. All schools of agriculture or offering agriculture should give short courses during the period of least pressing farm work, of a type that will attract the youth and younger adults. These courses would need to be adapted both to the special problems of the farmers and to their time-requirements. Evening courses, half-day programs; courses varying in length from one week to several; courses illustrated with exhibits, charts, pictures, demonstrations, all suggest points of adaptability.

Itinerant Teachers. It is possible that some of these schools,—co-operating with one another, or with the colleges, could arrange for a traveling teacher, who could spend a day

each in the schools of several villages, concentrating the agricultural teaching in each school into one day, but giving sufficient guidance and suggestion to the permanent teacher to permit of certain aspects of the work being carried on between visits.

This suggestion is really one of great importance, for the reason that perhaps most missions can not spare funds for a special school of agriculture, nor even for a special teacher of agriculture. Indeed it may be permanently out of the range of possibilities that the farm-village school in China can be provided with a full-time special teacher, or with a teacher sufficiently trained to give effective vocational work in agriculture.

What *must* be done, if farming is to progress in China, if the Christian forces are to do their full work for China, is that bright farm boys shall be *trained for farming.* Two grades of schools are needed for this purpose; one that gives the training to the boy at an age as late as possible and still turns him into farming; the other that gives many boys as much agriculture as is possible at the age when they are on the "edge" of leaving school.

Now it can not be foretold whether special schools or special teachers can be made available for these two types of work, especially the schools. If not, itinerant teachers must be depended upon.

Industrial Work. Home and village industries are in practice so closely linked with farming in China, that the need for introducing industrial work in the schools seems apparent. It is doubtful, however, if in most farm villages it is possible or necessary to give this work a status similar to that of agriculture; this is not to minimize its value and place in village education.

Education of Girls and Women. It is desirable that in those regions where women participate in farming all grades of work offered for boys and men in agriculture, will be offered to girls and women as rapidly as needed. It is of course assumed that the education of the girls of the farm villages shall be stimulated in every possible way. In addition to facilities for general education, the system of rural education should fully recognize home-making and home industries.

6. Agriculture as a general subject. It is useless to try to make the village schools fully effective unless they recognize

the environment of the pupils, an environment essentially rural. The difficulty of introducing agricultural material into the lower primary school is very great; lying partly in lack of a trained teacher, partly in the fact that there is demand for the more conventional subjects. But nothing will more quickly vitalize a rural school than the use of just this environing agricultural material. It may be utilized in all the grades, up to Junior College, not at all for its vocational implications, but wholly as cultural material. Of course, agriculture in this sense is virtually applied science—natural and social. This cultural value and comprehensive nature of the subject of agriculture is not always recognized, even by those trained in the subject. On the technical side agriculture is rooted in such sciences as geology, physics, chemistry, bacteriology, botany, zoology, and various secondary sciences such as plant pathology and entomology that have developed out of special applications of the primary sciences. Economics and sociology are now specialized in terms of agriculture. Literature is replete with material that has sprung out of the soil. The training in observation and in accuracy of statement; the necessity of obedience to natural law; alertness to and appreciation of environment, are among the disciplinary values of agriculture. As social material, we deal with the largest group of the world's population, engaged in the primary business of furnishing the world with food. In morals and religion, we find that the greatest of all material resources vouchsafed to man's care is in the keeping of the farmer—the fertility of the soil, the farmer its steward for all mankind; and a process so utterly dependent upon the laws of God that man's relation to the mind and will of his Maker is laid bare. All of these values of agriculture should be utilized to the full, and when so used their richness and variety will add immeasurably to the educational materials of the schools.

Methods of Teaching. The project method has made its way into agricultural teaching in the United States, and has justified itself. It may be overdone; it may lead to undue attention to a result, without due regard to cause and effect, or to the acquiring of ability to analyze a situation in its fundamental aspects. The best results come when the specific project is a phase of some large and significant problem—a problem that is actually to be faced. These matters are mentioned chiefly to call attention to the fact that the older methods of presenting agriculture to students have been challenged, and to

urge all agricultural teachers in China to spare no pains to try to work out the most effective method—the method that both interests the pupils and gives him a real grip of the subject.

C.—Types of Leadership Needed

Those of us constantly engaged in education are inclined to discuss subject matter, courses, grades, methods, without due regard to the ends for which these devices are obviously but means. The idea of "job-analysis," now coming into vogue in certain realms of vocational education, has a suggestion for the agriculturist. The discussion just concluded contains certain recommendations as to type of school and grade of work. It is quite possible that experience, or even fuller enquiry, would lead to radical modifications of plan. It is well, therefore, if we keep in mind the sort of people we desire our educational machine to produce. We can then test the process by the product. We need to reckon of course with the "raw material" that we have to take as it comes. We can, nevertheless, set up our ideal in terms of the personalities we would like to see coming from our hands and taking places of leadership and service. A list of the main groups of leaders needed may help us better to measure and weigh the institutions and courses designed to prepare for leadership.

1. Agricultural specialists in the colleges and schools. These men are chiefly teachers and investigators. They are specialists as to subject matter. As investigators they furnish the material upon which leadership training rests. As teachers they both impart knowledge and exert personal influence over those in training. Eventually, every aspect of the rural problem will have its specialists.

2. Administrative experts. As governmental institutions develop and as voluntary associations are formed, there will be increasing call for men properly trained for administrative work. Such men must know agriculture, and beyond that the farm people. But they are essentially organizers and executives.

3. Extension workers. The extension teacher is a specialist but he needs peculiar qualifications and can be given special training. He must be skilful in impressing or "driving home" an important fact. His knowledge of the art of farming must be sufficient to enable him to show to the farmer the better method.

4. The Village Teacher. This teacher should be a community-builder, a teacher of adults as well as of boys. On account of the difficulty of securing and keeping such a teacher in a farm village it has been suggested that the offices of teacher and preacher be combined. This teacher-preacher could not probably alone teach all grades of an elementary school, but he and his wife, for example, might together carry both school and parish work. The teacher for the village needs special training.

5. The Village Pastor. If the Christian church is to make a substantial impression upon the one hundred thousand farm villages of China, it cannot confine its preachers even to the small cities—there must be some attempts to keep a pastor in a village church. Here again special training is needed. A middle school course in agriculture, with a year or two of ministerial training added, should fit a man very well for this work, provided he is one of a group who could in a sense be supervised from some center by an even better trained man. Perhaps the preacher-agriculturist is a more practicable combination than even the teacher-preacher. A man trained for extension work, really expert in the prevailing type of agriculture, mingling freely with the people, helping them in their crises, and then as pastor, preacher, and friend, leading them into the way everlasting, would personify to the Chinese rural folk, more than any one else could, both the practical and the spiritual aspects of the Christian message.

6. Local farmers. A leaven of local leadership among the farmers themselves must be forthcoming. The lower schools evidently must be depended upon to train an increasing number of young farmers who can read, and who can and will lead in all works of farm and community improvement. This need should never be lost sight of, for these men in their humble way are quite as significant as any other group of leaders.

7. Local Gentry. In the initial stages at least, the men who could most influence village improvement are the local gentry; every effort should be made to interest them and in a sense to educate them to the village program.

8. City Business Men. In all the larger aspects of the agricultural program, and in many practical problems such as credit, agricultural co-operation, transportation questions and the like, Chinese agriculture should have the personal intelligent aid of business men. It is for their interest as well, but

primarily that their skill and influence shall be mobilized for the farmers' interests, that they should be thought of as rural leaders, and as a part of the scheme of education.

D.—Sundry Suggestions

1. Community Schools. It is desirable to try to get the whole community together to consider their common problems. Sometimes this can be done on market days. But, recalling that the original "Sunday school" was a school held on Sunday but designed to teach people to read, an experienced missionary educator in China has made a suggestion that while advanced with some hesitation—seems worthy of full discussion. Is it not possible to use Sunday in the farm village for community schools, and lay before the villagers, old and young, the program for a better community? This program would include practical helps for better farming, suggestions for health and comfort, methods of village co-operation for common ends, and the teaching of Jesus as it applies to personal character and social relationship. In other words, the specifications of the Kingdom could be set before the villagers by teacher and by preacher, who could thus indicate the practical character of religion, and at the same time emphasize the ideal elements in social progress and human relationships. Students in the schools could help better on Sunday than on any other day. It requires little imagination to see the possibilities of the plan, provided the schools have personnel to spare for a very arduous and delicate service. The suggestion should be developed into a plan and given a fair trial.

2. Danish People's High Schools. These schools have for nearly three generations helped adults as well as youth to gain the spiritual insight and power that could utilize technical materials in behalf of a patriotic service to one's country through vocation, and have been one of the secrets of the success of the organization of the most complete agricultural co-operative movement thus far developed anywhere in the world. These folk schools take adults and older youth, keep them for six months, give them courses in Danish music, history, literature, and send them home permanently enlisted as soldiers in an agrarian army determined to co-operate for Denmark's best interests. It is a far cry from little Denmark to great China; perhaps a farther cry from Denmark's prosperous, educated, co-operating peasants, to China's illiterate, superstitious farmers.

But it would be a great contribution to rural China if one of the Christian schools would seriously attempt to adapt the People's School of Denmark to the needs of the Chinese farmer and his family.

3. Exchange of Lecturers. It is to be hoped that plans may be worked out by which authorities on various aspects of the rural problem in China, Japan, the Philippines, India and the Orient generally, may exchange with similar authorities from Europe and the United States. This interchange of ideas and experience has too many advantages to require argument.

4. Exchange of Students. Men from China will continue to go to the West for advanced if not for undergraduate work in agriculture. It would also be a great gain if, by means of travelling fellowships, or by temporary appointments to some specific service in the Chinese agricultural colleges, advanced students from the West could study Chinese agriculture at first hand.

5. Exchange of Farmers. Chinese agriculture is as yet practically unorganized; but the movement can not and should not be long delayed. If representatives of farmers' organizations in the West could come to China; and similar deputations from China could be put into touch with the agrarian movements of Europe and America, untold good would result.

6. The Enlistment and Training of Agricultural Missionaries. Steps have already been taken by the International Association of Agricultural Missions to formulate standard courses of preparation for those seeking service in mission fields as agricultural teachers. There is a newly aroused but rapidly growing interest in the agricultural colleges and in many liberal arts colleges as well. There should be a clearing house of information as to demand and requirements in the field, and as to supply of prepared candidates. The Association can render this service if the authorities both in China and in the United States will utilize it.

E.—Co-operation in Agricultural Education

1. Between the Agricultural Colleges. There is little likelihood of overlapping in the teaching and extension work of the Christian agricultural colleges in China, and the work of research is so vast that even there the probability of duplication is not imminent. Nevertheless there would be many advan-

tages arising from a deliberately planned project of co-operation between all the colleges. Exchange of ideas, discussion of methods, and possibly even a division of labor in research would be much worth while.

One of the important pieces of investigation certain to develop in the near future is in the field of economic and social studies. Various colleges will enter upon this work; doubtless other agencies also, like the Young Men's Christian Association. Eventually there may be a specialized institute for the purpose. Now in a country so thoroughly rural as China, this sort of research cannot go very far without entering the rural field. Hence, at the outset, there should be definite co-operative plans made between those undertaking this type of investigation, and the research workers in agriculture.

2. Between the Colleges and the Schools. The agricultural college should be regarded as the capstone of the group of agricultural schools of all grades organized within the educational area efficiently served by the college. To illustrate: The Agricultural College of the University of Nanking, together with all the agricultural schools and departments in East China, should co-operate so that all of them together form a sort of unit in this special field of education, within the area designated.

3. An All-China Association or Council of Agricultural Education. As a means of securing constant and full co-operation, of discussing common problems, of stating the case for agriculture, and in general of securing by the co-operative method a genuine system of agricultural education under Christian auspices, it would be well to form a permanent Council, with adequate representation from all areas and from all types and grades of work, which should serve as a clearing house for the purposes indicated and for the common needs of this phase of the educational enterprise. Doubtless the Council should be an agency of the China Christian Educational Association.

4. An All-China Agricultural Journal. As soon as funds will permit, it would be of great value if an agricultural journal could be published by the Council, possibly devoted chiefly to results of research, but not too technical to lack interest to all the workers in the field. It should be a journal of experience and suggestion, of news and of opinion, as well as a record of investigation.

5. Books. The Council could also assist in arranging for the translation of foreign books—text-books and reference books, in the agricultural field; for the compilation of Chinese literature on the subject of agriculture; and possibly for the writing of new books in Chinese and by the Chinese.

6. Co-operation with the Government. It is peculiarly important in agricultural education that there be the closest possible co-operation between the Governmental and non-Governmental institutions. In order to furnish a background for the agricultural missionaries in making their own plans and for discussing co-operation; it may be well to give space here to some facts and opinions about Government agricultural education made available by one of the most alert and aggressive of the Government agricultural educators.

"The present system of agricultural education in China was adopted from Japan about seventeen years ago. It has four kinds of agricultural schools, namely, the agricultural college (3 yrs.), agricultural junior college (3 yrs.), agricultural middle school (3 yrs.) and agricultural primary school (3 yrs.). The Senior and Junior colleges are much the same so far as the aim and courses are concerned, and differ chiefly in requirements for admission. The Junior College gives no degree for graduation. There is at present no government Senior agricultural college in China except the one which is newly organized in Southeastern University; this college has a system of its own. There are seven agricultural Junior Colleges at present in China. The following table gives some data collected in the year of 1918:

Name of College	No. of Students	No. of Teachers	Budgets
Peking Ag. Junior College	171	21	$91,200
Chi-te Ag. Junior College	182	20	$25,904
Shantung Ag. Junior College ..	263	23	$45,808
Honan Ag. Junior College.....	158	14	$32,734
Shansi Ag. Junior College	229	24	$66,000
Szechuen Ag. Junior College ..	127	23	$73,853

"Many think that the courses of studies are altogether too general with too much "little of everything" and too little of one thing. The colleges have no elective system and students are required to pass all the courses named in the catalogue. Since the number of courses to be studied is over 36 and

cover such a wide range, it is necessary that the time spent for each course be very limited. This constitutes the chief difficulty in training agricultural specialists.

"Lack of laboratory work is another criticism often made. Besides chemistry and biology there is practically no laboratory work for subjects like farm crops, soil, plant pathology, entomology, etc. The farm practice is also inefficient and sometimes carried out in a very half-hearted manner. There is no summer farm practice required. The result is that the students get a very imperfect understanding in what little they have studied.

"There seems to be a lack of teaching materials concerning Chinese agriculture. This material, consisting of improved methods, better seeds, better breeds as well as answers to many different agricultural problems, can be gotten only after long years of research by experts. But the present agricultural college does not provide adequate research facilities for its professors. In fact the professors are so busy with the teaching work it is really impossible to do research. The colleges as a rule have no extension work, and make little effort to help the farmer directly.

"Many believe it wise to abolish the system of two kinds of agricultural colleges and to organize one strong agricultural college for each province after the model of the United States, and build on the following principles:

"(1) The function of an agricultural college is not only to teach but to act as the agricultural leader of the province. To the college all agricultural problems of the province should go and be solved. Its work should consist of three phases, namely: research, instruction, and extension. All of them should be put on an equal footing and be so strongly organized that it can work effectively and efficiently.

"(2) Within the college there should be departments. Subjects like farm crops, soils, horticulture, animal husbandry, plant pathology, etc. should be organized into departments. Each department should have enough specialists and funds to carry out the three phases of work. To hasten the progress of the departments, foreign specialists of world reputation should be invited and the less experienced Chinese specialists should act as their assistants for the next three or four years.

"(3) The emphasis of experimentation work should lie on the most important agricultural problems. Problems like rice, cotton, wheat, beans, sugar beets, sericulture, pig-raising, poultry-raising, insects and disease, and improvements of farm implements, etc. should receive the best attention. The experimental station should be strongly organized so that it not only can solve the problems but will be able to distribute or sell good seeds, breeds and improved implements for the benefit of the farmer.

"(4) The college should adopt the elective system and require five-years residence for graduation. The best arrangement is to put all the general work on the first two or three years and in the last two or three years let students select the subjects they prefer to study.

"(5) The college should have direct control over all the agricultural teachers and farm advisors in the rural districts. They should be the field workers of the college, the extension division.

"*Agricultural Middle Schools.* According to the educational statistics of 1916 we have 40 Agricultural middle schools in China with 4393 as total number of students and $526,046 Mex. as the total budget of the year.

"The trouble with this kind of school is that it is without definite aim. It is not expected to train specialists, since this belongs to the function of agricultural colleges, nor is it expected to train farm hands because reward of a farm hand is so low that the graduate of this kind of a school will never want to be one. At best it could be turned into a vocational school, training men for definite vocations in agriculture. If so, their courses of study should be changed from a general into a special nature. A school training students for running a cotton farm of over 30 acres should teach nothing but subjects that have to do with running the farm. But it is probable that such vocational courses could be better offered in the agricultural college as short courses of no longer than two years, and the money spent in the agricultural middle schools thus more efficiently used in the college.

"*Agricultural Primary Schools.* There are about 161 schools of this type in China. They are of higher primary grade and most of the farmers' sons cannot afford to enter. The courses of study are again too general and bear no relation to the local

agricultural problems. Some have recommended the following changes for this kind of school. (1) Abolish this type of school, and have all primary schools in rural districts, especially the lower primary, insert agricultural teaching in their last year's program; also have all rural schools give short courses in agriculture to younger farmers. (2) The nature of agricultural teaching should have direct bearing upon the local problem. If the school is situated in a rice section, the teaching should be confined to rice-growing and no more. (3) The teaching material should be as practical as possible. It should be furnished by the agricultural college. (4) The teacher must be especially trained by the college for this work. He should at the same time act as farm advisor of that district, doing all the extension work which the agricultural college requires him to do, and as far as his time permits. Later it may be better to assign the work of teacher and advisor to two men."

Both the facts and the opinions just cited should have careful attention in planning Christian educational work in agriculture. It is evident that in the field of elementary and middle school agriculture there is little danger of duplicating the work with government agencies; at least if some care is exercised in the location of schools. In the case of Christian colleges being located near government colleges, there is need for frank and careful efforts to co-operate. Although it is doubtful if there is much chance for co-operation in college teaching of agriculture, that is in exchange of students and teachers.

In investigation, however, there is so much to be done that co-operation would seem inevitable. In research more depends upon the personal equation than upon formal projects; at least projects will in the main follow the tasks and plans of individual investigators. Here is a chance for frank conference between Government and Mission colleges. Written projects should be drawn up, outlining the methods of co-operation in research on some given problem, each institution taking a definite part. Publication of results would be made only by common consent and would give full credit to all participating. In extension work the simplest method of co-operation is division of territory; i. e., allotment of certain villages or hsiens for the work of each college.

X. Costs and Support

It is not within the province of this document to discuss the question of costs nor the method of support, for they are matters that are part of the whole system of Christian education in China and must conform, in the case of agriculture, to the general policy. But it is not out of place to make a few observations that must be regarded largely as personal suggestions.

1. The whole system of agricultural education for China, inclusive of all grades and types, should be united both in theory and in practice, and the costs thereof should be placed in a single budget. This process will be of the greatest value in making comparisons, in avoiding duplication, and in presenting claims for support.

2. It is evident that the larger plans for expansion in agricultural education will require the raising of funds for the special purpose. It is to be hoped that the Mission Boards will recognize the "case" for agriculture in China and state that case to their constituencies, but will also arrange, at the appropriate time, for special campaigns among those whose special interests might easily lead them to give substantial aid in this particular field. Would it not be a distinct advantage, both in securing and in alloting funds for this type of education in China, if the money could be labeled "Agricultural Education." It is not at all improbable that all of following groups could be induced to aid materially if the needs and opportunities in this field could be properly laid before them:

(a) Agricultural colleges, to send agricultural missionaries. (b) Individuals especially interested in agriculture. (c) Firms dealing in a large way with agricultural development.

3. Whether Chinese private individual support can be counted upon depends one would think very largely upon the extent to which the whole enterprise comes to express the wishes, the ambitions, and the management of the Chinese. But Chinese firms are already helping substantially in those fields where agricultural improvement is of immediate concern to them, and this form of aid should increase rapidly.

4. There is already some support from the Chinese Government.. There may be at least two forms of this support: (a) Subsidy, or grants-in-aid; (b) Full support, in which case

the institution then becomes to all intents and purposes a substitute for a government institution.

It is to be noted that in some American commonwealths the state refuses to pay money to educational institutions not under public control. The Federal government, however, in making its grants to "land-grant" colleges, left it to the states to determine whether an endowed or a publicly controlled institution should act as trustee of the grant. Under the British system, on the other hand, definite public grants are made to endowed or private institutions.

The main objections to receiving gifts from corporations or from government lie in the fear of possible control of policies. It is assumed that the Christian institutions in China cannot surrender responsible management nor perfect freedom of teaching, especially the Christian content and purpose. With these qualifications, however, is there any reason why government or corporation support should not be accepted?

XI. A Challenge to the West

"The conclusion of the whole matter" is this: The farm people of China need the help that the West can give them, for their own sakes, in the interest of China, and for the good of the world. Judged by amount, the Christian forces in China can perhaps do only a fraction of what needs doing. Measured by significant aid at crucial points in a time of transition, their potiential service to rural China is incalculable. It may help all concerned to understand the nature and extent of this possible service, if a few inclusive objectives for the enterprise be accepted, and if all minor effort be bent to these large ends. This entire discussion on agricultural education in China under Christian auspices can be explained in terms of three comprehensive goals to be ever kept in mind:

1. To help in the formation of a comprehensive but thoroughly practical all-China program for the development of her agriculture and farm-life.

2. To give to a best-farm-village movement in China the spirit of Christian incentive, the desire and purpose to make every farm village a true Kingdom of God among men.

3. To train a Christian leadership for these two main tasks, consisting of men and women burning with a passion for redeeming rural China in body, mind, and soul, determined to

do all in their power to produce in China a Christian rural civilization, and themselves fully possessed of the knowledge, the skill, the insight, the sympathy, and the persistence that shall keep them true to the great task.

These ends, viewed in the light of China's need, should make a great appeal to the people of the West. They constitute a challenge to personal service, to liberal giving, to a new interest in China's fundamental problems. Let us trust and believe that the call may be heard, the challenge met.