"There is no doubt that British farmers are in a bad way. They are holding up, and that is all. Many are even working at a loss because the price of farm values, others simply through sentiment. Over-capitalisation has been largely ascribed as a reason for the agricultural woes of Britain. Others again strongly combat this view.

"There can be much to be said for the mixed farming carried on throughout Britain—the British farmer never has a wholly one-sided view of farming, he pinned his faith to wheat, or sheep, or cattle along as the Australian does. In other words, what he loses on the roundabouts he makes up on the swings."

### Took Kindly to Science

British farmers generally took kindly to scientific agriculture, said Dr. Davies, and in many cases made experiments recommended by the agricultural schools. Still they were a conservative class—sometimes painfully so, where science allied itself to commerce—and there were many among them who liked things done as their fathers and grandfathers before them.

With the co-operation of the farmers Dr. Davies thinks that scientific agricultural research can do much toward bettering the lot of the British farmer. The trouble was that the farmer was urged at best of help immediately, while the progress of research work was necessarily slow.

The Government had installed a chain of research stations throughout the country. One of the most important bureaux of the Imperial Agricultural Research Conference last October was the decision to co-ordinate the work not only of these stations but of similar establishments throughout the Empire.

Dr. Davies is entering on his new duties full of enthusiasm. His work has not been defined yet, but will probably deal for the time being with investigations into the mineral content of lands.

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# AGRICULTURAL EDUCATION.

## SUGGESTED REFORMS.

## "A NATIONAL DUTY."

**Addressing the Rotary Club on Friday, the Director of Education said the Commonwealth Government should assist the State educational authorities in training the young men who are to take part in the various industries of the Commonwealth.**

The chairman at the weekly luncheon of the Rotary Club at the Grosvenor on Friday was the ex-president (Mr. P. A. Lawrence), and the speaker was the Director of Education (Mr. W. T. McCoy). There was a large attendance, including several visiting Rotarians. Mr. McCoy spoke on "Agricultural education."

The Director said during his visit to Canada and the United States these things had made a great impression upon him. They were the unbounded belief of the Canadians and of the people of the United States in education, and especially in agricultural education; the efforts made in the schools to teach the scientific principles which concerned the work of the modern farmer, and the large sums of money spent in the various States and, in the case of vocational education, by the Federal Government to secure the best in education, and to teach their young men how to make farming a profitable business. Agriculture was taught in 100,000 primary schools and 3,600 high schools in the United States, and, in addition, each State had at least one agricultural college, where the instruction was equal to the University grade. In this respect Australia was lagging behind other countries. Agricultural education was handicapped in the Commonwealth in two ways. Nothing was taught like course in agriculture had not the same status as other courses. It was looked upon as a soft option, and the brighter boys at the school avoided or despised it. Relatively speaking, they were not spending the same amount of money as other countries to improve the courses.

### The Food Supply.

It had been said that the white race was increasing at the rate of one million per year, and that the land took years to produce the requirements of one man. If this were so, and the food supply was to be maintained, the white race would either place two million additional acres of land under production per year or find some means of increasing the crops of the present acreage. New lands were becoming scarce, or were too far afield, so they had to produce larger crops, and this could be done by studying the scientific basis of farming and applying them in practice. The present Government had recognised this in the recent Agricultural Education Act. The northern countries of Europe provided wonderful illustrations of what science had done for the farmers. In Denmark the Agricultural College at Copenhagen had furnished the country with the whole of its agricultural men, some of whom had turned barren landscapes into profitable farms. Others were scattered over the country as expert consultors to the farmers. The agricultural colleges of Canada and the United States were also doing great work. In these cases the courses were of the university grade, and could not be undertaken unless a student had completed the twelve years' education in a high school, and had matriculated at one year on a farm after the age of 14. The completion of the course was a B.Sc. degree in agriculture. Many who had gained those degrees were available as teachers of agriculture in the high schools, the majority of which offered a four years' course in that subject. The attitude of a student who had completed an agricultural course in a high school was equal to that of the student who had taken any other course, and its completion entitled the student to graduate from the high school to the University.

### University Traditions.

This was not the position in Australia, where the universities followed the British tradition, and insisted in most cases on external examinations to test the school knowledge in these and other subjects. The effect was to reduce the value of school all high school courses except those which were traditional as secondary. This position forced the schoolmaster, in order to meet the wishes of ambitious parents, to teach subjects which the boy could and could not assimilate. The master pushed the boy along these lines, leaving the other boys behind, and left them in the school, to the "duds." In this opinion parent and teacher should confer regarding the boy's future, and have due regard to the lad's wishes and ability, should guide him in the course which would best serve his future needs. The universities should remedy the existing state of affairs by approving all five courses—secondary, commercial, industrial, agricultural, and home economics—recognising them as of equal value, inspecting such schools as desired it, and certifying those capable of carrying out the more of courses, and admitting to any course at the university boys and girls who were certified by the inspector of an efficient school as having satisfactorily completed a full four-year course.

### More Money Needed.

They must spend more money to improve their courses in agriculture, and they could learn much from the practice in Canada and the United States. The Dominion Government on the one hand, and Congress on the other, had conceived it to be a national duty to ensure that education was provided with competent workmen and efficient farmers. Here each State said it was not the business of South Australia, say, to educate farmers who might migrate to New South Wales, nor was it the business of the Dominion to provide skilled carpenters for Victoria, any more than Victoria should provide artisans for New South Wales. Each recognised that it was the nation's business. If the University, the Agricultural Department, the School of Mines, and the Education Department were together spending £60,000 a year on agricultural education in the new or technical subjects, and the Federal Government did for the various States of Australia what was being done by the countries to which he had referred, they could in South Australia expand their activities by £20,000 in teaching, and spend the same amount on technical education, bringing the total up to £160,000, of which the Commonwealth would pay one-half. The result would be better farmers, more highly skilled workmen, and a saving to the State of £40,000 a year. (Applause.)

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## AGRICULTURAL EDUCATION.

The address on agricultural education given by Mr. McCoy before the Rotary Club yesterday constitutes a valuable supplement to the information he has already furnished concerning his researches on this important subject in Great Britain, Canada, the United States, and other countries. The Director of Education has returned from his travels abroad with much up-to-date knowledge regarding the progress made by advanced countries in various branches of education, and with a stock of new ideas which, when he presents them in a systematic form to the Government in his official report, will be found exceedingly useful as a guide to future developments of educational activity in this State. He was, as he told the Rotary Club, particularly impressed with the high value attached to agricultural instruction both in Canada and the United States, the efforts made in the schools to teach the scientific principles which underlie the work of the modern farmer, and the large expenditure by the States and provinces, with the support of the federal authorities, on a thorough system of agricultural education. When we learn that agriculture is taught in no fewer than 100,000 primary schools and 2,600 high schools in the United States, while in addition each State has at least one agricultural college with a curriculum of the university grade, the recognition by the Government of the importance of an adequate rural status is a revolution in rural pursuits becomes apparent. In this matter South Australia, though essentially an agricultural State, lags behind not only the United States and Canada, but even the mother country. Mr. McCoy holds that unless agricultural education is handicapped, first, by the failure to assign to it the status it is given to other courses of instruction, and, secondly, by the insufficiency of the expenditure upon it as compared with the liberal outlay in other countries. Yet the need for the study and certified application of the principles of scientific farming is no less insistent with us than with them, and if we are to make the most of the new and rapidly opening lands for settlement, and what is even more necessary, increase the yield per acre from the lands now in agricultural use, we must be prepared to train our agriculturists in the same way as our chief competitors in the world's markets are already doing.

There is, as Mr. McCoy assures us, no lack of appreciation of the utilitarian value of this form of education. Both the old world and the new afford instructive and inspiring examples. We may learn, for instance, how the great agricultural college at Copenhagen provides a supply of scientifically trained teachers, some of whom have shown that they are equally able to be converted into profitable farms, while others travel over the country giving expert advice to farmers who are always ready and willing to listen. In Canada and the United States the great agricultural colleges are rendering similar public service. These institutions, at the request of the Government of agriculture, give instruction of University grade, and the course is completed by a B.Sc. degree in Agriculture, many of the winners of which become available for teaching in the high schools. The latter offer a four years' agricultural course, ranking equally with the courses in commerce and industry for boys and home economics for girls. The successful completion of any course enables the student to graduate from the high school. He becomes entitled to enter the University and take up there whatever course he likes, whether or not he has studied any specific subject, such as Latin or mathematics, it being understood, of course, that if the subject not studied by him at school forms part of the University course on which he proposes to enter, he must make up the lost ground or fail. Following British traditions, Australian Universities insist on a knowledge of certain specific subjects before a student can enter upon a particular course, and most of them also require an external examination to test the student's knowledge. Thus, says Mr. McCoy, the schoolmaster is frequently obliged to teach a boy subjects which he dislikes or is unable to assimilate. The Director of Education would confer with the parent and teacher should confer regarding the boy's future, and paying due regard to his own inclinations and intellectual capacity, should guide him into the course for which he is best fitted. The University, he suggested, would then do well to reform existing methods by extending their approval to all five courses of high school education—secondary, commercial, industrial, agricultural, and home economics; recognising them as of equal value; inspecting such schools as desire it, and certifying them as capable of carrying out one or more of the courses; and admitting to any University course students certified by the headmaster of an efficient school as having satisfactorily completed a full four-years' course. One of several advantages to be gained by this reform would be the abolition of all need for the present external examination.

In any scheme for the improvement of the present courses in agriculture finance is an essential consideration. More acres of land to feed a white man. If the State is to be maintained, and the White Australia Policy is to be maintained, the white races must have great difficulty in providing. Mr. McCoy suggests that a lesson can be either plant two million additional acres learned from the practice in Canada and the United States, though either course, though either course, or increasing the crops of the present acreage. New lands were becoming scarce, or were too far afield, so they had to produce larger crops, and this could be done by studying the scientific basis of farming and applying them in practice. The present Government had recognised this in the recent Agricultural Education Act.

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# AGRICULTURAL EDUCATION.

## Its Study a "Soft Option."

## Mr. McCoy and Examinations.

**The Director of Education (Mr. W. T. McCoy), addressing the weekly luncheon of the Rotary Club, presided over by Mr. P. J. A. Lawrence, on Friday, made interesting comparisons regarding the teaching of agriculture in America and Australia.**

Mr. McCoy said during his recent visit to Canada and the United States these things had impressed him:—The unbounded belief of the Canadians, and the people of the United States, in education, especially agricultural education; the efforts made in the schools to teach the scientific principles, which underlay the work of the modern farmer, and the large sums of money spent by the United States (and, in the case of vocational education, by the Federal Government, to secure the best in education, and to teach their young men how to make farming a profitable business. Agriculture was

Mr. W. T. McCOY.

taught in 100,000 primary schools, and 3,600 high schools. In addition each State had at least one agricultural college, where the teaching was of university grade. In this connection it was his opinion that Australia was lagging behind Great Britain, Canada, and the United States.

### Australia's Handicap.

"With us," Mr. McCoy said, "Agricultural education is handicapped in two ways. First, whenever it is taught the course in agriculture has not the same status as other courses. It is looked upon as a soft option, and the brighter boys of the school avoid, and perhaps despise, it. Secondly, relatively speaking, we are not spending the same amount of money as other countries, to improve our courses."

The speaker said that the white population was reported to be increasing at the rate of a million per year. If this were so, we would have to produce the food requirements of one man. New lands were becoming scarce, or were becoming too far afield, so we would be compelled to produce larger crops than formerly, and that could be done by studying the scientific basis of farming, and applying them in practice. The present Government had recognised this in the recent Agricultural Education Act.

Vol. 1. 4. Bolinge, E. L. Gurney Street.