

AGRICULTURE IN AUSTRALIA

BY

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FARMING CONDITIONS

Australia is in marked contrast to India as regards her agricultural problems and practices. One of Australia's great farming disadvantages is drought and insufficient rainfall. There has not been a satisfactory general rain for five years. Wing Commander L. J. Wackett who flew across the Continent recently, lecturing before the Sydney branch of the Royal Empire Society said: We hear much from time to time about the great open spaces of Australia. Having seen them from the air I regret to say they left an impression of despair. Such country can never support modern civilisation and most of it is useless waste.'

Despite this gloomy opinion scientific methods of dry farming have enabled wheat to be grown successfully in regions where cropping would have been considered impossible thirty years ago. Now wheat is one of the most important agricultural products of the country, and it is produced at a profit despite high wages. The fields are very large, some in the west are as much as a thousand acres, and a furrow has been known three miles long. The roads are straight and wide and large implements are therefore possible, and the usual sized team for one man to manage is seven horses and in some there are ten. A considerable amount of work can therefore be done: in one day a man is expected to plough 5 to 6 acres, to cultivate 20 acres, to harrow 40 acres, to drill 25 to 30 acres, and to harvest 8 to 12 acres. Much use is made of tractors and power implements of all kinds, especially combined implements. A favourite machine for instance cultivates and drills seed and superphosphate all in one operation. The harvest weather is normally fine and dry so that one implement takes off the heads and threshes and bags the wheat. Great economy of labour is thus possible, and one man can manage 800 acres of wheat with a little extra labour at harvest time only.

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The Commonwealth of Australia has a Council for Scientific and Industrial Research. This Council appoints State Committees on which are representatives of the science sections of the State Agricultural Departments, and provision is made for the co-option of additional members enabling each Committee to be so constituted that all the major industrial activities followed in each individual State may be given a voice on the local body. These Committees correspond to the Provincial Agricultural Advisory Committees recommended by the Royal Commission on Agriculture in India, one of which has been established in Madras, while the Commonwealth Council corresponds to the Central Research Committee established recently at Simla.

The Committees provide the Council with a facile and rapid means of obtaining complete information on different aspects of particular problems.

They ensure that any important information obtained from State sources is a well balanced statement of the position viewed from all aspects, and not a coloured version of one particular body or individual. The Committees, especially those far distant from the headquarters of the Council, also serve on occasion to draw attention to problems previously little known, or whose importance and potentialities have not been fully realised.

One of the duties of the Commonwealth Council is to co-operate with State organisations with a view to the prevention of unnecessary overlapping, and the utilisation of facilities and staffs available in the States, and this side of its work has been developed to a remarkable degree, and a large and wide number of subjects have been dealt with.

Another important function of the Council is to act as a means of *liaison* between the Commonwealth and other countries in matters of scientific research. A movement for the establishment of team work in matters of scientific research is becoming evident throughout the world and Australia is fully alive to the desirability of its forming one of a team in an Empire-wide attack on the various problems that are now confronting the Empire as a whole.

These are also the broad lines along which the Royal Commission on Agriculture in India advised that the Imperial Committee of Agricultural Research in India should be conducted. But the Commonwealth Council have gone a step further and have divided themselves into sections, termed Divisions, each of which is in charge of a Chief. And here comes a very important point, a point raised by the way at the last meeting of the Indian Central Cotton Committee at Bombay. The Council has definitely adopted the policy of refusing to carry out extensive investigations in any particular field until it has obtained the services of a really competent authority in the science involved to direct the work in the capacity of Chief of a Division, and a similar policy has also been adopted in the case of minor or more or less independent researches. This policy may cause delay in some cases, but it is considered far better to wait and get the very best man possible than to run the risk of having the investigation misdirected.

At present the Council has four main Divisions, each in charge of a Chief, viz. animal nutrition, economic entomology, economic botany, and forest products, while a Division of animal health is contemplated. The Council itself has control over a fund voted by the Commonwealth Government which amounted to £500,000.

ii. AGRICULTURAL EDUCATION

In Australia the State Agricultural Colleges are under the Agricultural Departments but independent of the Universities, which have chairs of agriculture of their own, and provide a really practical training for would-be farmers. They grant a diploma in both agriculture and dairying, and successful graduates are eligible for posts in the Agricultural Departments and receive concessions at the University, but the majority of the students actually take up farming. In this respect these Colleges differ from ours at Coimbatore where a University course leading to a degree is taught, and the majority of the graduates look to Government Service for a career. This being so, the

Australian Colleges are specially equipped to teach a practical course, and the research and laboratory sides are somewhat neglected as compared with the field work.

The author had an opportunity of inspecting the Hawkesbury Agricultural College at Richmond not far from Sydney in New South Wales, which is one of the largest and the best of the colleges in Australia. The primary object that the Department of Agriculture had in view in establishing this institution was to teach the science of agriculture and its practical application. The chief aim is to turn out men who will take up farming as a vocation. Various courses are provided and they cover not only general farming of all kinds, but also instruction in the handling of poultry and pigs, including bacon making, orcharding, vineyarding, and agriculture. There is also a dairy course teaching the most modern methods of handling milk, butter, and cheese. Connected with the farm itself are sections devoted to carpentry, black-smith-craft, saddlery, and engineering, in all of which subjects is given a systematic course of work suitable for farm requirements. Every section is provided for down to jam making, fruit preserving and drying in connexion with the orchard.

The buildings are excellent, each student has his own room in a two-storied hostel, and all mess together in a big hall, and there is a fine swimming bath and gymnasium as well as playing fields and a rifle range.

A portion of the farm which has over a thousand acres under cultivation is devoted to experimental work. The comparative values of different fertilisers are being tested, various systems of rotation of crops and methods of cultivation are being tried with regard to their suitability to the district. New varieties of crops and pure line seed are also being produced. With the object of improving the stock of the State, pigs, poultry, dairy cattle, and sheep are bred. Selected animals of the best blood strains are purchased and imported from time to time and the progeny with pedigrees are sold to farmers at 'reasonable rates.' Farmers will pay as much £50 for good young stud bulls which may be contrasted with Madras where ryots grumble at paying Rs. 250 for pedigree stud bulls from Hosur.

The College handles about 150 students a year. They must be over 16 years of age and must pass an entrance examination. The course costs about £22 per annum. As compared with Coimbatore the buildings strike one as small and the class rooms and laboratories are cramped; but the farm itself is a marvel of efficiency and equipment. The pure Jersey dairy herd is one of the finest pedigree herds in the world. A number of the best cows give over 500 lbs. of butter fat in a year of 365 days.

The College also provides short courses at the slack period of the year for busy farmers and stock owners who can devote only a limited time for study and intensive practical instruction. Designed specially to teach improved methods these courses discuss theory only to explain practice and the discussions are made as simple and as free from technical language as possible. The courses embrace a variety of subjects including dairying and poultry keeping, Entomology, and Veterinary Science. Thus all classes are provided for and it is easy for both prospective and actual farmers to obtain education in the latest developments of agricultural science.

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