

# THE MAN ON THE LAND.

## RESEARCH AND EDUCATION

### What State and University Can Do.

II.—By Professor A. J. Perkins, before the Pan-Pacific Congress. In this article Professor Perkins deals particularly with avenues of research, and maintains that it is the bounden duty of the universities to make adequate provision in this respect.

What could we have possibly done, when would all our efforts and research have availed, had not those with mechanical talent taken up the tale and assisted towards the solution of the ever-present problem of labour shortage? It is no exaggeration to state that without the assistance of our manufacturers of agricultural machinery, and of local mechanical genius, there would have been no agricultural development in this country. We should still have continued a purely pastoral, sparsely-populated country, with enough acres under wheat to satisfy local demands, but nothing more. The implements which are peculiarly our own, the fruit of local research and study, which have rendered possible the growing of what, are the stump jump plough, the Ridley stripper, the complete harvester, the seed broadcaster, large cultivators, and so on. Some of these, no doubt, are out of date to-day. All, however, have in their time contributed adequately towards the foundations of successful agricultural settlement. Research and practical experience have taught the farmer how best to joint wheat growing and sheep in profitable association; how to take advantage of natural pasture always available when wheat is not actually in the ground; how on occasion to raise forage catch-crops to make good possible grazing deficiency; and how, in the end, to build up a more complex system of farming, with wheat as the main, but not necessarily the exclusive crop grown.

#### Our Most Successful Ventures.

But in our brief agricultural career we have done vastly more than grow wheat, and in the matter of other crops corresponding difficulties have been met and overcome in like manner. I need refer to but a few of our most successful ventures. The pastoralist, starting with very indifferent material, has built up the Australian merino which to-day, in its finest representatives, is probably second to none in the world. The great sugar industry of Queensland has had to overcome countless difficulties before attaining its present-day commanding position. Equally remarkable is the wonderful development of our irrigation areas; of our vine and fruit industries, of our dairying and poultry industries, of the Victorian sugar beet and tobacco industries, &c. Nobody can contend that in a new country these various lines of rural activity could have been raised to economic stability in so brief a period of time without the assistance of much patient research and work. Such, then, is the case for "utilitarian" research, in which the work of the men of the fields has perhaps necessarily been more in evidence than that of their brethren of the laboratories. It must not, however, be supposed that the work of the latter lacks of appreciation in our midst, particularly when its bearing on everyday affairs has been made sufficiently clear. Agricultural research, if it have any meaning, must, I take it, seek a wider audience than those of high scientific attainments: it must ultimately make appeal to the journeymen on whose behalf it is presumably undertaken. And, no inconsiderable personal experience has taught me that in Australia, at all events, farmers are for the most part keenly alive to the value of work of this kind, nor are they slow to show their appreciation of it—if you but gain their confidence. If I stress this point, it is because I am convinced that to flourish in our midst agricultural research must have the backing of those whom it is intended to serve. We recognise the need for continued research work in all the many phases of rural activity that have hitherto occupied our attention; and we know of others the depths of which we have still to plumb.

#### Avenues of Research.

The question that should concern us most, therefore, should be how best to smooth the way for those whose special duty it will be to engage in future research. It seems to me that three avenues offer themselves for such energy as we may have available for the purpose:—(1) state institutions; (2) private initiative; and (3) the universities. Hitherto, apart from the efforts of the men of the fields, it is in State institutions mainly that agricultural research has received attention. They suffer, however, from severe disabilities which frequently cripple the effectiveness of such work as may be attempted. Among them we may quote the hampering ties of administrative work, the lack of continuity in general policy, the impatient cry for results, and at times political influence. Nevertheless, and notwithstanding these disabilities, it would be folly to rule out State institutions as centres of research whenever their occupants come under its inspiration.

Research is so much a matter of the man rather than of his equipment and of the funds available to him that private initiative in the matter, independent of the control of others, appear to me ideal, when time, circumstances and the individual meet. I know, for instance, of no more fruitful work in this connection than that of Lawes & Gilbert. But, unfortunately, how often do we find adequate training, adequate appreciation of fundamental questions, and adequate enthusiasm and capacity for work suitably combined with adequate personal means? The freedom of choice and action which must accompany such a combination helps to create an atmosphere ideal for the prosecution of research; and it was largely by its favour that in his laborious life Charles Darwin was able to do what he did. Nevertheless, let us admit the rareness of the circumstances, and recognise that to a very limited degree only can research be left to private initiative. But when we chance upon it struggling to give effect to a faith that is within, then surely our interest should be lent towards securing for it public recognition, and if need be public assistance.

#### No Funds and "Chilly Love."

Lastly, we come to the universities who here in Australia somewhat tardily, and mayhap somewhat diffidently, are beginning to acquire agricultural interests, and in time, one may hope, will develop a special agricultural policy and outlook of their own. It would seem that very shortly Chairs of Agriculture will be attached to all of our universities, and we must assume that the claims of agricultural research will appeal strongly to their incumbents. As to whether, apart from the few who aspire to purely professional careers, local conditions are as yet ripe for university training in agriculture, there may be room for differences of opinion; but there can be none as to the desirableness of the prosecution of research by the universities. Indeed, it is perhaps permissible to put the position more emphatically and to maintain that it is the bounden duty of the universities to make adequate provision for research. The usual retort is simple and obvious enough that there are no funds available for the purpose. That may well be, and may even continue so indefinitely, if we have nothing better to offer than passiveness. Refusal to act on the grounds that funds are inadequate always seems to me to argue but chilly love for research. If I may be pardoned for raking in a matter of personal experience, I shall state that work done and results achieved under difficulties eventually act as magnets towards public funds. There is no such thing as a wasted effort if it be but launched in the right direction; and even if it go awry it is surely better than inaction. Moreover, I have yet to learn that the world's best work has come from the most generously endowed institutions. After all, it is the man that counts and not his equipment; and let him but show inclination and power to act and equipment will follow soon enough. I take it, therefore, that it is mainly to the universities that we must look for future extension of agricultural research.

#### In Touch with Realities.

I hold very strongly that no university should attempt agricultural research or agricultural education that has not access to ample farm lands to keep its staff in touch with realities. These lands, in my view, should be immediately controlled by the Professor of Agriculture, whose presence and authority would ensure that research would take place along agricultural lines. I have the highest respect for the sciences, and realize that agriculture

can make little or no progress without their aid; nevertheless I feel that in such matters the sciences are already securely entrenched, and well able to look after their own interests whenever they have a mind thereto. Agriculture, on the other hand, a new comer, perhaps an intruder in academic circles, is likely to be jockeyed out of its rights, unless its interests are in sympathetic and understanding hands. Hence, my firm conviction that at all times the head of a university agricultural department should at all times be an adequately trained agriculturist.

#### Future of Agricultural College.

I believe that the type of agricultural education hitherto adopted by the Australian States has adequately met the general requirements of our special position. In the first place we have recognised that circumstances were such that only the merest fraction of the future tillers of the soil could hope to acquire adequate technical training away from home. Secondly, we have thought it imperative that the few able to attend our agricultural colleges should, as a matter of every day routine, take part in ordinary farm work to the extent of 50 per cent. of their time. It follows that all students have necessarily been boarders, and that numbers in attendance have been strictly limited by the capacity of the college farm adequately to provide work. It seems probable that in the course of time we shall be compelled to review this practice, particularly if applicants in excess of those that can be accommodated become clamorous. We can, perhaps, legitimately assume that farmers' sons, who follow in the wake of college teams, are generally wasting their time, and might be occupied more profitably. As a matter of principle they might be definitely excused from farm work of any kind; they might even be enrolled as day boarders: both of which would admit of larger attendances at the colleges without much additional cost. The men our colleges have hitherto turned out have, for the most part, given good account of themselves on the land, and in many instances in purely professional positions. It is a moot point whether higher university training would help them much in their normal pursuits as farmers, fruitgrowers, and dairymen, and it is probable that in the main it will be availed of by those only who have in view professional appointments.

#### Teaching the Adult.

I have said nothing of the early training which precedes admission to the agricultural college, and which in nine cases out of 10 represents the only schooling of the ordinary agriculturist, because I cannot bring myself to admit that we have any right to force specialization upon children until the very last minute when the final decision must be made. Personally, apart from question of equipment and teaching facilities, I can see no reason why the early education of the country lad should differ essentially from that of his city cousin. Agriculture, on the other hand, has infinitely greater interest in adult education, extending beyond school walls, and reaching out to the man who has already taken up the burdens of life. The Australian States have, I believe, recognised their duties to those who have gone out into the wilderness, and have in various ways endeavoured to give effect to them. State departments of expert officers have been created, publications have been issued, lectures and demonstrations have been given, and settlers have been encouraged to join in local units for the discussion of technical and social matters, &c. No doubt, much remains to be done in this direction. Speaking, however, for South Australia, I believe that I can say with confidence that, had it not been for these educational efforts, our agricultural progress would have been infinitely slower than it has been; and the same can probably be said of neighbouring States.

## "THE DREAM OF GERONTIUS."

AUG 1923

### Former Successes Repeated.

It speaks well for the ability of the public to grasp the musical significance of "The Dream of Gerontius," that although Elgar's greatest work soars to great heights of composition, the audience obviously appreciated the whole interpretation on Thursday.

Last night registered another triumph for the Adelaide Bach Society and its honorary conductor, Professor E. Harold Davies, Mus. Doc. "The Dream of Gerontius" is a masterpiece of poetry through the spiritual exaltation of Cardinal Newman; but, when it emerges, kindled into musical life by the genius of Sir Edward Elgar, it is, indeed, a satisfying and noble theme. Listening to that marvellous union of vocal score and context, it was realized that the great English oratorio should share the well-earned distinction accorded Handel's "Messiah," and become an annual performance by the Bach Society. The work is colossal; it exacts the utmost of musicianship from voice and instrument, but, having once been fami-



PROFESSOR E. HAROLD DAVIES, MUS. DOC.

liarised, it should not be allowed to sink into an oblivion covering several years. Its resurrection is too arduous for a busy conductor and a lay company of vocalists. "Gerontius" made its first unforgettable impression at the Adelaide Town Hall on October 6, 1909, and was repeated on October 9. Eighteen months later another great night was celebrated on April 11, 1911. Subsequently the Bach Society assisted the famous Sheffield Choir with its notable rendition of the work.

#### A Requisite Atmosphere.

Last evening's interpretation of "Gerontius" was in keeping with the enviable standing attained by the Bach Society. The presentation was a great one from a musical standpoint, and a devout atmosphere enveloped the entire performance. Elgar's score shows how largely his devotional spirit had been touched by the words of the poem; and soloists, choir, and instrumentalists reflected that sanctity. Throughout the storm and stress of Gerontius's pilgrimage from things mortal to immortality one felt that the Town Hall had temporarily become holy ground. Great aid was lent the production by the association of the South Australian Orchestra—which had previously mastered the instrumental section under the direction of Mr. W. H. Foote. That gifted conductor deserves a special word of praise; for under his preparatory schooling, all the requisite support of the instrumentalists was brought out, yet the effects were skilfully subordinated when so required. This collaboration recalled other memorable occasions with "The Messiah." When the hour of commencement was reached, the Town Hall was crowded, most of the "bookable" portions of the hall having been reserved prior to the occasion. A sense of almost perfect unanimity pervaded the company of performers, and the ensemble of the voices and the balance of the instruments left little to be desired. Miss Sylvia Whittington, A.M.U.A., is an orchestral leader upon whom infinite reliance can be placed.