

## THE STATE AND EDUCATION.

### EDUCATION IN THE CAPE OF GOOD HOPE.

By W. A. RUSSELL, M.A.  
(Inspector of High Schools.)

#### Elementary Education.

Elementary education is free only in the case of those children whose parents are unable to pay fees. Provision has been made for making elementary education compulsory between the ages of seven and 14 in any district where the local authority may deem it expedient.

State-aided undenominational schools are opened by a short religious exercise, but religious instruction is not included in the curriculum. Liberal government grants are given to cadet corps. A considerable number of denominational elementary schools receive Government grants. All appointments of teachers must be approved by the Superintendent General of Education; the curriculum is also settled by him.

There is a regular system of inspection of schools. Every school is formally inspected once a year, and, if possible, is also informally visited by the inspector at least once a year.

State aid is generally granted on what is called the £ for £ principle—*i.e.*, the local contribution must be equal to the amount contributed by the State.

About 73 per cent. of the white children of school-going age are attending school. The average cost to the State per pupil is £2. 14s. 6d.

In the larger centres of population evening classes are provided.

#### Secondary Education.

Education is practically one in the Cape Colony, and the secondary courses of instruction dovetail into the primary course.

Liberal provision has been made for assisting poorer students of ability through both school and college.

The State gives large grants to five colleges (one of these is for women), and also supports an agricultural school.

Courses in law, medicine (preliminary), engineering, mining, forestry and surveying are offered.

#### Teachers.

Teachers are not Civil servants, but after five years' continuous good service draw an extra grant and become eligible for pensicn.

There is free passage from the lower posts in the profession to the higher.

Several courses are open to candidates desiring to enter the teaching profession. They may pass through the Normal School course—there are four of these institutions—or candidates may enter the profession by the Pupil Teacher course. The certificates of the English, Scotch and Irish Boards of Education are accepted, and also those of certain other Education Boards.

#### General Subjects.

Government assists in the establishment of school libraries on the £ for £ principle. Nearly all schools of a permanent character have now libraries.

No assistance is given in the purchase of school text-books, except in the case of indigent scholars.

Many schools have good museums. The Education Department is initiating an organised system of school gardens. Empire Day is here styled Victoria Day, and has been officially recognised for some time.

#### Native Education.

The education of natives is cared for by the various religious bodies and by the State. The churches establish and manage the schools under the superintendence of the Department, and Government grants are made in aid of teachers' salaries and of equipment.

## THE TEACHING OF AGRICULTURE IN THE SCHOOLS OF VICTORIA, AUSTRALIA.

By J. P. McLENNAN.  
(Supervisor of Agriculture, Education Department, Victoria.)

Of the many efforts made by the Victorian Department of Education during recent years to secure reality in educational methods, none is likely to produce more far-reaching results than the introduction of agricultural teaching. The developments in this branch of educational work were made possible through the liberalising and broadening of the syllabus by the present Director of Education, Mr. Frank Tate, I.S.O. The organising of this work in the primary and agricultural schools has been in the hands of the Chief Inspector, Mr. Wm. Hamilton. A pleasing feature in connexion with the introduction of agriculture into the curriculum of the rural schools is the interest the parents take in the work. They manifest their sympathy and co-operation in many ways, *e.g.*, by fencing and ploughing the experimental plots, and by discussing with the boys the results of the experiments they carry out in school and in their plots.

The work tends to the development in the pupils of interest and power, and to the acquisition of knowledge that will be of benefit to them throughout life. They realise that there is plenty of scope for thought and experimentation on the farm, and that a farmer's life need not be dull and uninteresting. They will be better farmers, and will not be so likely to pursue wasteful methods that leave the soil in an impoverished condition. The objective is *training* rather than *learning*: by means of experiments they are trained to observe and deduce.

#### THE EXPERIMENTAL PLOTS.

The experimental plots are usually in the grounds attached to the school. In many cases they are a quarter of an acre in area; in others, considerably less. In these plots, crops are grown, and experiments carried out, that have a bearing on the chief industries of the district.

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WARRAGUL DISTRICT  
 Agricultural Society  
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 Central



EXPERIMENTAL PLOTS, SOUTH BUCHAN SCHOOL.

principles of agriculture are given in school. Here, again, the work is of an elementary nature, and is experimental. It is recognised that experimentation is one of the oldest, soundest and most potent methods of training for power. The apparatus used in the experiments is of the simplest character, and is usually home-made. In this branch of the work, topics such as the following are dealt with:—Humus in soil, water-holding power of soils, capillarity, the effect of the soil mulch, osmosis, transpiration of water in plants, germinating power of seeds, necessity for drainage, and so on.

#### TEACHERS.

The teachers have taken up the work enthusiastically, and, although few of them have had previous training in practical farming, they have shown remarkable aptitude in placing the work on a sound and permanent basis. At the summer schools held during the last two years, lectures were given in school agriculture; and, next year, it is proposed to hold a summer school at one of the agricultural colleges, to impart instruction in agriculture to about 100 teachers. At the agricultural shows in most districts of the State a section is devoted to the exhibition of produce from the school plots in the district. At the Royal Agricultural Society's Annual Show in Melbourne, the inspectorial districts of the State compete for a substantial prize. In this competition, a very fine display of the produce of the school plots is made, as exhibits are sent from all parts of Victoria.

Tests are made to find the effect of some of the principal artificial fertilisers; superphosphate, sulphate of ammonia, and sulphate of potash are usually employed for this purpose. Wheat, oats, barley, and the common legumes, such as peas and beans, are generally grown in the plots in which this experiment is being carried out. There is always a strip left untreated, which acts as the "control strip," and with which comparisons are made. Other experiments commonly undertaken are tests to ascertain the most suitable varieties of cereals, grasses, clovers and other crops for the locality, and tests in liming, sub-soiling, green manuring, inter-tilling, and other cultural operations. Again, the best depths and times to sow are investigated, also the effects of various fungicides on the smut diseases of cereals, and methods of carrying out "rotation of crops" are demonstrated. The officers of the Department of Agriculture take an interest in the work, and seeds are sent to the schools by that Department.

The children collect the weeds of the locality, and keep dried specimens in the school. They are named and classified, and information regarding their harmfulness to animals is noted.

In districts where dairy farming is a leading industry, fodder crops are grown, and weekly tests of milk are made with the Babcock tester. The children bring the samples of milk from the farm, and make a tabulated record of the results of the tests.

The pests and diseases that attack economic plants, especially fruit trees, are studied. The life histories of some of the insects are followed out, and the methods of eradicating them are learned.

The pupils are encouraged to keep the plots neat and free from weeds; all the sections are neatly labelled; and plans are drawn to scale in the record books.

#### INDOOR EXPERIMENTS.

In addition to the out-door observational and experimental work, lessons on the general

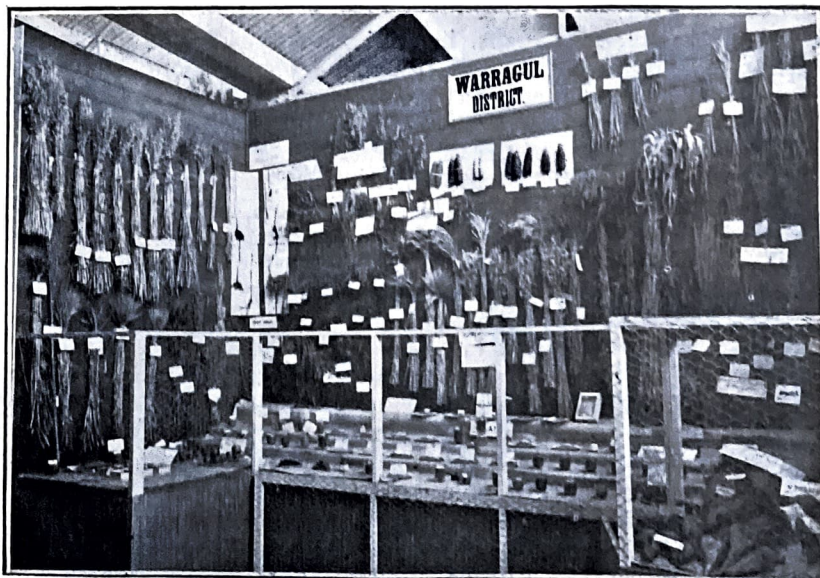


EXHIBIT FROM WARRAGUL DISTRICT, ROYAL SHOW, MELBOURNE, 1909.  
(Warragul Exhibit secured Third Prize.)

### AGRICULTURAL HIGH SCHOOLS.

The work referred to above is carried out in the primary schools under the Education Department. During the last few years, agricultural high schools have been established in several of the provincial towns, and arrangements are now being made for the establishing of others. These schools are under the control of the Minister of Education, who is assisted in questions affecting the course of study and general policy by a committee consisting of the Minister of Agriculture, the Director of Education and the Director of Agriculture. A local council, appointed by the Governor in Council, exercises a general oversight in matters affecting the school and in expending the maintenance allowance allotted, and, to some extent, supervises the farm operations. At least one-half of the cost of the necessary buildings and equipment is contributed by local subscription, the remainder is paid by the State. Each agricultural high school has, within easy distance of the school, a farm of at least 20 acres, on which the boys work under the supervision of the staff. Recently, a *Circular of Information* was issued, which contained the regulations relating to these schools and also the syllabus of instruction. The following extracts from the regulations will give an idea of the standard required in pupils entering the school and other matters connected with the institution:—

1. The qualifications for enrolment of students shall be as follows:—

(a) Pupils must have obtained the Certificate of Merit, or must have passed the primary or some higher examination of the Melbourne University, or must have satisfied an inspector of schools that they are qualified to profit by the course of study in such school.

(b) They must furnish satisfactory evidence that they are of good moral character, and of good general health.

(c) They must be at least fourteen years of age at the date of enrolment.

2. The Minister may grant, in each year, scholarships entitling holders thereof to free tuition for two or more years in any approved courses of study prescribed in agricultural high schools.

3. At least one-third of the time devoted to instruction shall be spent in the study (both practical and theoretical) of the sciences bearing upon agriculture, and one-third of the time shall be devoted to manual and practical work on the school farm or in the school workshop.

4. The fees to be paid by pupils shall be £8. 8s. per annum.