

AGRICULTURAL EDUCATION.

The following remarks on the means of practical instruction in agricultural science are from the pen of Mr. S. W. Johnson, an able correspondent of the *Country Gentleman*. As we are making some feeble attempts in that direction in Canada, his observations may be read with advantage:—

“In my last it was attempted to illustrate and define more fully the ground covered by scientific agriculture; we have now to consider the methods of teaching it, or rather the helps towards the elucidation and enforcement of its doctrines.

As the laboratory is needful to illustrate the facts of Science, so the farm is necessary to illustrate Practice. But whether it is best directly to connect a school with the farm, is a question which admits of either an affirmative or negative answer according to circumstances.

It must be remembered that an agricultural school is a place to learn what cannot be learned elsewhere. What is taught on the farm may be neglected in the school.

In no country flourishes a more extended or better periodical agricultural literature than we possess; and nowhere are agricultural exhibitions so often and so intelligently attended as here. As a consequence the majority of those who would become pupils in an agricultural school are so far familiar with every detail of practical agriculture that they could put into practice almost any farming operation or plan, had they the means and the incentives. The class of young farmers who would patronize an agricultural school are uniformly familiar with every improved, if not in all cases with the most improved implements. They all know something of the peculiarities of the best breeds of cattle, sheep and swine. They certainly would never need to be taken into the field to see the usual and best methods of plowing, of making hay, or of carrying on the majority of farm operations, and were they put in possession of the true theory, and the best routine of husbandry, would be abundantly able to work out the highest results.

Those who have not been brought up on the farm, had better arrange with some good farmer to live and work with him a year or two, rather than attempt to seek a knowledge of practical agriculture in any school; unless, indeed, it be a school organized especially for supplying their wants.

A knowledge of ordinary farm practice being possessed by the student, we have to enquire what practical illustrations he still needs, and how they may best be provided. This subject is too extensive to be adequately treated of in a short article. We must, therefore, be content to discuss briefly some of the more important plans for furnishing the kind of instruction under notice.

Agriculture may be efficiently taught without great expenditure for means of practical illustration. However, an almost indispensable part of any school that professes to supply anything like a complete course of agricultural instruction, is an experimental and illustrative garden. Many of the less pretentious, yet most efficient agricultural schools of Europe, have no land of their own beyond a few acres of garden. Such is the Royal Saxon Agricultural School at Tharand, near Dresden. Its distinguished teachers, Schober and Stoeckhardt, know how, with apparently little means, to attract pupils from every country in Europe.

The illustrative and experimental garden is a cheap means of a great amount of valuable instruction. By its help it only costs a few dollars annually, to bring before the student every plant that has any agricultural importance, and illustrate the chief points to be attended to in its cultivation. Fruit culture, particularly, may be thus easily taught, and the various modes of propagation, pruning, dwarfing, procuring new varieties, &c., thoroughly inculcated in a practical manner. There are numerous species of grasses and other plants which are cultivated and prized in other countries, but are as yet almost unknown here, that might be made familiar to the learner. The agricultural value of Italian rye-grass, of rape, lucerne, lupines, &c., &c., might thus be practically made evident. The plot of sand might be used to show the wonderful fertilizing effects of guano, and it would be easy to make little beds of different soils, to illustrate how a given special manure would show good results on one and fail on another. The relative merits of deep and shallow tillage, of drill culture and broadcast sowing, &c., &c., might be easily demonstrated.

There remain a great variety of matters in which the student should have the advantages of illustration, for which the garden can furnish no facilities. Such are thorough-draining, subsoil ploughing, irrigation, and similar operations where benefit can only be