

son; but it goes without saying that he does not want all this printed. A judicious selection from these 734 letters would have been very much more valuable than this unsifted mass of important and unimportant matter. There is an excellent index, which will be of great use to a reader desirous of referring to any particular subject. In an appendix are given some letters about the negotiations to get Gauss an appointment at Berlin, and three very interesting letters from Bessel to Olbers from the year 1812, which have only recently been found.

J. L. E. D.

COLONIAL FRUIT-GROWING.

Fruit-ranching in British Columbia. By J. T. Bealby. Pp. viii+196. (London: A. and C. Black, 1909.) Price 3s. 6d. net.

THIS is a practical work on the subject of fruit-growing in British Columbia, and we recommend it to any who have the intention of emigrating for the purpose of engaging in this healthful and interesting pursuit. But not to these alone, for the style in which it is written is sufficiently good to make the reading agreeable to the general public. It sets forth in plain but picturesque language the reasons that led the rancher to select British Columbia for the scene of his operations; it describes his journey out, relates the difficulties the new settler had to overcome, and proceeds to describe the measure of success that soon attended his labours.

This success enabled him, not only to win prizes for fruit at exhibitions in British Columbia and in the United States, but also to send excellent apples to the Royal Horticultural Society's shows in London, and gain for them the Society's gold medal!

The figures relating to the crops obtainable per acre in British Columbia are almost bewildering to the cultivator in this country, who can never be certain, even of a moderate return, until the danger of spring frosts is past at the end of May. The difference is explained by the sunnier skies, freedom from violent winds and storms, and the presence of a most fertile soil. The allurements these things offer are only to those who are content to undertake the hard work inseparable from colonisation. Unless the "tender-foot" possesses a sufficient capital to enable him to purchase an estate already planted, he must commence by clearing away the trees and under-shrub from his plot, and in this and all other work he must improvise ways and means for carrying out the details which are simple enough in a more thickly populated country, but very difficult in parts of a colony in the first stages of development.

In these matters the reader will find much interesting information in Mr. Bealby's work. He will realise how important it is that the work of preparing the ground shall be done in a thorough manner, and that careful consideration shall be given to the planting of suitable trees. The settler has to take into account the kinds of fruit most likely to yield profitable returns, and having decided thus far he must select the best varieties of each kind. He must study his market, the means that exist for sending the fruits to market, and the length of time they will be on transit.

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The advice given on such matters as these is perfectly sound, and therefore calculated to assist settlers very materially, provided that instead of slavishly following them in detail they wisely modify them to suit best their own circumstances.

Mr. Bealby probably underestimates the cost of preparing the land, but this may be expected to vary in different districts, and he appears to place too much importance upon the fact that in the Kootenay and Okanagan districts the fruit plantations are more free from insect and fungal pests than in other localities. The explanation of this comparative immunity will probably be found in the newness of the land. Pests are seldom epidemic unless the host-plants are present in large numbers and so facilitate the spread of insects or fungi, but they usually appear when the cultivator has planted vast areas with the same kind of tree, or crowded them into a hot-house, as is the case with tomato and cucumber culture in our own country.

For this same reason, the best preventive is to plant thinly, allowing each tree as much isolation as can be spared with due regard to the yield per acre. It is satisfactory from this point of view to note that, so far as can be seen from the excellent illustrations contained in the book, it is not the practice to crowd the trees together in British Columbia. The trees depicted appear to have plenty of space around them, therefore they are exposed well on all their sides to the good influences of sunshine and air, which are conducive to healthy growth and a free cropping habit.

The evidence the book contains of the enormous help the settler in British Columbia may expect to receive from the Department of Agriculture and the British Columbia Fruit-Growers' Association should be an extra inducement to emigrants to select this country for their new home. We hope Mr. Bealby will return to the subject when he has gained further experience, for it has to be noted that he has only been engaged in the industry since 1907, a fact that may cause some to receive his recommendations with a certain amount of reserve, especially so far as they relate to yields, prices, and returns.

STEAM TABLES.

Tables and Diagrams of the Thermal Properties of Saturated and Superheated Steam. By L. S. Marks and H. N. Davis. Pp. 106. (London: Longmans, Green and Co., 1909.) Price 7s. 6d. net.

AN immense amount of painstaking work is represented by this little volume, which will, we think, be of undoubted use to all physicists and engineers who have to deal with problems involving the influence of heat upon water and steam. The two authors are connected respectively with the engineering and physical sides of the great American University of Harvard, and they have evidently formed a combination well suited for such an investigation as this. Until quite recently the only authoritative experiments over a considerable range of steam pressures and temperatures were those made by Regnault more than sixty years ago. We now have, however, the results of later experiments by Dieterici, Smith, Griffiths, Henning, Joly, Grindley, Peake,