

need for the 'human touch', and to organise too rigidly on purely clinic and institutional lines would be unfortunate. One problem which, to the reviewer, does not seem to have been given the attention it deserves is that of housing. If one regards the family in the home as the unit—and surely this is right—provision of adequate housing and labour-saving devices for the housewife should rank in the forefront of any scheme to improve the lot of the less fortunate children. The net reproduction-rate is below unity in Great Britain, and the population is being maintained by the greater expectation of life now existing. Whatever aspect of social paediatrics one discusses, from the birth-rate to juvenile delinquency, adequate housing of the poorer classes is a fundamental problem. Dr. Craig rightly states that "ultimately public opinion will determine the standards of provisions to be made for the care of child life and health". There is evidence now that the public regard adequate housing as one of the essential provisions.

This is a stimulating book, and in every chapter problems are raised which, when the time of planning gives way to the time of action, will require to be solved. "It is only from the past that one can judge the future", and here we have the past arrayed before us for our study, and it is to be hoped that good use of it will be made by the planners.

The book shows no evidence of war-time austerity. It is printed on excellent paper and is profusely illustrated, a credit to the author and to the publishers.

STANLEY GRAHAM

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## SOFT FRUITS

The Cultivation of Berried Fruits in Great Britain: History, Varieties, Culture and Diseases. By Chas. H. Oldham. (Agricultural and Horticultural Handbooks.) Pp. 24+8 plates. (London: Crosby Lockwood and Son, Ltd., 1946.) 21s. net.

JUDGED on the basis of commercial acreage, the cultivation of small fruits in Great Britain is not greatly in comparison with other classes of crops. In 1939 the total area devoted to berried fruits in England and Wales was 47,000 acres, and the restrictions of war-time reduced this to 33,000 acres in 1944. This is very small compared with the 250,000 acres of so-called 'top' fruits, apples, pears, plums and cherries. Nevertheless, the high economic returns per acre of the soft fruits and their value in the diet make their cultivation an important item in the horticultural production policy of Great Britain. In spite of their relatively short season, strawberries remain the most popular of the small fruits and account for nearly half of the total acreage. Dietetic research during the last ten years has shown that the blackcurrant is by far the richest source of vitamin C of all cultivated crops, and it is probable that we may look to a considerable increase in its production in the future.

Financial returns with soft fruits, however, vary enormously with differences in cultivation, choice of varieties and, above all, incidence of pests and diseases. Strawberries, to take the extreme example, may give crops of as much as five or even six tons per acre, but the average yield over a series of years for the whole of Britain is less than a ton, due largely to the prevalence of virus diseases in commercial stock.

It is clear, therefore, that an authoritative book

on the cultivation of these kinds of fruits is of the greatest value to the grower in advising him of the best methods of production and the pitfalls to avoid. Mr. Oldham, in his position as a horticultural inspector of the Ministry of Agriculture, speaks with this requisite authority from his years of experience among growers and he has prepared a volume containing a great deal of invaluable information on the history and commercial production of our principal small fruits.

It is clear that the book was mainly written before the War; the statistical and economic data refer only to 1939 and earlier, and are therefore in many cases of little present value even without the occasional errors as, for example, on p. 206 where the acreage of gooseberries in the Tamar Valley and the Exeter area is stated to be about four hundred acres, though on p. 202 the total area of this crop in Devon is given as 185 acres.

Here and there also are other more serious errors which it is hoped will be corrected in a future edition. For example, in the account of the breeding work on the cultivated species of *Rubus* at the John Innes Horticultural Institution, there is confusion over the origin of the varieties 'John Innes' and 'Merton Thornless'. The former, a tetraploid variety, was raised by crossing the thornless diploid, *R. rusticanus inermis*, with the thorny, tetraploid, *R. thyrsiger* (incorrectly spelt throughout as "*R. thyziger*"), an unreduced egg-cell of the former combining with the normal haploid sperm-cell of the latter. The new variety was as thorny as the male parent, but some seedlings in the  $F_2$  generation were thornless, and one of these was the valuable tetraploid, "Merton Thornless", to which no reference is made in the book.

It is also to be hoped that a second edition will receive more careful editing. Sub-headings, always difficult in a book of this type, are very confused, most particularly in Chapter 38; the numbering of tables seems without rhyme or reason, some receiving a number, others, of precisely the same type, remaining unnumbered. Incidentally, the strange practice is followed of printing the number in words.

In the section on raspberries, Chapters 24 and 26 are confused in their substance and need to be combined into a single chapter.

In the classifications of varieties in each kind of fruit the value would be greatly enhanced by giving one classification only and confining it to the varieties in cultivation at the present time. In gooseberries, for example, two lengthy classifications are given, one quoted verbatim from Hogg and containing long lists of varieties now entirely lost.

The treatment of pests and diseases is usually adequate, though Latin names are often misspelt; but in the section on strawberries, in general the most valuable and authoritative part of the book, more attention might be given to the all-important virus diseases and especially to the great work of East Malling Research Station in raising and distributing virus-free clonal stocks. Following on this, the omission of reference to the present-day system of official certification of stocks is a serious gap.

The black-and-white illustrations, to the author of whom no acknowledgment is made, are delightful, and it is a pity that half-way through they give place to photographs, some of which are of little value.

Two other matters calling for attention in a second edition are the symptoms of mineral deficiencies and the causes and avoidance of frost damage.

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