

Regan's amazing account of the males of *Cerattias*, the work of C. J. G. Petersen and many others on the varying rate of growth of plaice according to the density of population and the available food, and of course Johannes Schmidt's epoch-making studies of the eel—all these are

among the many matters clearly and lucidly explained.

In short, this is a good book and a useful one all through. It is not for easy reading but for reference and study; and few will open it without finding what they want to know. D. W. T.

The New Agriculture and World Peace

Nations can live at Home

By Dr. O. W. Willcox. Pp. 279. (London: George Allen and Unwin, Ltd., 1935.) 10s. net.

PEACE is the paramount need of the world to-day. Of the many factors, complex, obscure and profound, which tend to endanger peace and produce war, one at least can be definitely diagnosed as the increasing pressure of population, in some parts of the world, on land resources. Any practical means that can be applied to reduce that pressure should, if coupled with the requisite social and political adjustments, become a powerful agent of world peace. Such is the message of this book, a message of profound and vital importance, of particular interest to scientific agriculturists and students of population problems, but also of wide general appeal. Many nations are at present quite unable to obtain from their own soil all their requirements in food and raw material, which they must import accordingly and pay for by exports. But with the vast shrinkage in international trade and the increasing difficulties of keen and world-wide competition, this method of obtaining the desired supplies may appear, to some of the nations so situated, as much more difficult and less satisfactory than that of actual, and if need be aggressively, warlike attempts to find additional territory outside their own boundaries. Dr. Willcox, however, now offers to the peoples in these straitened and parlous circumstances a simpler, easier and much more effective method: that of greatly increasing the yields of their own soil, by using to their fullest extent the wonderful powers of crop productiveness that modern plant-breeding and soil science—the new agriculture or agrobiolgy—has placed within their reach.

The book makes a powerful and compelling two-fold appeal: first, because of the inherent interest of the wonderful results claimed on behalf of agrobiolgy in respect to vastly increased yields from the land; and secondly, the profound economic, social and political consequences of such agrobiological advance.

Whilst fully admitting, however, that plant-breeding or genetics and soil science have made

immense strides and produced results of the kind and magnitude herein described, backed up indeed by large-scale field work in many parts of the world, it nevertheless seems to the present reviewer that the difficulties due to such things as plant pests, drought, flood and other meteorological disturbance, the human element, and above all costs, have just possibly been brushed aside a little too indifferently.

It was perhaps scarcely possible, within a book of this compass, to deal fully with all the practical difficulties in technique. The far greater difficulty is that of getting the new methods generally adopted by those very conservative and sceptical people, the farmers. In the very interesting chapter dealing with the special conditions in various 'deficit' or 'beyond the threshold' countries—Great Britain, Germany, Italy, Japan—Dr. Willcox describes the remarkable results obtained by the Better Farming Association in Japan, in the matter of rice yields. The best type of farmer, using the best and most productive variety of rice plant, under the best agrobiologic conditions, obtained yields several hundred per cent above the average. But it was very difficult, if not impossible, to arouse the interest of the majority of farmers in Japan.

There is, of course, the further complication of over-production in those parts of the world which are mainly agricultural, and supply world markets. This is touched upon in the present book, and provided for plausibly if not too convincingly.

Some of the figures given for crop yields or possibilities are startling enough, especially when combined with reduced crop cycles so that several crops can be taken from the unit of land each year. These are studied at some length in relation to population density, and the relative values of different crops from the protein-carbohydrate ratio point of view. It is generally concluded that population densities up to 15,000 or more per square mile are not beyond the bounds of agrobiological possibility; but it is scarcely fair to the author to state these bald figures without the accompanying well-reasoned arguments in support.

W. G. L. C.