

REVIEWS

The Coming of Age of Wood. Egon Glesinger. Simm and Schuster, New York, 1949. \$3.50. 280 pp.

This is a most stimulating and arresting study of the role which wood can play in transforming a world of shortages into a world of plenty. Its author can fairly claim to be an authority on his subject. Coming from a family which has been in the lumber business for four generations in Czechoslovakia, he chose *European Wood Problems* as the subject for his Doctor's thesis. In 1933 he was chosen as Secretary-General of C.I.B., the international timber committee sponsored by the League of Nations. After 1941 he spent several years in the U.S.A. before his appointment as Chief of the Forest Products branch of F.A.O.

The central thesis put forward in this book may be briefly stated: Wood is the one and only universal, potentially abundant and inexhaustible raw material which can satisfy almost every requirement of existence; by some extension of the existing forest area, by proper sustained yield management of all forests, by eliminating wasteful utilization and by integrating forest industries so that the mechanical and chemical characteristics of wood are utilized to the full, by these means can be made available to the human race a plentiful supply of wood and the derivatives of wood—pulp paper, motor fuel, wallboard, turpentine, plastics, textiles. He claims that the forest can provide one of the four freedoms—freedom from want—within a generation. The world's forests are capable of supplying 8,000 millions tons of materials, more than twice the tonnage of food, coal, oil, minerals and fibres now consumed yearly by mankind. This would allow four tons per head of wood. In the future he foresees wood, not just as firewood and lumber, but as the source of a vast range of materials created by the marvels of wood chemistry.

Already the problems of breaking down cellulose into sugar and wood alcohol and the synthesis from these of lubricating oils, rubber, plastics, paint, cattle food, etc., has been accomplished on a factory scale. During the war such developments with an economy based on wood have enabled Sweden to survive a state of critical siege. Even hamburgers and the Swedish drink "aquavit" have been produced.

The reader will not doubt suggest that while such products are worthwhile under war conditions they disappear rapidly under the stress of peacetime competition from cheaper rivals. The author frankly admits that some of these products are no longer economic but argues strongly that with further industrial research many of these will be in a position to compete with, if not undersell, such products. The intense opposition of American oil interests to the development of the wood alcohol industry (which he describes in detail) certainly suggests that they take the new rival very seriously indeed. Again, if the problem of the industrial use of lignin

20-30% of all wood, which is now largely wasted or at best boiler fuel, could be solved, the costs of chemical wood products would be drastically reduced and the whole outlook dramatically altered.

While prophecy is necessarily a risky business, the author certainly gives the conventional outlook on utilization a severe jolt and one must concede it a reasonable prediction that we are on the threshold of an immense and revolutionary expansion in the chemical uses of wood.

After imbibing this forestry "cocktail" one proceeds to ponder on the possible reactions of such a revolution on the development of Irish forestry. Up to the present the factories utilizing wood as a chemical raw material have been immense undertakings involving heavy capital outlay and requiring correspondingly immense tracts of forest close by to render them economic. In our highly diversified country where forestry must fit into an agricultural pattern such immense blocks are an impossibility and we can only hope that the equipment for chemical use of wood will be adapted for use on a smaller scale—as the Danes have done already in the case of pulp and plywoods. On the other hand, the chemical development has its brighter facet for us. At least the first rotation of such species as P.C. on poor and exposed western peat lands are unlikely to produce much high-grade lumber and we will probably have to rely on such outlets as firewood, pulp, fibreboard and chemical utilization for a high proportion of the crop. Such a development would not be unwelcome as the ratio of industrial employment to forest acreage is extremely high in such industries. Thus the new forest could at an early stage contribute materially to the relief of congestion and under-employment which are the chronic ills of the West.

In addition to putting forward its main argument, this book provides a fund of interesting information on forest area and distribution, consumption, utilization, chemistry, plywood, veneers, fibreboards, etc. Perhaps the most startling fact of all is that about 80 per cent of all wood substance produced by the forest is wasted in utilization. Yet this 80 per cent is chemically identical with the 20 per cent that is used. The book is illustrated by a series of clever drawings which illustrate the main points of the text.