

CHOICE OF TREE SPECIES

A PUBLICATION on forestry issued by the Food and Agriculture Organization tends to make one ask: "What has forestry to do with food and agriculture?" In the introduction to a recent Forestry Development paper entitled *Choice of Tree Species**, we are told that it is a contribution to the general *World Forest Planting Manual*, about which it gives no more information. One next asks: For whom is this work intended? Its primary object is stated to be to summarize what is known about the factors which should guide the practising forester in reaching a decision about the choice of species. The second object is said to be to stimulate foresters to amplify and correct the often inadequate information presented in this book. With regard to the first object it must be said right away that the summary is extremely faulty in respect both of the completeness of the information and of the manner of its treatment. With regard to the second object, this seems to imply that the aim of a publication is not to furnish information but to ask for information.

This type of publication is a feature of the present day. The setting up and staffing—at considerable expense—of global organizations from above downwards instead of building them on well-founded services from below upwards lead to attempts being made to produce text-books intended to be of universal use. The time has not yet come when natural agencies will have reduced the face of the globe to one monotonous landscape. Perhaps in no other field is there a greater variety of working conditions than in forestry. As the author, or authors, say (p. 69), "It is, of course, quite impossible to suggest general rules on the selection of species and sites for production which would be applicable in all circumstances". Nevertheless, they have attempted the impossible. Then again (p. 170) it is admitted that "The information available from different parts of the globe is so variable that uniform

* Food and Agriculture Organization of the United Nations. FAO Forestry Development Paper No. 13: *Choice of Tree Species*. Pp. xi+307. (Rome: Food and Agriculture Organization of the United Nations; London: H.M. Stationery Office, 1960.) 17s. 6d.; 3.50 dollars.

presentation is not possible". Uniform presentation has not been achieved. There are very serious gaps in the sources consulted, especially in respect of European countries; some works in English on the subject have been overlooked; recent developments in the study of the major site factors are unrecorded; conclusions are accepted and illustrations reproduced from examples of plantations too young to have proved their suitability; there is a lack of discrimination in assessing the relative importance of the many publications quoted; there is a very evident bias in the selection of material and too narrow an outlook on this extremely difficult problem.

The fact is that it would be unwise to recommend to any practising forester that he should purchase and consult this book—or any book of such a global type; it would be far better that he should be advised to consult the literature available in respect of the narrower field with which he is concerned, or of areas like it. To help him in this, all that is required is information on the literature referring to his conditions, to furnish which is the task—admirably performed—of the Commonwealth Forestry Bureau, Oxford.

The age of the superman has not yet arrived. No one is qualified to undertake satisfactorily such a tremendous task as that attempted in this case. The eyes of a fool are in the ends of the Earth. It was unwise of the Food and Agriculture Organization to sponsor this book, and one can only offer sympathy to those who were enticed into wading through a vast amount of heterogeneous literature to produce it. It is understood that the Organization is assisting with forestry publications dealing with certain restricted geographical regions. This is more rational and should prove more useful.

If one is eclectic and chooses the parts of special interest to oneself, there is something of value to be had from the book. Part 3, for example, consists of monographs on four widely differing species—Norway spruce, Monterey pine, teak and blue gum, which demonstrate effectively the wide differences among tree species which render difficult the writing of a global text-book. M. L. ANDERSON

ENERGY-LINKED CYTOCHROME OXIDATION IN MITOCHONDRIA

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THE study of succinate-linked reduction of pyridine nucleotide in mitochondria was begun some time ago¹. More recent work demonstrates that reduction of diphosphopyridine nucleotide in mitochondria is an energy-linked reaction having a definite requirement for internal high-energy intermediates² or for adenosine triphosphate itself³. Although previous attempts to demonstrate a requirement for adenosine triphosphate failed³, these

recent experiments demonstrate the possibility of driving electron transfer reactions in the respiratory chain in reverse by means of high-energy intermediates, and it has been of interest to determine whether or not cytochrome reduction induced by substrate could be reversed by adenosine triphosphate, a possibility that is particularly attractive in connexion with theories of active transport^{4,5} and photosynthesis as well. (Lundegårdh⁶ has