

*NURSERY PRACTICE.* J. R. Aldhous. Forestry Commission  
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For many years forest-nursery managers have been waiting for a publication covering all aspects of raising forest planting stock under conditions prevailing in these islands. This bulletin fulfils the need adequately being, as it is, a summary of a large number of experiments carried out by the Forestry Commission, Research Division, together with the practical experience of the large-scale production of young trees.

It was prepared by Mr. Aldhous but many people on the Forestry Commission's Research staff and others have helped to provide material for various chapters and the result is this well-balanced work full of useful information for the nursery manager.

There is a central inset of thirty one fine black and white photographs, twenty-five of which are full-page size ( $24\frac{1}{2} \times 18\frac{1}{2}$  cm), in addition to fifteen figures. Measurements given are imperial followed by their metric equivalents.

The bulletin covers all the advances that have been made since the late forties and early fifties such as the use of herbicides (of which Simazine is still the most important), mechanisation, the improvement in the physiological quality of seed resulting from improved methods of handling and storage, and the use of grit for seed covering.

Nursery soils and plant nutrition occupy twenty pages of text. Older Foresters in this country will remember that up to the early fifties the direct application of inorganic manures to young trees was regarded as useless or even harmful and nutrients were supplied through green-manure crops. This view also obtained in Britain and it is pointed out that in agricultural rotational cropping is soundly based, e.g. if ground is cropped repeatedly without a break the yield of cereals decreases progressively due to increase in soil-borne diseases such as 'take-all'. It is clearly stated, however, that experiments and practical experience have shown that, given adequate nutrition and a suitably acid soil, continuous cropping with Sitka spruce seedlings can be carried out successfully.

The question of green cropping, as opposed to fallowing, is discussed and it is interesting to note that in 1963 in the Forestry Commission nurseries where the rotation was broken in some way out of thirty-six nurseries in England and Wales only one used green crop while all nineteen in Scotland did.

Here as home we have tended to steer a middle course, and where foresters claimed they saw value in green cropping, such as its beneficial effects on soil structure brought about by whatever sticky substances are produced in the breaking down of the green crop following ploughing in, it was carried out, while others seeing the effect of fallowing on weed control chose the latter. Most use a combination of both.

In discussing the effects of green cropping on the humus content of the soil, it is stated that there is evidence from agriculture that the nitrogen released by a rapidly decomposing green crop may result, not only in the green crop's decomposition, but also in the breakdown of some of the organic matter present in the soil prior to the green crop.

In a short article in 'Tree Planters' Notes' (United States Department of Agriculture, Forest Service, October 1960) by H. A. W. Knight, Research Division, British Columbia Forest Service, this reviewer read of a similar experience where only inorganic manure was used in fertilising green-cropping trials in a forest nursery.

This Forestry Commission Bulletin on the whole is notably sensible in its approach and at the price is very good value.

There is an excellent index.

J. J. Deasy