

Fertilisers in the establishment of conifers in Wales and Southern England. Forestry Commission Booklet 41. J. E. Everard. HMSO, 1974. £1.25.

A feature of forestry in Britain and Ireland in recent years has been the establishment of large areas of coniferous plantations on

what are frequently impoverished, nutrient deficient soils. This has resulted in a considerable amount of research into the fertiliser requirements of the more important tree species across a range of site types. The purpose of this colourfully produced Booklet, which summarizes the results of about fifty such experiments, is to answer some of the questions commonly asked about the use of fertilisers in young forest crops in Southern Britain.

The Booklet discusses in brief such basic questions as to why fertilisers should be used in the first place and if so where, when, how, and in what quantity they should be applied. The fertiliser requirements of a number of different species and the question of heather control and its relationship to the nitrogen nutrition of Sitka spruce are also considered in brief. Phosphorus is the most commonly deficient nutrient in the region to which the Booklet refers. It is usually applied as unground phosphate rock at a rate varying between 50 and 75 Kg P/ha.

Although nutrient levels may be low and even limiting growth, the use of fertilisers is only justified when the expected response exceeds the cost involved in monetary terms. In deciding whether or not to use fertilisers, therefore, an estimate of the expected response must be initially made. This is done by comparing the production of fertilised and unfertilised trees growing under similar climatic conditions. The number of years crop revenues are likely to be advanced by fertiliser application are then estimated by reference to the results of experiments on similar site types. This enables the calculation of net discounted revenue figures for both the fertilised and unfertilised crop and the expenditure that is justified on fertilisation is thus obtainable.

In theory the approach is sound, in practice it is likely to suffer from a paucity of data, over generalisation, a questionable and highly subjective system of site classification and an over emphasis on the value of foliage analysis as a diagnostic tool.

Most of the publication is taken up by diagrams and tables. The ten colour plates included could have been better positioned and more informative. Despite its limitations the Booklet is of much value to forest managers in Southern Britain and Wales. Its usefulness in Ireland is limited due to different soils and environmental circumstances.