



FORESTRY COMMISSION

Bulletin No. 14

# FORESTRY PRACTICE

A Summary of Methods of Establishing  
Forest Nurseries and Plantations with  
Advice on other Forestry Questions for  
Owners, Agents and Foresters

Revised 1946



LONDON: HIS MAJESTY'S STATIONERY OFFICE

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## PREFACE TO FOURTH EDITION

SINCE the first edition of this Bulletin was brought out in 1933 there have been many developments in British forestry practice, and the need for a complete revision of the text has long been realised. It was hoped to undertake this task as soon as the war was over, but shortage of staff and the urgent work of reconstruction have made this impossible. This Bulletin continues, however, to be much in demand, the latest issue of 2,000 copies being exhausted within a few weeks. Rather than hold up the publication until a complete revision could be made, the Commissioners have decided to issue a fourth edition in a partly revised form. While the bulk of the text remains substantially unchanged, certain sections have been amended or re-written. The major alterations are as follows:—

The tabular "Notes on Individual Species" have been entirely revised, as have Tables I and II concerning nursery treatment for each species. The section on "Thinning" has been re-written, and the list of suppliers of tools and equipment brought up to date. Another addition is the inclusion of the official Explanatory Note on the Dedication Scheme.

Labour costs have risen greatly since the last revision in 1939 and are not yet stabilised, so it was decided to retain the 1939 values. It should be observed that the wage of an adult male forest worker at that time was in the region of 38s. per week. Prices of tools have been omitted from this edition.

FORESTRY COMMISSION,  
25, Savile Row,  
London, W.1.

*September, 1946.*

## PREFACE TO FIRST EDITION

THIS booklet contains little that will not be familiar to good foresters on the larger forestry estates who have kept an eye on the technical forestry journals. It is not suggested that well-established practices which have stood the test of time and trial should be abandoned for in each district that which succeeds best is best. Many, however, have little or no access to first-hand experience gained in their own districts, and it is hoped that they will be encouraged and helped by what they read here to embark upon forestry and to undertake the clearing of old woodland and its reafforestation on better lines. Those who doubt may find it useful to read first the section dealing with the treatment of forestry by the State.

Owing to the infinite variety in the conditions under which it is practised forestry cannot be an exact science in which it can be said with certainty that certain actions will always produce the same results. It follows that much of what is set down here with some definiteness will not be universally true, and a handbook cannot be a wholly satisfactory substitute for personal inspection and advice such as owners can secure from the Forestry Commission or, in some cases, from their Forestry Societies. Some may think that it is therefore a mistake to try to give general guidance in print and that everything should be a matter for the advice of the expert on the spot. But to the compiler of this publication, who is not an expert, forestry appears to be not a complex of abstruse mysteries, but a matter of learning to do a number of quite simple things in ways which as far as possible avoid waste of time, money and effort. No one can tell how well it will pay, but no one can doubt that if full advantage is taken of experience already gained, it will pay much better than most of the expenditure landowners lay out on their estates.

The Report on the Census of Woodlands published by the Commission in 1928 shows all too clearly the sad state of British woods. There were nearly 3,000,000 acres of woodland in 1924 or the years immediately preceding, and as only a little over 200,000 acres were definitely maintained for purposes other than the growing of timber, some 2½ million acres should thus have been productive. Unfortunately, nearly one-third of this was scrub or areas felled and not replanted, while the remaining area of under 2,000,000 acres, though nominally economic, included over half a million acres of coppice with or without standards—a poor form of silviculture for most districts under present conditions. The balance is by no means fully productive. The best of the high forest—nearly half a million acres—was felled in the War, and not much of it has been replaced. The existing reserves of mature coniferous timber are equivalent to less than six months' consumption. The younger crops, though well distributed through the various age-classes, are on the same small scale. Oak planting in particular has gone out of fashion and future supplies of home-grown oak are endangered. The total area of woodlands tends to diminish, and the productiveness of the areas under coppice and coppice-with-standards will probably be reduced. There is thus plenty of room for improvement, and those who plant, as all of us must, for the future, should not be deterred by present unfavourable prices.

Mr. Owen J. Sangar has been responsible for nearly all of the technical matter here presented. But for Mr. Sangar's exact grasp of detail and practical knowledge the work of compilation would have been much more difficult. Mr. W. H. Guillebaud, Chief Research Officer, has given valuable assistance throughout and has prepared the section on thinning.

FRANCIS D. ACLAND,  
*Commissioner.*

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25, Savile Row, London, W.1.

February, 1933.

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# PART I

## NURSERY WORK

### INTRODUCTION

THE FIRST QUESTION to be decided is whether to have one's own nursery, and the best guidance that can be given in answering it is this :—by having a nursery one should secure that really suitable plants will reach the planting area in thoroughly good condition, as and when required. Considerable financial saving should result unless the soil is very heavy, and there is the further advantage that the estate staff will take an increased interest in their forest work. Nevertheless, it is probably better for a planter on a fairly small scale not to have a nursery if supplies of plants in good condition can be relied on with certainty from outside. A nursery should certainly be dispensed with unless either a regular planting programme of at least 5 acres a year is to be followed, or at least 20–30 acres are to be planted within a few years, and unless a suitable area is available for the nursery, which is conveniently placed both as to supervision and in relation to the area to be planted.

Although it may be decided that it is desirable to have an estate nursery, it should not be taken for granted that it ought to be used for raising plants from seed. The forest tree goes through its most difficult stages in the first two years. It is then that it requires the most skilled treatment, as the following pages will show, and then that, even with such treatment, the greatest variations in yield and quality are liable to occur. It is therefore unwise to grow from seed unless skilled direction and supervision by a trained forester or gardener are available, and unless there is difficulty owing to local circumstances in obtaining supplies of seedlings from a reliable nurseryman, without considerable danger of damage in transit.

A nursery should be on a gentle slope; places where mist collects or frost lodges should be avoided, as also should southerly aspects in the warmer parts of the country. The site should be well sheltered, particularly from early morning sun and drying winds. It will be more difficult to be sure of the nursery's success in a high than in a moderate (say, 25–40 inches per annum) rainfall area, but a high rainfall will not be fatal where other elements are favourable, though it will increase the cost of weeding. Under these conditions it is essential to start with the soil thoroughly cleared of weeds. To maintain supplies of plants of the ages recommended on pages 20–31, the nursery area should be one-twentieth of the estimated annual planting area and if all plants are raised from seed about one-fifth of this will be needed for seedbeds. In preparing the nursery, it is useful to leave a path which will take a cart lengthways through the middle, and to subdivide the area on each side of this by narrower paths about 4 feet wide, and about 30 feet apart. The nursery must, of course, be securely fenced against rabbits, and unless it is otherwise sheltered, hedges of thorn, beech, yew, *Cotoneaster simonsii* or *Thuya plicata* are useful inside the fence, also sometimes at intervals across the nursery. Owing to the risk of disease it is not desirable to use for hedges a species which is to be grown in bulk in the nursery.

The nature of the soil, more particularly its texture, will affect the success of the nursery more than any other single factor. Unless it works freely costs are sure to be high, and it may be almost impossible to raise conifers satisfactorily from the seed. If the soil is dirty to begin with, weeding costs will be high for a number of years. Soil which lacks humus, or worked-out agricultural land, will be expensive to get into condition. It is pretty safe to select the

NOTES—

(a) *Work done.*

Preparation of ground .....acres  
 New fences (permanent) .....chains  
 New drains (permanent) .....chains  
 Planting, Underplanting and Direct Sowing .....acres  
 Plants used for Planting and Underplanting .....thousands  
 Beating up 1st.....acres ; 2nd.....acres  
 Plants used for beating up .....thousands  
 Weeding and cleaning 1st year.....acres ;  
 2nd year.....acres ; 3rd year.....acres  
 Brashing and Pruning .....acres  
 Thinnings 1st.....acres ; 2nd.....acres ;  
 3rd.....acres  
 Felling .....cu. ft.

New Works (Description) :—  
 Other Work (Description) :—

(b) *Explanation of any exceptional costs and items.*

I declare the foregoing to be a full and true account, to the best of my judgment and belief.

Signature .....

Address .....

Date .....

*For Inland Revenue purposes.*

Net Schedule A Assessment... ..£  
 Land Tax ... ..£  
 Tithe Rent Charge Annuity or Stipend ... ..£  
 Cost of new fences (permanent) ... ..£  
 Cost of new drains (permanent) ... ..£

## DEDICATION OF WOODLANDS

Name of Estate.....

Parish..... County .....

Name and Address of Owner.....

Name and Address of Agent.....

Approximate area of Woodlands .....acres.

I am prepared to consider placing the above woodlands under the Forestry Commissioners' Dedication Scheme.

As at present advised I prefer :—

(a) Basis 1.

(b) Basis 2.

(Signed) .....Owner.

.....Date.

Application forms as above are obtainable from : The Secretary, Forestry Commission, 25 Savile Row, London, W.1.



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