FORESTRY COMMISSION

BULLETIN No. 10

GROWTH AND YIELD OF CONIFERS IN GREAT BRITAIN

LONDON:
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE
To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:
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FOREWORD

THIS publication is a revision of Bulletin No. 3, " Rate of Growth of Conifers in the British Isles," which is now out of print. Most of the additional data have been derived from the measurement of permanent sample plots, certain of the tables have been extended and the text re-written.

The new bulletin has been prepared by Mr. J. Macdonald, Sample Plot Officer, in collaboration with Mr. W. H. Guillebaud, Chief Research Officer, and has been edited by Mr. Fraser Story, Publications Officer.

The yield tables for the commoner species, Scots pine, European larch and Norway spruce are unchanged, but the tables for Douglas fir, Corsican pine and Japanese larch have been extended and a new table constructed for Sitka spruce. A full description is given of the methods used in measuring sample plots and in working up the data into yield tables. A summary of the measurements of the individual plots is also appended. The locality factors are briefly discussed and the evidence presented in tabular statements.

Systematic growth studies are of the first importance in forestry, and it is desired to record the Commissioners' appreciation of the facilities afforded by woodland owners for the establishment of sample plots and the felling of sample trees.

R. L. ROBINSON,
Commissioner.

FORESTRY COMMISSION,
22, Grosvenor Gardens,
London, S.W.1.

July, 1928.

BULLETIN No. 10

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CONTENTS

GROWTH AND YIELD OF CONIFERS IN GREAT BRITAIN

CHAPTER I

THE COLLECTION OF THE DATA

A survey for the collection of statistics as to the rate of growth and production of timber was begun in the summer of 1917, at a time when the large demands for timber for military purposes and for the mining industry were being met mainly from British woods. Extensive fellings were in progress in all parts of the country, and on all sides negotiations were proceeding for the sale of standing timber. These abnormal conditions offered a unique opportunity for the collection of forest statistics. In order to obtain results which should be applicable generally throughout the country, data had to be collected from woods growing under all conditions, but there was no lack of material, as emergency fellings were widespread and landowners generous in allowing sample trees to be felled in standing woods. Further, there was an additional reason for action in that many of the middle-aged and old coniferous plantations in the country were being swept away. Owing partly to this rapid disappearance of coniferous plantations, and partly to the different nature of the problems involved in the measurement of broadleaved woods, it was decided to confine the investigations to coniferous species.

The results of the investigation were published in June, 1920, as Bulletin No. 3 of the Forestry Commission ([13]*). That work, now out of print, presented, for the first time, a full account of the rate of growth and production of the chief coniferous species in Great Britain, giving, as it did, complete yield tables for European larch, Scots pine and Norway spruce, and preliminary tables for Douglas fir, Corsican pine and Japanese larch.

In the present work the original tables for European larch, Scots pine and Norway spruce have been retained unaltered, while complete yield tables for Douglas fir and Corsican pine have been added. Further, a revised preliminary yield table for Japanese larch and a new preliminary table for Sitka spruce are given. This fuller treatment of the newer exotics has been made possible by the utilisation of data taken from permanent sample plots, which have been established since 1920. Up to the present, 170 permanent sample plots have

* For references to bibliography see page 103.

been established, of which 48 have been utilised in the preparation of the yield tables for Douglas fir, Corsican pine, Japanese larch and Sitka spruce. Of the plots so utilised, the majority have been measured more than once. Those permanent sample plots which had been subjected to heavy thinning were, however, excluded.

The methods employed during the survey were laid down in Bulletin No. 1 ([12]) of this series (published in November, 1919), but, for the sake of convenience, much of the information has been reproduced in Chapter II of the present publication, which also includes a description of the methods employed in measuring the permanent sample plots. The section in Bulletin No. 3 dealing with the methods of constructing the yield tables has been revised, and diagrams included to illustrate some of the more important stages of the work. Chapters IV to VIII of Bulletin No. 3, which discussed the relation of some of the factors of locality to the growth of the principal species, have been abridged, but there is now included a complete list of the sample plots with relative summary data and locality descriptions.

Organisation.—The collection of data was begun in England under the Forestry Branch of the Board of Agriculture in August, 1917. At the commencement careful instructions as to method were issued to the officer in charge of the field work, and though certain modifications were found to be necessary, by the end of the first year the methods had been finally established.

In December, 1917, a survey on the same lines was begun in Scotland under the Board of Trade, Timber Supply Department (Scotland). The same methods were employed, and, in order to ensure uniformity, the officer in charge had, for a time, been attached to the original party in England. In February, 1919, the work was extended to Ireland, where it was carried out under the Department of Agriculture and Technical Instruction for that country. Uniformity in the three countries was secured by conferences between the officers in charge of the operations.

The work was carried out by women assistants under the supervision of trained forest officers. The women received their training in the field. The inspection of woods, selection and survey of sample plots, marking of thinnings, etc., were made by the officer in charge; the actual measurement of the trees and the working-up of the field data were left in the hands of the women assistants. Each officer worked, as a rule, with two sub-parties, each of three women, one of the women in each sub-party acting as a forewoman. For the greater part of the time there were two parties at work in England and two in Scotland, and operations were continued all the year round in both countries.

The work now being carried on in permanent sample plots is under the charge of one officer who is assisted by four men.

Number of Plots measured.—The survey consisted of the measurement in different parts of the country of a large number of sample

plots and of a number of smaller areas which were known as sub-plots.

It was shown in the Bulletin of 1920 that, up to December 31st, 1919, a total of 1,100 sample plots and sub-plots had been measured in the three countries. After that date the survey was continued in both England and Scotland for a short time, in the course of which 83 new plots were measured, bringing the total up to 1,183. This figure includes 52 plots and sub-plots which were measured in Ireland up to the end of 1919, the data from which were used in the construction of the yield tables in 1920, but have now been excluded, and 13 plots and sub-plots of miscellaneous species.

The yield tables now presented have therefore been based on measurements of 1,118 temporary plots and sub-plots and 48 permanent plots.

The following table shows the distribution by species, of plots, sub-plots and permanent plots in England and Scotland :—

Species.	England and Wales.		Scotland.		Total.	
	Plots.	Sub-plots.	Plots.	Sub-plots.	Plots.	Sub-plots.
Scots pine	135	23	180	2	315	25
European larch	228	84	156	10	384	94
Norway spruce	54	32	79	11	133	43
Douglas fir	31[1]	8	25[5]	5	56	13
Corsican pine	20[2]	4	3	1	23	5
Sitka spruce	4[3]	1	9[6]	2	13	3
Japanese larch	18[4]	6	28[7]	7	46	13
Total	490	158	480	38	970	196
Total plots and sub-plots ..	648		518		1,166	

Summarised data for all sample plots, together with locality descriptions, will be found in the Appendix, pp. 105–187 :—

([1]) Includes 10 permanent sample plots.
([2]) ,, 8 ,, ,,
([3]) ,, 3 ,, ,,
([4]) ,, 5 ,, ,,
([5]) ,, 9 ,, ,,
([6]) ,, 5 ,, ,,
([7]) ,, 8 ,, ,,

CHAPTER II

THE MEASUREMENT OF SAMPLE PLOTS

This chapter falls naturally into two sections. In the first, under "Temporary Plots," is described the method of measurement followed during the survey; in the second section, the method used at the present time in the permanent sample plots is given.

Temporary Plots

The survey was carried out by means of the measurement of a large number of sample plots taken in all parts of the country in pure coniferous woods. Each sample plot consisted of a small, demarcated block of forest, the area of which was accurately determined and which ranged in the majority of the sample plots from 0·2 to 0·5 of an acre.

In selecting sample plots for measurement, certain considerations were kept constantly in mind. In the first place, a plot was required to provide a sample of the average rate of height growth under the conditions obtaining in the particular locality where the investigation was being carried out. Thus, in a wood, otherwise uniform, where there were slight variations in the rate of height growth, every effort was made to select for the plot a site on which the height growth appeared to be about the average and to avoid placing it where the height growth was more rapid. Secondly, each plot had to be well stocked and uniform. When the canopy was reasonably complete for the species and age under consideration the wood was considered to be well stocked. The reason for insisting upon the measurement of well-stocked woods only is that the average stocking in any one wood of a given species and age may differ very greatly from that of a similar wood in another locality, while it may be possible to find well-stocked areas in both woods which are comparable. Moreover, the development of incompletely stocked woods will differ from that of fully stocked crops, and it is impossible to adjust the data without introducing the personal factor, which should be avoided as far as possible in an investigation of this kind.

The necessity for observing these conditions made it difficult to obtain areas of any great size for sample plots. The plots were made as large as possible, but it was considered better to have a large number of small plots than a smaller number of plots of half an acre or over.

Preparation of the Sample Plots for Measurement.—After a sample plot had been chosen and demarcated, it was carefully surveyed, the lengths of the sides being recorded in feet to the nearest half-foot

and the angles to the nearest half-degree, and the area calculated in acres to the third decimal place. A thinning was then marked, in the course of which the following trees were selected for removal :—

(1) Dead trees.
(2) Dying trees.
(3) Suppressed trees.
(4) Whips.

A light thinning of this kind gave an indication of the maximum main crop which had been produced by the soil and had the advantage of permitting the instructions to be made so explicit as almost entirely to eliminate the personal factor. It was necessary, in order to secure uniformity of treatment, to employ a thinning grade which could be strictly defined, as the operations were being carried out by several officers working independently in different districts.

Before any trees were felled, a general description of the plot was made on the ground by the officer in charge. In this description note was made of each of the following : situation, species, elevation, aspect, exposure, slope, geological formation, soil, soil covering, vegetation, past history as far as this was ascertainable, wind damage or disease, stocking and condition of the canopy.

The position of the plot was accurately marked for future reference on a map reserved for this purpose.

Method of Grouping.—Hartig's method of equal basal area groups was employed in the measurement of sample plots throughout the survey. In practice, five of Hartig's groups were formed for each plot and two sample trees felled for each group. Ten sample trees were thus necessary for each plot, but it was sometimes impossible to fell so large a number. In cases where less than ten sample trees were available, the number of groups was reduced on the basis of two trees per group and the measurement proceeded with. Thus, for example, where only six sample trees could be felled, the number of groups was reduced to three and two mean trees felled for each group. Sample trees were generally obtained within the plots themselves.

The permanent sample plots, the establishment of which was undertaken at the conclusion of the survey, have presented a different problem in mensuration and it has been necessary to adopt another method of measurement. That method will be described in the second part of this chapter.

Main Crop.—The trees of the main crop were numbered and then girthed at breast height—4 ft. 3 in. above the ground—girths being recorded to the nearest $\frac{1}{4}$ in., quarter girth. They were then

arranged in ¼ in., quarter girth, classes and the number of trees in each class totalled. The basal area for each class and the total basal area of the plot were ascertained and the total basal area divided by five. The stems were then arranged into five groups containing approximately equal basal areas, and the mean basal area for each of the groups calculated by dividing the group basal area by the number of trees in the group. The quarter girth corresponding to this mean basal area was found from the table of quarter girth squares.

The mean quarter girth of each group having been ascertained, two or more sample trees, with the calculated mean quarter girth, or a girth as near to this as possible, were selected, due care being taken to choose stems which were typical of their class as regards height and form.

The sample trees were then felled and measured, the following measurements being taken :—

(1) Total height, *i.e.*, height to the tip—in feet to the nearest 6 inches.

(2) Timber height, *i.e.*, height to 3-inch diameter over bark—in feet to the nearest 6 inches.

(3) Quarter girth at half-timber height both over bark and under bark to the nearest ⅛ inch, quarter girth.

(4) Height from the ground to the lowest living branch—the lower crown—to the nearest 6 inches.

(5) Height from the ground to the lowest living whorl of branches—the upper crown—to the nearest 6 inches.

In each plot three of the sample trees were selected for analysis. These trees were cut into sections, and the annual rings at the end of each section counted. In selecting the trees for analysis, the mean height of the sample trees was determined, and three trees with this height, or a height approximating to it, were taken and analysed; trees from the first or the last of the groups were avoided.

The lengths into which the trees were cut varied according to the purposes for which they were being utilised, but were rarely more than 10 feet.

Thinnings.—The trees to be removed in the thinning were girthed at breast height to the nearest ¼ inch, quarter girth, and were arranged in ¼ inch, quarter girth, classes, but kept separate from the main crop trees. They were treated as one group; the number of stems and total basal area were found, and from them the mean girth of the thinnings. Two or more sample trees were selected with the required girth, felled, and measured in the same way as the main-crop sample trees.

The Working-up of the Results.—The results as given in the Appendix show the following:—

Age (A).—This was determined by ring-counts on the stools of felled sample trees. The ring-counts were made with great care and false rings excluded.

Height (H).—The mean height was obtained in the following way. The heights of the sample trees were plotted against their respective quarter girths and a smooth curve drawn to show the relationship. From this curve the height corresponding to the mean quarter girth was read off and the result taken as the mean height of the plot.

Quarter girth (G) at 4 feet 3 inches above ground. This was taken as the geometric mean quarter girth, *i.e.*, it was taken as the quarter girth of the tree which had the average basal area. It was determined to the nearest $\frac{1}{4}$ inch.

Number of stems (N).—Worked out per acre to the nearest multiple of 5.

Basal area (B.A.).—Determined to the nearest square foot per acre from the total basal area of the plot.

Volume (V).—The volumes of the groups were found separately and the volume of the plot taken as the sum of these group volumes. The volumes of the sample trees in each group were found by multiplying the sectional area at half timber height in each tree by the timber length. This was done for over bark as well as under bark volume. The basal areas and volumes of the sample trees of each group were then summed and the volume of the group calculated according to the following formula:—

$$\text{Volume of group} = \frac{\text{Volume of sample trees} \times \text{basal area of group}}{\text{Basal area of sample trees}}$$

The volume per acre was obtained from the sum of the group volumes. The volumes over bark and under bark were calculated separately, but, in order to save space, only the volume under bark is given in the Appendix.

Form factor (F).—This was determined to three places of decimals by dividing the total volume under bark by the product of the total basal area and the mean height, *i.e.*,

$$F = \frac{V}{B.A. \times H}.$$

Bark percentage (B).—This was obtained from the following formula—

$$\text{Bark percentage} = \frac{\text{V (O.B.)} - \text{V (U.B.)}}{\text{V (O.B.)}} \times 100.$$

Crown-length percentage (C).—For the individual sample trees, the mean of the upper crown (U.C.) and the lower crown (L.C.) was subtracted from the total length (L) of the tree and the result expressed as a percentage of the total length.

$$\text{Crown-length percentage} = \frac{\text{L} - \frac{\text{U.C.} + \text{L.C.}}{2}}{\text{L}} \times 100.$$

The crown-length percentage is therefore the percentage covered by living crown of the total length of the tree. For the whole crop the crown-length percentage was determined by plotting the crown-length percentages of the sample trees against their respective quarter girths, drawing a curve through the points to express the relationship and reading from this curve the crown-length percentage corresponding to the mean quarter girth of the plot.

Thinnings.—The number of stems, basal area and volume were determined as for the main crop.

Analysis of Stems—Age-Height Graphs.—The number of annual rings at the various heights at which each tree was cross-cut was ascertained, and the age at any height, found by subtracting the number of rings at that height from the number of rings at the stump. For each of the three trees the heights of the different sections were plotted against the ages at these heights and a smooth curve drawn. A mean age-height curve for the plot was drawn from the three curves.

Sample Sub-Plots.—Where woods were too small or irregular to yield plots of from 0·2 to 0·5 acre, it was sometimes found possible to secure smaller areas for measurement. These sub-plots, as they were called, were generally about 0·1 acre in size. They were treated exactly as plots, except that, in the volume determination, all the trees were regarded as forming one group and the data worked up on the basis of three arithmetical mean sample trees.

Methods and Units of Measurement.—The girth system of measurement, using linen tapes, was employed throughout the survey. This

system was adopted in preference to the calliper method of measuring diameters for the following reasons :—

(1) The tape has always been used in commercial practice in Britain.

(2) Girthing by tape is simpler and much quicker than measuring with callipers ; it also requires less physical effort, an important point where the measurements were to be carried out by women.

(3) A comparative series of measurements was made with tape and callipers on about 2,000 trees. Analysis of the results showed that the theoretical relation between girth and diameter held good quite satisfactorily when allowance was made for a small systematic error in the callipers employed.

It is satisfactory to note that a recent careful investigation of the problem by Chaturvedi ([6]) has demonstrated the superiority of the girthing system of measurement. According to this writer, callipers are difficult to construct so as to give accurate readings ; they quickly get out of order and are not easy to calibrate. Further, the error due to a displacement from the horizontal in measurement is double the error caused by the same fault with a tape, while errors in rounding off diameter measurements are three times the magnitude of those involved in rounding off girths. Linen tapes are liable to stretch slightly in course of time, but they are comparatively cheap and can be discarded as soon as the stretching becomes appreciable. Steel tapes do not alter at all with use and are now employed in our permanent sample plot-work. It is a further advantage of tapes that the errors due to eccentricity of the tree bole are always positive, while with callipers the errors due to this and other causes are unsystematic.

The units of measurement employed for expressing girth, basal area and volume are, respectively, the inch, square foot, and cubic foot, quarter girth measure. The quarter girth system is a form of measurement universally employed in dealing with timber in Great Britain, and as the present Bulletin is intended for the use of all concerned with the production and utilisation of British softwoods, it was considered best to retain these units in place of the standard or true measure employed on the Continent. The relation between the two systems of measurements is as follows :—

1 inch quarter girth	=	4 inches true girth.
1 square foot quarter girth	=	1·273 square feet true measure.
1 cubic foot quarter girth	=	1·273 cubic feet true measure.

Accuracy of the Temporary Sample-plot Method.—In order to test the accuracy of the method, 20 sample plots were measured by

Hartig's method and then clear felled, every tree being measured on the ground. The results are given in the following table :—

Species.	Plot No.	Felled volume per acre.		Volume per acre by sample-plot method (Hartig's).		Percentage difference from felled volume.	
		Over bark.	Under bark.	Over bark.	Under bark.	Over bark.	Under bark.
European larch	110	4,815	—	4,725	—	−1·87	—
	112	4,965	—	4,985	—	+0·4	—
	124	6,590	5,320	6,600	5,410	+0·2	+1·7
	134	6,510	5,245	6,340	5,120	−2·6	−2·4
	330	3,530	2,750	3,475	2,750	−1·6	0
	510	5,160	—	5,220	—	+1·2	—
	515	6,585	5,345	6,600	5,285	+0·2	+1·1
	S. 19	2,675	2,120	2,815	2,195	+5·2	+3·5
	116 Scot.	5,900	—	6,035	—	+2·3	—
	118 Scot.	4,165	—	4,095	—	−1·7	—
Scots pine ..	301	3,040	2,675	3,160	2,780	+3·95	+3·78
	302	4,670	4,185	4,595	4,115	−2·13	−2·02
	548	7,235	6,845	6,930	6,550	−4·22	−4·31
	1 Scot.	4,230	3,720	4,445	3,910	+5·1	+5·1
	60 Scot.	4,950	4,335	4,745	4,210	−4·1	−2·9
Corsican pine	Misc. 5	6,580	5,375	6,560	5,340	−0·3	−0·7
Norway spruce	Misc. 6	4,235	3,770	4,110	3,700	−2·5	−1·9
	,, 7	5,670	5,100	5,685	5,105	+0·3	+0·1
Douglas fir ..	Misc. 8	4,950	4,415	4,765	4,275	−3·7	−3·2
	,, 13	5,675	5,095	5,800	5,170	+2·2	+1·5

These results compare not unfavourably with results obtained by other investigators, such as Hillerich ([19]), Böhmerle ([2]) and Flury ([10]), and show that while a reasonable degree of accuracy may be attained in the use of the method, variations up to ± 5 per cent. from the felled volume do occur.

Permanent Plots

The investigation of problems in silviculture and mensuration by means of permanent sample plots constitutes an important part of forestry research in all parts of the world. With close examination at regular intervals, a permanent sample plot can be made to throw much light upon many of the problems which confront the forester when he comes to tend the woods which he has created ; it can also give valuable information as to the yield of species under a

carefully regulated system of management, and it offers, in addition, opportunities for the improvement of technique in mensuration.

When research work was first undertaken by the Forestry Commission on its establishment, considerable attention was devoted to the possibilities of permanent sample-plot work. Apart from the data which had been collected during the survey, no other figures were available to show what yields might reasonably be expected from the different species in cultivation, and there were no figures to indicate what actual yields in thinnings could be obtained under definite management. Further, the survey had scarcely touched the newer exotic conifers which have now come to play so large a part in British forestry, and the need was urgent for investigations into the rate of growth and production of the more important of these species and for experimental work in methods of thinning.

Thus, when the permanent sample plots came to be established, two objects had to be kept in mind. The first was the study of the development and especially of the increment under a definite and continuous system of management, with a view to improving the existing yield tables and to producing new yield tables for the more recently introduced conifers and, the second, the study of the effects of different treatments upon the growth and production—both in quantity and quality—of any given species.

In consequence, wherever it has been found possible to do so, permanent sample plots have been established in sets of two, three or four, to show, by comparison, the effects of different types of thinning. Single plots have been laid down only in woods of sufficient interest where there was no room for two plots or more.

Up to the present, permanent plot investigations have been confined almost entirely to pure coniferous woods. Each sample plot consists of a small, accurately demarcated block of woodland, together with an adjoining area—the "*surround*"—which receives exactly the same treatment as the plot proper, and from which the sample trees are taken. The surround should be comparable in all respects to the plot and the whole should be homogeneous and well stocked. The depth of the surround must vary according to circumstances, but as a rule a depth of about twenty yards may be regarded as satisfactory. When a set of two or more comparative thinning plots is being established, care is taken to see that the growth over the area is uniform so that the plots may at the outset be quite comparable.

The plots vary in size according to the nature of the wood and the configuration of the ground. Large plots, provided that they are uniform, are preferred, but they are always difficult to obtain, especially where a series of comparative plots is required. The majority of the plots are from 0·3 to 0·5 of an acre in area. The plots are accurately surveyed, the areas being recorded in acres to the third decimal place, and their boundaries permanently marked. Each tree is permanently numbered and the point of girthing

(4 feet 3 inches) marked in white paint. Permanent sample plots are measured, as a general rule, once in five years, but some plots of the faster-growing species have been measured at three-year intervals.

There are certain questions of great importance in permanent sample-plot work which did not arise in the course of the survey but which had to be faced when the later work was taken up. They are, the choice of a system of classification for the trees, the choice of a set of thinning grades, and the selection of a method of mensuration adapted to repeated measurements. These will all be discussed in the following pages.

The Classification of the Trees.—The importance of an adequate system of tree classification as the basis of scientific thinning has long been recognised, and for more than eighty years attempts have been made to establish a system which is at once descriptive and convenient for use in the forest. The pioneers in this work were the Germans, whose early systems of classification devised by Seebach ([35]), von Cotta ([7]) and others were superseded by the classification drawn up at the Conference of representatives of the German Forest Research Stations held at Mühlhausen in 1873. This new system resembled its predecessors in that it recognised two main classes in the canopy: class I, the dominant trees, and class II, the dominated trees, with subsidiary classes for the suppressed and for the dead and dying trees. The basis of the classification was the relative position of the trees in the canopy and the form of neither stem nor crown was taken into account. In 1903 the International Conference of Forest Research Stations, held at Mariabrünn, adopted a system of classification which marked a great advance on the plan adopted in 1873, because, though it still recognised only two main classes—the "dominant" and the "dominated" trees—it divided each of these into a number of sub-classes according to the form of crown and stem.

This system is convenient and fairly descriptive, but certain workers, notably Gunnar Schotte in Sweden, found that the subdivision into two canopy classes led to much difficulty in placing borderline trees, and in 1912 Schotte ([29]) evolved a modified system of classification in which four canopy classes or crown strata were recognised. Each of these classes was subdivided into seven subclasses, founded upon the characters of the crown and stem. The large number of classes is, however, inconvenient in practice.

In Great Britain the decision in 1919 to press forward with the establishment of permanent sample plots necessitated a choice between the International and Schotte's systems. After careful consideration it was decided to adopt the International system, partly on account of its greater simplicity and partly because it was more generally in use in European research stations. After the classification had been in use for some time in this country it was

realised that Schotte's criticisms were in the main justified; there was often difficulty in placing trees in their proper class, and it became clear that the simple division into "dominant" and "dominated" stems was insufficient. Consequently, after several tests, a new system of classification was adopted in 1923, which followed the Swedish in its division of the canopy into four classes, but differed from it in having fewer sub-classes and also in using separate classes for dead and dying, and for diseased trees.

The classification now in use is as follows:—

Class 1. Predominant or Dominant Trees.

(*a*) Trees with normal crown development and good stem form.
(*b*) Trees with slightly defective stems or crowns.
(*c*) Trees with very defective stems or crowns.
(*d*) Whips.

Class 2. Co-dominant Trees.

(*a*) Trees with normal crown development and good stem form.
(*b*) Trees with slightly defective stems or crowns.
(*c*) Trees with very defective stems or crowns.
(*d*) Whips.

Class 3. Sub-dominant Trees.

(*a*) Trees with normal crown development and good stem form.
(*b*) Trees with defective stems or crowns.

Class 4. Suppressed Trees.

These are trees standing under the shade of other trees but still capable of development.

Class 5. Dead and Dying Trees.

Including bent-over and leaning trees.

Class 6. Diseased Trees.

(*a*) Dominant and Co-dominant.
(*b*) Sub-dominant and Suppressed.

Note.—In larch crops, where the larch canker is generally prevalent, class 6 is not used. The trees are classified as though they were free from disease, but in the case of cankered stems the letter k is added to the symbol for stem class as *e.g.*, 1 a k, 2 b k, 3 a k.

Thinning Grades.—The scientific study of the results of thinning is comparatively a recent development in silviculture, for without an adequate system of tree classification it is impossible strictly to define any but the very lightest thinnings. Nevertheless, in the

course of a long practice certain quite definite types of thinning have arisen in Europe. For example there developed what is known as the "low thinning." At first only dead and dying trees were removed but the method was later extended to permit of very heavy cuts. The low thinning consists essentially in the removal of trees which are falling behind, leaving the final crop to be selected from the fastest growing and most vigorous members of the crop.

Another line along which thinning methods developed resulted in the "crown thinning." In this the thinning is carried out chiefly in the dominant classes with a view to favouring the best individuals. All the dominated stems are spared except those which are dying or are already dead, as they are expected to preserve the quality of the soil. The crown thinning, like the low thinning, may be either "light" or "heavy."

These two are the principal types of thinning in use at the present day, and though various methods, apparently different, have been introduced from time to time, it has been found that they can all, in the last analysis, be related either to the one or to the other.

The International Conference in 1903 drew up a system of thinning grades for employment in experimental work. This system recognised the two main types— the low thinning and the crown thinning—each of which was divided into grades according to the strength of the thinning, and these thinning grades were defined by means of the classification prepared at the same conference, to which reference has already been made. The International grades of thinnings were adopted in this country for sample-plot investigations, but, in 1923, when the thinning grades had to be re-defined in terms of the new classification which was then adopted, the opportunity was taken to make certain other alterations. The A grade low thinning, which consisted in the removal merely of dead, dying and diseased trees, and was, in fact, not so much a thinning as a cleaning, was dropped, while the C grade, or heavy low thinning, was divided into two—the C 1, or moderately heavy thinning, and the C 2, or heavy thinning. This subdivision allowed of a greater precision in the definitions.

The following are the grades of thinning now employed in permanent sample-plot work in Great Britain :—

I. *Low thinning* (Niederdurchforstung : Eclaircie par le bas).

B Grade—Light thinning.
Remove classes 6, 5, 4, 3 (*b*), 2 (*d*) and 1 (*d*).
i.e., dead, dying and bent-over trees, suppressed and diseased trees and whips.
This grade is used as a control when different types of thinning are being tried.

C 1 Grade—Moderately heavy thinning.
Remove classes 6, 5, 4, 2 (*d*) and 1 (*d*), and gradually all trees of classes 3, 2 (*c*) and 2 (*b*), and part of classes 2 (*a*) and 1 (*c*).

i.e., all dead, dying, bent-over, suppressed, diseased trees and whips; also all sub-dominants, the majority of the co-dominants and some of the worst-formed dominants.

C 2 Grade—Heavy thinning.

Remove classes 6, 5, 4, 2 (*d*) and 1 (*d*), and gradually all trees of classes 3, 2, 1 (*c*), 1 (*b*) and part of class 1 (*a*).

i.e., all dead, dying, bent-over, suppressed and diseased trees, whips, sub-dominants, co-dominants, defective dominants and some of the well-developed dominants.

There remain only trees with normal crown development and well-shaped boles, distributed as regularly as possible over the ground so that each has room to develop its crown normally. At the same time, no permanent break in the leaf canopy is permitted.

In all cases in which the removal of a dominant would make a hole in the canopy, suitable suppressed or backward trees should be left to cover the soil.

The removal of trees with bad crown development or poorly shaped boles should be carefully conducted with reference to the canopy and development of the whole crop.

II. *Crown thinning* (Hochdurchforstung : Eclaircie par le haut).

D Grade—Light thinning in the dominant crop.

Remove classes 6, 5, 2 (*d*), 1 (*d*), part of 2 (*a*), 2 (*b*), 2 (*c*) and 1 (*b*), a great part of 1 (*c*) and also some stems of 1 (*a*).

i.e., dead, dying, bent-over and diseased trees, part of the co-dominants, a large number of the defective dominants, and some well-shaped dominants where these are over-crowded.

The removal of trees with poor stems, defective crowns and forks may be spread over several thinnings in order to prevent too extensive a breaking of the canopy.

E Grade—Heavy thinning in the dominant crop.

The grade is concerned with the development of certain stems—the *élite*—which are to form the final crop.

Remove classes 6, 5 and many stems from classes 2 and 1.

i.e., all dead, dying, bent-over and diseased trees, as well as all trees which hinder the development of the crowns of the *élite*.

Method of Grouping.—A method of grouping such as Hartig's, which has proved itself suitable and accurate enough for single determinations of the volume of standing woods, has certain disadvantages if used for repeated measurements of permanent sample plots. The chief disadvantage lies in the nature of the groups which are formed. These groups are dependent solely upon the basal area

of the plot, a factor which is constantly changing, and they will, in consequence, vary much from time to time in respect both of the number of trees and the volume they contain. Further, the trees which are likely to form the final crop are grouped together with trees which are certain to be removed as thinnings, so that it becomes impossible to trace the development of the former from the first to the final measurement. Thus a method of measurement suitable for permanent sample plots must be based upon a system of grouping in which the largest trees are kept, as far as possible, separate. Such a system was introduced for the first time in 1889 by Block, who formed his groups so that each contained trees in the proportion of 50 per hectare. His first group contained the largest trees, his next the next largest, and so on, down to the last group, which contained the smallest trees. The great merit of this system of grouping lay in the fact that the trees most likely to enter into the final crop, namely, the largest trees, were placed together in groups of a constant size and so could not be affected by the removal of the smaller trees in thinning. A modification of Block's system of grouping put forward in 1891 by Schwappach ([31]), tended to level up the group volumes by increasing the numbers of the trees in the smaller girth groups. This method of forming groups, together with Schwappach's graphical method of measurement, was adopted for the permanent sample-plot work at its commencement, and with some modification is still in use.

The details are as follow :—The trees in the sample plot are classified and a thinning is marked. The trees are then girthed at breast height (4 feet 3 inches) to the nearest half inch, true girth, the thinnings being booked separately from the main crop and the girths grouped into half-inch classes. The trees of the main crop are then grouped according to the area of the plot in the following way :—

Area of plot.	Group No.									
	1	2	3	4	5	6	7	8	9	10
	Number of trees in each group.									
0·75 acre or over ..	50	50	50	50	100	100	100	200	200	200
0·3 to 0·75 acre ..	20	20	20	20	40	40	40	80	80	80
Under 0·3 acre ..	10	10	10	10	20	20	20	40	40	40

That is to say, taking plots with areas of from 0·3 to 0·75 of an acre, group 1 contains the 20 largest trees in the plot, group 2 the

20 next largest, and so on, the last group containing the smallest trees in the plot.

Selection and Measurement of Sample Trees.—When the range of girth in the main crop has been discovered, it becomes possible to select the sample trees. These are not chosen to represent the means of the groups, but are selected so as to cover adequately the range of girth and should be spread over this range as evenly as possible. Each tree should also be quite typical of its class.

The sample trees are obtained from the surround attached to the plot, though with C grade or with crown thinnings it is often possible to select a certain number of sample trees from among the trees marked for removal in the plot itself. For this reason, in plots where thinnings of these grades are being carried out, the sample trees should always be selected before the thinnings are felled.

The number of sample trees to be chosen depends upon the area of surround available, the nature of the thinning, the exposure, and the age and size of the crop. With a small surround it is often difficult to fell a sufficient number of sample trees without affecting the treatment of the surround as compared with that of the plot, and in older crops, the felling of trees in the larger girth classes may result in the formation of undesirable gaps. The number of sample trees to be felled is left to the discretion of the officer in charge, but must in no circumstances be less than six. As a rule, about ten trees are cut. In special cases it is possible to measure some or all of the sample trees standing, and in view of the increasing difficulty which will be experienced in obtaining felled sample trees as the plots grow older, investigations are being carried out with the object of developing a method for measuring standing sample trees. The selected sample trees are felled and measured, the measurements taken being similar to those recorded on page 10. In addition, however, the lengths of the leading shoots for the past five years are recorded. The trees, too, are measured over bark and under bark in one length and in 10-foot sections to the timber point, the girths being taken at 5, 10, 15 feet, etc., from the butt. If the last length down to timber point is less than 6 feet, it is added on to the preceding section, *e.g.*, in a tree with a timber height of 65 feet the last section would be 15 feet long. If the last length is 6 feet or over, it is treated as an independent section.

The volume of each tree is taken as the sum of the sectional volumes and is calculated both over bark and under bark. The bark percentage is obtained for each section and also for the whole tree, while the form factor for each tree is calculated from the formula :

$$\text{Form factor} = \frac{\text{Volume of tree (under bark)}}{\text{Total height} \times \text{basal area at 4 ft. 3 in.}}.$$

Analysis of Sample Trees.—Five of the sample trees are cross-cut into lengths not longer than 10 feet and the annual rings counted at each section and also at the butts. The trees selected for this analysis

should not include any with girths below the mean girth of the plot, and, when a sufficient number of sample trees is felled, the two largest should also be excluded. The number of rings at the various heights at which each tree has been cross-cut having been ascertained, the age at any height is found by subtracting the number of rings at that height from the number counted at the butt. For each of the five trees the heights above ground of the sections are plotted against the corresponding ages and a smooth curve drawn to follow the points. A mean height curve for the plots is drawn from the five curves.

The sample trees analysed represent, as a rule, the growth rather of the dominant trees than that of the crop at the time of measurement, because only the larger sample trees have been selected for analysis. It sometimes happens, therefore, that the final mean height obtained from the curves differs from the average height of the main crop. The age may also differ from the age given in the final record. When the difference is greater than 1 foot in height or 1 year in age, a second mean curve is drawn, to follow accurately the trend of the first curve, taking the age and height from the final record as the fixed end point. The first of these curves is labelled " Sample Tree Curve" and the second " Mean Plot Curve."

Measurement of Thinnings.—Thinnings are marked for felling both in the sample plot and in the surround, but only the thinnings in the plot itself are measured.

Every tree felled in the plot as a thinning is measured, the girth, total height and timber height being recorded. All trees in which the timber height is less than 16 feet are measured in one length, but trees with a timber length of 16 feet or more are measured in 10 foot sections. From 5 to 10 per cent. of the thinnings, according to their number and size, are girthed under bark as well as over bark at the points of measurement and their volumes calculated for under bark as well as over bark.

All the other thinnings are measured over bark.

The percentage of bark in the thinnings is calculated from the barked thinnings as follows :—

Bark percentage =

$$\frac{\text{Sum of O.B. volumes} - \text{sum of U.B. volumes}}{\text{Sum of O.B. volumes}} \times 100.$$

The under-bark volume of all the thinnings is then calculated by the following formula :—

$$\text{Volume of thinnings (U.B.)} = \text{Volume of thinnings (O.B.)} \times \frac{(100 - \text{Bark, per cent.})}{100}.$$

The number of thinnings barked should in no case be less than five, and trees should be selected for barking from the large, average and small classes of thinnings.

Calculation of the Volume.—The trees of the main crop having been grouped according to the method already described, the total basal area for each group is calculated and the mean basal area and mean girth worked out.

The next step is to construct from the sample tree data graphs showing the relationship between girth and height, girth and form factor and girth and volume.

The girth-height graph is obtained by plotting the total heights of the sample trees against their girths at breast height and drawing a smooth curve through the points to express the relationship. On this graph the data from the felled sample trees are supplemented by height measurements—taken by hypsometer—of the group of largest trees in the plot. These hypsometric heights plotted against the respective girths help to indicate the trend of the curve towards the largest girth classes (Fig. 1).

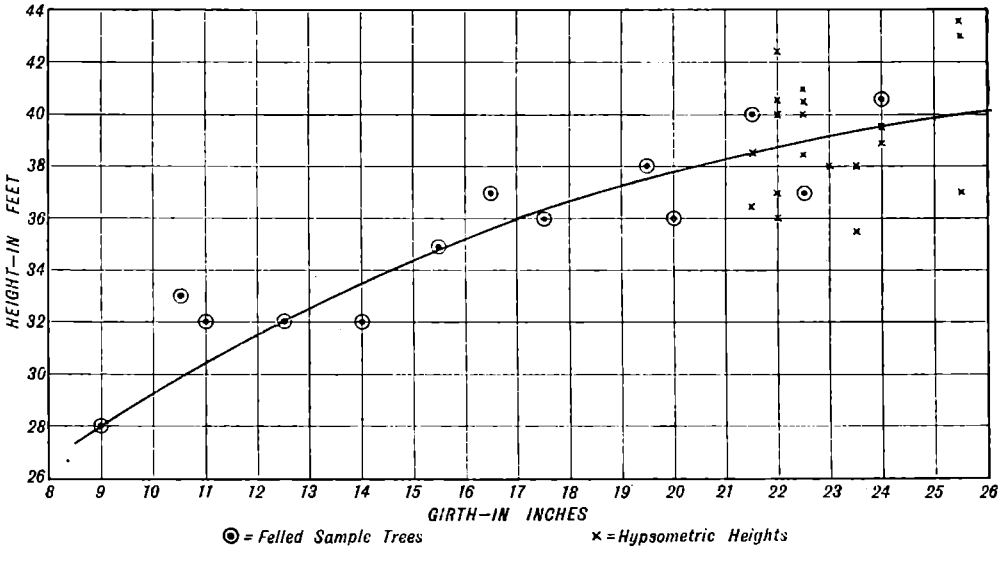

FIG. 1.—Girth-Height graph. Permanent sample plot method. Scots Pine—42 years old

The form factors and the volumes under bark are similarly plotted and the respective curves drawn (Figs. 2 and 3).

After the graphs have been completed, the mean height and mean form factor for each group are read from the curves against the mean girth.

The group volume is then obtained from the following formula :—

Volume of group = mean height × basal area of group × mean form factor.

As a check, the mean volume of the group is obtained in a similar manner from the girth volume graph and the group volume found in this way :—

Volume of group = mean volume of group × number of trees in group.

These two volumes should correspond closely.

The volume of the plot is taken as the sum of the group volumes.

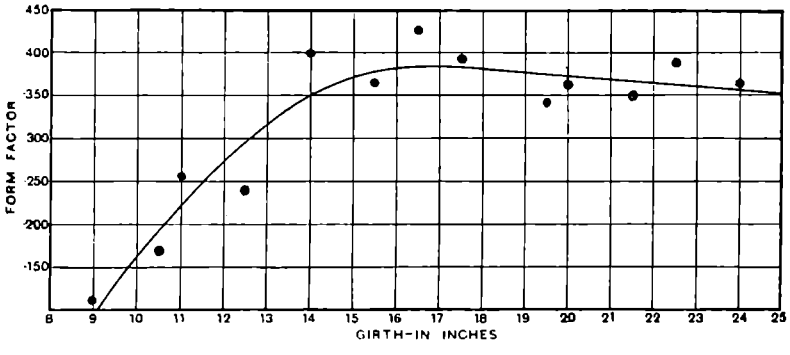

FIG. 2.—Form factor graph. Permanent sample plot method. Scots Pine—42 years old

Final Record.—The figures shown in the Appendix for each permanent plot are obtained in the following ways :—

Height.—The mean height is found by Lorey's formula,

$$H = \frac{s_1 h_1 + s_2 h_2 + \ldots s_n h_n}{S},$$

where $s_1, s_2 \ldots s_n$ are the basal areas of the various groups $h_1 h_2 \ldots h_n$ are the heights of the groups and S is the total basal area of the plot. The value so obtained should agree to within one foot with the value read from the girth-height graph against the mean girth.

Bark Percentage.—This is obtained for the main crop from the sample trees, thus :—

$$\text{Bark percentage} = \frac{\text{Total volume of sample trees (O.B.) } \textit{minus} \text{ Total volume of sample trees (U.B.)}}{\text{Volume of sample trees (O.B.)}} \times 100.$$

The *age, girth, number of stems, basal area, volume, form factor, crown length percentage* are obtained in the manner described on p. 11.

Unit of Measurement.—The measurements in the permanent sample plots are based upon girth as during the survey. In order,

however, to bring the results more into conformity with the results of similar work in other countries, the quarter-girth system has been abandoned and the true-girth measure substituted.

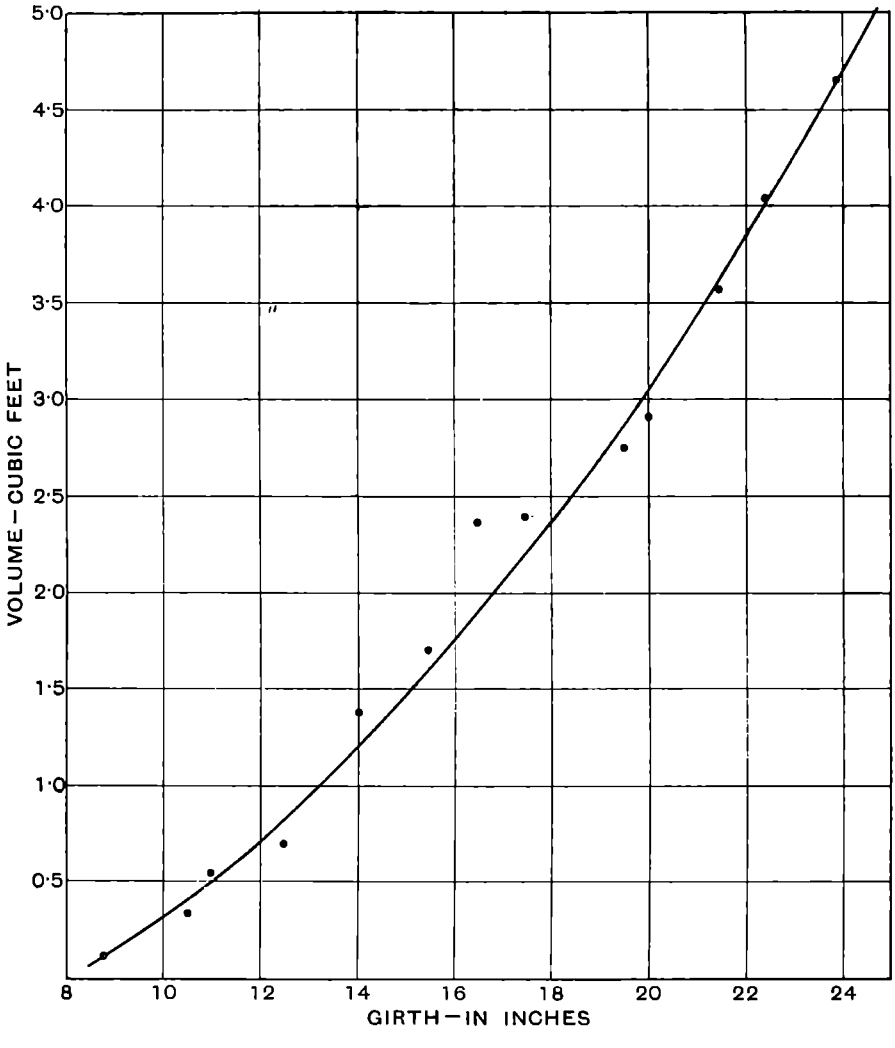

FIG. 3.—Girth-Volume graph. Permanent sample plot method. Scots Pine—42 years old

The final records of such permanent plots as have been employed in the preparation of the bulletin have been converted from the true-girth to the quarter-girth measure.

It may be observed that the quarter-girth system is still in general use in Great Britain and is not likely to be displaced.

Accuracy of the Method.

Four felled plots have been measured to date. In each case the volume was determined by the permanent sample-plot method, and, when this had been done, the plot was felled and every tree measured.

Species.	Felled volume per acre.		Volume per acre by sample-plot method.		Per cent. difference from felled volume.	
	O.B.	U.B.	O.B.	U.B.	O.B.	U.B.
European larch ..	—	4,396	—	4,428	—	+ 0·7
Douglas fir ..	7,225	—	7,175	—	— 0·7	—
Norway spruce ..	5,390	4,800	5,315	4,730	— 1·4	— 1·5
Norway spruce ..	—	5,134	—	5,079	—	— 1·1

The above table indicates that the methods now employed are sufficiently accurate to enable the results to be regarded with a fair degree of confidence.

CHAPTER III

CONSTRUCTION OF YIELD TABLES

Formation of Quality Classes

The rate of growth of any species is found to vary greatly from place to place; locality conditions such as soil, rainfall and exposure all exert a marked influence with the result that over a sufficiently large area every gradation may exist, according as conditions are favourable or unfavourable, between woods of the fastest and woods of the slowest growth.

The variations in rate of growth within a species are generally so wide that the study of individual woods throws very little light upon the course of development of the species as a whole. Nor is it possible to foretell the probable development of any wood until there has been devised a system of classification which covers the complete range of growth for the species, and groups together all woods with similar rates of growth. As one of the principal objects of a yield table is to forecast with some degree of certainty the future growth of a stand, the necessity for such a classification becomes evident.

The standard classes which are used are known as quality classes, and the methods employed in their derivation are of the first importance. Speaking generally, it may be said that the chief object of commercial forestry is to produce, for any given species, the largest possible volume of marketable timber in the shortest time. It is therefore natural that the rate of volume production should have been selected as the basis of classification. This practice, introduced by Baur ([1]), is now firmly established.

Baur's method is, briefly, as follows :—The volumes per unit area of the sample plots are plotted against their respective ages and a diagram obtained which shows the range of volume. On this diagram the points representing the young stands are found to be clustered together near the origin, while, as the age increases, the range of volumes grows wider, with the result that the points lie on a band which becomes broader as it gets further from the origin. The shape of the band has been compared to the tail of a comet. A curve is then drawn through the highest points of the band and another through the lowest, indicating respectively the maximum and the minimum production. The space between the curves is divided into strips of equal breadth by curves drawn to conform in shape to the maximum and minimum curves, the number of strips varying according to the number of classes desired. The plots are in this way separated into quality classes. Thus, for example, any plot which falls into the highest strip is held to belong to Quality Class I, *i.e.*, the quality class which is best in respect of rate of volume production.

Baur's method, on account of its simplicity, has been widely adopted and, though open to certain objections, was not seriously challenged until Cajander ([3]), in 1909, introduced his theory of forest types, in which an entirely new system of classification was propounded.

The basis of Cajander's classification of localities is the forest type, which is defined by the surface vegetation. " . . . . All those stands are referred to the same forest type, the vegetation of which at or near the time of maturity of the stand, and, provided that the stands are normally stocked, is characterised by a more or less identical floristic composition and by an identical ecologico-biological nature . . ."* That is to say, the ground vegetation in a normal mature stand is held to reflect with sufficient accuracy the action of the various locality factors. In Finland, it has been possible to use forest types in place of the conventional quality classes and to construct yield tables on this new basis.

Cajander's theory of forest types has been severely criticised by Hesselman ([18]), of the Swedish Research Station, who maintains that it is not applicable to conditions in Sweden. The application of the theory in Great Britain appears also to be open to serious objections. In the first place, the scarcity of mature coniferous woods in this country makes it difficult to establish forest types as understood by Cajander, and the absence of large areas of woods of different ages limits the possibilities of tracing any given type from the mature to the young crops. The second disadvantage is the large number of types which would be needed to cover the wide range of soil and vegetation in Great Britain, while the necessity of sub-dividing many of these types in order to take into account the effect of exposure would tend to make the system so complex as to be unworkable.

Baur's method gives reliable results if the woods in which the sample plots are measured have been uniformly treated in the past, and also, if there is a sufficient number of plots of the highest and lowest productions at all ages to enable the limiting lines to be drawn with a fair degree of certainty. Most of the continental yield tables constructed on this pattern were derived from state-owned forests which have been under continuous management over long periods. In Great Britain, on the other hand, the woods upon which it was necessary to base the yield tables had been subjected to widely different methods of treatment. Thus, some of the woods had been left for many years unthinned, others had been thinned only at irregular intervals, while the intensity of thinning had varied from wood to wood and even in the same wood at different periods. Consequently, if the classification were made according to volume produced at a given age, localities really equal in yield capacity would appear to belong to different quality classes as a result of the diversity of treatment in earlier years.

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* " The Theory of Forest Types" ([4]), p. 26.

Examination of any yield table based on Baur's method shows that if the volumes are plotted against mean height instead of against age, the points lie closely about a smooth curve (usually a straight line, at least for the younger age classes). This indicates that mean height can be used as an index to volume and so to rate of production. In point of fact, except by the adherents to Cajander's theory, height is invariably used as a means of referring the growth of any given wood to its appropriate quality class in the yield tables. The objections which Ilvessalo ([21]) has advanced to the use of height as an index to quality are not, in our opinion, valid. In the first place, although the mean height may vary according to the method or formula employed in deriving it, these differences are not sufficiently great to introduce any serious disturbing factor. Secondly, differences in thinning procedure within the limits usually recognised as practicable do not appreciably affect the height growth. Volume, on the other hand, is very sensitive to treatment, and thus is not nearly so satisfactory as a basis for division into quality classes.

In view of these considerations, it was decided to base the classification upon height and to group the sample plots according to height reached at 50 years of age. This choice of 50 years as the standard age was wholly arbitrary, but was influenced by the following considerations :—

(*a*) By the time a coniferous wood is 50 years old, most of the factors of locality may be expected to have found expression in the growth of the crop, and the height growth at that age should be a reliable index to the quality of site for that species.

(*b*) It is desirable to take the lowest age at which these factors produce a decisive effect, as, the lower the standard age, the fewer sample plots need be excluded from the preliminary classification and the more data will be available for constructing the height curves upon which the final classification depends.

As Schlich ([28]) has pointed out, an alternative method would have been to plot all the final heights against age and employ Baur's method of limiting curves in the same way as for volumes. The weak point, however, of Baur's method is that the whole trend of the curves is based upon what is inevitably the scantiest part of the data, namely, the fastest and the slowest growing woods, whereas the method now to be described derives the curves from the individual sample tree analysis, the trend of the final age-height curve for any class being determined by the mean of the curves from the plots within that class. By this method the various steps in the process of constructing quality class curves were as follows :—

For the species under consideration, the mean age-height graphs of all plots of 50 years of age and over were reproduced on one diagram (Fig. 4*). On considering the diagrams for the

* To make the diagram clearer, certain of the curves have been omitted.

principal species it was found that a difference of 10 feet in height growth at 50 years was in all cases convenient for the definition of adjacent quality classes and that the mean height of any one quality class could be fixed at a multiple of 10 ft. Thus, there were set up quality classes, known as the 40-ft. class, 50-ft. class, &c., with upper and lower limits at 35 ft. and 45 ft., and 45 ft. and 55 ft., &c., respectively, at 50 years of age. The number of quality classes in any species depends on the range of height at 50 years of age. For example, there are five quality classes for Norway spruce, I or 80-ft., II or 70-ft., III or 60-ft., IV or 50-ft., and V or 40-ft., but only three for Corsican pine, I or 70-ft., II or 60-ft. and III or 50-ft.

A certain number of plots were measured of quality classes lower than any given in the tables, but the number of such plots was so few that they were left out of consideration.

Height growth curves were next constructed. The sample plots were placed in their appropriate quality classes on the basis of height at 50 years and a mean age-height curve constructed for each quality class. This was done arithmetically. For each sample plot, 50 years of age or older, the heights at 10, 20, 30, &c., years were read from the age-height curve. These heights were tabulated, as is shown below, and the arithmetic mean of all the readings calculated for each age. If these mean values are plotted they tend, especially towards the higher ages when the data become scantier, to give a graph with erratic tendencies. The reason is that from the point where the number of readings begins to diminish, the mean values do not relate to the same data. The curve was, therefore, taken as a firm line so far as the maximum number of readings allowed. It was then "stepped," each step referring to so much data as were available. In this way, the tendency of the whole series becomes clear and it is possible to draw with accuracy the mean curve for the quality class (Fig. 5).

Table showing Method of constructing Mean Age-Height Curve. European Larch, Quality Class III.

Plot No.	Height at									
	10 yrs.	20 yrs.	30 yrs.	40 yrs.	50 yrs.	60 yrs.	70 yrs.	80 yrs.	90 yrs.	100 yrs.
ENGLAND.										
365	12½	32	43	55	65	—	—	—	—	—
335	8	22½	36½	48	57½	—	—	—	—	—
357	11	26	41	54	64	—	—	—	—	—
325	12	27½	40½	51	60½	—	—	—	—	—
326	10	22½	37	48	55½	—	—	—	—	—
109	8	26	41½	52	59	—	—	—	—	—
Carried forward	61½	156½	239½	308	361½	—	—	—	—	—

Table—continued

Plot No.	Height at 10 yrs.	20 yrs.	30 yrs.	40 yrs.	50 yrs.	60 yrs.	70 yrs.	80 yrs.	90 yrs.	100 yrs.
Brought forward	61½	156½	239½	308	361½	—	—	—	—	—
England.										
418	15	32½	44	54½	62½	—	—	—	—	—
362	10	26	37	46½	56½	67	—	—	—	—
352	5½	14	27½	43½	57	66	—	—	—	—
128	15	33½	47	57½	65	72	—	—	—	—
194	12½	31½	44	51	55	58	—	—	—	—
202	14	33½	46	55	63	70	—	—	—	—
410	17½	35	46	54	60½	66	68½	—	—	—
346	12	26½	38	46½	54½	61½	67	71½	—	—
195	11	27	41	51½	61	67	71	74	—	—
515	9	28	43	54	63	71	77	84	—	—
130	9½	24	41	54½	64	72½	78	83	86½	—
Y. 13	17½	31½	40½	48½	55	—	—	—	—	—
Y. 12	13	30½	41½	51	59	66	—	—	—	—
Y. 4	7½	28½	41½	50	57½	64½	71	—	—	—
611	12½	25½	37	46½	55½	—	—	—	—	—
612	13	30	43½	53	62½	—	—	—	—	—
627	8½	25	35½	46½	56½	—	—	—	—	—
633	12	26½	39½	50	59	—	—	—	—	—
635	15	28½	40½	50½	61	—	—	—	—	—
679	16	31	44½	51½	57	62½	67½	—	—	—
680	12	27	38	49½	60	—	—	—	—	—
Sub Y. 58	18½	34	44½	53	61	—	—	—	—	—
Y. 55	11	24½	37	48	57½	64½	73	79	—	—
Y. 40	11	24½	35½	47	58½	65	—	—	—	—
Y. 23	16	37	49	57½	64	70½	76½	—	—	—
Y. 21	13	31½	45	52½	58	—	—	—	—	—
S. 10	17½	33½	46½	57	63½	—	—	—	—	—
S. 13	14	28½	39½	50	61	—	—	—	—	—
663	16½	31	41½	50	58	—	—	—	—	—
618	14	29½	42½	54	65	—	—	—	—	—
6	13	29	41	53	63½	—	—	—	—	—
10	10½	25½	38	49	60	—	—	—	—	—
11	7	20	34	46	57½	68	—	—	—	—
SCOTLAND.										
79	10½	25	39½	53½	64	—	—	—	—	—
71	11	26½	43	54½	64½	—	—	—	—	—
70	9½	27	42	54	61	—	—	—	—	—
64	6	16	31	46	59	—	—	—	—	—
85	8	19	34	48½	60	69	—	—	—	—
84	11	24	37½	52	65	76½	—	—	—	—
37	7	19½	36½	54	64½	—	—	—	—	—
17B	10½	24½	36½	47	56½	65	72	—	—	—
15B	17	29½	42	54	64	71½	78	—	—	—
13	11	26	39½	50	57½	64	70	76	—	—
54	8½	22	37½	50½	60½	67½	74	78	—	—
53	11½	24½	36½	48	58	68	78	87½	—	—
16	13	29	41	50	58	65	71½	78	83½	—
46B	18½	33½	46½	56½	63½	69	74	78½	82½	85
69	13	29	43	54½	63	—	—	—	—	—
228	20	31	42½	52	60	65½	71	77	83	—
Carried forward	667½	1,506½	2,218½	2,815½	3,313	1,813	1,238	866½	335½	85

Table—continued

Plot No.	Height at									
	10 yrs.	20 yrs.	30 yrs.	40 yrs.	50 yrs.	60 yrs.	70 yrs.	80 yrs.	90 yrs.	100 yrs.
Brought forward	667½	1,506½	2,218½	2,815½	3,313	1,813	1,238	866½	335½	85
Scotland.										
227	14	29	42	53	62	68	74	78	81½	—
191	10	24	39	54½	65	—	—	—	—	—
188	9½	20	32½	47	59½	68½	—	—	—	—
149	13	27	39½	51	60½	68½	—	—	—	—
173	11½	25	40	51	60½	—	—	—	—	—
Total ..	725½	1,631½	2,411½	3,072	3,620½	2,018	1,312	944½	417	85
Number of readings	60	60	60	60	60	30	18	12	5	1
Mean ..	12	27	40	51	60½	67½	73	79	83½	85
	Elimination of the plots which do not carry on to the next 10-year period results in the following totals and means :—									
Total ..	—	—	—	—	1,795½	1,203½	878½	394½	82½	—
Number of readings	—	—	—	—	30	18	12	5	1	—
Mean ..	—	—	—	—	60	67	73	79	82½	—

It then remained to interpolate a limiting curve between each pair of mean curves. The age-height curves for all species will be found in Figs. 12–18.

All the sample plots were finally classified according to the height attained at the time of measurement. For example, a Norway spruce plot, 70 years of age and 60 ft. in height, falls on the Norway spruce graph between the 45-ft. and the 55-ft. limiting curves and belongs, therefore, to the 50-ft. class.

The plots under 50 years of age, which were not used in the construction of the quality class curves, were also assigned to the classes to which they belonged. For example, a Norway spruce plot, 30 years of age and 45 ft. in height, falls on the graph above the 75-ft. limiting curve and thus belongs to the 80-ft. class.

In constructing quality class curves for the newer exotics—Douglas fir, Corsican pine, Japanese larch and Sitka spruce—it was necessary to make use of the age-height curves from plots of all ages, on account of the scarcity or, in some cases, the absence of plots of more than 50 years of age. Douglas fir, Corsican pine and Sitka spruce were classified according to mean heights at 50 years. Japanese larch, on the other hand, was divided into two classes

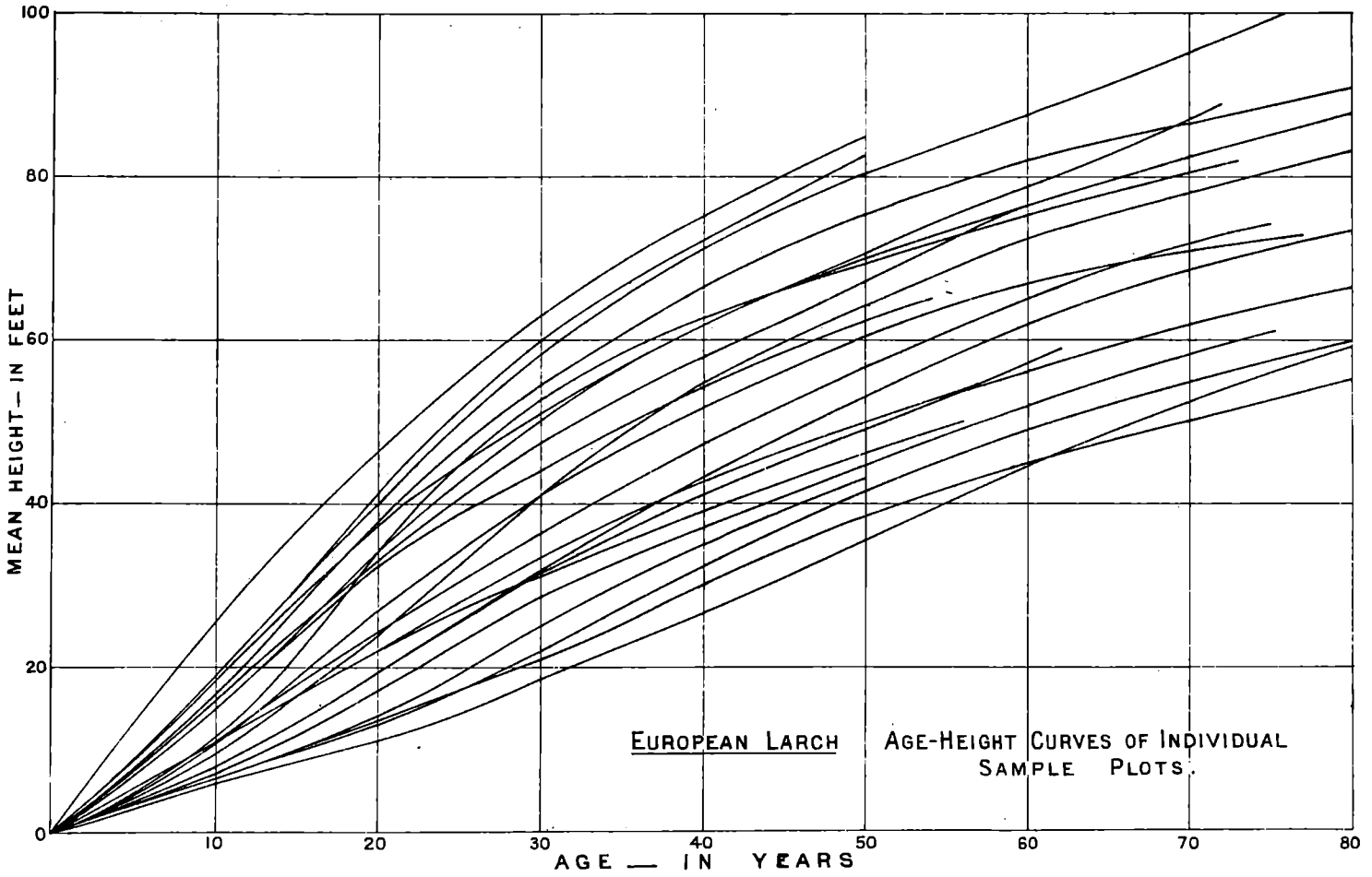

Fig. 4. Diagram illustrating Method of constructing Quality Classes.

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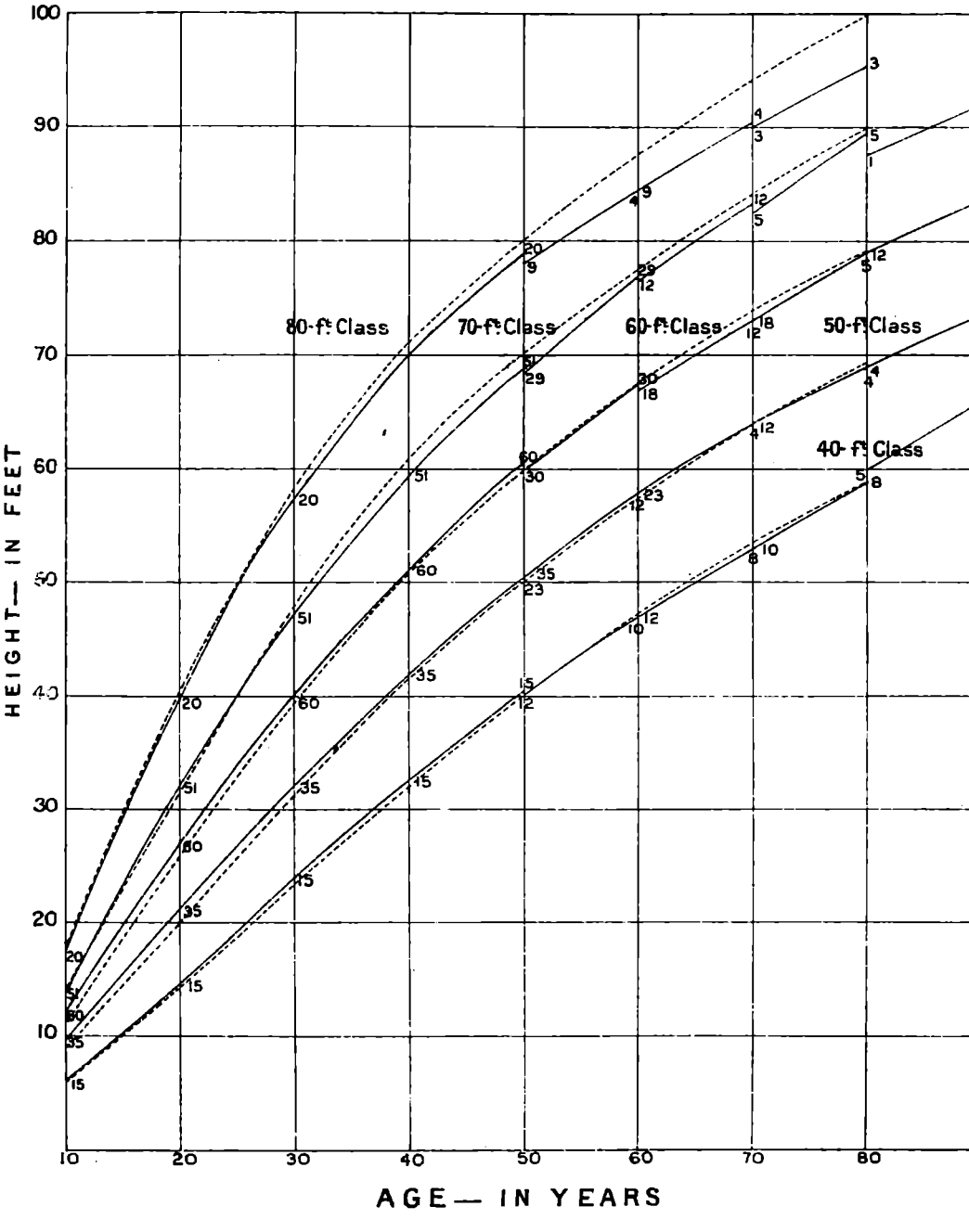

Fig. 5. Diagram illustrating Method of constructing Quality Classes.—European La

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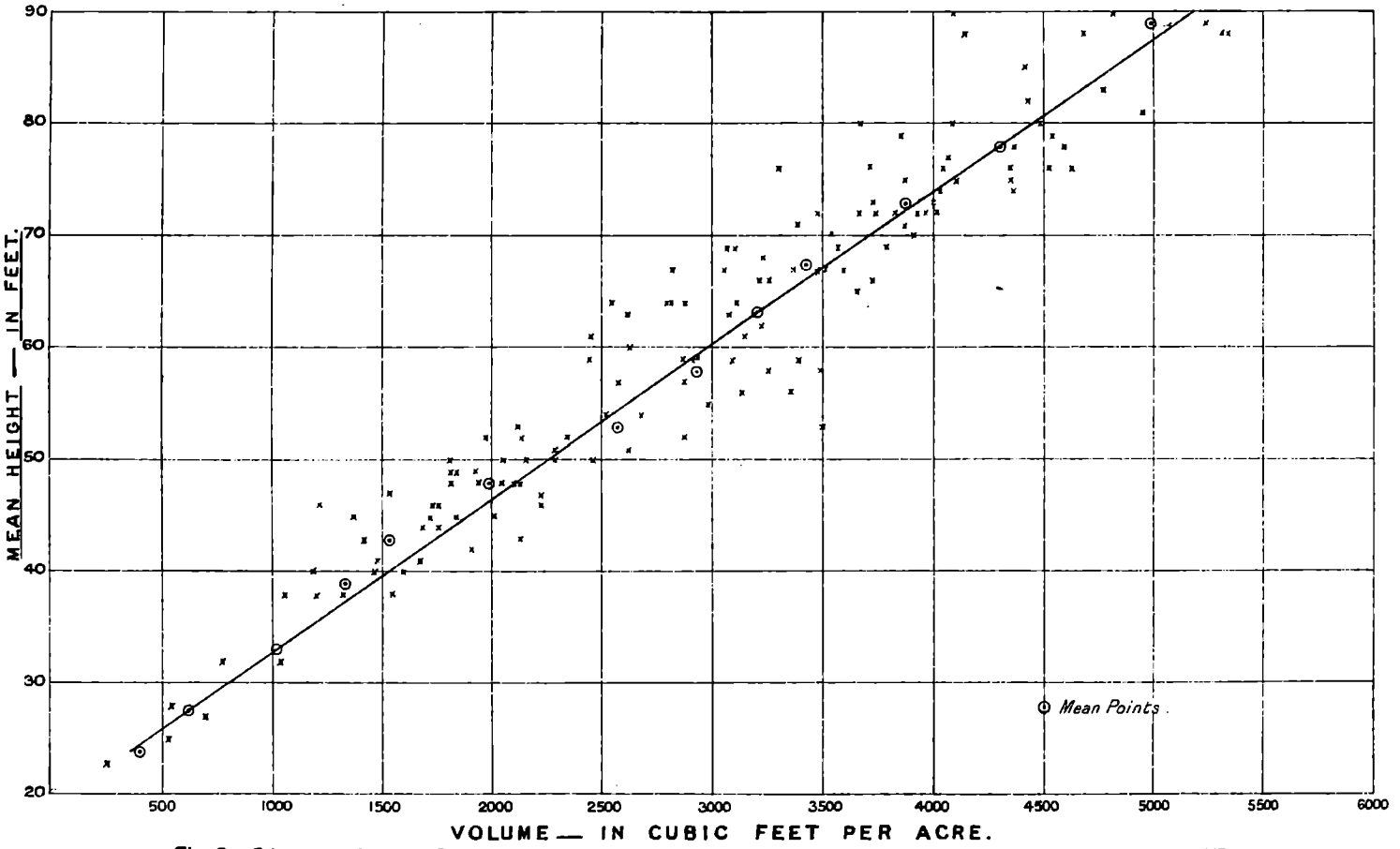

Fig. 6. Diagram showing Construction of Height-Volume Graph. — European Larch, Quality Class II.

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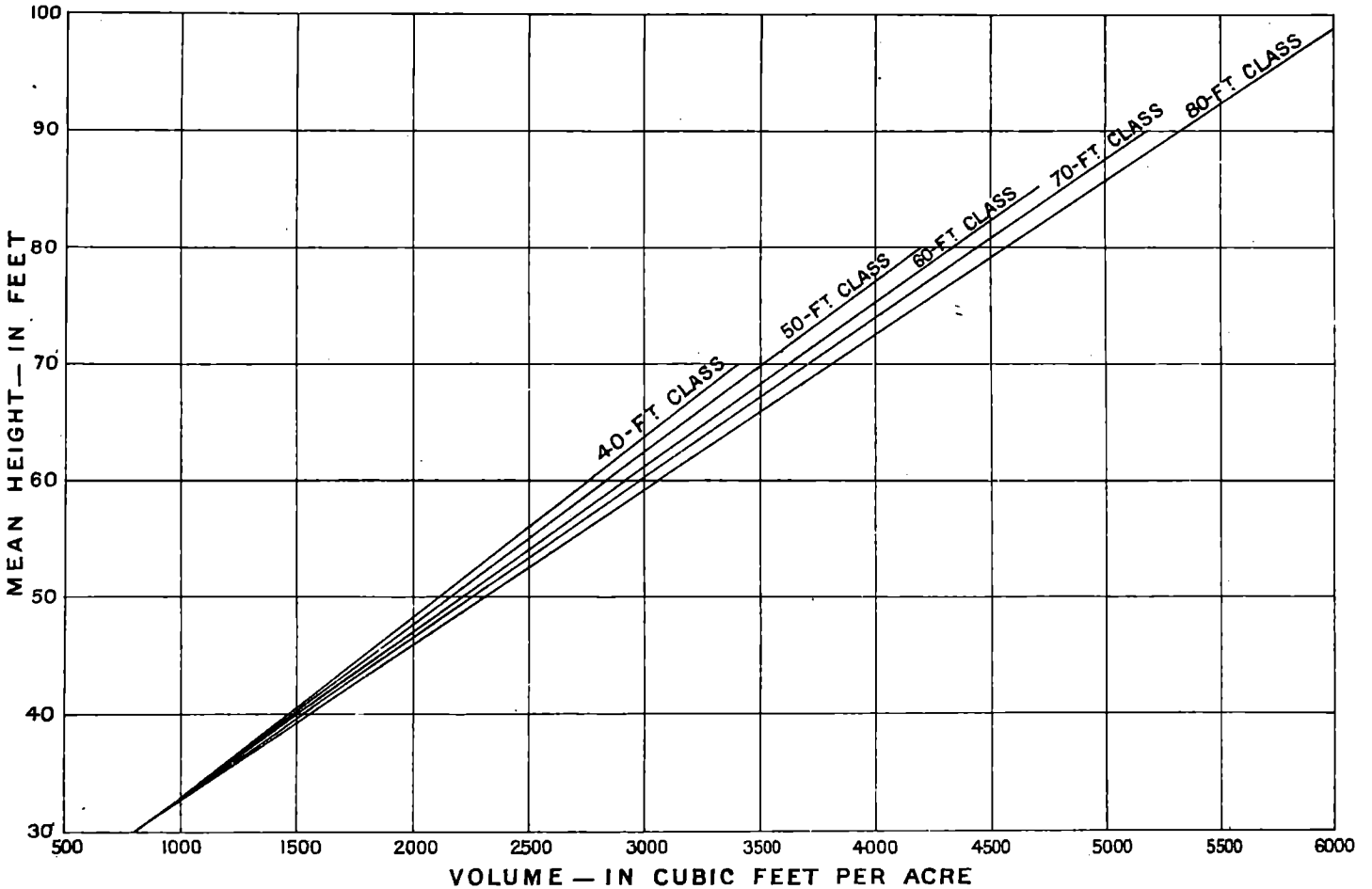

Fig. 7. Diagram showing the Relation between Height and Volume per Acre. — European Larch.

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according to mean height at 15 years of age; this was necessary because almost all the plots of this species were less than 25 years old, the oldest recorded being 33 years. Such a classification, it must be understood, is only temporary.

Method of constructing the Yield Tables

When all the sample plots for a species were separated into their appropriate quality classes, it became possible to proceed with the preparation of the yield tables.

A yield table for any species is intended to present in tabular form the development of crops subjected to a definite method of treatment. It is so constructed as to show the yields which may be expected from average woods of all quality classes at various ages, as well as the intermediate yields in thinnings. A complete yield table also gives particulars of the average stocking at a given age, showing the number of stems and basal area per unit area, together with dimensions of the mean tree of the stand, such as mean height, mean girth and mean form factor.

Graphical methods have been employed in the construction of the yield tables. As mean height at a given age was used as the criterion in the case of the quality classes, it was used again as a basis in the study of the volume, basal area, number of stems and girth.

Volume.—For each quality class the volume per acre under bark of each plot was plotted against mean height. The points so obtained, as is seen in Fig. 6, lie along a band of variable but often considerable breadth. To facilitate inspection of the general trend the volumes were grouped in five-foot height classes and the mean volume of each class superimposed on the graph as a red ink dot enclosed by a circle. In some cases individual points were found to lie a long way above or below the centre of the band and such plots were excluded by inspection as abnormal. A smooth curve was then drawn to represent the mean relation between height and volume.

When the curves had been drawn in this way for all the quality classes of a species, they were brought together on a single graph. Sometimes all the curves lay with the origins close together and the upper part of the curves fanning out quite uniformly, but often the relative positions were not so good and adjustments were necessary to space out the curves. These difficulties were usually greatest for those quality classes for which there were least data, and the method adopted was to accept the trend of the curves for the mean quality classes for which there were most points and to adjust the upper and lower curves accordingly. The adjusted curves were then replotted on the data graphs and it was almost invariably found that the revised trend did not involve any serious disregard of the data.

The height-volume graph for European larch, illustrated in Fig. 7, is of interest in that it shows a relationship amongst the different quality classes which is the reverse of that which holds in the other species. In European larch, it is found that the volume at a given height is greatest in Quality Class I and decreases in the lower classes, whereas in species such as Norway spruce, Scots pine and Douglas fir, at a given height the volume is greatest in the lowest quality class and smallest in Quality Class I.

Diagrams of this description were prepared for all species with the exception of Sitka spruce for which the data were not sufficient to permit of a height-volume curve for each quality class. In consequence, it was necessary to bring the plots of all classes together and construct one height-volume graph for the species.

Number of Stems per Acre.—In the same way, the number of stems per acre was plotted against height for each quality class and a similar set of graphs prepared for all species to show the relationship between mean height and number of stems per acre. A typical set of curves is shown in Fig. 8.

Mean Quarter Girth and Basal Area per Acre.—Graphs were prepared in the same way for quarter-girth (Fig. 9) and for basal area per acre (Fig. 10). This was done for the principal species, Scots pine, European larch, Norway spruce and Douglas fir, as well as for Quality Class I of Corsican pine. For the remaining classes of Corsican pine and for Japanese larch and Sitka spruce, the number of sample plots measured was insufficient to enable details of numbers of stems, girth and basal area to be given.

Form Factor.—The form factors are obtained by calculation from height, basal area and volume at each five-year period, using the formula :—$F = \frac{V}{H \times B.A.}$

Age-form factor graphs for European larch are shown in Fig. 11.

Intermediate Yield.—The numbers of stems per acre disappearing from the main crop from one five-year period to the next are directly obtainable by subtracting the number given at any age from the number shown for the preceding age; the resulting series represents the average number of stems removed at each age in the thinnings. The derivation of the corresponding volumes proved, however, to be a matter of considerable difficulty, owing partly to the irregularity in the past treatment of the woods and partly to the small amount of actual data available, which made it unsafe to apply the graphical methods used in constructing the tables for the main crop. It was decided eventually to employ an indirect method, in which the thinning volumes were derived from a theoretical consideration of the ratios existing between the mean volume per stem of the main crop and that of the thinnings. The ratios were based on selected continental yield tables.

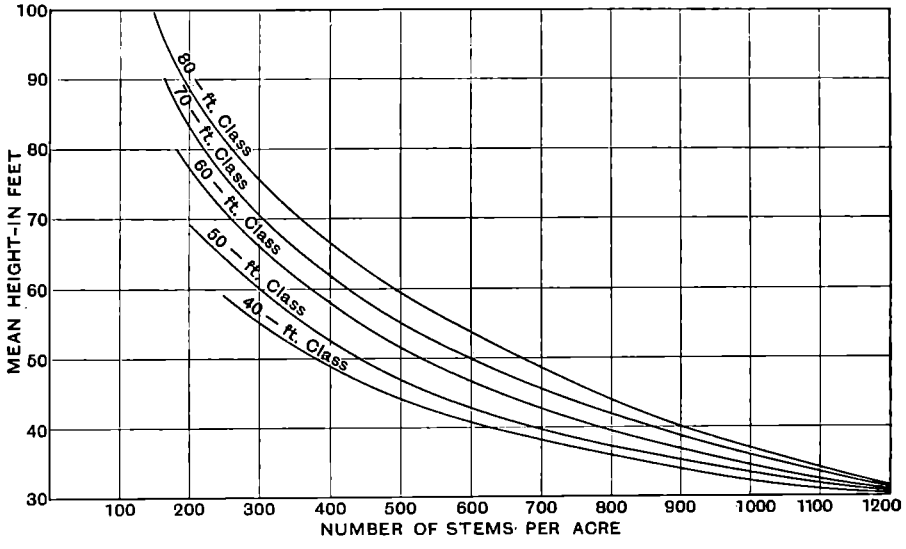

FIG. 8.—Diagram showing the relation between height and number of stems per acre—European Larch

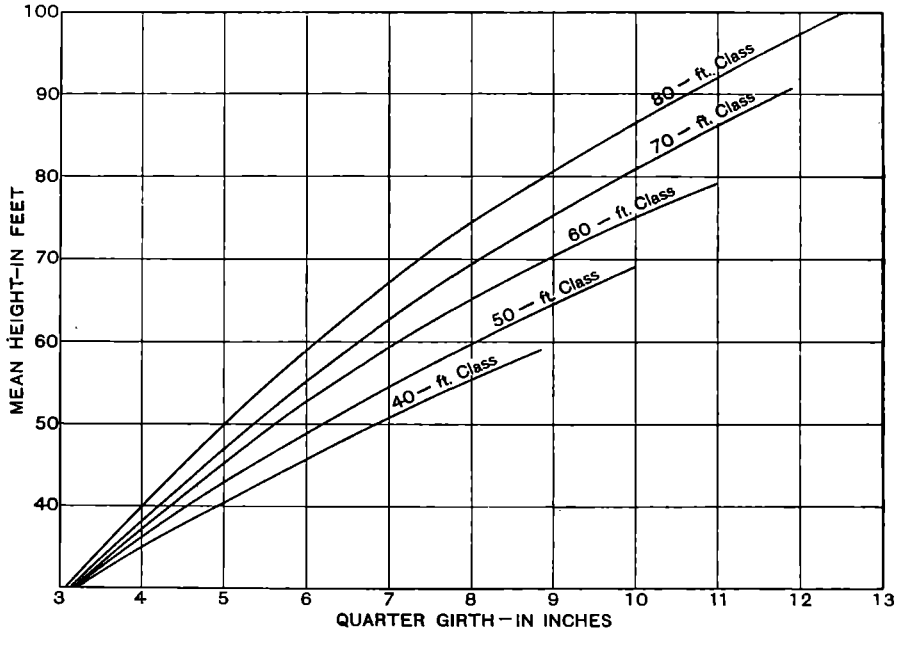

FIG. 9.—Diagram showing the relation between height and quarter-girth—European Larch

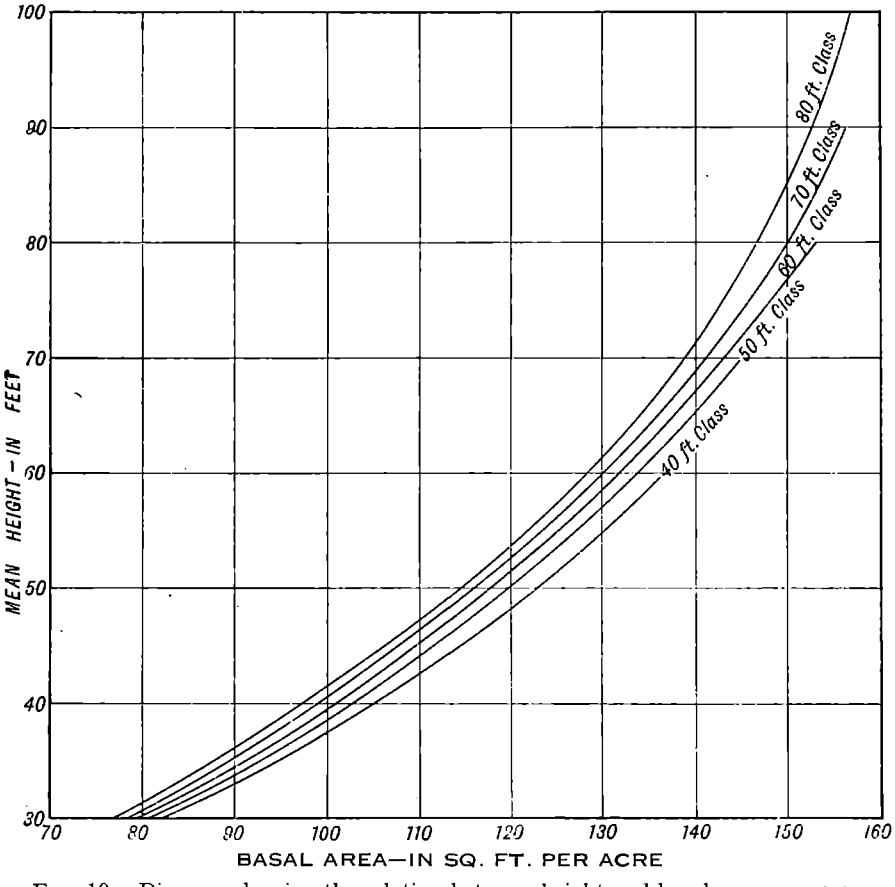

FIG. 10.—Diagram showing the relation between height and basal area per acre—European Larch

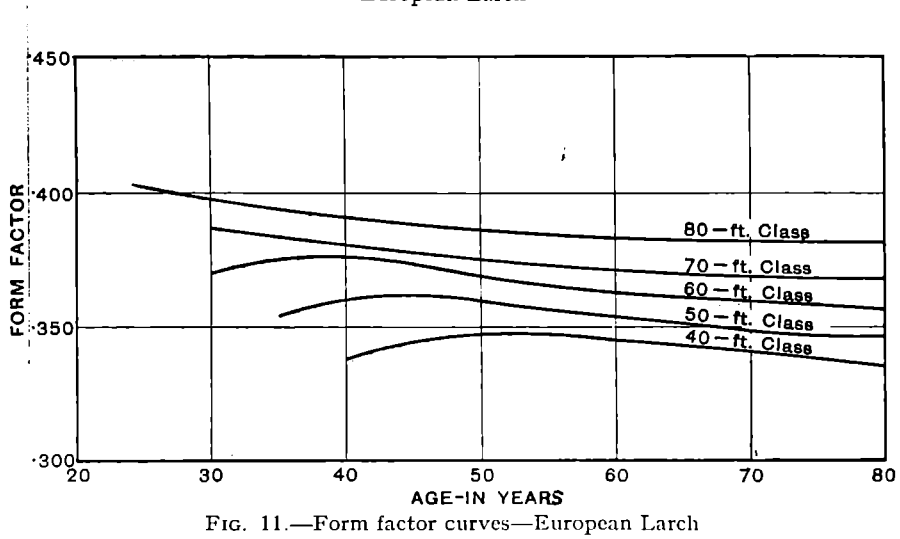

FIG. 11.—Form factor curves—European Larch

Preparation of Tabular Statements.—The final stage in the work was the preparation of the tabular statements which appear in Chapter VI. These were constructed as follows :—In each quality class the age was tabulated at five-year intervals (*i.e.*, at 5, 10, 15, &c., years) as shown in column 1 of the table below, and heights corresponding to these ages were read from the age-height graphs and entered in column 2. For these heights, the corresponding figures for quarter girth, number of stems per acre, basal area and volume were read from the graphs and entered in columns 3, 4, 5 and 7 respectively.

Table illustrating Method of presenting the Data

European Larch—Quality Class II (70-ft.)

1	2	3	4	5	6	7
Age in Years.	Mean Height in feet.	Mean Quarter Girth at 4 ft. 3 in.	No. of stems per acre.	Basal area sq. ft. per acre.	Form Factor.	Volume cubic ft. under bark per acre.
10	14	—	—	—	—	—
15	23	—	—	—	—	—
20	31½	3¼	1,160	82	·348	900
25	40	4¼	850	99	·384	1,520
30	48	5	640	113	·387	2,100
35	55	6	500	123	·384	2,600
40	61	6¾	410	131	·382	3,050
45	66	7½	350	137	·377	3,410
50	70	8¼	310	141	·375	3,700

It may be mentioned that the actual process of compiling the tables from the various curves is not always as simple as it appears from the above description. All the curves are interdependent and many mutual adjustments have to be made before satisfactory correlation is obtained.

Application of the Yield Tables

The figures in a yield table are averages compiled from a large number of woods, situated in different localities. With individual woods, variations from these mean figures are considerable, and

this must be kept in mind before the tables are used to estimate the future of any particular plantation. The direct application of yield tables to a single wood is limited to cases in which average figures are sufficient and it follows that the tables will be most reliable when used for comprehensive estimates in a series of woods spread over a large area. They cannot, for example, be used accurately to determine the sale or purchase value of a single wood.

Before a yield table can be applied in any forest, the quality classes of the component stands must be correctly assessed. It is necessary for this purpose to determine the mean height and age of the various stands. Thus, if a larch wood 40 years old, has a mean height of 58 ft., reference to the height curves for larch shows that it falls into Quality Class II (70 ft.). By assessing in the same way the quality class of every stand in the forest, the percentage of the whole area falling into each quality class can be ascertained and a basis secured for the determination of the economic treatment. A certain caution must be observed in assessing the quality class of young woods. A severe check in early life may cause a 20-year-old plantation of, say, Scots pine, to appear to belong to Quality Class III (40 ft.) or even to Quality Class IV (30 ft.), while 30 years later the same wood may have developed so rapidly as to come within Quality Class II (50 ft.).

It is probable that at the present time in Great Britain yield tables will be employed most frequently in connection with problems arising out of replanting and afforestation. On or near most areas suitable for planting, some plantations are generally to be found, and by comparing their mean heights with the height growth curves the quality classes may be determined. In this way the possibilities of the locality in respect of the species concerned may be discovered and the tables applied in order to assess the probable production and aid in fixing the rotation. The tables have been prepared for fully-stocked areas and it will be necessary, therefore, to employ a reducing factor to allow for land not actually planted, such as roads and rides, and for possible damage by wind, fire, insects and disease. The actual factor will depend upon the nature of the area to which the figures are applied.

The tables of thinnings are intended to apply to fully-stocked woods and represent a rough estimate of the intermediate yields which are probable from a light thinning. Irregularity in the intervals between thinnings, and deficient or excessive stocking, would necessitate considerable modifications in estimates of intermediate returns. The tables cannot safely be used as a guide to treatment in individual cases.

CHAPTER IV

YIELD TABLES for SCOTS PINE (England), SCOTS PINE (Scotland), EUROPEAN LARCH, NORWAY SPRUCE, DOUGLAS FIR, CORSICAN PINE, SITKA SPRUCE, JAPANESE LARCH

The figures for numbers of stems, basal area and volume given in the yield tables refer to the production on 1 acre of fully stocked wood.

The mean quarter-girth is given in inches at breast height (4 feet 3 inches above ground), the total basal area in square feet quarter-girth at breast height and the volume in cubic feet, under bark, measured down to 3 inches diameter.

The following factors may be employed to convert these tables from the quarter-girth system with British units of measurement to the diameter system, true measure, with metric units :—

Feet to metres = feet × 0·3048.

Inches quarter-girth to centimetres diameter = inches quarter-girth × 3·234.

Number of stems per acre to number of stems per hectare = number of stems per acre × 2·471.

Square feet quarter-girth per acre to square metres per hectare = square feet quarter-girth per acre × 0·2922.

Cubic feet quarter-girth per acre to cubic metres per hectare = cubic feet quarter-girth per acre × 0·0891.

To convert cubic feet quarter-girth to cubic feet true measure the following factor should be used :—

Cubic feet true measure = cubic feet quarter-girth × 1·273.

SCOTS PINE—England

Age.	Main Crop.						Thinnings.	
	Mean Height.	Mean Quarter Girth.	Number of Stems.	Basal Area.	Form Factor.	Volume.	Number of Stems.	Volume.
Years.	Ft.	Ins.		Sq. ft.		Cub. ft.		Cub. ft.
Quality Class I (60-*ft.*)								
25	33	3¾	1,010	91	·370	1,110	—	—
30	40	4½	810	113	·383	1,730	—	—
35	46	5¼	655	129	·383	2,280	155	135
40	51	6¼	545	141	·380	2,730	110	170
45	56	7	445	150	·377	3,170	100	195
50	60	7¾	375	156	·377	3,530	70	210
55	64	8½	325	162	·375	3,890	50	210
60	67	9	285	165	·376	4,160	40	225
65	70	9¾	255	169	·374	4,430	30	220
70	72½	10¼	230	171	·374	4,640	25	220
75	75	11	210	174	·373	4,870	20	210
80	77	11½	193	176	·373	5,050	17	200
85	79	12	179	179	·370	5,230	14	190
90	81	12½	167	180	·371	5,410	12	180
95	83	13	157	182	·370	5,590	10	170
100	84½	13¼	150	183	·370	5,730	7	160
Quality Class II (50-*ft.*)								
30	31	3¾	1,040	93	·392	1,130	—	—
35	36½	4½	835	113	·400	1,650	—	—
40	41½	5¼	680	128	·397	2,110	155	120
45	46	6	570	140	·391	2,520	110	140
50	50	6¾	480	149	·388	2,890	90	150
55	54	7½	405	157	·386	3,270	75	160
60	57	8	350	161	·386	3,550	55	170
65	60	8¾	305	165	·386	3,820	45	175
70	62½	9½	270	169	·384	4,060	35	180
75	65	10	245	172	·384	4,300	25	180
80	67	10½	225	173	·385	4,470	20	175
85	69	11	207	176	·385	4,670	18	165
90	71	11½	192	177	·386	4,850	15	155
95	73	12	179	179	·385	5,030	13	145
100	74	12¼	170	180	·385	5,130	9	130

SCOTS PINE—England—*continued*

Age.	Main Crop.						Thinnings.	
	Mean Height.	Mean Quarter Girth.	Number of Stems.	Basal Area.	Form Factor.	Volume.	Number of Stems.	Volume.
Years.	Ft.	Ins.		Sq. ft.		Cub. ft.		Cub. ft.
				Quality Class III (40-*ft.*)				
35	28½	3½	1,060	93	·392	1,040	—	—
40	32½	4¼	885	108	·410	1,440	—	—
45	36½	5	720	123	·410	1,840	170	85
50	40	5¾	610	134	·408	2,190	110	95
55	43	6¼	520	142	·408	2,490	90	105
60	46	7	445	150	·404	2,790	75	115
65	49	7½	385	156	·404	3,090	60	120
70	51	8¼	345	160	·403	3,290	40	130
75	53	8¾	310	163	·404	3,490	35	130
80	55	9¼	280	166	·403	3,680	30	130
85	57	9¾	253	169	·404	3,890	27	130
90	59	10¼	230	171	·404	4,080	23	125
95	61	10¾	212	174	·404	4,280	18	115
100	62	11¼	200	175	·405	4,390	12	105

SCOTS PINE—Scotland

Quality Class I (60-*ft.*)

25	33	3¾	1,240	115	·312	1,180	—	—
30	40	4½	960	137	·354	1,940	280	110
35	46	5¼	760	153	·366	2,580	200	125
40	51	6¼	630	165	·371	3,120	130	140
45	56	7	525	177	·369	3,660	105	155
50	60	7¾	450	185	·369	4,100	75	175
55	64	8½	385	192	·368	4,520	65	195
60	67	9	340	197	·366	4,840	45	220
65	70	9¾	305	202	·365	5,160	35	235
70	72½	10¼	275	206	·364	5,440	30	250
75	75	11	250	210	·362	5,700	25	260
80	77	11½	230	212	·362	5,920	20	255
85	79	12	215	215	·361	6,130	15	245
90	81	12½	200	218	·360	6,350	15	225
95	83	13	190	221	·358	6,560	10	205
100	84½	13¼	183	223	·357	6,720	7	180

SCOTS PINE—Scotland—*continued*

Age.	Main Crop.						Thinnings.	
	Mean Height.	Mean Quarter Girth.	Number of Stems.	Basal Area.	Form Factor.	Volume.	Number of Stems.	Volume.
Years.	Ft.	Ins.		Sq. ft.		Cub. ft.		Cub. ft.
Quality Class II (50-*ft.*)								
30	31	3¾	1,230	116	·361	1,300	—	—
35	36½	4½	990	136	·387	1,920	240	85
40	41½	5¼	795	152	·393	2,480	195	100
45	46	6	655	164	·398	3,000	140	115
50	50	6¾	550	174	·397	3,450	105	125
55	54	7½	470	182	·398	3,910	80	145
60	57	8	410	188	·396	4,250	60	160
65	60	8¾	360	194	·395	4,600	50	175
70	62½	9½	325	199	·392	4,880	35	190
75	65	10	295	204	·390	5,170	30	195
80	67	10½	270	207	·389	5,400	25	200
85	69	11	250	210	·389	5,630	20	195
90	71	11½	230	213	·387	5,850	20	185
95	73	12	215	215	·387	6,080	15	175
100	74	12¼	207	218	·384	6,200	8	160
Quality Class III (40-*ft.*)								
40	32½	4¼	1,030	130	·395	1,670	—	—
45	36½	5	840	144	·407	2,140	190	100
50	40	5¾	700	155	·410	2,540	140	110
55	43	6¼	600	163	·413	2,900	100	120
60	46	7	510	171	·412	3,240	90	130
65	49	7½	440	179	·408	3,580	70	135
70	51	8¼	400	185	·404	3,810	40	145
75	53	8¾	365	189	·404	4,050	35	155
80	55	9¼	330	194	·401	4,280	35	160
85	57	9¾	300	198	·400	4,510	30	165
90	59	10¼	275	202	·398	4,750	25	160
95	61	10¾	253	206	·396	4,980	22	155
100	62	11¼	237	208	·395	5,100	16	145

EUROPEAN LARCH

Age.	Main Crop.						Thinnings.	
	Mean Height.	Mean Quarter Girth.	Number of Stems.	Basal Area.	Form Factor.	Volume.	Number of Stems.	Volume.
Years.	Ft.	Ins.		Sq. ft.		Cub. ft.		Cub. ft.
Quality Class I (80-*ft.*)								
20	40	4	900	98	·398	1,560	—	—
25	50	5	670	114	·403	2,300	230	155
30	58	6	520	126	·397	2,900	150	190
35	65	6¾	420	134	·394	3,430	100	220
40	71	7½	350	140	·390	3,880	70	245
45	76	8¼	295	144	·389	4,260	55	270
50	80	9	260	148	·386	4,570	35	290
55	84	9¾	230	151	·384	4,870	30	315
60	87½	10¼	205	153	·383	5,130	25	330
65	91	10¾	185	155	·383	5,400	20	325
70	94	11½	170	157	·382	5,630	15	290
75	97	12	158	158	·382	5,850	12	250
80	100	12¼	150	159	·382	6,070	8	210
Quality Class II (70-*ft.*)								
20	31½	3¼	1,160	82	·348	900	—	—
25	40	4¼	850	99	·384	1,520	310	120
30	48	5	640	113	·387	2,100	210	150
35	55	6	500	123	·384	2,600	140	180
40	61	6¾	410	131	·382	3,050	90	200
45	66	7½	350	137	·377	3,410	60	220
50	70	8¼	310	141	·375	3,700	40	240
55	74	8¾	275	145	·373	4,000	35	250
60	77½	9½	240	148	·370	4,250	35	260
65	81	10	210	151	·369	4,510	30	265
70	84½	10¾	190	153	·368	4,760	20	260
75	87	11¼	175	155	·368	4,960	15	230
80	90	11¾	165	156	·368	5,170	10	180
Quality Class III (60-*ft.*)								
25	33	3½	1,060	87	·352	1,010	—	—
30	39½	4¼	800	100	·370	1,460	—	—
35	45½	5	620	111	·374	1,890	180	145
40	51	5¾	510	119	·377	2,290	110	160
45	56	6½	430	126	·374	2,640	80	175
50	60	7¼	370	132	·367	2,910	60	185
55	64	7¾	325	137	·365	3,200	45	195
60	67½	8½	285	141	·362	3,440	40	205
65	71	9	250	144	·362	3,700	35	215
70	74	9¾	220	147	·359	3,910	30	215
75	77	10½	200	150	·358	4,130	20	200
80	79½	11	185	152	·356	4,300	15	160

EUROPEAN LARCH—*continued*

Age.	Main Crop.						Thinnings.	
	Mean Height.	Mean Quarter Girth.	Number of Stems.	Basal Area.	Form Factor.	Volume.	Number of Stems.	Volume.
Years.	Ft.	Ins.		Sq. ft.		Cub. ft.		Cub. ft.
				Quality Class IV (50-*ft.*)				
30	31½	3¼	1,100	84	·340	900	—	—
35	37	4	810	97	·354	1,270	290	100
40	41½	5	640	105	·360	1,570	170	120
45	46	5½	520	113	·362	1,880	120	130
50	50	6¼	440	120	·360	2,160	80	140
55	54	7	380	126	·356	2,420	60	150
60	57½	7½	330	131	·353	2,660	50	160
65	61	8¼	290	135	·352	2,900	40	170
70	64	9	255	139	·348	3,100	35	180
75	66½	9½	225	141	·348	3,270	30	175
80	69½	10	200	144	·347	3,470	25	150
				Quality Class V (40-*ft.*)				
40	32	3½	1,010	87	·338	940	—	—
45	36	4¼	790	97	·344	1,200	220	75
50	40	5	620	105	·348	1,460	170	90
55	44	5¾	500	113	·346	1,720	120	100
60	47½	6¼	425	119	·343	1,940	75	115
65	50½	7	365	123	·343	2,130	60	125
70	53½	7½	320	128	·340	2,330	45	140
75	56½	8¼	280	132	·339	2,530	40	145
80	59	8¾	250	136	·335	2,690	30	140

NORWAY SPRUCE

Quality Class I (80-*ft.*)

25	41	4½	1,080	152	·385	2,400	—	—
30	51	5¾	710	171	·401	3,500	370	410
35	59	7	535	183	·407	4,400	175	440
40	66½	8¼	410	194	·407	5,250	125	485
45	73½	9½	335	203	·404	6,030	75	490
50	80	10½	280	211	·401	6,760	55	470
55	86	11½	240	217	·398	7,420	40	445
60	91	12½	210	223	·395	8,020	30	415
65	96	13¼	190	228	·391	8,530	20	345
70	100	14	175	231	·388	8,960	15	320

NORWAY SPRUCE—*continued*

Age.	Main Crop.						Thinnings.	
	Mean Height.	Mean Quarter Girth.	Number of Stems.	Basal Area.	Form Factor.	Volume.	Number of Stems.	Volume.
Years.	Ft.	In.		Sq. ft.		Cub. ft.		Cub. ft.
				Quality Class II (70-*ft.*)				
25	35½	3¾	1,440	141	·382	1,910	—	—
30	43½	5	920	160	·408	2,840	520	220
35	51	6¼	640	176	·410	3,680	280	300
40	58	7½	500	189	·410	4,490	140	320
45	64½	8½	400	199	·409	5,250	100	350
50	70	9½	325	207	·407	5,890	75	350
55	75	10½	275	214	·402	6,450	50	340
60	79	11½	240	220	·399	6,940	35	330
65	83	12½	210	225	·396	7,390	30	315
70	87	13¼	190	229	·392	7,800	20	250
				Quality Class III (60-*ft.*)				
30	36½	4	1,310	146	·402	2,140	—	—
35	43	5	930	162	·422	2,950	380	180
40	49	6¼	665	177	·424	3,680	265	210
45	55	7¼	500	188	·420	4,360	165	240
50	60	8¼	410	198	·415	4,930	90	270
55	64	9¼	350	205	·414	5,440	60	280
60	68	10¼	300	212	·409	5,910	50	260
65	72	11	260	219	·402	6,340	40	240
70	75	11¾	230	224	·401	6,730	30	200
				Quality Class IV (50-*ft.*)				
35	34½	3¾	1,450	142	·412	2,020	—	—
40	40	4¾	1,000	157	·427	2,690	450	100
45	45	5¾	755	172	·430	3,320	245	120
50	50	6¾	590	183	·426	3,900	165	150
55	54½	7¾	470	193	·421	4,430	120	180
60	58	8½	400	201	·419	4,890	70	195
65	61½	9¼	340	208	·415	5,310	60	190
70	64½	10	300	214	·410	5,660	40	170
				Quality Class V (40-*ft.*)				
40	31	3½	1,500	130	·414	1,670	—	—
45	36	4½	1,020	148	·428	2,290	480	90
50	40	5½	765	162	·435	2,820	255	110
55	44	6½	615	173	·432	3,290	150	130
60	47½	7¼	500	183	·427	3,700	155	150
65	50½	8	430	191	·424	4,080	70	160
70	53	8¾	375	197	·422	4,400	55	155

Yield Table for
DOUGLAS FIR

Age.	Main Crop.						Thinnings.	
	Mean Height.	Mean Quarter Girth.	Number of Stems.	Basal Area.	Form Factor.	Volume.	Number of Stems.	Volume.
Years.	Feet.	Ins.		Sq. ft.		Cub. ft.		Cub. ft.
				Quality Class I (110-*ft.*)				
15	38	3½	1,330	115	·384	1,680	—	—
20	53½	5½	715	150	·375	3,010	615	430
25	67	7¼	470	173	·360	4,170	245	590
30	78	9	335	190	·346	5,130	135	625
35	87	10¾	255	201	·339	5,930	80	640
40	95½	12¼	205	211	·329	6,630	50	595
45	103	13¾	170	219	·323	7,290	35	570
50	110	15¼	140	225	·319	7,900	30	540
				Quality Class II (100-*ft.*)				
15	33	3	1,605	105	·378	1,310	—	—
20	46½	4¾	850	139	·388	2,510	755	225
25	58½	6½	560	164	·369	3,540	290	435
30	69	8¼	395	182	·354	4,450	165	520
35	78	10	295	196	·343	5,240	100	545
40	86	11½	230	206	·335	5,930	65	545
45	93½	13	185	215	·327	6,570	45	520
50	100	14½	150	222	·323	7,160	35	490
				Quality Class III (90-*ft.*)				
20	39½	4	1,115	126	·398	1,980	—	—
25	51	5¾	650	155	·376	2,970	465	305
30	60½	7½	445	174	·363	3,820	205	420
35	69	9	335	188	·352	4,570	110	440
40	76½	10½	265	199	·344	5,240	70	450
45	83½	12	210	208	·337	5,850	55	485
50	90	13¼	170	216	·330	6,420	40	465
				Quality Class IV (80-*ft.*)				
20	33½	3¼	1,530	111	·403	1,500	—	—
25	43	4¾	860	138	·403	2,390	670	200
30	52	6½	570	164	·375	3,200	290	305
35	60	8	415	180	·364	3,930	155	355
40	67½	9½	310	193	·352	4,590	105	390
45	74	11	245	203	·346	5,190	65	410
50	80	12¼	200	210	·342	5,740	45	405

Yield Table for

CORSICAN PINE

Age.	Main Crop.						Thinnings.	
	Mean Height.	Mean Quarter Girth.	Number of Stems.	Basal Area.	Form Factor.	Volume.	Number of Stems.	Volume.
Years.	Feet.	Ins.		Sq. ft.		Cub. ft.		Cub. ft.
Quality Class I (70-*ft.*)								
20	29	3¼	1,630	122	·350	1,240	—	—
25	37½	4¼	1,095	139	·386	2,010	535	135
30	45	5½	740	152	·398	2,720	355	195
35	52	6½	555	162	·400	3,370	185	235
40	58½	7½	435	171	·397	3,970	120	265
45	64½	8½	355	179	·392	4,530	80	285
50	70	9½	295	185	·390	5,050	60	300
Quality Class II (60-*ft.*)								
20	23½	—	—	—	—	890	—	—
25	31	—	1,430	—	—	1,600	—	—
30	38	—	980	—	—	2,250	—	—
35	44	—	715	—	—	2,840	—	—
40	49½	—	560	—	—	3,360	—	—
45	55	—	445	—	—	3,870	—	—
50	60	—	365	—	—	4,330	—	—
Quality Class III (50-*ft.*)								
20	18½	—	—	—	—	530	—	—
25	25	—	1,835	—	—	1,160	—	—
30	31	—	1,365	—	—	1,730	—	—
35	36	—	1,015	—	—	2,230	—	—
40	41	—	760	—	—	2,710	—	—
45	45½	—	605	—	—	3,140	—	—
50	50	—	485	—	—	3,560	—	—

PRELIMINARY YIELD TABLE FOR

SITKA SPRUCE

Age. Years.	Mean Height. Feet.	Number of Stems.	Volume. Cub. ft.	Mean Height. Feet.	Number of Stems.	Volume. Cub. ft.
	Quality Class I (100-*ft.*)			*Quality Class II* (90-*ft.*)		
15	37	1,330	1,950	29½	1,785	1,050
20	49	850	3,400	41½	980	2,460
25	59½	645	4,690	52	695	3,750
30	69	505	5,800	61	545	4,860
35	77½	395	6,770	69	440	5,800
40	85½	305	7,690	76½	350	6,660
45	93	245	8,550	83½	280	7,460
50	100	190	9,350	90	225	8,200
	Quality Class III (80-*ft.*)			*Quality Class IV* (70-*ft.*)		
20	33½	1,230	1,530	26½	1,780	700
25	43½	810	2,710	36	980	1,820
30	52½	610	3,810	44½	690	2,830
35	60½	490	4,800	52	545	3,750
40	67½	400	5,620	58½	445	4,550
45	74	325	6,370	64½	380	5,280
50	80	270	7,060	70	320	5,910

PRELIMINARY YIELD TABLE FOR

JAPANESE LARCH

Age. Years.	Mean Height. Feet.	Number of Stems.	Volume. Cub. ft.	Mean Height. Feet.	Number of Stems.	Volume. Cub. ft.
	Quality Class I (35-*ft.*)			*Quality Class II* (25-*ft.*)		
10	23	1,895	—	16	—	—
15	35	1,190	1,030	25	1,680	—
20	44½	740	1,965	33	1,140	1,175
25	52	580	2,680	39½	800	1,815
30	57½	490	3,200	44½	640	2,295

Bark

The table below gives the percentage of bark in the over-bark volumes for the different species and quality classes.

Quality Class.	Scots Pine (England).	Scots Pine (Scotland).	European Larch.	Norway Spruce.	Douglas Fir.	Corsican Pine.	Sitka Spruce.	Japanese Larch.
	per cent.	*per cent.*	*per cent.*	*per cent.*	*per cent.*	*per cent.*	*per cent.*	*per cent.*
I	12·5	13·5	18	10	12	17*	10·5*	16
II	13	15	19·5	10	12	17*	10·5*	17·5
III	13·5	16·5	21	10	13	17*	10·5*	—
IV	16	17	22	11	13	—	10·5*	—
V	—	—	22·5	12	—	—	—	—

* *Average of all quality classes.*

The above average figures are based upon the measurement of a large number of trees and ought not, therefore, to be applied to individual stems which are liable to large variations in respect of bark. These variations are generally small in the spruces, but in Scots and Corsican pine, European and Japanese larch and Douglas fir, they may be quite considerable.

The percentage of bark in Scots pine in Scotland is greater than in England, while in both countries the bark of this species is distinctly thinner than that of Corsican pine. There is a close resemblance between the bark percentages obtained for European and Japanese larch, and similarly for Norway and Sitka spruce.

The table shows that for all species the percentage of bark is greater in the poorer quality classes.

AGE-HEIGHT CURVES

Diagrams are given in the following pages showing the age-height curves of :—

Scots pine,
European larch,
Norway spruce,
Douglas fir,
Corsican pine,
Sitka spruce.
Japanese larch.

The continuous lines represent the mean curves and the broken lines the limiting curves of each quality class.

SCOTS PINE.

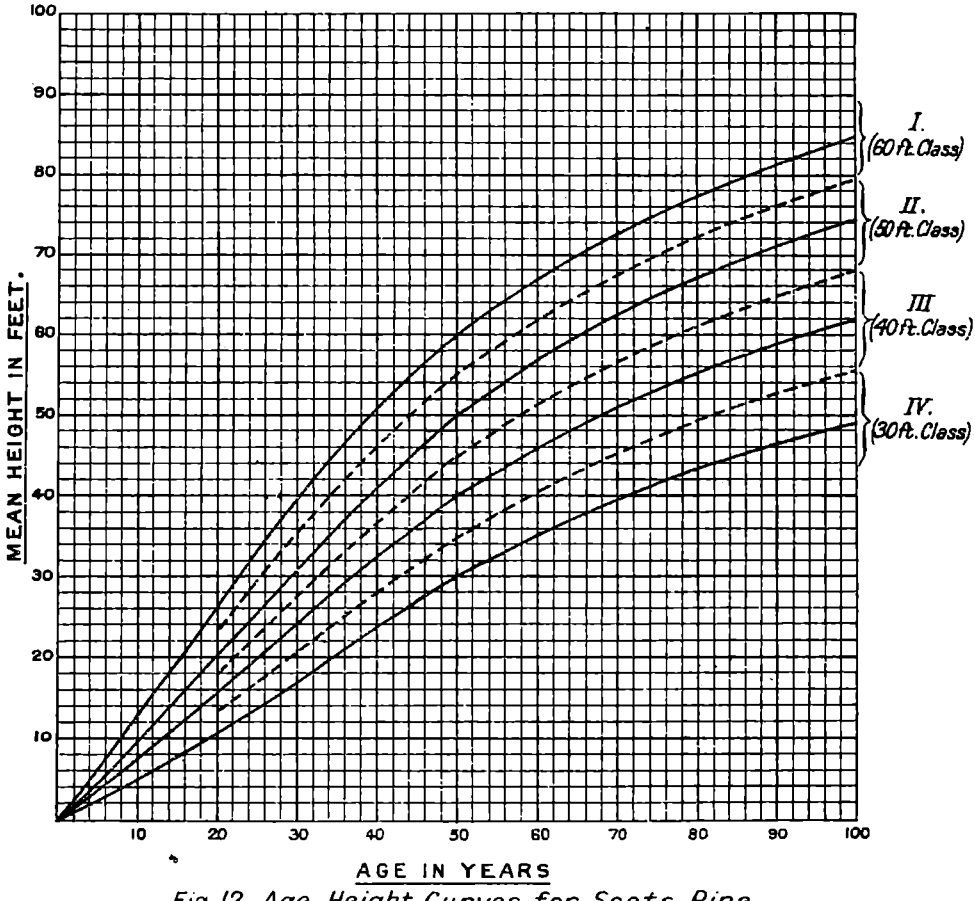

Fig. 12. Age-Height Curves for Scots Pine.

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EUROPEAN LARCH.

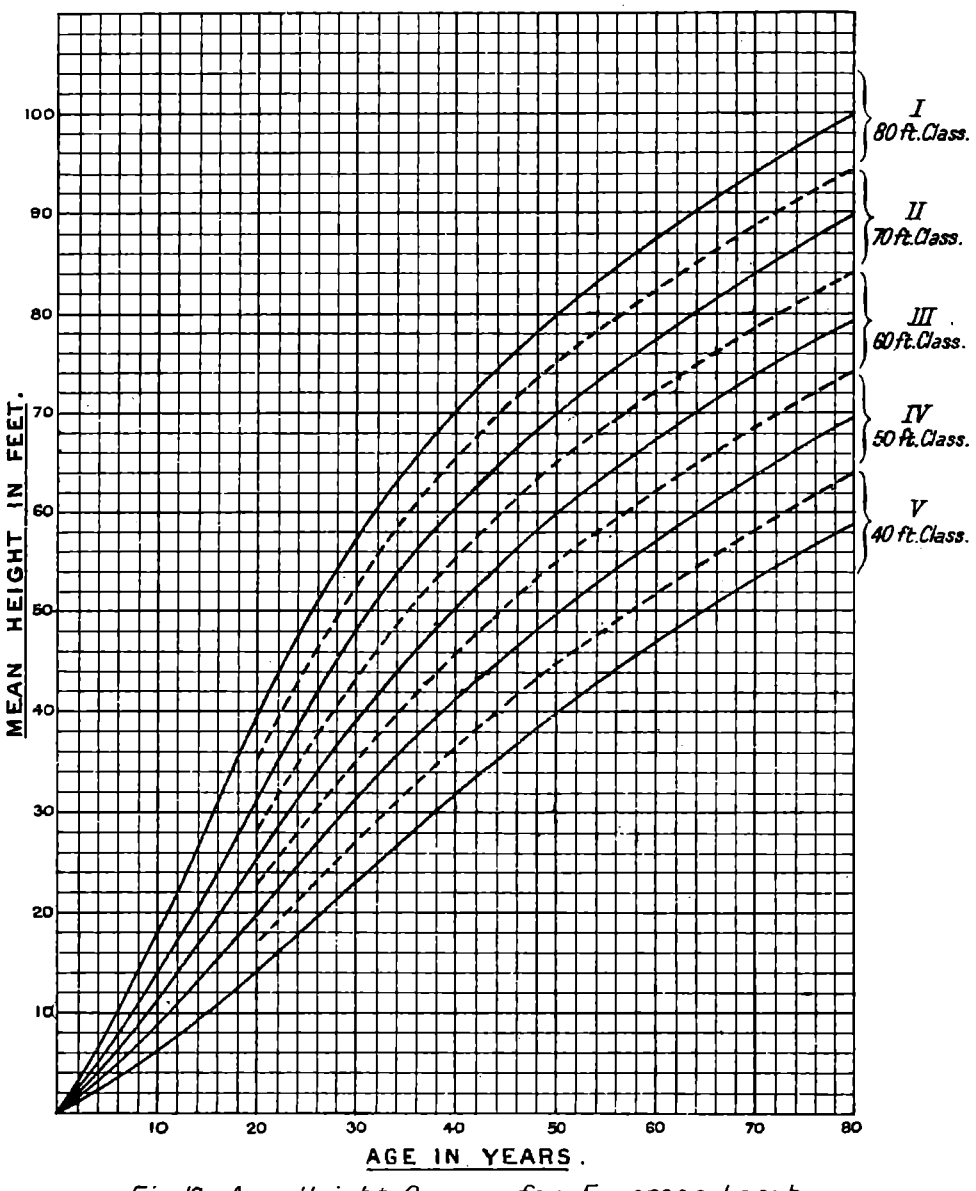


Fig. 13. Age-Height-Curves for European Larch.

NORWAY SPRUCE.

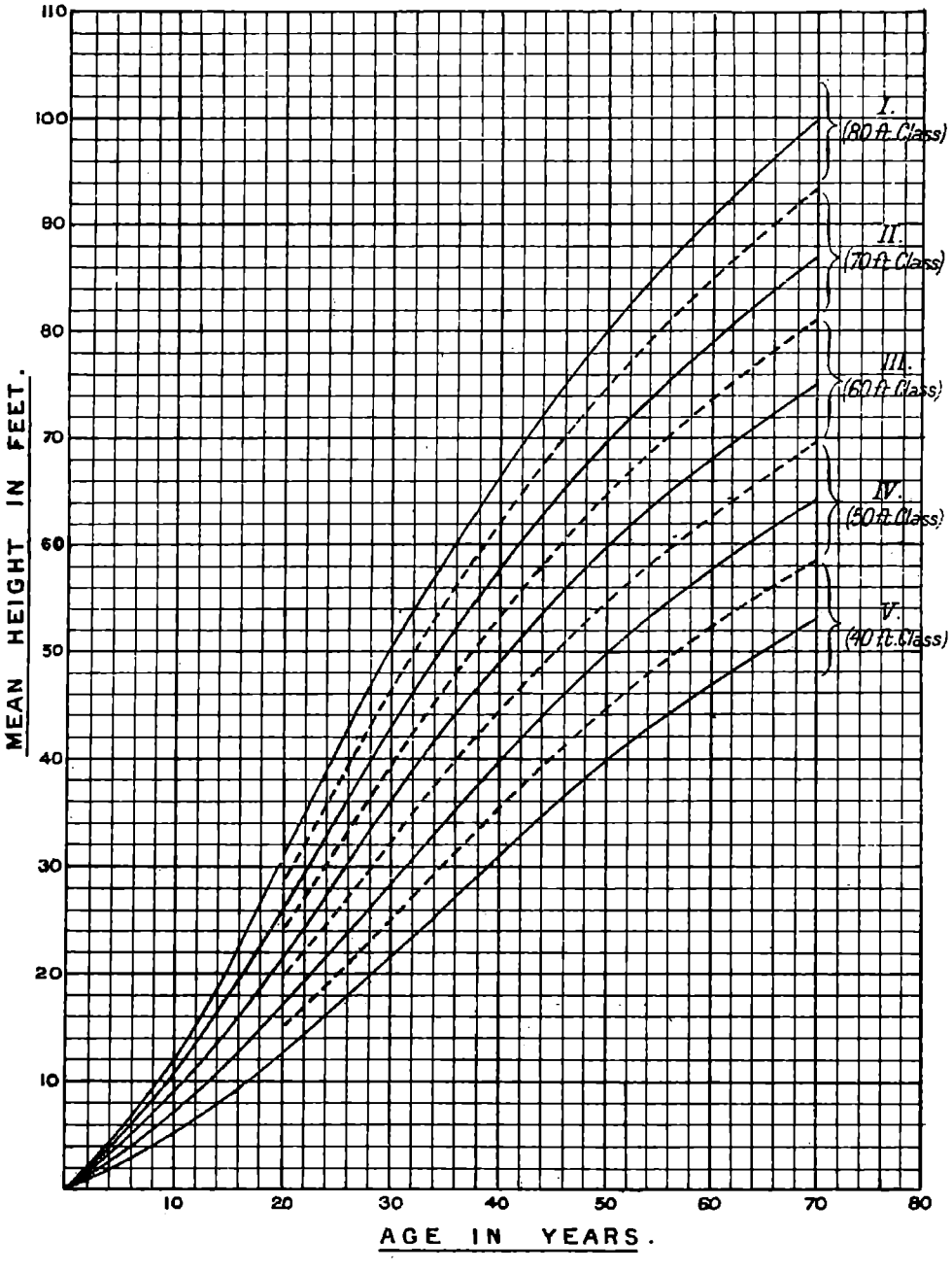


Fig. 14. Age-Height Curves for Norway Spruce.

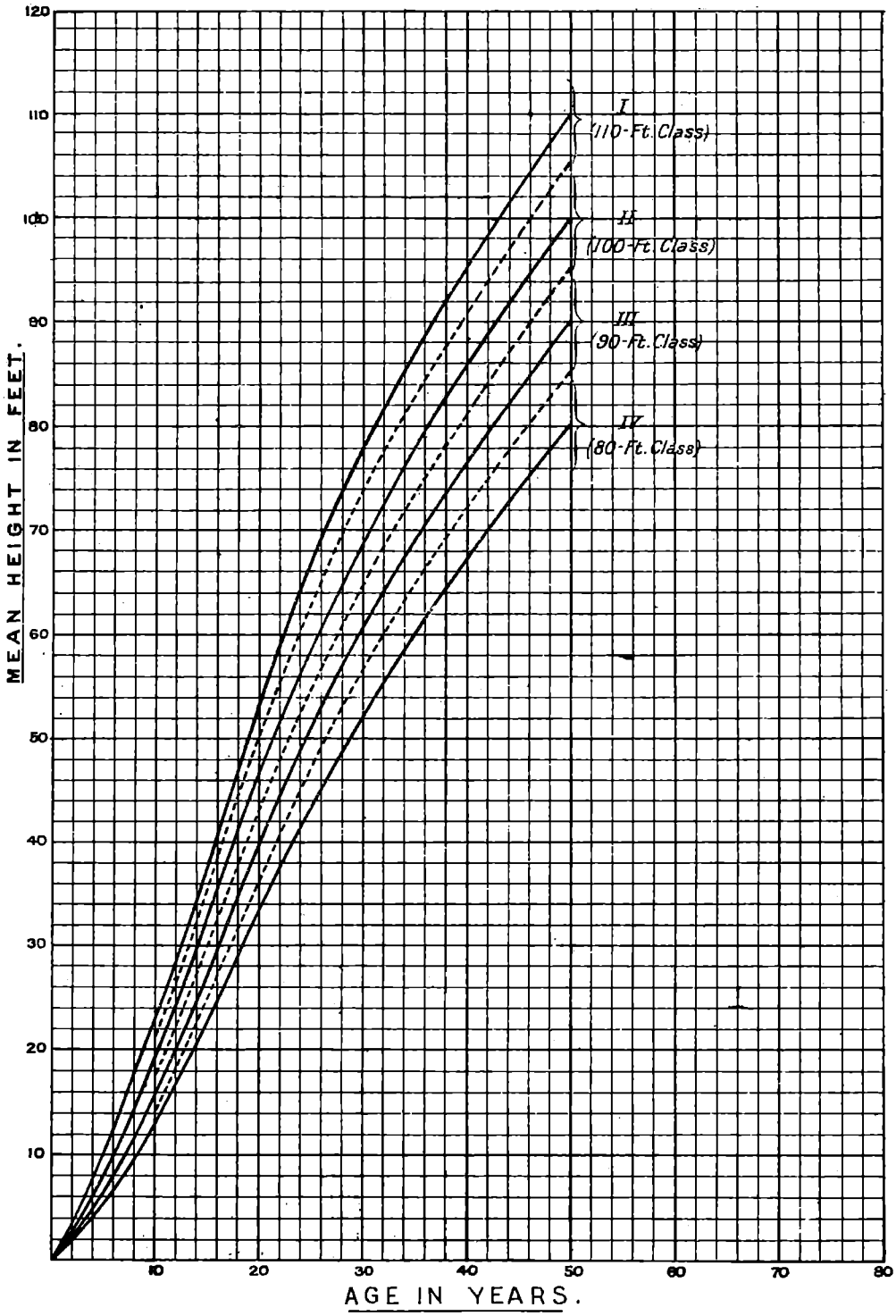


Fig.15. Age-Height Curves for Douglas Firs.

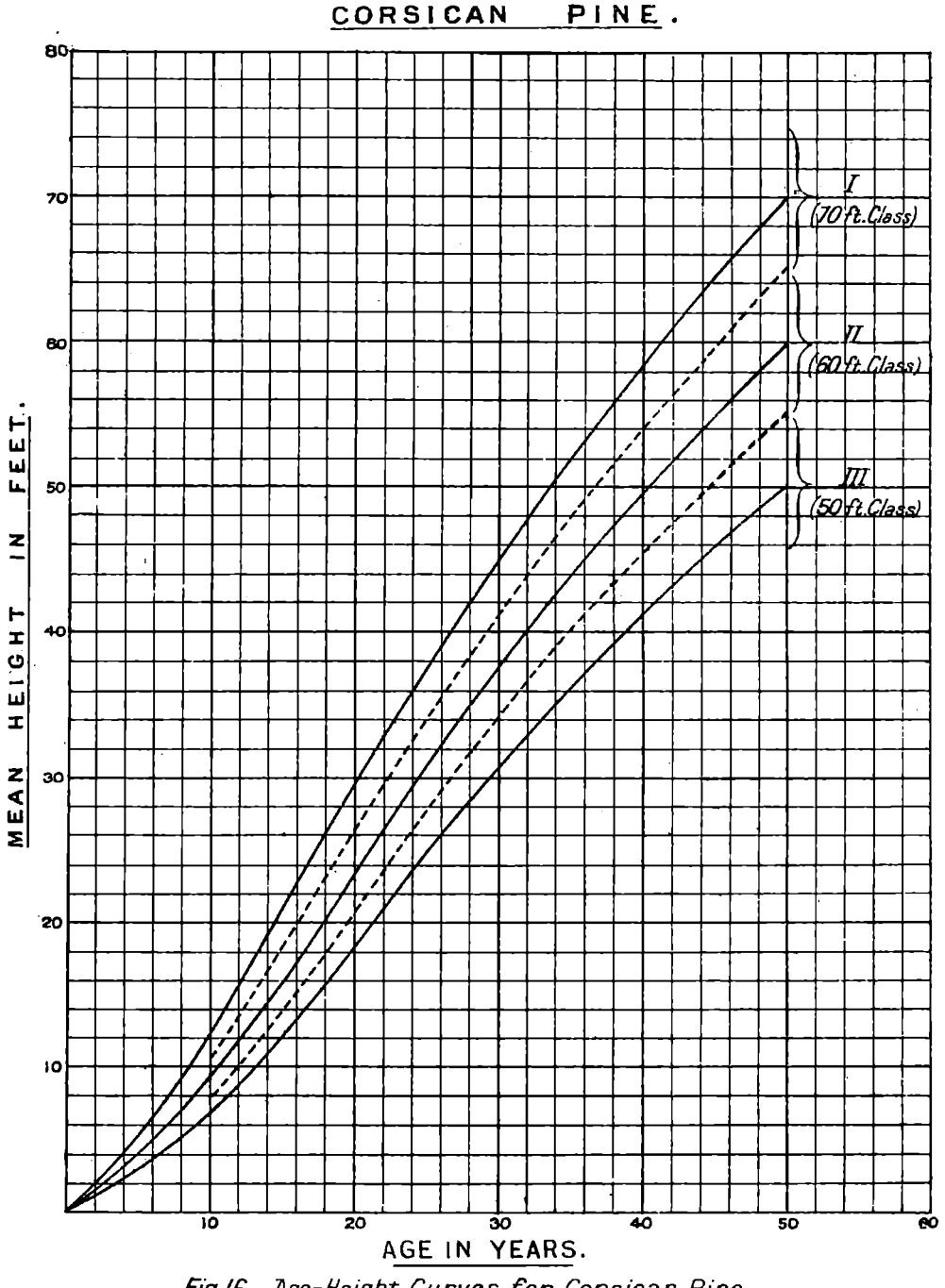


Fig.16. Age-Height Curves for Corsican Pine.

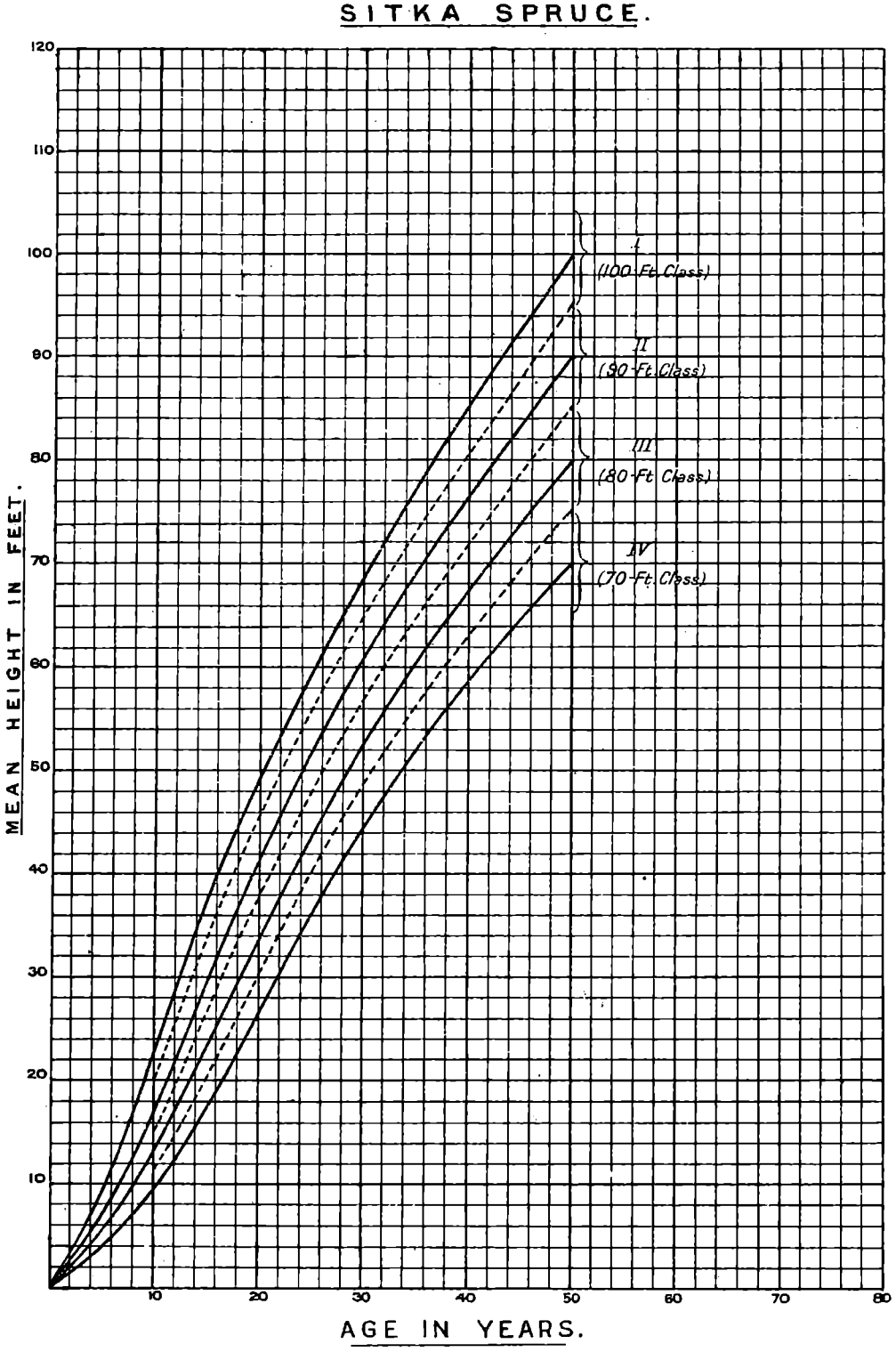


Fig. 17. Age-Height Curves for Sitka Spruce.

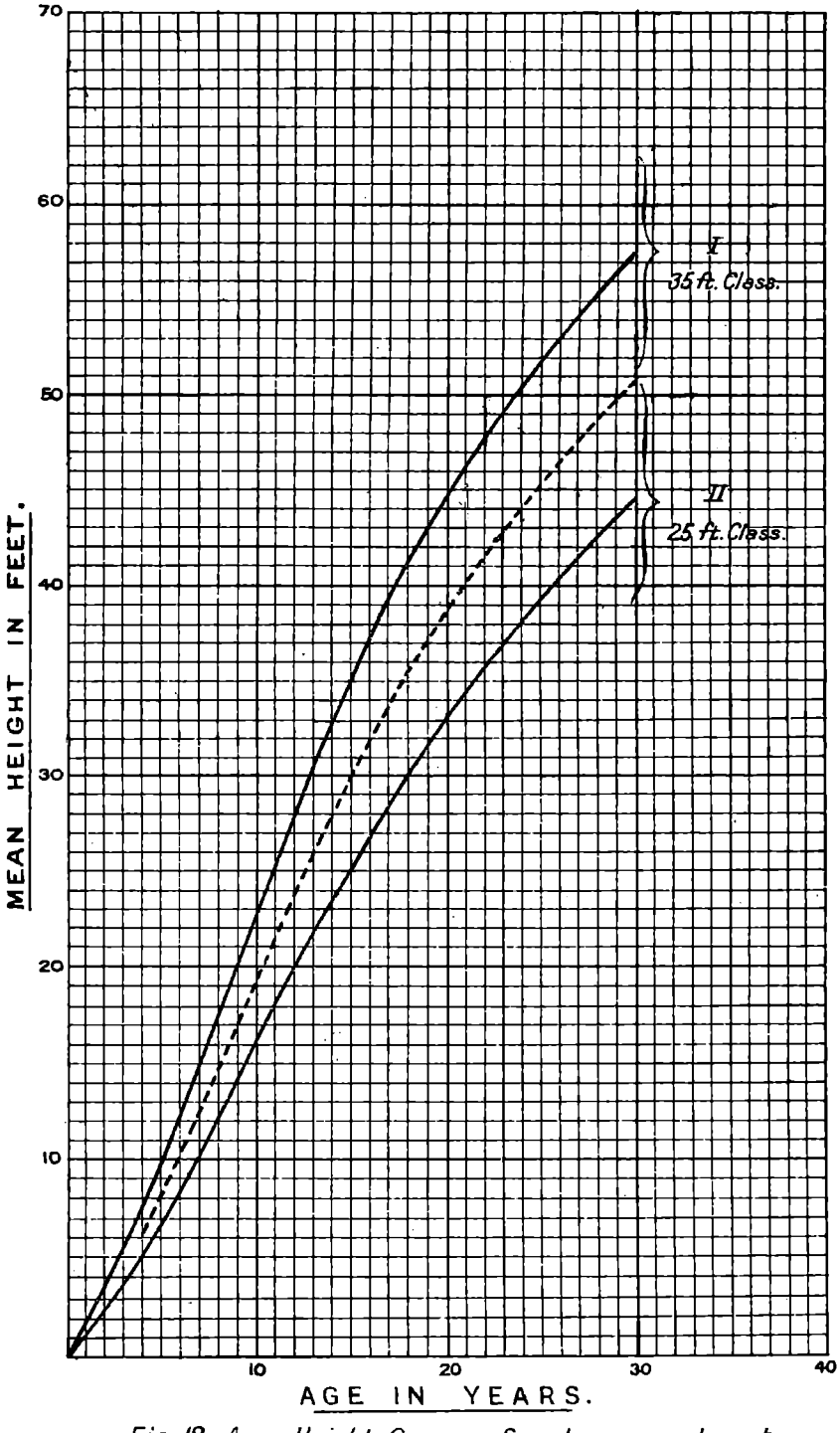


Fig. 18. Age-Height-Curves for Japanese Larch.

CHAPTER V

DISCUSSION OF THE YIELD TABLES AND COMPARISON WITH TABLES FROM OTHER COUNTRIES

Scots Pine. (*Pinus silvestris*, Linn.)

The yield tables for Scots pine were prepared in 1920 from the measurements of 152 sample plots in England and 172 in Scotland. The number of plots measured since 1920 has been too small to enable any revision to be made, and the age-height curves and tables have been reproduced unchanged in Chapter IV. The tables, which comprise three quality classes, viz.: Quality I (60-ft.), Quality II (50-ft.) and Quality III (40-ft.), show the development up to the age of 100 years.

It will be observed that separate yield tables are given for England and Scotland. The necessity for this distinction, which was not required in the case of any of the other species, arose as follows. When the mean age-height curves were prepared from the stem analyses in the manner described in Chapter III, the data were found to combine quite satisfactorily, and there was no evidence of a difference in trend in the height growth in the two countries. Accordingly, the English and Scottish plots were combined for the purpose of constructing the quality class curves. But, on plotting some of the other factors of production against height, a material difference was found. The height-number of stems, height-basal area and height-volume graphs showed in each case a separation of the points into two bands, an upper containing the majority of the English and a lower the majority of the Scottish plots, implying that the average stocking for a given height was heavier in Scotland. An attempt was made to construct mean curves from the combined data but this was found to be quite impracticable, whereas the data for each country separately fell readily into line. Remarkably enough, the height-quarter girth relation was virtually identical in both countries, which meant that, for a given height, the Scottish plots carried a larger number of trees per acre with the same mean girth and hence had larger volumes and higher form factors.

There is no well-marked line separating the one type of growth from the other, but the political boundary between the countries has been adopted as forming a convenient division.

Though the quality classes cover adequately the normal range of height growth in the species, several plots were measured with a rate of growth poorer than that of the lowest class for which a table has been prepared. On the other hand, in the south of England, a group of plots was found in which the growth was considerably

faster than in Quality Class I. Comparison with the age-height curves shows that these plots would fall into a quality class represented by a mean height of 70 feet in 50 years.

The following table gives details of one of these plots :—

Plot No.	Situation.	Elevation.	Exposure.	Soil.	Age.	Ht.	Vol. per acre.
167	Holmhill Enclosure, New Forest.	180	Sheltered by surrounding wood.	18-in. dark grey sand.	95	89	6,970

Elsewhere, the best height growth was represented by the 60-ft. in 50 years of Quality Class I. This class was found more frequently in England than in Scotland. In both countries, Quality II was the class most commonly met with and it may be considered as the average growth.

Sample plots in the older age classes measured both in England and in Scotland afford examples of high volume production. In England a plot of Quality I Scots pine (No. 554) was found to have a volume of 9,300 cubic feet per acre at 141 years of age, while a plot (No. 29) of the same quality class in Scotland, 126 years old, had a volume of 10,110 cubic feet. These volumes, though high, were exceeded by that of a small sub-plot (No. 18) measured in the south of Scotland ; this sub-plot at 140 years of age had the extremely high volume of 15,845 cubic feet per acre.

The tables given on pp. 67–69 enable the growth of Scots pine in Great Britain to be compared with its growth in other countries. The yield tables which have been used for this purpose are those of Weise ([37]) for South Germany, Schwappach ([32]) for Prussia, Gehrhardt ([14]) for Germany, Maass ([21]) for Sweden, Ilvessalo ([20]) for southern Finland and Filitschkin ([9]) for Russia (N.W. of Moscow). A comparison of the British and German tables shows that the trend of the age-height curves is similar throughout in both countries except that, in the older age classes, the growth in Germany does not appear to fall off so rapidly as it does in Great Britain.

The yield table for Finland prepared by Ilvessalo shows that on the best forest type in that country—the *Oxalis-Myrtillus* type—the rate of growth corresponds to that of Quality II of the British tables. The trend of the age-height curves is, however, different. In Finland, growth at the commencement is slower. Between 40 and 60 years of age, it is more rapid than in this country, and it continues fairly fast up to about 80 years of age when it begins gradually to diminish.

The Swedish table shows a rate of growth almost identical with that in Great Britain.

Compared with the tables for foreign countries, the British tables show smaller figures for numbers of stems per acre. The differences are most pronounced up to 40 years of age, and may be ascribed to the artificial method of forming woods and to differences in thinning methods.

In England the number of stems per acre is consistently lower than in Scotland and the countries on the continent of Europe; the Scottish table in this respect resembles the Swedish and Russian tables, though in the latter the thinning does not appear to be so heavy and a larger number of stems are left at 100 years of age.

The Scottish volumes are much heavier throughout than those in any of the other tables. This is especially noteworthy in Classes II and III. The volumes for England, though lower than the Scottish volumes, are still higher, especially in older stands, than those shown by most of the continental tables. (Fig. 19.)

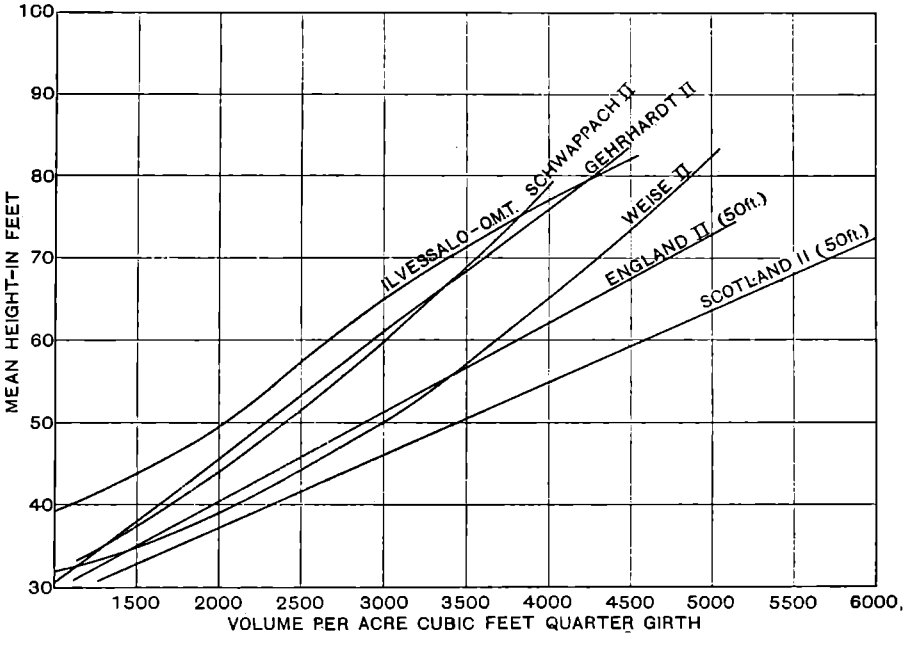


FIG. 19.—Diagram showing comparative volume production—Scots Pine

EUROPEAN LARCH. (*Larix europaea*, D.C.)

The yield tables for European larch were prepared in 1920 from the measurements of 335 sample plots in England, Wales and Scotland. A comparatively small amount of data has been collected since 1920, and as this was found to agree well with the original tables and curves, the latter have been reproduced unchanged in

Chapter IV. The tables, which comprise five quality classes, viz.: Quality Classes I (80-ft.), II (70-ft.), III (60-ft.), IV (50-ft.) and V (40-ft.), give the development up to the age of 80 years.

Comparisons with other species as regards rate of height growth and volume production will be found in the sections on Norway spruce, Douglas fir and Japanese larch. The only foreign yield table for European larch available for comparison with our tables is that prepared by Gunnar Schotte ([30]) for Sweden and published in 1915. Schotte recognised three quality classes which are represented at 50 years of age by mean heights of 82½ feet, 71 feet and 60½ feet, and are thus almost identical with Quality Classes I, II and III respectively of the British Yield Tables.

During the first 30 years, the height growth in Great Britain is slightly faster than the growth in Sweden. Beyond that age the growth of the Swedish trees is better, but the difference between the two countries in this respect is not great and the age-height curves throughout their course are found to have very much the same trend.

On comparing the number of stems per acre these are seen to be very similar for equivalent quality classes up to 50 years of age. In Sweden, in the older age classes, the number of stems per acre is much smaller than in Britain; this difference in stocking appears to be the result mainly of the heavier thinnings which are customary in the former country.

Norway Spruce. (*Picea excelsa*, Link.)

The yield tables for Norway spruce were prepared in 1920 from the measurements of 137 sample plots in England, Wales and Scotland. Relatively few sample plots of this species have been measured since 1920, and the original age-height curves and tables have been reproduced in Chapter IV. The tables, which comprise five quality classes, viz.: Quality Class I (80-ft.), II (70-ft.), III (60-ft.), IV (50-ft.) and V (40-ft.), depict the development up to the age of 70 years.

A certain number of slow growing plots were measured belonging to classes lower than Quality Class V, but the data were insufficient to justify additional tables.

The yield tables enable a comparison to be made of the rate of development of average woods of larch, spruce and Scots pine in Great Britain. In the following table, Quality Class II Scots pine is compared with Quality Class III of spruce and larch. These quality classes have been selected to give, in a general way, an indication of the comparative development of the species. They are the classes which were most largely represented, and may therefore be considered as giving average rates of growth.

Age. Years.	——	Scots Pine, England. II.	Scots Pine, Scotland. II.	Larch. III.	Spruce. III.
10	Height	10	10	11	9
30	Height	31	31	39½	36½
	Mean quarter-girth	3¾	3¾	4¼	4
	Number of stems per acre ..	1,040	1,230	800	1,310
	Basal area per acre	93	116	100	146
	Volume per acre	1,130	1,300	1,460	2,140
50	Height	50	50	60	60
	Mean quarter-girth	6¾	6¾	7¼	8¼
	Number of stems per acre ..	480	550	370	410
	Basal area per acre	149	174	132	198
	Volume per acre	2,890	3,450	2,910	4,930
70	Height	62½	62½	74	75
	Mean quarter-girth	9½	9½	9¾	11¾
	Number of stems per acre ..	270	325	220	230
	Basal area per acre	169	199	147	224
	Volume per acre	4,060	4,880	3,910	6,730

In the early stages, the growth of spruce is, if anything, rather slower than that of the other species. At 30 years of age, larch shows the best height growth but is followed closely by spruce ; at 50 years of age, the spruce has reached the same height as the larch, and at 70 years of age is slightly taller. The Scots pine falls rapidly behind the other species in height growth, and, at 70 years of age, is only 62½ feet high, whereas larch and spruce are 74 feet and 75 feet respectively.

In volume development, however, spruce takes the lead at an early stage and maintains it throughout life. At 30 years of age, it yields nearly 50 per cent. more timber than larch and has double the volume of a Scots pine wood of the same age. At 70 years of age, the average spruce wood contains one and a quarter times the volume of the average larch wood and one and a half times the volume of the average wood of Scots pine. Moreover, at this age every quality of spruce, except the poorest, carries a higher volume per acre than even the best qualities of larch and Scots pine.

The tables on pp. 72–74 enable the development of spruce in Great Britain to be compared with its development in other countries. The tables used for comparison are those by Kunze ([23]) for Saxony, Schwappach ([32]) for Prussia, Schiffel ([27]) for Germany, Flury ([11]) for Switzerland (Lowlands), von Guttenberg ([16]) for the Tyrol and Ilvessalo ([20]) for Finland. From these tables it would appear that the rate of growth in Britain is, in general, faster than on the continent. Quality Class I Great Britain with 80 feet of height in 50 years is equalled only by Flury's best quality class, though the best German growth in Schiffel's table comes just within it. Quality

Class I for Prussia is no better than our Quality Class II, while the fastest growth shown by the tables of Kunze and von Guttenberg would fall into our third quality class. The lower limit of the range of growth covered by the tables of Schwappach, Schiffel and von Guttenberg is much below that of the British yield tables. In Schiffel's lowest quality class the mean height at 50 years is 26 feet; in Schwappach's Quality Class V and in von Guttenberg's it is 22½ feet and 20 feet respectively, against the 40 feet recorded in our yield tables. These figures indicate that on the continent a growth, poorer than any to be found in this country, is of common occurrence. The most remarkable example of the slow growth of spruce comes, however, from Finland. The tables prepared by Ilvessalo for the *Oxalis-Myrtillus* and the *Myrtillus* types indicate rates of growth much slower than any commonly met with in Great Britain. On the *Oxalis-Myrtillus* type, which represents favourable conditions in Finland, the mean height of spruce at 50 years of age is only 33 feet, while on the *Myrtillus* type, which is only slightly poorer, the height at the same age is no more than 28 feet. At 100 years of age, the mean heights are 63½ and 56 feet respectively.

A general yield table for spruce, recently prepared in Russia by Tjurin, gives a very wide range of growth which appears to pass from German conditions on the one hand to Finnish conditions on the other. The best growth shown in this table corresponds to our Quality Class II, but the poorest is of the Finnish type. Thus, at 50 years of age the spruce in the lowest quality class has not yet reached 20 feet in height.

The number of stems per acre in Britain is much lower throughout than on the continent, the difference between the British and the continental tables being especially noticeable in the younger age classes. The relatively low stocking shown by the British tables at those ages is to be explained by the history of many of the plantations in this country. Mixed planting and heavy thinning in early youth with a view to improving the conditions for game are probably the most important factors.

The volume production of spruce in Britain up to 30 years of age is greater than the yields shown in most of the continental tables. Between 40 and 70 years of age, however, the foreign tables generally show rather better increments, and at the latter age the British yields are exceeded by Schiffel's and Flury's and almost equalled by the figures from the tables by Kunze and von Guttenberg.

Douglas Fir. (*Pseudotsuga Douglasii*, Carr.)

The preliminary yield table for Douglas fir prepared in 1920 divided the growth into four quality classes, viz.: I (110-ft.), II (100-ft.), III (90-ft.) and IV (80-ft.). The table gave mean heights and the volumes per acre up to 50 years of age and was based on the measurements of 43 sample plots. Subsequent measurements of permanent sample plots have brought the number of records

available up to 69 and have enabled a complete table to be prepared showing, in addition to height and volume, the numbers of stems, mean girths, basal areas, form factors and thinning volumes. The new height-analysis data were found to conform quite closely to the original height curves, which have been retained unaltered save for a few minor changes. The height-growth curves, together with the Yield Tables, will be found in Chapter IV.

These tables bring out clearly the extremely rapid growth of Douglas fir in this country. In rate of height growth first quality Douglas fir surpasses all other conifers in Great Britain. It must be remembered, however, that, in general, it has been planted in exceptionally favourable situations and that the extent of land capable of growing Quality I is probably somewhat limited. The evidence available at present goes to show that Quality I Douglas fir and Quality I European larch correspond more or less closely in site requirements, and that the second and third quality classes of the two species can be similarly associated. As regards volume production, Douglas fir produces much more timber than European larch when equivalent quality classes are compared, *e.g.*, Douglas fir Quality II, 7,160 cubic feet per acre at 50 years, European larch Quality II, 3,700 cubic feet at 50 years. Sitka spruce, on the other hand, appears likely to exceed the production of Douglas fir, especially over the age of 30 years. Compared with other species, the form factors are exceptionally low in the better quality classes, *e.g.*, ·319 for Quality I at 50 years and ·323 for Quality II at the same age. This low form factor has been found in woods all over the country and may possibly be explained by the fact that in many cases Douglas fir was originally planted in mixture with other species which were suppressed at an early age, leaving the crop too open for the development of a cylindrical form.

On pp. 75–77 will be found a series of tables showing comparisons between the growth of Douglas fir in this country and its growth in the United States and in Germany. It is of especial interest to compare the tables prepared by Hanzlik ([17]) for Douglas fir in western Washington and Oregon with the figures for Great Britain. Quality I of the British tables shows a faster rate of growth up to 50 years than any in the American table, but at that age the American Quality Classes I and II correspond closely, as regards mean height, with the British Classes II and III. The American Quality III (70-ft. at 50 years of age) represents poorer growth than any yet recorded in Great Britain, but there is little doubt that as plantations on poorer sites in this country develop, some at least will be found to belong to this class. On comparing the height growth of the American Quality I with that of Quality II in Great Britain, the trend of the two curves is found to be very different. The American trees grow comparatively slowly at first, and at 20 years are below the mean of our third (90-ft.) class; between 20 and 50 years the trees on British soil begin to slacken off

appreciably in growth, while in western America a more constant rate of growth is maintained, which brings the trees at 50 years above the mean of our second (100-ft.) class.

When the volumes of the equivalent quality classes are compared, the American woods are seen to have, for the first 40 years, a lower volume for a given age and height than the woods in this country. At 50 years of age, the American Quality I and the British Quality II have volumes which are almost identical. Hanzlik's tables are also interesting in that they show the very high yields obtainable in the older age classes in Western America. They also show for a given age and height a greater number of stems per acre than the British tables, while the low form factors which have been found in this country appear to be equally characteristic of the Douglas fir in America.

A more recent yield table for the Douglas fir in western America has been prepared by McArdle ([25]). In this table the height of the dominant trees is taken as the criterion in assessing the quality of the sites. The author recognises three quality classes, " excellent," " good " and " fair." As these tables are based upon the heights of dominant trees, it is impossible to make comparisons between them and other tables in which the mean height of the crop is taken as the standard. They show height growths which are extremely rapid. Thus, at 50 years of age, the height of the dominant trees in the best class is 139 feet, in the second class 119 feet and in the poorest class 98 feet. They also show that a wide range of growth is possible.

Within recent years, much attention has been paid to Douglas fir on the continent of Europe, and there is now available from that quarter a considerable mass of information on the rate of growth and the volume production of the species. In Germany a preliminary yield table for Douglas fir was published by Schwappach ([34]) in 1920. The table was based on the measurements of a small number of sample plots and did not extend beyond 40 years of age. Two quality classes were recognised, Class I, which reached a height of 70 feet at 40 years of age and was thus comparable with our Class IV (80-ft.), and Class II, which at 40 years had a mean height of only 58 feet and was thus poorer than any growth yet recorded in this country. Schwappach's heights fell away quite suddenly after 30 years of age, a trend which was not confirmed by Gehrhardt ([15]), who, with more data at his disposal, published in 1926 a new yield table for Douglas fir based upon the measurements of sample plots in Germany and in Holland. This table shows the production under a system of heavy thinnings. An abstract of the data is given in the tables on pp. 75–77. A comparison between these tables and our own shows that the German Class I corresponds roughly to our Class II (100-ft.) and that the German Class II is comparable generally with our 90-ft. class. The difference in the trend of the German and British curves is similar to that described above in the case of the American trees, only still more accentuated.

Corsican Pine. (*Pinus Laricio*, Poir.)

In Bulletin No. 3, a preliminary yield table giving mean heights and volumes up to 50 years of age was prepared for this species. The table was based on the measurement of 20 sample plots which were separated into three quality classes, namely, 70 feet, 60 feet and 50 feet at 50 years. Since the publication of that work, the addition of further data from 8 permanent sample plots has enabled the tables to be revised and extended. The new plots were found to conform remarkably well to the original height curves, and these have been retained unchanged, but some modification was found to be required in the height volume curves. The sample plots measured are curiously disposed in the three quality classes, practically all falling into Class I, for which alone a complete table could be prepared. The tables for Classes II and III show only height, number of stems and volume per acre.

Contiguous sample plots of Corsican pine and Scots pine were measured in six localities, four of which were in the south of England, one in Yorkshire and one in Aberdeenshire; with the exception of the last named locality, the growth of the Corsican pine was in each case faster than that of the Scots pine. Quality I (70-ft.) Corsican pine was associated with Quality I (60-ft.) Scots pine, Quality II (60-ft.) Corsican pine with Quality II (50-ft.) Scots pine.

Yield tables show that at 50 years of age the volume of Quality I Corsican pine is more than 40 per cent. greater than that of Quality I Scots pine in England, while in total yield up to the same age, the Corsican pine exceeds the Scots pine by more than 50 per cent.

Beyond 50 years, there is little information available, but one sample plot at Highclere, Hants, 80 years old, showed a mean height of 104 feet and a volume of 9,900 cubic feet per acre. The undernoted measurements of two sample plots of Corsican pine were obtained in Corsica a few years ago and are given as examples of the rate of growth of the species in its native habitat.

Locality.	Elevation.	Aspect.	Exposure.	Soil.	Age.	Ht.	Mean quarter-girth.	Vol. (under bark) per acre.
	Ft.				Years.	Ft.	In.	
Forest of Aïtone, in north-west of Corsica.	3,500	N.	Sheltered	Deep loam on weathered granite.	100	123	13¾	9,130
Forest of Valdoniello, 10 miles east of Aïtone.	3,500	E.	Sheltered	Stony loam on granite.	70	62	6¼	4,900

The analysis of the sample trees showed in rate of height growth a remarkable correspondence with the Corsican pine in this country, except that the native trees exhibited slower growth during the first 10 years, a fact which may be explained by the selection system of regeneration practised in Corsica. The sample plots in the Forests of Aïtone and Valdoniello belong respectively to the 70-ft. and 50-ft. height classes. The former was selected on the ground that it appeared to indicate first-class growth conditions in Corsica, and the latter because it represented average conditions. The assessments of the best and average conditions, however, were made by eye and on scanty data and it is possible that they may be a little wide of the mark.

Sitka Spruce. (*Picea sitchensis*, Carr.)

Within the last few years, information as to the growth of Sitka spruce in Great Britain has become more plentiful as many of the plantations formed in the years immediately preceding the war have now reached measurable size. Up to 1920, only six sample plots had been measured, but since that time, additional data have been collected and the preliminary yield table which is given in Chapter IV has been based upon measurements from 13 sample plots. No great accuracy can be claimed for a table based on so little data, but in view of the importance of this species to British forestry it was felt that an effort should be made to present the information available.

The trend of the height growth based upon the sample tree analyses is reasonably well defined up to the age of about 30 years, but beyond that there are only a very few measurements and the prolongation of the curves up to the age of 50 years is admittedly somewhat hypothetical. None the less, it is believed that the range of error possible is not very great and that when more ample data are available on which to revise the curves these will not require radical alteration. The range of growth of the sample plots measured was covered by four quality classes, 100-ft., 90-ft., 80-ft. and 70-ft., at 50 years. Some support for the upper part of the trend of the age-height curves is given by the fact that the 80-ft. and 70-ft. Sitka spruce curves correspond very closely in trend with the corresponding curves for Norway spruce. This might be expected when dealing with two species so closely allied.

The sample plots which have been measured have almost all been located in plantations formed on good soil and under favourable growing conditions. In consequence, the data represent only the upper part of the range of Sitka spruce growth in this country, and it is certain that in the course of time lower quality classes than anything given in the present tables will be necessary. There is already some evidence to show that on certain soils, *e.g.*, the poorer types of peat, the trend of the height growth is likely to differ from the normal curves obtained from trees growing on mineral soils.

The tendency on peat is for the trees to hang back or check for a considerable number of years and then to grow much more rapidly than the position on the age-height graph would appear to indicate.

Reference to the yield tables shows that the volume production of Quality I Sitka spruce exceeds that of any other species, including even Douglas fir. The volume per acre, at 30 years of age, is 5,800 cubic feet or more than 2,000 cubic feet greater than the volume of first quality Norway spruce at the same age. As it appears to be tolerant of a wider range of conditions in this country than the European species, the increasing importance which is being attached to Sitka spruce in British forestry can be readily understood.

Figures have been given by Cary ([5]) to show the height growth of this species in Washington and Oregon, the southern part of its range along the Pacific Coast of North America. He gives a table which indicates the mean height which may be expected at different ages. The figures are based upon the measurement of a large number of dominant trees from various localities in both States and show that in the first 50 years at least, there are wide variations in height growth. The curve for the average of all the measurements follows our curve for Quality III very closely up to the 35th year, when it begins to draw ahead, reaching 87 feet at 50 years, 104 feet at 60, and 119 feet at 70. Generally the figures show that, up to 30 years of age, the growth is rather slower than in Great Britain, but that beyond that age it is maintained at a considerably greater rate.

On the Continent, considerable attention has recently been paid to Sitka spruce and certain information as to the rate of growth and the production is now available. Schwappach ([33]), for example, gives an account of a sample plot of mixed Norway and Sitka spruces in Schleswig-Holstein. This plot is of some interest on account of the remarkable way in which the Norway spruce has kept pace with the Sitka spruce; at 25 years of age, the mean heights were 38 feet and 42½ feet respectively, while at 31 years of age the Norway spruce had reached 51 feet and the Sitka spruce 56½ feet. In this case, the Norway spruce is referable to Quality I and the Sitka to Quality III of our tables. The most important accounts of Sitka spruce in Europe, however, are those of Oppermann ([26]) and Fabricius ([8]) in Denmark. Their works deal fully with the growth of this species, which has been in general cultivation in that country since about 1890. A number of sample plots have been established in plantations up to 34 years of age, and, as most of these have been measured more than once, the figures which they have provided are of considerable interest.

The following table gives the detailed measurements of the Danish sample plots :—

Locality.	Main Crop.						Thinnings.	
	Age.	Height in feet.	Quarter-girth.	Number of Stems per acre.	Basal Area per acre.	Volume per acre quarter-girth.	Number of Stems per acre.	Volume per acre quarter-girth.
Vilsbøl.. ..	26	26	3½	1,845	153	2,180	510	225
	31	36	4¼	1,305	168	3,240	540	770
Vrøgum	25	22	3	1,300	79	945	—	—
	30	31	4	1,265	139	2,345	35	12
Gisselfeld	19	30½	3	1,880	113	1,925	510	35
	21	35½	3½	1,340	112	2,065	540	390
	25	45	4¼	900	108	2,585	440	650
Frijsenborg I...	27	40½	4	1,025	107	2,365	470	550
	30	47½	4¾	675	110	2,850	350	825
Frijsenborg I...	27	55	5	760	136	—	—	—
	30	62	6¼	470	124	4,275	290	1,175
Palsgaard	31	14	1½	3,285	54	465	375	15
Mejlgaard	22	41	4¼	688	91	2,050	—	1,030
	25	47¼	5½	467	95	2,480	220	605
	32	60½	7	401	140	4,515	83	495
	34	68¼	7½	339	130	4,700	62	495

Comparing these plots with our own tables the majority are seen to be referable to Quality Classes II and III, the British Quality I being unrepresented in Denmark. The volumes and girths are surprisingly low, the former especially, as they seem to include timber below 3 inch diameter and also possibly bark. One of the most interesting of the plots is that at Palsgaard, established in a mixed plantation of Sitka spruce and mountain pine on *Calluna* ground. At the age of 31 years it had reached a height of only 14 feet. These figures indicate a rate of growth very much slower than any yet found in Great Britain.

Japanese Larch. (*Larix leptolepis*, Gord.)

In Bulletin No. 3, a preliminary yield table for this species was presented, giving mean heights and volumes up to the age of 25 years. This was based upon measurements of 47 plots. For purposes of division into quality classes, 15 years was adopted provisionally as the standard age, the lack of older plots precluding the use of the standard age of 50 years adopted in the case of the other species. It was found that the range of growth was covered in a satisfactory manner by a division into two height classes—a 35-ft. and a 25-ft. class at 15 years. Accordingly, two quality classes were constructed, the limits for the first class being 40 feet and 30 feet and for the second, 30 feet and 20 feet, respectively, at 15 years. The inclusion of further data obtained from the measurement of permanent sample plots has enabled the height curves to be prolonged another five years, *i.e.*, up to 30 years of age. The new table now includes number of stems in addition to age, height and volume per acre.

The rapid growth of Japanese larch in early youth is apparent from the table. On first quality sites the trees attain a mean height of 35 feet in 15 years, a growth only slightly exceeded by the top quality classes of Douglas fir and Sitka spruce. The height growth culminates in Japanese larch remarkably early, in fact between the 5th and the 10th year; from the 10th to the 20th year there is a slight falling off, but after 20 years of age the slowing down is unmistakable, and it is clear that the view, which has been widely held in this country, that the growth of Japanese larch is not maintained in later years is justified. A comparison of the height curves of European and Japanese larch (Fig. 20) illustrates the very different behaviour of the two species. It will be observed from the diagram that the curve for Quality I Japanese larch keeps well above the 80 feet curve for European larch up to 20 years of age. The curves then begin to converge until at the 29th year they intersect and the European larch goes ahead. The curves for the second quality classes of the respective species are not so widely separated; for the first few years, indeed, they closely correspond. Then, after about the sixth year, the Japanese larch curve rises above the other and remains about 2 feet higher until the 20th year, when the difference begins to diminish; the two curves intersect at 23 years of age.

The volume production of the two larches is best compared in relation to the growth on equivalent sites. In several instances adjacent plots of the two species were measured, and it was found that Quality II European larch corresponded with Quality I Japanese larch. The third and second classes of the respective species appear to be similarly associated together. This means that a site capable of growing 70-ft. class European larch producing 1,520 cubic feet per acre at 25 years should grow 35-ft. class Japanese larch with 2,580 cubic feet per acre. The latter species thus gives a much heavier production in young stands.

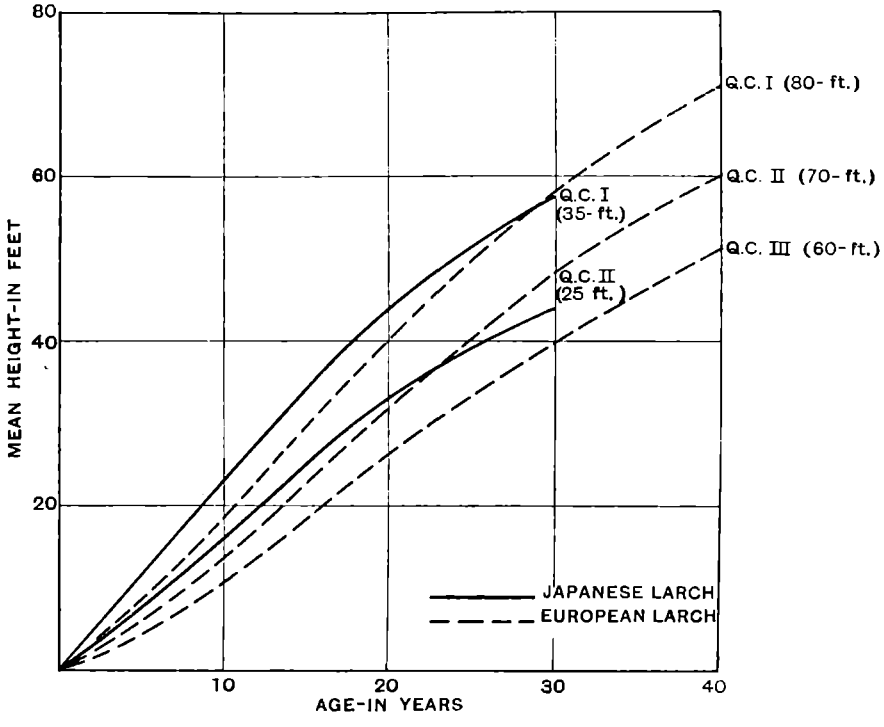


FIG. 20.—Diagram showing the comparative height growth of European and Japanese Larch

When the volumes of the sample plots of Japanese larch were plotted against their respective heights for the purpose of drawing height-volume curves it was at once apparent that the Scottish sample plots carried a higher volume in relation to height than the English plots. The difference was found to be due partly to a heavier stocking in Scotland and partly to higher form factor.

Like many other exotic species Japanese larch has been planted hitherto in Great Britain chiefly at low elevations and on good soil. There is evidence to show that the tree will thrive at comparatively high elevations in the west of the country, although

naturally the same rapid growth as is found in the valleys cannot be expected.

Japanese larch does not appear to have been planted to any great extent upon the Continent and little is known as to its growth outside Great Britain. A preliminary Yield Table has, however, been published by Terazaki ([22]) for the tree in its native habitat in the central mountains of Japan.

Yield Table for Japanese Larch in Japan (Terazaki)

Age.	Quality Class I.		Quality Class II.		Quality Class III.	
	Mean Height. Ft.	Volume per acre cu. ft. quarter-girth.	Mean Height. Ft.	Volume per acre cu. ft. quarter-girth.	Mean Height. Ft.	Volume per acre cu. ft. quarter-girth.
10	16	520	10	260	7	105
20	45	2,605	36	1,855	29	1,710
30	64	4,445	55	3,550	47	2,605
40	76	5,840	68	4,290	60	3,910
50	84	6,870	77	5,975	70	4,975
60	90	7,660	83	6,810	77	5,840
70	95	8,255	89	7,480	83	6,560
80	98	8,740	93	8,030	88	7,150
90	101	9,130	96	8,470	92	7,640
100	104	9,480	99	8,850	94	8,065

It is difficult to reconcile some of the figures of the above table, but in so far as the height data are concerned they appear to indicate rapid growth in early youth followed by a very marked slowing down after the age of 40 to 50 years. The volumes are surprisingly high, but apparently include timber below 3 inches diameter and, possibly, also bark.

SCOTS PINE

TABLE SHOWING COMPARISON

between

BRITISH YIELD TABLES

and

YIELD TABLES BY

Weise ...	...	...	1880 for South Germany
Schwappach	...	...	1908 for Prussia
Gehrhardt	...		1921 for Germany
Maass ...	...	...	1911 for Sweden
Ilvessalo	...	...	1920 for Southern Finland
Filitschkin	...	...	1927 for Russia

in respect of

(A) MEAN HEIGHT IN FEET.
(B) NUMBER OF STEMS PER ACRE.
(C) VOLUME PER ACRE QUARTER-GIRTH.

Note:—The Finnish tables are based upon forest types, the *Oxalis-Myrtillus* type has been entered as Quality I, *Myrtillus* type as Quality II, *Vaccinium* type as Quality III, *Calluna* type as Quality IV and *Cladina* type as Quality V.

The Russian table has been prepared for one type only, the *Hylocomium* type.

Scots Pine

(A) *Mean Height of Main Crop in Feet*

Quality Class.	Age.	Height in feet.						
		Great Britain. 1928.	Germany. *Weise*, 1880.	Prussia. *Schwappach*, 1908.	Germany. *Gehrhardt*, 1921.	Sweden. *Maass*, 1911.	South Finland. *Ilvessalo*, 1920.	Russia. *Filitschkin*, 1927.
							O.M. T.	Hyl. T.
I	20	26	24	—	28	—	17½	26½
	30	40	38	39½	43½	38½	28½	41
	40	51	51	51½	57	47½	40	53
	50	60	64	62	67	59	52	63
	60	67	72	71	75	66½	62½	71
	70	72½	80	77½	82	72	70½	77½
	80	77	85	83½	88	77	77½	83
	90	81	90	88	93	81½	82½	88
	100	84½	93	92	97	85½	85½	92
							M. T.	
II	20	20	19	—	23	—	15½	—
	30	31	31	33½	37	32	25½	—
	40	41½	41	43½	48	41½	36	—
	50	50	51	52	57	49	47½	—
	60	57	60	59½	64½	55	58½	—
	70	62½	67	65½	70½	61½	67½	—
	80	67	73	71	75½	66½	74½	—
	90	71	78	75	79½	70	79	—
	100	74	83	79	83	73	82	—
							V. T.	
III	20	16	15	—	18	—	12	—
	30	24	26	26	30	25½	20½	—
	40	32½	35	35	39½	34	29	—
	50	40	43	42½	47½	41	37½	—
	60	46	51	49	53½	47	45½	—
	70	51	57	55	58½	52½	53½	—
	80	55	63	59½	63	56½	60	—
	90	59	67	63½	66½	60	65	—
	100	62	71	66½	69½	62½	68	—
							C.T.	
IV	20	—	13	—	13	—	—	—
	30	—	22	19½	22½	19½	13½	—
	40	—	31	26½	30½	27	18½	—
	50	—	37	33	37	33½	24	—
	60	—	42	38½	42½	37½	29	—
	70	—	47	43½	47	44½	34	—
	80	—	52	47	50½	48	38½	—
	90	—	56	50½	54	51	43½	—
	100	—	—	53½	56	53½	48	—
							Cl. T.	
V	20	—	11	—	8	—	—	—
	30	—	19	—	16	14	—	—
	40	—	25	17½	22	20½	10	—
	50	—	31	23	27	27	13½	—
	60	—	35	28	31½	32½	16½	—
	70	—	39	32	35	37	20	—
	80	—	43	35½	38	40½	23	—
	90	—	45	38½	40½	43½	25½	—
	100	—	—	41	42½	45½	28	—

Scots Pine

(B) *Number of Stems per Acre*

Quality Class.	Age.	Number of Stems per acre.							
		England. 1928.	Scotland. 1928.	Germany. *Weise.* 1880.	Prussia. *Schwappach.* 1908.	Germany. *Gehrhardt.* 1921.	Sweden. *Maass.* 1911.	South Finland. *Ilvessalo.* 1920.	Russia. *Filitschkin.* 1927.
								O.M.T.	Hyl.T.
I	20	—	—	—	—	—	—	2,225	1,585
	30	810	960	1,190	1,165	1,080	995	1,315	970
	40	545	630	735	635	660	715	820	680
	50	375	450	515	405	435	565	595	510
	60	285	340	380	300	325	450	465	405
	70	230	275	305	235	255	380	380	330
	80	195	230	245	195	210	320	315	275
	90	167	200	205	165	180	275	265	240
	100	150	183	170	140	155	240	235	205
								M.T.	
II	20	—	—	—	—	—	—	3,195	—
	30	1,040	1,230	1,895	1,595	1,355	1,265	1,770	—
	40	680	795	1,035	850	760	940	1,090	—
	50	480	550	665	550	495	735	765	—
	60	350	410	460	405	365	590	575	—
	70	270	325	340	310	285	485	460	—
	80	225	270	265	245	240	405	380	—
	90	192	230	220	200	200	350	325	—
	100	170	207	185	165	175	300	285	—
								V.T.	
III	20	—	—	—	—	—	—	3,765	—
	30	—	—	2,535	2,145	1,620	1,805	2,465	—
	40	885	1,030	1,235	1,250	970	1,370	1,640	—
	50	610	700	760	810	645	1,065	1,040	—
	60	445	510	515	560	465	840	740	—
	70	345	400	395	425	365	675	575	—
	80	280	330	315	335	300	560	460	—
	90	230	275	265	265	255	470	380	—
	100	200	237	230	215	225	405	330	—
								C.T.	
IV	20	—	—	—	—	—	—	—	—
	30	—	—	—	2,310	1,985	2,830	5,100	—
	40	—	—	1,585	1,460	1,325	2,135	3,035	—
	50	—	—	1,060	1,015	880	1,630	2,030	—
	60	—	—	765	735	650	1,230	1,480	—
	70	—	—	565	565	510	970	1,185	—
	80	—	—	430	450	415	785	955	—
	90	—	—	365	365	345	655	760	—
	100	—	—	—	300	305	555	595	—
								Cl.T.	
V	20	—	—	—	—	—	—	—	—
	30	—	—	—	—	2,710	3,920	—	—
	40	—	—	1,835	1,745	1,740	3,150	2,305	—
	50	—	—	1,340	1,320	1,230	2,495	1,445	—
	60	—	—	1,055	1,030	925	1,845	1,115	—
	70	—	—	880	835	740	1,445	930	—
	80	—	—	740	695	625	1,135	800	—
	90	—	—	665	585	540	925	700	—
	100	—	—	—	495	480	775	620	—

Scots Pine

(C) *Volume per Acre*

Quality Class.	Age.	Volume per acre—cubic feet, quarter-girth.							
		England. 1928.	Scotland. 1928.	S. Germany. *Weise.* 1880.	Prussia. *Schwappach.* 1908.	Germany. *Gehrhardt.* 1921.	Sweden. *Maass.* 1911.	South Finland. *Ilvessalo.* 1920.	Russia. *Filitschkin.* 1927.
									Hyl.T.
I	20	—	—	—	—	830	—	—	865
	30	1,730	1,940	1,735	1,725	1,885	1,650	—	1,750
	40	2,730	3,120	3,040	2,540	2,750	2,425	1,100	2,560
	50	3,530	4,100	3,975	3,160	3,410	3,110	2,260	3,265
	60	4,160	4,840	4,730	3,675	3,940	3,615	3,040	3,905
	70	4,640	5,440	5,335	4,065	4,400	4,060	3,775	4,455
	80	5,050	5,920	5,830	4,380	4,780	4,465	4,385	4,960
	90	5,410	6,350	6,245	4,625	5,105	4,850	4,855	5,385
	100	5,730	6,720	6,590	4,805	5,375	5,185	5,195	5,790
II	20	—	—	—	—	525	—	—	—
	30	1,130	1,300	920	1,165	1,425	1,245	—	—
	40	2,110	2,480	2,225	1,960	2,165	1,875	545	—
	50	2,890	3,450	3,095	2,555	2,740	2,435	1,865	—
	60	3,550	4,250	3,685	2,980	3,220	2,875	2,575	—
	70	4,060	4,880	4,125	3,315	3,635	3,255	3,200	—
	80	4,470	5,400	4,495	3,615	3,960	3,590	3,785	—
	90	4,850	5,850	4,790	3,853	4,240	3,885	4,190	—
	100	5,130	6,200	5,035	4,010	4,465	4,153	4,525	—
III	20	—	—	—	—	280	—	—	—
	30	—	—	650	730	965	930	—	—
	40	1,440	1,670	1,545	1,410	1,605	1,460	—	—
	50	2,190	2,540	2,120	1,960	2,100	1,965	910	—
	60	2,790	3,240	2,590	2,340	2,515	2,370	1,515	—
	70	3,290	3,810	3,000	2,665	2,860	2,715	2,085	—
	80	3,680	4,280	3,345	2,890	3,145	3,005	2,565	—
	90	4,080	4,750	3,630	3,045	3,380	3,245	2,720	—
	100	4,390	5,100	3,860	3,170	3,570	3,435	3,230	—
IV	20	—	—	—	—	—	—	—	—
	30	—	—	345	225	505	660	—	—
	40	—	—	1,015	760	1,010	1,090	—	—
	50	—	—	1,605	1,255	1,445	1,560	—	—
	60	—	—	2,050	1,660	1,795	1,920	325	—
	70	—	—	2,410	1,970	2,085	2,245	645	—
	80	—	—	2,630	2,220	2,325	2,490	1,000	—
	90	—	—	2,765	2,385	2,525	2,695	1,345	—
	100	—	—	—	2,485	2,695	2,860	1,665	—
V	20	—	—	—	—	—	—	—	—
	30	—	—	285	—	190	425	—	—
	40	—	—	705	270	470	775	—	—
	50	—	—	1,125	695	785	1,190	—	—
	60	—	—	1,470	1,055	1,065	1,525	—	—
	70	—	—	1,760	1,355	1,315	1,805	—	—
	80	—	—	1,975	1,570	1,515	2,020	260	—
	90	—	—	2,115	1,725	1,685	2,200	430	—
	100	—	—	—	1,825	1,805	2,325	625	—

EUROPEAN LARCH

TABLE showing comparison between British Yield Tables and Yield Tables by Gunnar Schotte, 1915–16, for Sweden, in respect of (A) mean height ; (B) number of stems per acre ; and (C) volume per acre, quarter-girth.

Quality Class.	Age.	(A) Mean Height in feet.		(B) Number of Stems per acre.		(C) Volume per acre cubic feet, quarter-girth.	
		Great Britain. 1928.	Sweden. *Schotte.* 1916.	Great Britain. 1928.	Sweden. *Schotte.* 1916.	Great Britain. 1928.	Sweden. *Schotte.* 1916.
I	20	40	37½	900	925	1,560	1,380
	30	58	55	520	495	2,900	2,255
	40	71	70	350	310	3,880	3,055
	50	80	82½	260	215	4,570	3,785
	60	87½	93	205	160	5,130	4,455
	70	94	101	170	125	5,630	5,030
	80	100	108	150	98	6,070	5,510
II	20	31½	31	1,160	1,185	900	1,030
	30	48	47	640	640	2,100	1,850
	40	61	59½	410	390	3,050	2,515
	50	70	71	310	265	3,700	3,130
	60	77½	80	240	190	4,250	3,670
	70	84½	87½	190	145	4,760	4,130
	80	90	93	165	115	5,170	4,490
III	20	26	25	—	1,480	—	720
	30	39½	39½	800	790	1,460	1,460
	40	51	51	510	465	2,290	2,065
	50	60	60½	370	305	2,910	2,570
	60	67½	69	285	220	3,440	3,020
	70	74	75½	220	165	3,910	3,410
	80	79½	80½	185	125	4,300	3,705
IV	20	20	—	—	—	—	—
	30	31½	—	1,100	—	900	—
	40	41½	—	640	—	1,570	—
	50	50	—	440	—	2,160	—
	60	57½	—	330	—	2,660	—
	70	64	—	255	—	3,100	—
	80	69½	—	200	—	3,470	—
V	20	14½	—	—	—	—	—
	30	23½	—	—	—	—	—
	40	32	—	1,010	—	940	—
	50	40	—	620	—	1,460	—
	60	47½	—	425	—	1,940	—
	70	52½	—	320	—	2,330	—
	80	59	—	250	—	2,690	—

NORWAY SPRUCE

TABLE SHOWING COMPARISON

between

BRITISH YIELD TABLES

and

YIELD TABLES BY

Kunze	...	1878 for Saxony
Schwappach	...	1902 for Prussia
Schiffel	...	1904 for Germany
Flury ...	...	1907 for Switzerland (lowlands)
von Guttenberg		1915 for the Tyrol
Ilvessalo	...	1920 for Southern Finland

in respect of

(A) MEAN HEIGHT IN FEET.
(B) NUMBER OF STEMS PER ACRE.
(C) VOLUME PER ACRE QUARTER-GIRTH.

Note.—The Finnish *Oxalis-Myrtillus* type is entered as Quality I and the *Myrtillus* type as Quality II.

Norway Spruce

(A) *Mean Height of Main Crop in Feet*

Quality Class.	Age.	Height in feet. Great Britain. 1928.	Saxony. *Kunze.* 1878.	Prussia. *Schwappach.* 1902.	Germany. *Schiffel.* 1904.	Switzerland (Hugelland). *Flury.* 1907.	Tyrol. *von Guttenberg.* 1915.	S. Finland. *Ilvessalo* 1920.
								O.M.T.
I	20	31	20½	22½	27½	29½	17½	—
	30	51	34½	38	44½	47½	33	18½
	40	66½	49	54½	61	66	48½	25½
	50	80	62½	70	76½	80	62½	33
	60	91	72	81	88½	91	75	39½
	70	100	80½	88½	99½	99½	85½	46
	80	—	87	97½	107	107	94½	52½
	90	—	95	104	115	—	102½	58
	100	—	101	109	121	—	108½	63½
								M.T.
II	20	27	15	—	18½	26½	13½	—
	30	43½	25½	27½	33	42½	25	15½
	40	58	39½	42	48	58½	38	21½
	50	70	52½	55½	61½	72	50½	28
	60	79	62½	67	74½	82½	61½	34½
	70	87	70½	77	85	91	71½	40½
	80	—	77	84	93½	98½	79	46½
	90	—	84	91	101	—	86	52
	100	—	90	96	107½	—	92	56
III	20	22	12	—	12	23½	10½	—
	30	36½	20	28½	22½	37	20	—
	40	49	30	30½	34	52	30½	—
	50	60	42	43	47	64½	40½	—
	60	68	52½	53	60	74½	49½	—
	70	75	60½	62½	69½	83½	57½	—
	80	—	66	69½	77½	90½	64½	—
	90	—	72½	76½	85	—	70½	—
	100	—	77½	82	91½	—	75½	—
IV	20	17½	9½	—	7½	21	8	—
	30	29	16	14	14½	33	15	—
	40	40	23½	22½	22½	45	22½	—
	50	50	31½	32½	33	56½	30	—
	60	58	40½	41½	44½	67	37	—
	70	64½	48	50	54	75½	43½	—
	80	—	54	56½	61½	83	49	—
	90	—	59½	63½	68	—	54½	—
	100	—	63½	69	74½	—	59½	—
V	20	12½	—	—	5	18½	4½	—
	30	21½	—	—	10½	29	9	—
	40	31	—	15	17	39½	14½	—
	50	40	—	22½	26	49½	20	—
	60	47½	—	30½	36½	59½	25½	—
	70	53	—	38½	45½	68	30½	—
	80	—	—	45½	53	76½	35	—
	90	—	—	52	59	—	39½	—
	100	—	—	56½	65	—	43	—

Norway Spruce

(B) *Number of Stems per Acre*

Quality Class.	Age.	Number of Stems per acre.						
		Great Britain. 1928.	Saxony. *Kunze.* 1878.	Prussia. *Schwappach.* 1902.	Germany. *Schiffel.* 1904.	Switzerland (Hugelland). *Flury.* 1907.	Tyrol. *von Guttenberg.* 1915.	S.Finland. *Ilvessalo.* 1920.
								O.M.T.
I	20	—	Number	2,975	1,715	1,825	1,940	—
	30	710	of	1,500	825	1,115	970	3,260
	40	410	stems	895	520	750	630	2,145
	50	280	not	595	350	555	470	1,445
	60	210	given.	420	285	435	375	1,137
	70	175		310	240	350	320	940
	80	—		240	215	285	280	785
	90	—		195	195	—	250	655
	100	—		160	175	—	230	545
								M.T.
II	20	—		—	2,695	2,350	—	—
	30	920		1,830	1,280	1,395	1,215	5,990
	40	500		1,035	720	950	780	3,360
	50	325		690	495	680	580	2,330
	60	240		490	370	520	465	1,710
	70	190		375	300	400	395	1,250
	80	—		300	255	325	340	940
	90	—		240	225	—	305	720
	100	—		200	205	—	275	585
III	20	—		—	2,835	3,280	—	—
	30	1,310		2,375	2,113	1,800	1,620	—
	40	665		1,230	1,185	1,215	970	—
	50	410		815	695	870	710	—
	60	300		595	500	630	555	—
	70	230		460	400	475	465	—
	80	—		375	330	375	405	—
	90	—		305	290	—	355	—
	100	—		260	255	—	320	—
IV	20	—		—	—	4,860	—	—
	30	—		3,015	—	2,485	2,025	—
	40	1,000		1,605	1,920	1,540	1,215	—
	50	590		975	1,100	1,060	855	—
	60	400		715	735	745	670	—
	70	300		570	550	560	555	—
	80	—		470	445	430	480	—
	90	—		395	380	—	420	—
	100	—		340	330	—	375	—
V	20	—		—	—	8,345	—	—
	30	—		—	—	3,975	—	—
	40	1,500		2,035	2,420	2,145	1,315	—
	50	765		1,300	1,475	1,320	925	—
	60	500		935	920	895	730	—
	70	375		740	690	635	605	—
	80	—		615	540	500	525	—
	90	—		530	450	—	465	—
	100	—		465	385	—	420	—

Norway Spruce

(C) *Volume per Acre*

Quality Class.	Age.	Volume per acre, cubic feet, quarter-girth.						
		Great Britain. 1928.	Saxony. *Kunze.* 1878.	Prussia. *Schwappach.* 1902.	Germany. *Schiffel.* 1904.	Switzerland (Hugelland). *Flury.* 1907.	Tyrol. *von Guttenberg.* 1915.	S. Finland. *Ilvessalo.* 1920.
								O.M.T.
I	20	—	720	280	1,210	885	795	—
	30	3,500	2,380	1,405	2,605	3,535	1,965	—
	40	5,250	4,355	2,940	4,310	6,160	3,460	430
	50	6,760	6,015	4,600	6,040	8,000	5,040	1,215
	60	8,020	7,375	5,950	7,265	9,225	6,590	2,170
	70	8,690	8,485	6,845	8,990	10,060	8,000	2,960
	80	—	9,450	7,475	10,190	10,660	9,235	3,585
	90	—	10,030	7,945	11,300	—	10,310	4,100
	100	—	10,540	8,235	12,260	—	11,220	4,535
								M.T.
II	20	—	—	—	630	585	515	—
	30	2,840	1,300	795	1,595	2,580	1,270	—
	40	4,490	3,075	1,965	2,885	4,950	2,345	—
	50	5,890	4,555	3,310	4,365	6,565	3,590	710
	60	6,940	5,880	4,565	5,770	7,845	4,860	1,445
	70	7,800	6,735	5,475	6,990	8,630	6,050	2,250
	80	—	7,500	6,115	8,135	9,200	7,105	2,980
	90	—	8,170	6,545	9,170	—	8,000	3,505
	100	—	8,555	6,800	10,060	—	8,755	3,930
III	20	—	—	—	235	360	360	—
	30	2,140	560	260	820	1,865	830	—
	40	3,680	1,640	1,190	1,705	3,760	1,560	—
	50	4,930	3,145	2,255	2,850	5,410	2,445	—
	60	5,910	4,535	3,230	4,050	6,545	3,365	—
	70	6,730	5,365	4,040	5,085	7,305	4,265	—
	80	—	6,060	4,670	6,040	7,855	5,095	—
	90	—	6,530	5,120	6,935	—	5,825	—
	100	—	6,845	5,385	7,765	—	6,465	—
IV	20	—	—	—	—	180	200	—
	30	—	—	—	335	1,005	495	—
	40	2,690	650	605	855	2,785	945	—
	50	3,900	1,480	1,450	1,640	4,220	1,515	—
	60	4,890	2,920	2,280	2,525	5,375	2,145	—
	70	5,660	3,770	2,930	3,390	6,070	2,785	—
	80	—	4,375	3,410	4,185	6,590	3,400	—
	90	—	4,790	3,760	4,915	—	3,975	—
	100	—	5,065	4,040	5,600	—	4,500	—
V	20	—	—	—	—	—	—	—
	30	—	—	—	—	840	225	—
	40	1,670	—	—	525	1,920	405	—
	50	2,820	—	720	1,145	3,185	740	—
	60	3,700	—	1,315	1,885	4,220	1,075	—
	70	4,400	—	1,905	2,625	4,925	1,435	—
	80	—	—	2,335	3,320	5,445	1,805	—
	90	—	—	2,590	3,960	—	2,175	—
	100	—	—	2,750	4,545	—	2,525	—

DOUGLAS FIR

TABLE showing comparison between British Yield Tables and Yield Tables by Hanzlik, 1914, for Western America; Schwappach, 1920, for Germany, and Gerhardt, 1926, for Germany, in respect of (A) mean height; (B) number of stems per acre; and (C) volume per acre quarter girth.

DOUGLAS FIR

(A) *Mean Height of Main Crop in Feet*

Quality Class.	Age.	Height in feet.			
		Great Britain. 1928.	U.S.A. *Hanzlik.* 1914.	Germany. *Schwappach.* 1920.	Germany. *Gehrhardt.* 1926.
I	20	53½	36	37	36½
	30	78	61	58½	68½
	40	95½	84	70	89
	50	110	102	—	106
	60	—	117	—	119½
II	20	46½	31	23	30
	30	69	55	44½	58
	40	86	76	58	77
	50	100	90	—	91½
	60	—	100	—	104
III	20	39½	—	—	—
	30	60½	44	—	—
	40	76½	59	—	—
	50	90	70	—	—
	60	—	79	—	—
IV	20	33½	—	—	—
	30	52	—	—	—
	40	67½	—	—	—
	50	80	—	—	—
	60	—	—	—	—

Douglas Fir

(B) *Number of Stems per Acre*

Quality Class.	Age.	Number of Stems per acre.			
		Great Britain. 1928.	U.S.A. *Hanzlik.* 1914.	Germany. *Schwappach.* 1920.	Germany. *Gehrhardt.* 1926.
I	20	715	940	Number of stems not given.	690
	30	335	625		280
	40	205	385		145
	50	140	275		90
	60	—	220		60
II	20	850	940		745
	30	395	625		330
	40	230	425		170
	50	150	310		100
	60	—	250		70
III	20	1,115	—		—
	30	445	1,630		—
	40	265	775		—
	50	170	515		—
	60	—	360		—
IV	20	1,530	—		—
	30	570	—		—
	40	310	—		—
	50	200	—		—
	60	—	—		—

Douglas Fir

(C) *Volume per Acre*

Quality Class.	Age.	Volume per acre—cubic feet, quarter-girth.			
		Great Britain. 1928.	U.S.A. *Hanzlik.* 1914.	Germany. *Schwappach.* 1920.	Germany. *Gehrhardt.* 1926.
I	20	3,010	1,650	1,650	1,505
	30	5,130	3,140	2,660	4,230
	40	6,630	5,300	3,680	5,620
	50	7,900	7,100	—	6,500
	60	—	8,480	—	7,090
II	20	2,510	1,360	540	875
	30	4,450	2,540	1,435	3,130
	40	5,930	4,280	2,240	4,345
	50	7,160	5,790	—	5,140
	60	—	6,950	—	5,656
III	20	1,980	1,040	—	—
	30	3,820	1,960	—	—
	40	5,240	3,300	—	—
	50	6,420	4,440	—	—
	60	—	5,260	—	—
IV	20	1,500	—	—	—
	30	3,200	—	—	—
	40	4,590	—	—	—
	50	5,740	—	—	—
	60	—	—	—	—

CHAPTER VI

GENERAL DISCUSSION: RATE OF GROWTH IN RELATION TO FACTORS OF LOCALITY

The growth of any species of tree on a given site may be considered as expressing the combined effect of all the factors which influence growth. This expression is almost complete in old woods, but much less so in young stands.

The influence of locality upon tree growth is exceedingly complex, and it is impossible completely to disentangle the different factors which are at work. Nevertheless, these fall into two main groups —the sub-aerial, comprising the local climate, which varies, according to elevation and exposure about the general climate, and the edaphic —comprising soil, which varies in physical properties and in fertility. To these there may be added a third group, the artificial factors, which includes the effects of silvicultural treatment.

In practice, when descriptions are made of sample plots, it is necessary to concentrate on a few of the simpler and more easily estimated factors such as elevation, exposure and soil. These, however, are all to a greater or less degree inter-related. Thus, elevation in any locality modifies the general climate of the district and to a certain extent also the exposure.

In the succeeding sections the following locality factors are discussed briefly; climate, elevation, exposure, soil. In the second part of the chapter a series of tables is given in which the sample plots in each quality class are classified in relation to situation, elevation, degree of exposure and type of soil.

Climate.—The climate of Great Britain is mainly determined by the position of the country relative to the North Atlantic Ocean and by the influence of the Gulf Stream. The prevailing winds are south-westerly to westerly, though the configuration of the ground may cause local variations to the north or south.

The effect of the prevailing wind and the Gulf Stream is to produce a comparatively mild, equable climate. The mean January temperature, for example, is as much as 30° F. higher than the mean temperature of the same latitude in the northern hemisphere as a whole.

Cornwall has the warmest winter climate with a mean daily minimum in January of 39° to 40° F., and a mean temperature for the month of 43° F. The coldest winter climate is found in the eastern counties of England and the north-east of Scotland, where the January daily minima are 31° and 32° F. respectively. The

most severe climate in Great Britain is experienced in the mountainous districts of central and eastern Scotland; in these regions winter temperatures of 0° F. and lower are not uncommon.

While the mean temperature in winter decreases from S.W. mean to E. and N.E., in summer it falls from S.E. to N.W. The July temperature in the London district is 63° to 64° F.; in N.W. Scotland it is only 56° F. The highest temperature has been recorded in the district round London and there the greatest mean annual range of temperature occurs, viz., 24° F. In W. and N.W. Scotland, on the other hand, the range is only 16° F.

In the lower Thames Valley, the mean daily maximum for July is 71° F., while round the west and north coasts of Scotland it is only 63° F. The effect of temperature in Great Britain is most marked upon the growth of exotic trees. Species such as *Cupressus macrocarpa* and *Pinus insignis* which grow well in the south and west of England do not survive the winter climate in the N.E. of Scotland, while a tree such as Corsican pine also shows better growth in the south.

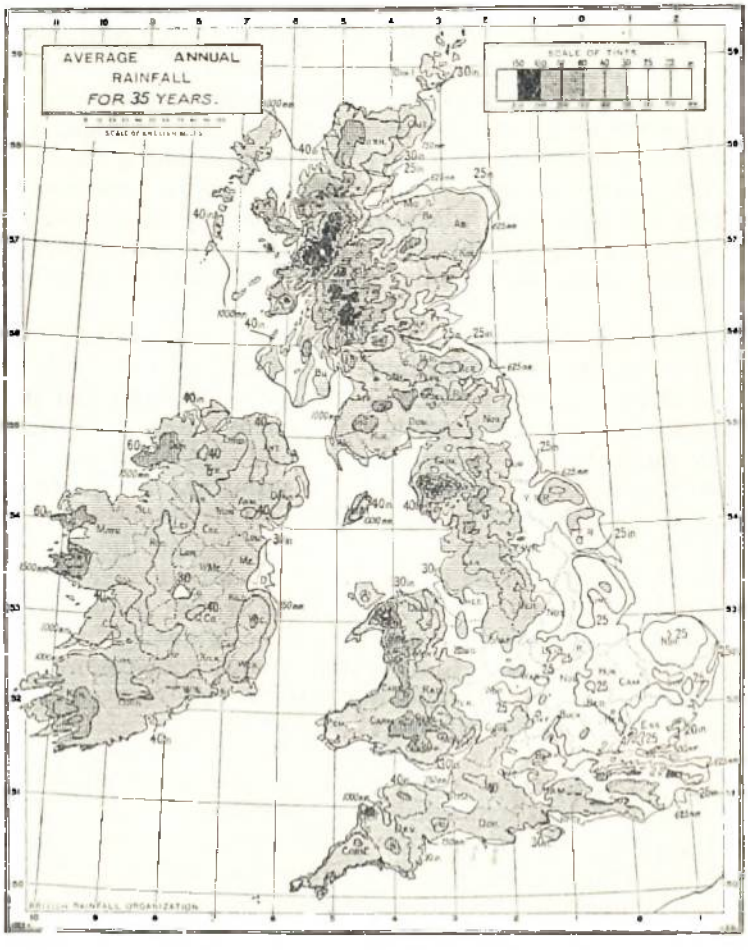
The accompanying map shows the distribution of the average annual rainfall over Great Britain. It will be seen that the rainfall is lowest in the east and south east counties of England and increases steadily to the west and north. The areas of heavy rainfall are three in number, viz., Wales, Cumberland and Westmorland, and western Scotland, the highest rainfall occurring in North Wales. round Snowdon, where the annual fall is about 200 inches.,

It is not easy to trace a relationship between the rainfall and the rate of growth. This is due to the fact that over the greater part of the country the areas of high rainfall have geological formations and soils entirely different from those in areas of low rainfall. In the north of Scotland these conditions are much more uniform, but there a comparison could not be effected on account of the lack of suitable woods in the west.

Elevation.—Elevation above sea-level is a factor which can be easily measured and expressed, but cannot be related directly to rate of growth. Its importance is due to the fact that changes in elevation usually involve changes in exposure and invariably changes in climate. Speaking generally, exposure increases with elevation. Within moderate limits of elevation the relative elevation of a given site above valley level is more important than absolute elevation. In almost any district a wood perched on a hillside 800 feet above the valley bottom is subject to a considerable degree of exposure even though it happens to face north-east, and be fully sheltered from the prevailing wind.

Increase in absolute elevation does, however, play an important part in checking the growth owing to the accompanying change in climate. This effect is more marked in the northern part of the kingdom. As elevation increases, summer and winter temperatures

become progressively lower, the growing season shorter and snowfall heavier and more prolonged. The effect of elevation on rate of growth is clearly shown in the tables by the absence of any sample plots of Quality I above the elevation of 1,000 feet with the sole exception of European larch in which Quality I was found up to 1,200 feet in one locality.



Exposure.—The effects of exposure on tree-growth are obvious under extreme conditions such as on rising ground on the western sea-board, but they are also seen clearly over the whole of the country. It is a matter of observation that exposure plays a great part in retarding tree growth in all parts of Great Britain, and it is, in its influence on the growth of trees, undoubtedly the most important individual factor. Nevertheless, it is a factor very difficult to assess with any degree of precision. Primarily, exposure in this country is defined in relation to the prevailing south-west

winds. The actual degree of exposure to which any given site is liable depends largely on the local, as well as on the general, topography. A slope facing due south-west may be comparatively sheltered if there happens to be a large mass of higher ground within a short distance to the west. On the other hand, a wood on an eastern slope, but near the crest of a hill, may be severely exposed to winds sweeping downwards over the crest. The actual direction of the prevailing wind may be altered locally by the lie of the land, and an observer not acquainted with the district may thus be confused.

The system employed during the survey in the classification of the exposures was necessarily very subjective. Four degrees of exposure were recognised, viz., fully exposed, moderately exposed, moderately sheltered and fully sheltered.* Plots which stood on ground open to the west, with no intervening higher ground within a considerable distance, were classified as fully exposed. Moderate exposure included a fairly wide range of conditions, in all of which there was some degree of shelter from the direct force of the westerly winds. Moderately sheltered plots included those sheltered to a considerable degree from the south-west or west but exposed to other quarters, *e.g.*, plots on sheltered aspects but at high relative elevations. Plots classified as fully sheltered were mostly in valleys or on lower slopes facing east, where there was complete protection from the prevailing winds, and also from winds from other quarters. In placing each sample plot into its exposure class regard was also paid to the actual evidence afforded by the trees themselves.

Soil.—Soil is the most complex of all the factors on which the growth of trees depends. The quality of a soil in relation to tree growth is determined not only by the physical texture but also by other conditions such as chemical composition, biological properties, depth and moisture. It is evident, for example, that a sandy soil in the eastern counties of England where the annual rainfall is about 20 inches will yield an entirely different crop from a similar soil in the west under a rainfall of 80 inches. Again, the abundance or scarcity of lime often plays an important part in promoting or retarding growth. Considered as a whole, the soils in England are rarely characterised by insufficient depth, or by poverty in essential food elements. In Scotland, the soils in the south and north-east are generally favourable, in the west and north-west, however, there are considerable areas covered with peat which present serious problems in afforestation.

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* In the tables, pp. 84—96 the following abbreviations are used :—

F.S. = Fully sheltered.
M.S. = Moderately sheltered.
F.E. = Fully exposed.
M.E. = Moderately exposed.

The classification of soils employed during the survey divides the soils into the following types :—Sand, sandy loam, loam, clay loam, clay, peaty loam, peat. The only type likely to require any explanation is the peaty loam. This is a soil in which the upper 12 to 18 inches consist of a black or dark brown peaty substance in which mineral particles are clearly visible, the whole being of the smooth texture of a loam.

Tables showing Classification of Plots in relation to Locality Factors

The data collected for the purpose of constructing the yield tables represent for each species a sample of the growth in fully stocked woods in Great Britain. The question as to how far each sample is truly representative for the species concerned depends on the number of plots measured, and the range of conditions included. It may fairly be claimed that, as regards the principal species at least, Scots pine, European larch and Norway spruce, the data can be regarded as forming a reliable sample. An analysis of the data in respect of the principal locality factors should, therefore, be of interest as indicating the general conditions under which the different species were growing. Such an analysis might also be expected to throw some light on the relation between locality and rate of growth.

In the tables below, the plots in each quality class have been grouped under the following eight districts (counties in which no plots were measured have been excluded) :—

(1) W. Scotland—comprising the following counties : Argyll, Inverness, Ross and Cromarty, Sutherland.
(2) E. Scotland—comprising the following : Aberdeen, Banff, Moray, Kincardine, Nairn, Perth, Forfar, Fife.
(3) S. Scotland—comprising Berwick, Roxburgh, Peebles, Selkirk, Dumfries, Kirkcudbright, Wigtown, Ayr, Renfrew.
(4) N. England—comprising Northumberland, Durham, Cumberland, Westmorland, Lancashire, Yorkshire.
(5) Wales and western counties of England—comprising Denbigh, Flint, Carnarvon, Merioneth, Montgomery, Radnor, Brecknock, Cardigan, Pembroke, Carmarthen, Glamorgan, Monmouth, Gloucester, Hereford, Shropshire, Cheshire, Stafford.
(6) S.W. England—comprising Cornwall, Devon, Somerset, Dorset.
(7) S.E. England—comprising Wiltshire, Hampshire, Sussex, Kent, Surrey, Berkshire.
(8) E. England—comprising Norfolk, Suffolk, Buckingham, Bedford.

The number of plots measured in each district is shown, and the plots are further arranged into elevation, exposure, and soil classes. The range of elevation is subdivided and the plots are grouped together into classes with a range of elevation of 200 feet. Thus, the first class includes plots which lay at elevations up to 200 feet above sea level, the next, those which lay at heights of from 200 feet to 400 feet and so on.

For the other factors—exposure and soil—the types which have already been described are employed.

Scots Pine—Locality Factors

Quality Class.	District.	Number of Plots.	Elevation. (Feet above sea-level.)								Exposure.				Soil.						
			0 to 200	200 to 400	400 to 600	600 to 800	800 to 1,000	1,000 to 1,200	1,200 to 1,400	1,400 to 1,600	F.S.	M.S.	M.E.	F.E.	Sand.	Sandy Loam.	Loam	Clay Loam	Clay.	Peaty Loam.	Peat.
Above 60-ft.	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	1	—	1	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—
	6	2	—	2	—	—	—	—	—	—	1	—	1	—	1	—	—	1	—	—	—
	7	5	2	3	—	—	—	—	—	—	3	1	—	1	5	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	8	2	6	—	—	—	—	—	—	4	1	1	2	7	—	—	1	—	—	—
I (60-ft.)	1	3	2	—	1	—	—	—	—	—	2	1	—	—	—	3	—	—	—	—	—
	2	9	3	5	—	1	—	—	—	—	5	3	1	—	6	1	1	—	1	—	—
	3	9	3	—	6	—	—	—	—	—	1	6	2	—	3	2	1	3	1	—	—
	4	1	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—
	5	1	—	—	1	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
	6	5	2	1	1	1	—	—	—	—	3	—	2	—	1	1	1	1	—	1	—
	7	25	14	7	4	—	—	—	—	—	13	2	7	3	15	1	2	—	2	5	—
	8	8	6	—	2	—	—	—	—	—	2	1	5	—	8	—	—	—	—	—	—
	Total	61	31	13	15	2	—	—	—	—	27	13	17	4	33	8	6	4	4	7	—

II (50-ft.)	1	13	5	5	2	1	—	—	—	—	2	3	8	—	2	8	—	—	—	—	3
	2	66	5	23	23	9	4	2	—	—	22	28	14	2	44	14	5	3	—	—	—
	3	11	1	4	6	—	—	—	—	—	1	2	7	1	—	3	1	6	—	—	1
	4	16	2	2	6	4	2	—	—	—	1	3	6	6	5	6	1	—	—	2	2
	5	11	—	2	—	1	6	1	1	—	—	—	5	6	2	3	6	—	—	—	—
	6	13	6	1	3	3	—	—	—	—	2	2	7	2	5	2	—	3	1	2	—
	7	12	3	5	4	—	—	—	—	—	4	1	4	3	5	4	—	1	—	2	—
	8	10	6	1	3	—	—	—	—	—	6	—	4	—	9	—	—	—	—	1	—
	Total	152	28	43	47	18	12	3	1	—	38	39	55	20	72	40	13	13	1	7	6
III (40-ft.)	1	14	6	4	2	2	—	—	—	—	—	4	10	—	7	7	—	—	—	—	—
	2	37	6	6	11	8	2	2	1	1	10	11	15	1	22	10	1	4	—	—	—
	3	6	—	—	3	3	—	—	—	—	—	—	4	2	1	2	3	—	—	—	—
	4	16	1	1	4	3	5	2	—	—	2	4	2	8	3	3	1	—	—	6	3
	5	2	—	—	1	1	—	—	—	—	—	—	—	2	1	1	—	—	—	—	—
	6	11	2	—	2	5	1	1	—	—	—	2	4	5	3	1	1	—	—	5	1
	7	9	4	4	1	—	—	—	—	—	4	—	5	—	8	—	—	—	—	1	—
	8	1	—	—	1	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—
	Total	96	19	15	25	22	8	5	1	1	17	21	40	18	46	24	6	4	—	12	4
Below (40-ft.)	1	5	2	1	1	1	—	—	—	—	—	2	3	—	1	4	—	—	—	—	—
	2	10	—	—	2	—	1	4	3	—	1	3	3	3	6	4	—	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	6	—	—	—	1	3	2	—	—	1	—	—	5	1	1	1	2	—	1	—
	5	2	—	1	1	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—
	6	1	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	24	3	2	4	2	4	6	3	—	2	5	6	11	10	9	1	2	—	2	—

European Larch—Locality Factors

Quality Class.	District.	Number of Plots.	Elevation. (Feet above sea-level.)										Exposure.				Soil.						
			0 to 200	200 to 400	400 to 600	600 to 800	800 to 1000	1000 to 1200	1200 to 1400	1400 to 1600	1600 to 1800	1800 to 2000	F.S.	M.S.	M.E.	F.E.	Sand.	Sandy Loam.	Loam	Clay Loam	Clay.	Peaty Loam	Peat.
I (80-ft.)	1	11	1	5	4	1	—	—	—	—	—	—	1	8	2	—	—	11	—	—	—	—	—
	2	2	1	—	1	—	—	—	—	—	—	—	1	—	1	—	—	2	—	—	—	—	—
	3	1	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—
	4	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—
	5	16	1	1	6	4	3	1	—	—	—	—	6	3	5	2	—	1	13	1	1	—	—
	6	10	1	2	2	4	1	—	—	—	—	—	6	3	1	—	1	2	6	1	—	—	—
	7	18	5	5	7	1	—	—	—	—	—	—	5	6	3	4	1	5	9	2	1	—	—
	8	1	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—
	Total	60	10	15	20	10	4	1	—	—	—	—	20	20	14	6	2	24	28	4	2	—	—
II (70-ft.)	1	15	—	5	8	2	—	—	—	—	—	—	1	6	8	—	—	15	—	—	—	—	—
	2	14	1	2	4	5	1	1	—	—	—	—	3	8	2	1	5	7	1	1	—	—	—
	3	17	4	9	3	—	1	—	—	—	—	—	2	8	5	2	—	11	3	1	1	—	1
	4	7	—	3	2	2	—	—	—	—	—	—	1	1	5	—	—	5	1	1	—	—	—
	5	47	3	4	12	13	9	5	1	—	—	—	16	14	8	9	3	12	28	4	—	—	—
	6	30	2	7	11	7	3	—	—	—	—	—	16	7	7	—	3	5	16	6	—	—	—
	7	31	5	5	14	7	—	—	—	—	—	—	5	8	10	8	3	7	4	9	8	—	—
	8	Nil	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	161	15	35	54	36	14	6	1	—	—	—	44	52	45	20	14	62	53	22	9	—	1
III (60-ft.)	1	11	—	6	2	—	2	1	—	—	—	—	1	5	4	1	—	10	—	—	—	—	1
	2	23	—	4	5	4	8	1	—	1	—	—	8	3	9	3	3	12	5	2	—	—	1
	3	20	2	4	5	4	4	1	—	—	—	—	—	7	11	2	—	13	4	3	—	—	—
	4	11	—	1	4	5	1	—	—	—	—	—	4	2	2	3	3	4	2	1	1	—	—
	5	55	—	6	11	12	9	13	4	—	—	—	17	6	22	10	1	9	44	1	—	—	—

	6	16	1	6	1	5	2	1	—	—	—	—	7	3	5	1	1	—	7	3	2	3	—
	7	7	1	3	1	2	—	—	—	—	—	—	—	2	3	2	—	1	3	1	2	—	—
	8	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—
	Total	144	4	31	29	32	26	17	4	1	—	—	37	28	57	22	9	49	65	11	5	3	2
IV (50-ft.)	1	4	—	3	—	—	1	—	—	—	—	—	—	2	1	1	—	4	—	—	—	—	—
	2	18	—	3	2	4	4	4	1	—	—	—	1	3	13	1	2	13	2	1	—	—	—
	3	8	2	—	—	1	—	1	3	1	—	—	—	4	2	2	—	5	3	—	—	—	—
	4	9	—	1	3	3	1	—	1	—	—	—	—	—	4	5	—	6	2	—	1	—	—
	5	21	—	3	2	—	8	5	3	—	—	—	1	1	12	7	1	6	13	1	—	—	—
	6	7	—	—	1	1	4	1	—	—	—	—	1	1	5	—	—	1	4	—	1	1	—
	7	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—
	8	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—
	Total	69	2	12	8	9	18	11	8	1	—	—	3	11	39	16	5	35	24	2	2	1	—
V (40-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	11	—	—	—	1	1	4	4	—	1	—	1	2	5	3	—	10	1	—	—	—	—
	3	1	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—
	4	8	—	1	1	2	2	2	—	—	—	—	1	1	3	3	1	3	3	1	—	—	—
	5	8	—	—	—	—	1	4	3	—	—	—	—	1	1	6	—	3	3	1	1	—	—
	6	2	—	—	—	—	1	1	—	—	—	—	—	—	1	1	—	—	2	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	30	—	1	1	4	5	11	7	—	1	—	2	4	10	14	1	17	9	2	1	—	—
Below (40-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	8	—	—	—	—	1	—	2	3	1	1	—	—	4	4	—	5	2	—	—	—	1
	3	1	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1	—	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	1	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	1	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	10	—	—	—	—	1	—	2	5	1	1	—	—	4	6	—	6	3	—	—	—	1

Norway Spruce—Locality Factors

Quality Class.	District.	Number of Plots.	Elevation. (Feet above sea-level.)										Exposure.				Soil.						
			0 to 200	200 to 400	400 to 600	600 to 800	800 to 1000	1000 to 1200	1200 to 1400	1400 to 1600	1600 to 1800	1800 to 2000	F.S.	M.S.	M.E.	F.E.	Sand.	Sandy Loam.	Loam	Clay Loam	Clay.	Peaty Loam	Peat.
I (80-ft.)	1	5	1	4	—	—	—	—	—	—	—	—	3	—	2	—	—	4	—	—	—	—	1
	2	4	3	1	—	—	—	—	—	—	—	—	1	—	3	—	—	4	—	—	—	—	—
	3	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
	4	1	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—
	5	5	1	1	3	—	—	—	—	—	—	—	3	1	1	—	—	—	—	3	—	1	1
	6	5	2	2	1	—	—	—	—	—	—	—	5	—	—	—	—	—	1	4	—	—	—
	7	1	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	22	7	10	5	—	—	—	—	—	—	—	13	2	7	—	—	10	1	7	—	1	3
II (70-ft.)	1	4	—	1	3	—	—	—	—	—	—	—	1	—	3	—	—	1	—	3	—	—	—
	2	12	1	6	2	1	2	—	—	—	—	—	6	4	2	—	1	5	3	2	—	—	1
	3	4	—	1	2	—	1	—	—	—	—	—	—	3	1	—	—	1	1	2	—	—	—
	4	3	2	1	—	—	—	—	—	—	—	—	1	—	2	—	—	—	—	1	—	2	—
	5	5	2	1	1	—	—	—	1	—	—	—	4	—	1	—	—	3	2	—	—	—	—
	6	4	1	—	2	—	1	—	—	—	—	—	—	2	2	—	—	—	—	1	2	1	—
	7	2	—	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	1	1	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	34	6	12	10	1	4	—	1	—	—	—	14	9	11	—	1	10	7	10	2	3	1
III (60-ft.)	1	3	1	2	—	—	—	—	—	—	—	—	—	3	—	—	—	1	2	—	—	—	—
	2	21	1	4	6	8	2	—	—	—	—	—	8	9	3	1	4	5	4	3	1	—	4
	3	8	1	5	—	—	1	1	—	—	—	—	1	3	3	1	—	2	4	1	—	—	1
	4	11	—	2	3	1	3	1	1	—	—	—	3	5	2	1	—	4	3	1	1	1	1
	5	5	—	—	1	—	1	1	1	1	—	—	1	2	1	1	—	2	1	1	1	—	—

	6	8	—	—	2	3	—	2	1	—	—	—	—	2	6	—	—	1	1	2	1	3	—
	7	4	—	—	2	2	—	—	—	—	—	—	—	1	1	2	—	1	1	2	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	60	3	13	14	14	7	5	3	1	—	—	13	25	16	6	4	16	16	10	4	4	6
IV (50-ft.)	1	1	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	1	—	—	—	—	—
	2	17	1	1	3	—	5	3	3	1	—	—	3	4	7	3	1	12	2	2	—	—	—
	3	5	—	—	1	3	—	1	—	—	—	—	—	3	2	—	—	—	4	1	—	—	—
	4	6	—	—	1	1	1	—	1	—	2	—	2	—	2	2	—	1	3	2	—	—	—
	5	1	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—
	6	11	—	—	—	3	3	3	1	1	—	—	4	3	3	1	—	—	4	3	—	3	1
	7	2	1	—	—	1	—	—	—	—	—	—	1	—	1	—	—	—	—	1	1	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	43	3	1	5	8	9	8	5	2	2	—	10	11	15	8	1	14	14	8	1	3	1
V (40-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	4	—	—	1	—	—	2	1	—	—	—	—	2	1	1	—	3	1	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	8	—	—	—	—	—	—	—	3	4	1	—	—	8	—	—	—	4	1	—	2	1
	5	1	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	1	—
	6	1	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	14	—	—	1	—	—	2	2	4	4	1	—	3	9	2	—	3	5	1	—	4	1
Below (40-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	2	—	—	—	—	—	—	—	1	1	—	—	2	—	—	—	—	1	—	1	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	2	—	—	—	—	—	—	—	—	1	1	—	—	2	—	—	—	—	1	—	1	—

Douglas Fir—Locality Factors

Quality Class.	Dis-trict.	Num-ber of Plots.	Elevation. (Feet above sea-level.)					Exposure.				Soil.						
			0 to 200	200 to 400	400 to 600	600 to 800	800 to 1,000	F.S.	M.S.	M.E.	F.E.	Sand.	Sandy Loam.	Loam.	Clay Loam.	Clay.	Peaty Loam.	Peat.
I (110-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	1	1	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
	3	1	1	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	2	1	—	1	—	—	2	—	—	—	—	—	1	1	—	—	—
	6	8	1	1	5	1	—	5	3	—	—	2	1	4	1	—	—	—
	7	1	—	—	1	—	—	1	—	—	—	1	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	13	4	1	7	1	—	10	3	—	—	3	1	7	2	—	—	—
II (100-ft.)	1	2	1	1	—	—	—	1	1	—	—	—	—	2	—	—	—	—
	2	8	2	6	—	—	—	5	2	1	—	2	4	2	—	—	—	—
	3	3	—	3	—	—	—	1	2	—	—	—	3	—	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	7	2	—	2	1	2	3	1	3	—	—	—	6	1	—	—	—
	6	8	—	4	3	—	1	4	3	1	—	—	—	8	—	—	—	—
	7	3	—	—	3	—	—	2	1	—	—	1	1	1	—	—	—	—
	8	1	1	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—
	Total	32	6	14	8	1	3	17	10	5	—	4	8	19	1	—	—	—

III (90-ft.)	1	1	—	1	—	—	—	—	—	—	1	—	1	—	—	—	—	—
	2	5	—	3	1	—	1	2	2	—	1	1	2	1	1	—	—	—
	3	3	1	1	—	—	1	3	—	—	—	—	2	—	1	—	—	—
	4	2	1	—	1	—	—	—	—	1	1	—	1	1	—	—	—	—
	5	1	—	—	—	1	—	—	1	—	—	—	—	1	—	—	—	—
	6	3	1	2	—	—	—	3	—	—	—	—	—	3	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	15	3	7	2	1	2	8	3	1	3	1	6	6	2	—	—	—
IV (80-ft.)	1	1	1	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—
	2	3	—	1	—	—	2	—	2	1	—	—	2	1	—	—	—	—
	3	2	1	1	—	—	—	1	1	—	—	—	1	1	—	—	—	—
	4	1	—	1	—	—	—	—	—	—	1	1	—	—	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	1	—	1	—	—	—	1	—	—	—	—	—	1	—	—	—	—
	8	1	1	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—
	Total	9	3	4	—	—	2	3	4	1	1	1	4	4	—	—	—	—

Corsican Pine—Locality Factors

Quality Class.	District.	Number of Plots.	Elevation. (Feet above sea-level.)					Exposure.				Soil.						
			0 to 200	200 to 400	400 to 600	600 to 800	800 to 1000	F.S.	M.S.	M.E.	F.E.	Sand.	Sandy Loam.	Loam.	Clay Loam.	Clay.	Peaty Loam.	Peat.
I (70-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	1	—	1	—	—	—	1	—	—	—	—	1	—	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	4	2	1	1	—	—	2	—	2	—	1	—	3	—	—	—	—
	6	8	1	—	4	3	—	1	2	4	1	—	1	7	—	—	—	—
	7	8	3	5	—	—	—	1	3	4	—	1	4	1	2	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	21	6	7	5	3	—	5	5	10	1	2	6	11	2	—	—	—
II (60-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	1	—	—	—	—	1	—	—	1	—	1	—	—	—	—	—	—
	5	1	—	—	—	—	1	—	—	—	1	—	—	1	—	—	—	—
	6	1	—	—	—	1	—	—	—	—	1	—	1	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	3	—	—	—	1	2	—	—	1	2	1	1	1	—	—	—	—

III (50-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	1	—	—	1	—	—	1	—	—	—	1	—	—	—	—	—	—	—
	3	2	2	—	—	—	—	—	1	1	—	—	1	1	—	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	3	2	—	1	—	—	1	1	1	—	1	1	1	—	—	—	—	

Sitka Spruce—Locality Factors

Quality Class.	District.	Number of Plots.	Elevation. (Feet above sea-level.)				Exposure.				Soil.						
			0 to 200	200 to 400	400 to 600	600 to 800	F.S.	M.S.	M.E.	F.E.	Sand.	Sandy Loam.	Loam.	Clay Loam.	Clay.	Peaty Loam.	Peat.
I (100-ft.)	1	1	1	—	—	—	1	—	—	—	—	—	1	—	—	—	—
	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	1	—	1	—	—	—	1	—	—	—	—	1	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	2	1	1	—	—	1	1	—	—	—	—	2	—	—	—	—
II (90-ft.)	1	1	—	1	—	—	—	1	—	—	—	—	—	1	—	—	—
	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	5	—	—	3	2	—	—	3	2	—	1	3	—	—	1	—
	4	2	2	—	—	—	—	—	2	—	—	—	—	—	2	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	8	2	1	3	2	—	1	5	2	—	1	3	1	2	1	—

III (80-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	2	—	—	—	2	—	—	2	—	—	—	—	—	—	—	2
	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	2	—	—	—	2	—	—	2	—	—	—	—	—	—	—	2
IV (70-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	1	—	—	—	1	—	—	1	—	—	—	—	—	—	—	1
	3	1	—	1	—	—	1	—	—	—	—	—	—	1	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	1	—	1	—	—	—	1	—	—	—	—	—	1	—	—	—
	Total	3	—	2	—	1	1	1	1	—	—	—	—	2	—	—	1

Japanese Larch—Locality Factors

Quality Class.	District.	Number of Plots.	Elevation. (Feet above sea-level.)					Exposure.				Soil.						
			0 to 200	200 to 400	400 to 600	600 to 800	800 to 1000	F.S.	M.S.	M.E.	F.E.	Sand.	Sandy Loam.	Loam.	Clay Loam.	Clay.	Peaty Loam.	Peat.
I (35-ft.)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	2	—	2	—	—	—	2	—	—	—	—	—	2	—	—	—	—
	3	14	4	7	3	—	—	4	7	2	1	—	7	5	1	—	—	1
	4	1	—	—	1	—	—	—	1	—	—	—	—	1	—	—	—	—
	5	6	2	1	—	2	1	1	3	2	—	—	1	5	—	—	—	—
	6	3	—	2	1	—	—	3	—	—	—	—	—	2	1	—	—	—
	7	7	1	1	4	—	1	4	3	—	—	—	3	2	2	—	—	—
	8	1	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
	Total	34	8	13	9	2	2	15	14	4	1	1	11	17	4	—	—	1
II (25-ft.)	1	1	1	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—
	2	4	—	1	1	2	—	2	2	—	—	2	2	—	—	—	—	—
	3	12	2	7	2	1	—	3	3	4	2	—	7	3	2	—	—	—
	4	3	—	—	1	1	1	—	2	1	—	—	2	1	—	—	—	—
	5	2	—	—	2	—	—	2	—	—	—	—	—	1	—	1	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	22	3	8	6	4	1	7	8	5	2	2	11	5	2	1	—	—

The foregoing tables are discussed briefly in the following sections.

Scots Pine

Geographical Distribution.—All districts are represented, but District 2—East Scotland—has by far the largest individual number of plots, viz., 122 out of a total of 350. This is due to the fact that within this district lie two of the most important Scots pine areas in this country—Deeside and lower Strathspey. The locality with the next largest representation is south-east England, where 51 plots were measured. The districts where fewest plots were measured were Wales (No. 5) and east England (No. 6). Quality II was the commonest class met with, both in England and in Scotland.

The following table shows the percentage distribution of the quality classes in each of the various districts.

Table showing for each district the percentage of plots belonging to each quality class.

Quality Classes.	Scotland. W.	Scotland. E.	Scotland, S.	England, N.	Wales.	England. S.W.	England. S.E.	England. E.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
I and over ..	9	8	35	3	12	22	59	42
II ..	37	54	42	42	54	41	23	53
III ..	40	30	23	42	12	34	18	5
IV and lower..	14	8	—	13	12	3	—	—
No. of plots	35	122	26	38	17	32	51	19

From this table it will be seen that in all districts with the exception of 7 (S.E. England) and 8 (E. England) the bulk of the plots belong to Quality Classes II and III. In districts 1, 2, 4 and 5, rates of growth represented, on the one hand, by Quality I, and on the other, by Quality IV and lower classes, are exceptional. In districts 3 (S. Scotland) and 6 (S.W. England) there is a surprisingly high proportion of Quality I plots. The S.E. and E. of England are seen to differ entirely from all the other districts on account of the very high proportion of fast growing plots which they contain. In neither were plots measured of poorer growth than Quality III, and very few plots of even this rate of growth were obtained.

Elevation.—Compared with European larch and Norway spruce, Scots pine is generally found at lower elevations; thus, the maximum elevation recorded is 1,600 feet, whereas in larch and Norway spruce it is 2,000 feet. In Districts I (W. Scotland), 3 (S. Scotland), 7 (S.E. England), and 8 (E. England) the upper limits of elevation are 800 feet, 800 feet, 600 feet, and 600 feet respectively, and the poorer quality classes in these districts are found at low elevations.

In E. Scotland, W. England and S.W. England there is a greater range of elevation.

Quality I has been found up to 800 feet in E. Scotland and S.W. England, but not above 200 feet in N. England. Quality II was found in E. Scotland up to 1,200 feet, in S.W. England up to 800 feet, and in N. England up to 1,000 feet. In the same localities the upper limits for Quality III were 1,660 feet, 1,200 feet and 1,200 feet respectively. This indicates that there are considerable variations from district to district.

Though generally it may be said that rate of growth falls as the elevation increases, the relation between the two is not so definite in the case of Scots pine as it is with some other species, and the conclusion falls to be drawn that elevation does not exert so great an influence upon the rate of growth of Scots pine as do some of the other factors.

Exposure.—The percentage of fully sheltered plots in a quality class falls gradually from Quality I to Quality IV, while the percentage of fully exposed plots is greatest in the lowest classes, and diminishes with increasing rate of growth. Thus, in Quality I, 45 per cent. of the plots are fully sheltered and 9 per cent. fully exposed ; in Quality III, 18 per cent. are fully sheltered and 19 per cent. fully exposed, while of plots which have a rate of growth slower than the last mentioned quality class, none is classified as fully sheltered, while 43 per cent. are fully exposed.

Soil.—Examination of the tables brings to light the preponderance among soil types of sand, on which almost half of the plots were growing. Numerous plots were also measured on sandy loam but those on loam, clay loam and peaty loam were not so numerous. Scots pine was very rarely found on clay, only four plots being measured on this soil. The predominance of sand and sandy loam is seen in all districts and holds for all quality classes.

European Larch

Geographical Distribution.—All districts are well represented with the exception of No. 8 (E. England) in which only three sample plots were measured. The largest number occur in Wales and the adjoining English counties. The distribution, within the seven principal districts, of the highest and lowest quality classes, indicates a well marked difference between, on the one hand, the east of Scotland and the north of England, and on the other, the remaining districts. The position is shown in the following table :—

Table showing for each district the percentage of plots belonging to each of the two quality class groups.

Quality Classes.	Scotland. E.	England. N.	Scotland. W.	Scotland. S.	Wales.	England. S.W.	England. S.E.
I and II	21	22	52	37	43	61	86
IV, V and below	53	47	9	21	19	14	2

The high percentage of slow-growing plots in the first two districts, contrasts strongly with the low figures for the others. The plots of Quality I occur chiefly in Wales, S.W. and S.E. England, and W. Scotland; only five out of the 60 plots belonging to this quality class occur in other localities.

Elevation.—Inspection of the table shows that, in spite of a considerable range of elevation within each quality class, there is a definite tendency for increase in elevation to be associated with reduction in the rate of growth. Thus, the sample plots in Quality I are grouped round about an elevation of 400–600 feet while in Class V the centre of the group lies nearer the 1,000 feet level. It will also be observed that the upper limit of elevation at which the sample plots of each quality class occur, varies considerably with the district, *e.g.* :—

District 2—Quality I, 600 feet; II, 1,200 feet; III, 1,600 feet; IV, 1,400 feet; V, 1,800 feet; below V, 2,000 feet.

District 5—Quality I, 1,200 feet; II, 1,400 feet; III, 1,400 feet; IV, 1,400 feet; V, 1,400 feet; below V, 1,600 feet.

District 7—Quality I, 800 feet; II, 800 feet; III, 800 feet; IV, 800 feet; V and lower, no records.

The inference to be drawn from these data is that, while Quality I may occur in Wales (District No. 5) up to 1,200 feet above sea level (probably only in very sheltered and favourable sites), it is not likely to be found above 600 feet in N.E. Scotland, or 800 feet in S.W. England, whereas Quality III may occur up to 1,600 feet in N.E. Scotland, 1,400 feet in Wales and 800 feet in S.W.England. In the last-mentioned district larch has not been planted to any extent above 800 feet, and information is lacking as to the growth at higher elevations. In Wales and the border counties—the district in which the largest number of plots was measured—all quality classes, from I to IV inclusive, were found at as low an elevation as 200 feet, but it is significant that Quality V was nowhere found below the 800 feet contour.

Exposure.—The proportion of fully sheltered plots within each quality class is found to fall gently from Quality I to Quality III and then abruptly to Quality Classes IV and V, while for the fully exposed plots the reverse holds good.

Soil.—Almost 80 per cent. of the larch plots in Great Britain occurred on either sandy loam or loam. Examination of the figures for the individual districts shows that, outside District 5 (Wales), sandy loam is the soil on which larch has been chiefly planted, but that in the Welsh area loam was more commonly met with. The differences between the various quality classes are not sufficiently great to give any indication of a relation between type of soil and rate of growth, and it is probable that any relation that actually

exists is masked by other factors. It will be observed, however, that Quality I was obtained on every type of soil except peat and peaty loam. Clay is, therefore, not necessarily prejudicial to the rapid growth of larch.

Norway Spruce

Geographical Distribution.—Sample plots of Norway spruce have been measured in all the districts with the exception of No. 8 (E. England). The districts with the largest numbers of plots were E. Scotland, N. England, and S.W. England which had 58, 31, and 29 plots respectively, out of a total of 175.

Taking Quality Classes I and II as representing good growth and IV and V as representing slow growth, it will be seen from the following table that in W. Scotland, Wales and S. England, the percentage of fast growing plots is greater than that of slow growing plots, while in the other districts the numbers are almost evenly balanced, except in N. England where there is a very high percentage of plots of slow growth.

Table showing for each locality the percentage of plots belonging to each of the two quality class groups.

Percentage of plots in each locality belonging to Quality Classes.	Scotland, W.	Scotland, E.	Scotland, S.	England, N.E.	Wales.	England, S.W.	England, E.
I and II	69	28	28	16	58	32	33
IV and V ..	8	36	28	51	12	40	22
No. of plots measured ..	13	58	18	31	17	29	9

Any conclusion which might be drawn from this table as regards the distribution of fast growing and slow growing plots is partially vitiated by the fact that the districts in which a high percentage of fast growing plots was found are those in which fewest measurements were obtained. The actual number, however, of plots of Quality I spruce is small, and it is probable that this class has a very limited distribution.

Elevation.—This species is found over a wide range of elevation even in one locality. The range of elevation within any quality class is extensive, except in Quality I where there are no plots at elevations of over 600 feet. Thus, Quality II is found from sea level up to 1,400 feet, Quality III up to 1,600 feet, Quality IV up to 1,800 feet, and Quality V up to 2,000 feet. The last class, however, was not met with under 400 feet.

Exposure.—Out of 175 plots measured, 50 were classified as fully sheltered, 50 as moderately sheltered, 60 as moderately exposed and only 15 as fully exposed. The percentage of fully sheltered plots is found to fall from 59 in Quality I and 43 in Quality II to 20 in Quality III and 23 in Quality IV. In Quality Classes V and VI there are no plots so described. On the other hand, none of the plots of Quality Classes I and II Norway spruce was described as fully exposed. Ten per cent. of the plots in Quality III, 16 per cent. in Quality IV, and 14 per cent. in Quality V fell, however, into this group. Speaking generally, it may be said that the best quality classes of Norway spruce are met with on sheltered or moderately sheltered situations, lower quality classes being usually associated with conditions of greater exposure.

Soil.—Loams were the soil types on which the great majority of the plots were growing, only six plots being measured on sand (all in District 2 (E. Scotland)), and seven on clay. Twelve plots were growing on peat of various depths, this type of soil occurring more commonly with this species than with any other Sandy loam, loam and clay loam had 53, 43 and 38 plots respectively, but on peaty loam only 16 were measured.

Douglas Fir

Geographical Distribution.—Sample plots of Douglas fir were measured in all districts, but the majority were found in four out of the eight geographical divisions—E. Scotland, S. Scotland, Wales and S.W. England. The distribution by quality classes shows that while the better and the poorer classes are evenly represented in the two Scottish areas, in Wales and the S.W. of England, 85 to 90 per cent. of the plots belong to Quality Classes I and II. Outside the S.W. of England, Quality I is evidently exceptional.

Elevation.—The maximum elevation at which Quality I is found is 800 feet (S.W. England), and none of the quality classes occurs above 1,000 feet. The data are largely a reflection of lowland conditions—42 out of 69 plots occurring below 400 feet—and give little guidance as to the growth which may be expected on upland areas. It will be observed that, out of the nine plots in Quality IV, two occur between 800 feet and 1,000 feet, and the remaining seven all below 400 feet.

Exposure.—Out of 69 plots, 38 are classed as fully sheltered and only 4 as fully exposed. There has thus been a marked tendency to plant Douglas fir in sheltered localities and, as has been shown above, at low elevations.

Soil.—Sand, sandy loam and loam are the principal types of soil represented. Plots are lacking on clay, peaty loam and peat.

Corsican Pine

Geographical Distribution.—The sample plots of Corsican pine have a distribution which is unusual and restricted. The table

shows that out of 27 sample plots, no fewer than 22 were measured in Districts 5, 6 and 7—in Wales, S.W. England and S. England. All but two of these plots belong to Quality I.

Elevation.—Quality I is found up to 800 feet above sea level, though the majority of the plots in this class occur below the 500 feet contour. Quality II occurs up to an elevation of 1,000 feet.

Exposure.—This species has not been planted so exclusively in sheltered situations as some of the other exotics. On the other hand, fully exposed sites have been in most cases avoided.

Soil.—The majority of the plots were found on sandy loams and loams. A few occurred on sand, but none on clay, peaty loam or peat.

Sitka Spruce

The number of sample plots measured is so small that there is little that can safely be said as to its distribution. Like Douglas fir, Corsican pine and Japanese larch it has been planted hitherto mainly in the lowlands, though in less fully sheltered localities. The soils are chiefly loam and clay ; there is only one plot on sandy loam and none on sand. The three plots on peat (a good type of peat in each case) give an indication of the growth on favourable examples of this important class of soil.

Japanese Larch

Geographical Distribution.—This species was found in all the districts into which the country has been divided. The largest number of plots (26 out of a total of 56) occur in District 3 in S. Scotland. In that locality the plots were evenly distributed between the two quality classes. The 19 plots measured in the southern half of England including Wales are, with two exceptions, of Quality I.

Elevation.—Only three plots were found at an elevation of more than 800 feet. The majority lie between 200 feet and 600 feet. This would indicate that, hitherto, this species has been planted chiefly in the low ground, in the valleys, and on the lower slopes of the hills.

Exposure.—The tables show very favourable conditions. 44 per cent. of the plots in Quality I and 32 per cent. of those in Quality II are classed as fully sheltered, whereas only 3 per cent. and 9 per cent. respectively are described as fully exposed.

Soil.—The great majority of the plots are seen to occur on sandy loams and loams, though all types of soil, with the exception of peaty loam, are represented. One plot of Quality I was growing on peat in E. Scotland.

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APPENDIX

SAMPLE PLOT DATA

In this Appendix the full final summary data and descriptons are given for all plots.

The plots are arranged within the species and quality classes in order of age, commencing with the youngest.

The plot numbers are in all cases given, *e.g.*, P. 575.

The sub-plots are designated by the letters S.P. before the number.

For each plot the measurement data are given first, followed by the locality description.

The following symbols are used :—

A = Age in years.
H = Mean height in feet.
G = Mean quarter-girth in inches.
N = Number of stems per acre.
B.A. = Basal area in square feet (quarter-girth) per acre.
V = Volume (under bark) in cubic feet (quarter-girth) per acre.
F = Form factor (under bark).
C = Crown length percentage.
B = Bark percentage.

In the locality descriptions the following order is maintained :—

County, elevation, aspect, exposure, soil, geological formation, ground vegetation, as for example :—

SCOTS PINE—England and Wales.

Above 60-ft. Class.

P. 167.—County—Hants. Elevation—180 ft. Aspect—General. Exposure—Fully sheltered. Geological Formation—Oligocene. Soil Vegetation—*Pteris ; Vaccinium Myrtillus.*

The following abbreviations have been made in the descriptions of exposure types :—

Fully exp. = for fully exposed.
Fully shelt. = for fully sheltered.
Mod. exp. = for moderately exposed.
Mod. shelt. = for moderately sheltered.

The vegetation notes attached to the plot files do not in all cases give a complete list of the species observed, though a list of the more prominent plants was always recorded. No attempt was made to express accurately the relative dominance of the different species ; this was merely indicated in a general way by the order in which the plants were entered, the most prominent species coming first, and then the others in descending order of importance. The species given in the plot descriptions below can have, therefore, only a limited value as an indication of the vegetation.

The following points should be noted. The species were given in order of dominance. Where there is only one British species in a genus, and where confusion is unlikely, the generic name only is given, *e.g.*, *Pteris* for *Pteris aquilina ;* in other cases the specific name also is given. (Note : *Rubus*, when occurring alone, always indicates *Rubus fruticosus*, agg.) Considerations of space and lack of complete records have necessitated the grouping together of the different species of grasses and mosses under the heads of

grass and *moss* respectively. These are placed in the descriptions in their relative order of frequency. The grasses which were most commonly found were few in number and consisted mainly of *Aira flexuosa, Agrostis alba,* and *A. vulgaris,* and *Holcus mollis.* When the vegetation was sparse, owing to the density of the canopy or other cause, the word "(Scanty)" follows the list of plant species. The word "Nil" indicates the absence of living vegetation in the plot.

SCOTS PINE—England and Wales

Above 60-ft. Class

P. 575.—MAIN CROP: A. 21 H. 32 G. 3½ N. 1170 B.A. 100 V. 1115 F. ·350 C. 44 B. 14. THINNINGS: N. 85 B.A. 2·4. Hants. 400′. General. Fully exp. Sand. Lower Greensand. Nil.

P. 641.—MAIN CROP: A. 24 H. 39 G. 4½ N. 770 B.A. 105 V. 1710 F. ·416 C. 45 B. 11. THINNINGS: N. 45 B.A. 4. Devon. 300′. E.N.E. Fully shelt. Clay loam. New Red Sandstone. Nil.

P. 691.—MAIN CROP: A. 24 H. 37 G. 4 N. 1020 B.A. 113 V. 1605 F. ·383 C. 42 B. 10. THINNINGS: N. 175 B.A. 8. Shropshire. 250′. General. Fully exp. Sand. Lower Trias. Nil.

P. 553.—MAIN CROP: A. 33 H. 51 G. 5 N. 575 B.A. 97 V. 2130 F. ·431 C. 31 B. 10. THINNINGS: N. 90 B.A. 7. Surrey. 350′. General—slightly S.W. Mod. shelt. Sand. *Rubus fruticosus, Pteris, Grasses, Mosses.*

S.P.Y. 80.—MAIN CROP: A. 33 H. 51 G. 6¼ N. 495 B.A.137 V. 2785 F. ·399 C. 44 B. 10. THINNINGS: N. 60 B.A. 7. Wilts. 400′. General. Fully shelt. Sand. Corallian Oolite. *Rubus fruticosus, Sambucus nigra, Ilex Aquifolium.*

P. 168.—MAIN CROP: A. 51 H. 72 G. 9¾ N. 290 B.A. 187 V. 4445 F. ·331 C. 41 B. 7. THINNINGS: N. 20 B.A. 6 V. 110. Hants. 100′. General. Fully shelt. Sand. Oligocene. Nil.

P. 315.—MAIN CROP: A. 61 H. 73 G. 9½ N. 355 B.A. 216 V. 5555 F. ·352 C. 25 B. 10. THINNINGS: N. 85 B.A. 24 V. 570. Devon. 270′. E.S.E. Mod. exp. Sandy loam. Permian. *Rubus fruticosus, Pteris, Hedera.*

P. 167.—MAIN CROP: A. 95 H. 89 G. 15½ N. 130 B.A. 216 V. 6970 F. ·363 C. 35 B. 7. Hants. 180′. General. Fully shelt. Sand. Oligocene. *Pteris, Vaccinium Myrtillus.*

Quality Class I—60-ft.

S.P.Y. 32.—MAIN CROP: A. 15 H. 22 G. 2¼ N. 2805 B.A. 98 V. 625 F. ·290 C. 45 B. 20. THINNINGS: N. 390 B.A. 9. Glos. 470′. S. Fully shelt. Loam. Oolitic Limestone. *Mosses.* (Scanty.)

P. 209.—MAIN CROP: A. 30 H. 42 G. 4¼ N. 930 B.A. 121 V. 2070 F. ·407 C. 37 B. 12. THINNINGS: N. 70 B.A. 3 V. 25. Suffolk. 30′. General. Mod. exp. Sand. Chalk. Nil.

P. 327.—MAIN CROP: A. 33 H. 39 G. 5¼ N. 725 B.A. 140 V. 2015 F. ·369 C. 37 B. 14. THINNINGS: N. 115 B.A. 10 V. 75. Devon. 550′. General. Fully shelt. Clay loam. Millstone Grit. *Mosses, Molinia.*

P. 589.—MAIN CROP: A. 33 H. 41 G. 3¾ N. 1235 B.A. 121 V. 1950 F. ·395 C. 38 B. 13. THINNINGS: N. 110 B.A. 5 V. 45. Wilts. 550′. E. Fully shelt. Peaty loam. Middle Oolite. Nil.

SCOTS PINE—England and Wales—*contd.*

Quality Class I—60-ft.—*contd.*

P. 213.—MAIN CROP: A. 33 H. 40 G. 4¼ N. 865 B.A. 104 V. 1665 F. ·399 C. 39 B. 12. THINNINGS: N. 65 B.A. 4 V. 40. Suffolk. 50′. General. Mod. exp. Sand. Chalk. Nil.

P. 210.—MAIN CROP: A. 34 H. 40 G. 3¾ N. 1050 B.A. 103 V. 1635 F. ·398 C. 36 B. 10. THINNINGS: N. 30 B.A. 2. Suffolk. 30′. General. Mod. exp. Sand. Chalk. *Mosses.* (Scanty.)

P. 566.—MAIN CROP: A. 35 H. 47 G. 5 N. 630 B.A. 110 V. 2260 F. ·436 C. 34 B. 9. THINNINGS: N. 85 B.A. 7. Hants. 130′. General, Fully shelt. Peaty loam. Upper Eocene. *Mosses, Pteris.* (Scanty.)

P. 201.—MAIN CROP: A. 43 H. 49 G. 5¼ N. 600 B.A. 114 V. 2340 F. ·421 C. 37 B. 9. THINNINGS: N. 25 B.A. 2. Beds. 490′. E. Fully shelt. Sand. Lower Greensand. Nil.

P. 199.—MAIN CROP: A. 43 H. 50 G. 4¾ N. 685 B.A. 115 V. 2600 F. ·453 C. 39 B. 9. THINNINGS: N. 20 B.A. 2. Beds. 480′. S. Mod. shelt. Sand. Lower Greensand. *Mosses.* (Scanty.)

P. 503.—MAIN CROP: A. 46 H. 52 G. 6½ N. 570 B.A. 156 V. 3345 F. ·412 C. 37 B. 9. THINNINGS: N. 30 B.A. 3 V. 40. Somerset. 700′. N.N.E. Mod. exp. Peaty loam. Old Red Sandstone. *Vaccinium Myrtillus, Mosses, Ferns.*

S.P.S. 12.—MAIN CROP: A. 46 H. 56 G. 7 N. 515 B.A. 172 V. 4005 F. ·416 C. 38 B. 6. THINNINGS: N. 85 B.A. 15. Sussex. 150′. W. Fully exp. Sand. Lower Greensand. Nil.

P. 564.—MAIN CROP: A. 47 H. 59 G. 7¾ N. 355 B.A. 144 V. 3010 F. ·356 C. 35 B. 10. THINNINGS: N. 65 B.A. 13 V. 105. Sussex. 120′. S.E. Mod. shelt. Sand. Lower Greensand. *Mosses.*

P. 211.—MAIN CROP: A. 49 H. 54 G. 6¼ N. 495 B.A. 135 V. 3165 F. ·433 C. 33 B. 11. THINNINGS: N. 10 B.A. 2. Suffolk. 30′. General. Fully shelt. Sand. Chalk. *Mosses.* (Scanty.)

P. 552.—MAIN CROP: A. 49 H. 61 G. 6¾ N. 475 B.A. 146 V. 3525 F. ·395 C. 34 B. 9. THINNINGS: N. 25 B.A. 7 V. 165. Surrey. 300′. W. Fully shelt. Sand. Greensand. *Pteris.* (Scanty.)

P. 569.—MAIN CROP: A. 50 H. 63 G. 7¼ N. 520 B.A. 188 V. 4930 F. ·416 C. 29 B. 10. THINNINGS: N. 60 B.A. 12. Hants. 150′. S. Mod. exp. Sandy loam. Upper Eocene. *Pteris, Mosses, Hedera.*

P. 565.—MAIN CROP: A. 52 H. 64 G. 10 N. 235 B.A. 160 V. 3710 F. ·361 C. 36 B. 11. THINNINGS: N. 20 B.A. 7. Hants. 150′. N.W. Fully shelt. Loam. Upper Eocene. *Oxalis, Teucrium scorodonia, Mosses.*

P. 158.—MAIN CROP: A. 52 H. 57 G. 7½ N. 345 B.A. 134 V. 3085 F. ·405 C. 32 B. 9. THINNINGS: N. 50 B.A. 10 V. 210. Hants. 90′. General. Mod. shelt. Peaty loam. Oligocene. *Molinia, Pteris, Mosses.*

P. 166.—MAIN CROP: A. 53 H. 63 G. 8¾ N. 280 B.A. 149 V. 3380 F. ·361 C. 39 B. 8. THINNINGS: N. 10 B.A. 1 V. 20. Hants. 60′. General. Fully shelt. Peaty loam. Upper Eocene. *Molinia.*

P. 165.—MAIN CROP: A. 53 H. 67 G. 9 N. 285 B.A. 162 V. 3875 F. ·356 C. 35 B. 9. Hants. 100′. General. Fully shelt. Clay. Upper Eocene. *Molinia, Mosses.*

P. 311.—MAIN CROP: A. 54 H. 61 G. 6½ N. 510 B.A. 152 V. 3560 F. ·385 C. 34 B. 9. THINNINGS: N. 40 B.A. 7 V. 75. Berks. 410′. General. Mod. exp. Sand. Bagshot sands. Upper Eocene. *Mosses, Pteris.*

SCOTS PINE—England and Wales—*contd.*

Quality Class I—60-ft.—*contd.*

P. 359.—MAIN CROP: A. 54 H. 63 G. 8¼ N. 355 B.A. 168 V. 4160 F. ·392 C. 33 B. 10. THINNINGS: N. 50 B.A. 14 V. 295. Devon. 200′. W.S.W. Fully shelt. Loam. Culm measures of Carboniferous series. *Pteris, Rubus fruticosus, Vaccinium Myrtillus.*

P. 169.—MAIN CROP: A. 54 H. 60 G. 10 N. 205 B.A. 142 V. 3160 F. ·371 C. 42 B. 9. Hants. 60′. General. Fully shelt. Clay. Oligocene. *Molinia.*

P. 160.—MAIN CROP: A. 54 H. 60 G. 9 N. 285 B.A. 162 V. 3380 F. ·348 C. 37 B. 9. THINNINGS: N. 35 B.A. 11 V. 195. Hants. 120′. S. Fully shelt. Sand. Oligocene. *Rubus fruticosus, Molinia, Mosses.*

P. 521.—MAIN CROP: A. 57 H. 61 G. 8½ N. 330 B.A. 168 V. 3650 F. ·357 C. 35 B. 11. Cumberland. 100′. General. Fully exp. Peaty loam. Permian. *Rubus fruticosus, Aspidium aculeatum.*

P. 314.—MAIN CROP: A. 60 H. 67 G. 9¾ N. 280 B.A. 181 V. 4410 F. ·363 C. 29 B. 10. THINNINGS: N. 50 B.A. 16 V. 280. Devon. 190′. S.W. Mod. exp. Sand. Permian. *Rubus fruticosus, Pteris.*

P. 312.—MAIN CROP: A. 61 H. 66 G. 8 N. 380 B.A. 166 V. 4160 F. ·376 C. 34 B. 9. THINNINGS: N. 30 B.A. 8. Berks. 400′. S.E. Mod. exp. Sand. Bagshot sands. *Pteris, Mosses.*

P. 549.—MAIN CROP: A. 65 H. 69 G. 8¾ N. 350 B.A. 190 V. 4600 F. ·351 C. 35 B. 8. THINNINGS: N. 60 B.A. 21 V. 470. Sussex. 150′. E. Fully shelt. Peat on sand. Lower Greensand. *Pteris, Mosses, Erica tetralix, E. cinerea.*

S.P.Y. 15.—MAIN CROP: A. 75 H. 73 G. 10¾ N. 260 B.A. 205 V. 5480 F. ·367 C. 27 B. 11. THINNINGS: N. 10 B.A. 4. Surrey. 500′. W.N.W. Mod. exp. Sand. Lower Greensand. *Pteris, Vaccinium Myrtillus, Erica cinerea, Mosses.* (Scanty.)

P. 214.—MAIN CROP: A. 78 H. 73 G. 11½ N. 180 B.A. 166 V. 4450 F. ·368 C. 37 B. 8. Suffolk. 35′. General. Mod. exp. Sand. Chalk. Nil.

P. 216.—MAIN CROP: A. 79 H. 75 G. 11 N. 170 B.A. 142 V. 4025 F. ·378 C. 30 B. 8. Suffolk. 30′. General. Mod. exp. Sand. Chalk. Nil.

P. 309.—MAIN CROP: A. 81 H. 78 G. 12 N. 175 B.A. 180 V. 5000 F. ·357 C. 33 B. 9. Berks. 280′. E. Fully shelt. Sand. Bagshot sands. Upper Eocene. *Pteris, Molinia, Mosses.*

P. 302.—MAIN CROP: A. 85 H. 80 G. 13¾ N. 105 B.A. 137 V. 4185 F. ·375 B. 10. Hants. 260′. W.S.W. Mod. exp. Sand. Lower Greensand. *Calluna, Molinia.*

P. 573.—MAIN CROP: A. 88 H. 79 G. 11½ N. 235 B.A. 220 V. 7120 F. ·409 C. 31 B. 9. THINNINGS: N. 25 B.A. 17. Sussex. 100′. W. Fully exp. Sand. Lower Greensand. *Pteris.* (Scanty.)

P. 307.—MAIN CROP: A. 91 H. 77 G. 10¾ N. 220 B.A. 175 V. 4980 F. ·370 C. 25 B. 9. THINNINGS: N. 10 B.A. 5. Berks. 415′. General. Fully exp. Sand. Bagshot sands. Upper Eocene. *Pteris, Mosses.*

P. 310.—MAIN CROP: A. 93 H. 79 G. 13¼ N. 145 B.A. 173 V. 4800 F. ·352 C. 33 B. 8. Berks. 300′. General. Fully shelt. Sand. Bagshot sands. Upper Eocene. *Grasses, Mosses.*

P. 560.—MAIN CROP: A. 94 H. 81 G. 11 N. 280 B.A. 241 V. 7090 F. ·364 C. 25 B. 10. THINNINGS: N. 50 B.A. 31 V. 460. Sussex. 300′. N. Mod. exp. Sand. Hastings sands. *Pteris.*

SCOTS PINE—England and Wales—*contd.*

Quality Class I—60-ft.—*contd.*

P. 548.—MAIN CROP: A. 98 H. 80 G. 12¾ N. 215 B.A. 242 V. 6550 F. ·338 C. 23 B. 6. THINNINGS: N. 35 B.A. 21 V. 480. Sussex. 100′. S.E. Fully shelt. Sand. Lower Greensand. *Pteris, Mosses.* (Scanty.)

S.P.Y. 67.—MAIN CROP: A. 100 H. 82 G. 12 N. 165 B.A. 115 V. 5545 F. ·413 C. 31 B. 8. THINNINGS: N. 10 B.A. 6. Devon. 300′. E. Fully shelt. Sandy loam. Lower Trias. *Pteris, Mosses.*

P. 164.—MAIN CROP: A. 105 H. 87 G. 15½ N. 105 B.A. 180 V. 5205 F. ·332 C. 29 B. 8. Hants. 100′. General. Fully shelt. Loam. Upper Eocene. *Erica tetralix, Vaccinium Myrtillus, Molinia.*

P. 554.—MAIN CROP: A. 141 H. 92 G. 12¾ N. 225 B.A. 251 V. 9300 F. ·403 C. 15 B. 7. Surrey. 250′. S.E. Mod. exp. Peaty loam. Lower Greensand. *Mosses.* (Scanty.)

Quality Class II—50-ft.

S.P. 20.—MAIN CROP: A. 26 H. 28 G. 3½ N. 1205 B.A. 109 V. 1080 F. ·355 C. 44 B. 14. THINNINGS: N. 135 B.A. 4. Yorks. 500′. General. Fully exp. Peat. Corallian beds of Middle Oolite. *Aspidium aculeatum.* (Scanty.)

S.P.S. 27.—MAIN CROP. A. 27 H. 32 G. 6¼ N. 400 B.A. 106 V. 1210 F. ·356 C. 54 B. 13. Brecknock. 850′. S.E. Mod. shelt. Sandy loam. Silurian. *Grasses, Pteris.*

P. 658.—MAIN CROP: A. 27 H. 32 G. 5¼ N. 565 B.A. 111 V. 1355 F. ·381 C. 47 B. 13. THINNINGS: N. 10 B.A. 0·5 Brecknock. 950′. S. Mod. exp. Loam. Silurian. *Pteris, Agrostis alba, Aira flexuosa.*

P. 664.—MAIN CROP: A. 31 H. 32 G. 4¼ N. 985 B.A. 116 V. 1360 F. ·424 C. 43 B. 14. THINNINGS: N. 385 B.A. 19. Glamorgan. 1250′. W. Fully exp. Sandy loam. Carboniferous. Nil.

P. 328.—MAIN CROP: A. 32 H. 36 G. 5¼ N. 570 B.A. 105 V. 1320 F. ·350 C. 42 B. 15. THINNINGS: N. 65 B.A. 6 V. 35. Devon. 550′. S.W. Fully shelt. Clay loam. Millstone Grit. *Molinia, Mosses.*

P. 401.—MAIN CROP: A. 32 H. 37 G. 4¼ N. 920 B.A. 116 V. 1505 F. ·350 C. 41 B. 17.—THINNINGS: N. 145 B.A. 6 V. 35. Yorks. 700′ N.W. Mod shelt. Sandy loam. Middle Oolite. *Aspidium f. mas., Asplenium f. fœmina.* (Scanty.)

S.P.Y. 34.—MAIN CROP: A. 33 H. 33 G. 5 N. 960 B.A. 174 V. 2295 F. ·399 C. 56 B. 17. THINNINGS: N. 115 B.A. 11 Denbigh. 1020. S.W. Fully exp. Sandy loam. Silurian. *Aira flexuosa, Ferns.* (Scanty.)

P. 529.—MAIN CROP: A. 33 H. 31 G. 5 N. 675 B.A. 114 V. 1320 F. ·374 C. 46 B. 14. THINNINGS: N. 75 B.A. 8 V. 70. Northumberland. 450′. S.E. Fully exp. Peat. Carboniferous. *Calluna, Pteris, Mosses.*

P. 329.—MAIN CROP: A. 33 H. 35 G. 5¼ N. 690 B.A. 135 V. 1690 F. ·359 C. 35 B. 15. THINNINGS: N. 85 B.A. 9 V. 70. Devon. 600′. N.W. Fully shelt. Clay loam. Millstone Grit. *Aspidium f. mas.* (Scanty.)

S.P. 25.—MAIN CROP: A. 35 H. 40 G. 4¾ N. 815 B.A. 125 V. 2035 F. ·408 C. 37 B. 13. THINNINGS: N. 145 B.A. 10 Yorks. 500′ General. Fully exp. Loam. Corallian Beds of Middle Oolite. *Aspidium aculeatum.* (Scanty.)

SCOTS PINE—England and Wales—*contd.*

Quality Class II—50-ft.—*contd.*

P. 234.—MAIN CROP: A. 35 H. 37 G. 5¼ N. 705 B.A. 140 V. 2090 F. ·403 C. 39 B. 12. THINNINGS: N. 70 B.A. 5 V. 50. Yorks. 650′. S. Fully exp. Peaty loam. Lower Oolite. *Aspidium aculeatum, Rubus fruticosus.*

P. 678.—MAIN CROP: A. 35 H. 39 G. 5 N. 745 B.A. 128 V. 1880 F. ·376 C. 46 B. 12. Stafford. 250′ N.N.W. Mod. exp. Sand. Lower Trias. Nil.

P. 694.—MAIN CROP: A. 37 H. 41 G. 6¼ N. 530 B.A. 146 V. 2570 F. ·428 C. 40 B. 12. THINNINGS: N. 10 B.A. 2 Devon. 500′ N.W. Fully exp. Clay loam. Triassic Red Sandstone. *Arrhenatherum avenaceum, Mosses.* (Scanty).

S.P.Y. 68.—MAIN CROP: A. 37 H. 40 G. 5¼ N. 705 B.A. 135 V. 2270 F. ·421 C. 36 B. 11. THINNINGS: N. 95 B.A. 10. Merioneth. 400′. N. Mod. exp. Loam. Cambrian. *Grasses, Mosses, Oxalis, Pteris.*

P. 527.—MAIN CROP: A. 41 H. 42 G. 5¾ N. 665 B.A. 147 V 2495 F. ·403 C. 35 B. 12. Northumberland. 500′. W. Fully exp. Sand. Carboniferous. *Oxalis, Rubus fructicosus, Pteris.*

P. 623.—MAIN CROP: A. 41 H. 40 G. 5¾ N. 610 B.A. 146 V. 2385 F. ·409 C. 43 B. 10. THINNINGS: N. 130 B.A. 17. Carnarvon. 1000′. N.W. Fully exp. Loam. Ordovician. *Aira flexuosa.* (Scanty.)

P. 251.—MAIN CROP: A. 42 H. 47 G. 6¼ N. 510 B.A. 135 V. 2625 F. ·414 C. 40 B. 9 THINNINGS: N. 100 B.A. 14 V. 225. Westmoreland. 400′. S. Mod. shelt. Sand. Permian Sandstone. Nil.

P. 212.—MAIN CROP: A. 43 H. 42 G. 5¾ N. 465 B.A. 103 V. 1770 F. ·408 C. 43 B. 11. THINNINGS: N. 15 B.A. 2. Suffolk. 50′. W. Mod. exp. Sand. Chalk. Nil.

P. 181.—MAIN CROP: A. 44. H. 48 G. 5 N. 950 B.A. 163 V. 3165 F. ·404 C. 34 B. 12. THINNINGS: N. 235 B.A. 17 V. 195. Dorset. 100′. General. Mod. exp. Sand. Bagshot sands; Upper Eocene. Nil.

P. 189.—MAIN CROP: A. 44 H. 45 G. 6½ N. 460 B.A. 137 V. 2260 F. ·366 C. 38 B. 10. THINNINGS: N. 20 B.A. 2 V. 20. Dorset. 70′. General. Mod. shelt. Sand. Bagshot sands. Nil.

S.P. 17.—MAIN CROP: A. 44 H. 43 G. 4¾ N. 710 B.A. 106 V. 1850 F. ·406 C. 27 B. 11. THINNINGS: N. 20 B.A. 1 Suffolk. 90′. General. Fully shelt. Sand. Chalk. *Mosses.* (Scanty.)

P. 244.—MAIN CROP: A. 44 H. 45 G. 6¼ N. 505 B.A. 135 V. 2215 F. ·364 C. 45 B. 11. THINNINGS: N. 15 B.A. 2. Northumberland. 300′. S. Mod. shelt. Sandy loam. Millstone Grit. *Aspidium aculeatum, Mosses.* (Scanty.)

P. 525.—MAIN CROP: A. 46 H. 51 G. 6¾ N. 580 B.A. 186 V. 3850 F. ·405 C. 38 B. 9 THINNINGS: N. 5 B.A. 0·5. Northumberland. 500′ W. Mod. exp. Sand. Carboniferous. *Pteris, Aspidium aculeatum, Blechnum.*

P. 184.—MAIN CROP: A. 46 H. 45 G. 4¾ N. 1095 B.A. 172 V. 2485 F. ·321 C. 31 B. 11. THINNINGS: N. 220 B.A. 17 V. 160. Dorset. 100′ W. Mod. exp. Sand. Bagshot sands; Upper Eocene. Nil.

P. 163.—MAIN CROP: A. 47 H. 51 G. 6½ N. 545 B.A. 145 V. 2590 F. ·351 C. 36 B. 10. THINNINGS: N. 150 B.A. 21 V. 300. Hants. 100′. General. Fully shelt. Sandy loam. Oligocene. Nil.

P. 170.—MAIN CROP: A. 47 H. 47 G. 6½ N. 445 B.A. 130 V. 2235 F. ·365 C. 40 B. 8. THINNINGS: N. 95 B.A. 13 V. 155. Hants. 300′. General. Mod. exp. Sand. Upper Eocene. *Molinia.* (Scanty.)

SCOTS PINE—England and Wales—*contd.*

Quality Class II—50-ft.—*contd.*

P. 183.—MAIN CROP: A. 47 H. 46 G. 5¼ N. 830 B.A. 152 V. 2535 F. ·362 C. 33 B. 10. THINNINGS: N. 140 B.A. 11 V. 100. Dorset. 100′. W. Mod. exp. Sand. Bagshot sands; Upper Eocene. Nil.

P. 685.—MAIN CROP: A. 48 H. 46 G. 5½ N. 495 B.A. 107 V. 1850 F. ·376 C. 40 B. 10. THINNINGS: N. 40 B.A. 3. Stafford. 660′. General. Fully exp. Sand. Lower Trias. *Pteris.* (Scanty.)

S. P. S. 25.—MAIN CROP: A. 48 H. 49 G. 5½ N. 550 B.A. 118 V. 2480 F. ·428 C. 33 B. 10. THINNINGS: N. 110 B.A. 13. Radnor. 1000′. N.N.W. Fully exp. Loam. Silurian. *Aira flexuosa, Galium saxatile, Oxalis. Agrostis alba.*

P. 409.—MAIN CROP: A. 49 H. 46 G. 6¼ N. 430 B.A. 117 V. 2300 F. ·427 C. 41 B. 9. THINNINGS: N. 30 B.A. 4. Yorks. 700′. S.W. Fully exp. Sandy loam. Millstone Grit. *Aspidium f. mas, Grasses, Asperula odorata.*

P. 247.—MAIN CROP: A. 52 H. 53 G. 7 N. 440 B.A. 151 V. 3115 F. ·390 C. 38 B. 10. THINNINGS: N. 145 B.A. 24 V. 330. Northumberland. 850′. N. Mod. exp. Sandy loam. Millstone Grit. *Aspidium aculeatum, Oxalis, Aira flexuosa, Mosses.*

P. 607.—MAIN CROP: A. 52 H. 47 G. 6¾ N. 605 B.A. 186 V. 3340 F. ·382 C. 33 B. 11. THINNINGS: N. 90 B.A. 16. Denbigh. 900′. General. Fully exp. Loam. Silurian. *Grasses, Mosses.*

P. 171.—MAIN CROP: A. 54 H. 55 G. 8¼ N. 350 B.A. 165 V. 2985 F. ·330 C. 36 B. 9. THINNINGS: N. 30 B.A. 5 V. 65. Hants. 70′. General. Fully shelt. Clay loam. Upper Eocene. *Molinia.*

P. 518.—MAIN CROP: A. 55 H. 55 G. 8¼ N. 365 B.A. 170 V. 3515 F. ·376 C. 37 B. 11. THINNINGS: N. 20 B.A. 4. Cumberland. 50′. General. Mod. exp. Peaty loam. Triassic. Nil.

P. 519.—MAIN CROP: A. 56 H. 59 G. 9 N. 310 B.A. 174 V. 3710 F. ·361 C. 35 B. 9. THINNINGS: N. 10 B.A. 4. Cumberland. 75′. General. Mod. exp. Sandy loam. Permian. *Aspidium aculeatum, A. f. mas, Blechnum.*

P. 257.—MAIN CROP: A. 57 H. 55 G. 6¾ N. 470 B.A. 146 V. 3170 F. ·396 C. 41 B. 9. Westmorland. 600′. S.W. Mod. exp. Sand. Permian. *Mosses.* (Scanty.)

P. 608.—MAIN CROP: A. 58 H. 54 G. 8¼ N. 460 B.A. 223 V. 4375 F. ·363 C. 33 B. 10. THINNINGS: N. 65 B.A. 14. Denbigh. 900′. W. Mod. exp. Loam. Silurian. *Mosses, Grasses, Oxalis, Pteris.*

P. 218.—MAIN CROP: A. 60 H. 54 G. 6½ N. 490 B.A. 144 V. 3115 F. ·400 C. 31 B. 11. THINNINGS: N. 5 B.A. 1. Norfolk. 190′. General. Mod. exp. Sand. Glacial drift on Chalk. *Mosses.* (Scanty.)

P. 200.—MAIN CROP: A. 60 H. 56 G. 7¼ N. 360 B.A. 133 V. 3245 F. ·435 C. 36 B. 8. THINNINGS: N. 10 B.A. 1. Beds. 500′. E. Fully shelt. Sand. Lower Greensand. *Vaccinium Myrtillus.* (Scanty.)

P. 572.—MAIN CROP: A. 66 H. 63 G. 9¾ N. 270 B.A. 181 V. 3865 F. ·338 C. 41 B. 9. THINNINGS: N. 25 B.A. 7. Sussex, 200′. General. Fully exp. Sand. Lower Greensand. *Erica cinerea, Pteris.*

P. 219.—MAIN CROP: A. 68 H. 65 G. 8½ N. 340 B.A. 173 V. 4135 F. ·368 C. 26 B. 9. THINNINGS: N. 5 B.A. 1. Norfolk. 190′. General. Fully shelt. Sand. Glacial drift on Chalk. Nil.

SCOTS PINE—England and Wales—*contd.*

Quality Class II—50-ft.—*contd.*

P. 334.—MAIN CROP: A. 69 H. 63 G. 8¾ N. 260 B.A. 142 V. 3230 F. ·360 C. 32 B. 11. THINNINGS: N. 55 B.A. 17 V. 330. Devon. 650′. E.N.E. Mod. exp. Clay. Millstone Grit. *Molinia, Erica tetralix, Rubus fruticosus, Hedera.*

P. 241.—MAIN CROP: A. 70 H. 58 G. 11¾ N. 175 B.A. 164 V. 3400 F. ·358 C. 50 B. 12. Durham. 860′. N.E. Fully shelt. Sandy loam. Yoredale Shales. *Agrostis alba.*

P. 215.—MAIN CROP: A. 73 H. 68 G. 8¼ N. 410 B.A. 188 V. 4795 F. ·370 C. 28 B. 7. THINNINGS: N. 65 B.A. 12 V. 225. Suffolk. 30′. General. Mod. exp. Sand. Chalk. Nil.

P. 544.—MAIN CROP: A. 76 H. 69 G. 9¾ N. 255 B.A. 172 V. 3790 F. ·319 C. 26 B. 8. THINNINGS: N 25 B.A. 11 V. 165. Sussex. 300′. W. Fully shelt. Sandy loam. Weald Clay. *Pteris, Mosses.*

P. 303.—MAIN CROP: A. 77 H. 68 G. 8¾ N. 205 B.A. 111 V. 2805 F. ·372 C. 34 B. 7. THINNINGS: N. 15 B.A. 4 Berks. 410′. W. Mod. exp. Sand. Bagshot sands; Upper Eocene. *Mosses, Vaccinium Myrtillus.*

P. 187.—MAIN CROP: A. 78 H. 67 G. 10 N. 320 B.A. 218 V. 5375 F. ·367 C. 30 B. 8. Dorset. 50′. General. Mod. exp. Sandy loam. Bagshot sands; Upper Eocene. *Agrostis, Holcus.*

P. 562.—MAIN CROP: A. 79 H. 67 G. 9¼ N. 320 B.A. 190 V. 4445 F. ·348 C. 31 B. 7. THINNINGS: N. 85 B.A. 27 V. 510. Sussex. 300′. S.W. Mod. exp. Peaty loam. Lower Greensand. *Pteris.*

S.P.Y. 20.—MAIN CROP: A. 81 H. 68 G. 9 N. 335 B.A. 192 V. 5615 F. ·431 C. 34 B. 6. THINNINGS: N. 20 B.A. 8. Sussex. 450′. S.W. Mod. shelt. Sandy loam. Lower Greensand. *Mosses, Pteris.* (Scanty.)

P. 193.—MAIN CROP: A. 92 H. 69 G. 9¾ N. 225 B.A. 151 V. 5105 F. ·490 C. 22 B. 8. THINNINGS: N. 5 B.A. 3. Bedford. 220′. N.W. Mod. exp. Sand. Lower Greensand. Nil.

P. 308.—MAIN CROP: A. 92 H. 73 G. 10¼ N. 215 B.A. 161 V. 4990 F. ·424 C. 26 B. 7. THINNINGS: N. 10 B.A. 5. Berks. 415′. General. Fully exp. Sand. Bagshot sands; Upper Eocene. *Vaccinium Myrtillus, Pteris, Mosses.*

P. 306.—MAIN CROP: A. 94 H. 68 G. 12 N. 150 B.A. 153 V. 3880 F. ·374 C. 37 B. 11. Berks. 400′. S. Mod. exp. Sand. Bagshot sands; Upper Eocene. *Moss, Pteris.* (Scanty.)

P. 534.—MAIN CROP: A. 95 H. 77 G. 10½ N. 255; B.A. 196 V. 5925 F. ·393 C. 23 B. 6. THINNINGS: N. 30 B.A. 14 V. 405. Kent. 300′. N.W. Fully shelt. Sandy loam. Wealden–Hastings Beds. *Pteris, Rubus fruticosus, Ilex Aquifolium.*

P. 321.—MAIN CROP: A. 96 H. 69 G. 11¾ N. 215 B.A. 212 V. 5675 F. ·389 C. 29 B. 9. THINNINGS: N. 15 B.A. 11 V. 240. Devon. 620′. Fully exp. Peaty loam. Upper Greensand. *Rubus fruticosus, Pteris, Lonicera Periclymenum.*

P. 240.—MAIN CROP: A. 97 H. 75 G. 14¼ N. 125 B.A. 176 V. 4920 F. ·373 C. 49 B. 10. Durham. 750′. S.W. Mod. shelt. Sand. Millstone Grit. Nil.

P. 205.—MAIN CROP: A. 101 H. 79 G. 16¾ N. 110 B.A. 216 V. 6510 F. ·382 C. 33 B. 8. Norfolk. 110′. General. Fully shelt. Peaty loam. Glacial drift on Norwich Crag (Pleiocene). *Mosses.* (Scanty.)

SCOTS PINE—England and Wales—*contd.*

Quality Class II—50-ft.—*contd.*

P. 198.—MAIN CROP: A. 107 H. 76 G. 11½ N. 190 B.A. 174 V. 5375 F. ·407 C. 27 B. 8. Beds. 500′. N.E. Fully shelt. Sand. Lower Greensand. *Vaccinium Myrtillus.*

P. 196.—MAIN CROP: A. 108 H. 77 G. 13 N. 125 B.A. 148 V. 4635 F. ·406 C. 29 B. 8. Beds. 500′. General. Fully shelt. Sand. Lower Greensand. *Vaccinium Myrtillus.*

S.P.Y. 62.—MAIN CROP: A. 110 H. 74 G. 11¼ N. 255 B.A. 221 V. 6010 F. ·368 C. 31 B 9. THINNINGS: N. 10 B.A. 3. Devon. 300′. N. Mod. exp. Sand. Upper Trias. *Pteris.*

P. 347.—MAIN CROP: A. 111 H. 74 G. 11½ N. 260 B.A. 246 V. 6805 F. ·374 C. 30 B. 8. THINNINGS: N. 40 B.A. 23. Devon. 750′. W. Mod. exp. Peaty loam. Millstone Grit. *Pteris, Vaccinium Myrtillus, Rubus fruticosus.*

P. 317.—MAIN CROP: A. 128 H. 83 G. 18¾ N. 70 B.A. 170 V. 5570 F. ·394 C. 31 B. 6. Devon. 200′. N.E. Mod. shelt. Sandy loam. Permian. *Pteris.*

P. 550.—MAIN CROP:—A. 154 H. 77 G. 11¼ N. 200 B.A. 174 V. 6060 F. ·452 C. 19 B. 8. THINNINGS: N. 25 B.A. 19. Surrey. 500′. W. Fully exp. Peaty loam. Lower Greensand. *Pteris.* (Scanty.)

Quality Class III—40-ft.

P. 322.—MAIN CROP: A. 33 H. 29 G. 3¾ N. 1005 B.A. 104 V. 1305 F. ·433 C. 40 B. 13. THINNINGS: N. 190 B.A. 10 V. 35. Devon. 720′. W. Fully exposed. Peat. Greensand. *Mosses.* (Scanty.)

P. 531.—MAIN CROP: A. 35 H. 30 G. 4¾ N. 755 B.A. 114 V. 1290 F. ·378 C. 48 B. 13. THINNINGS: N. 110 B.A. 7 V. 45. Northumberland. 400′. S. Fully shelt. Peaty loam. Carboniferous. *Aspidium, Mosses.*

P. 400.—MAIN CROP: A. 18 H. 15 G. 2¼ N. 1755 B.A. 67 V. 250 F. ·250 C. 62 B. 25. Yorks. 1025′. N.E. Fully exp. Sandy loam. Middle Oolite. *Holcus lanatus, Oxalis.*

P. 420.—MAIN CROP: A. 40 H. 35 G. 5¼ N. 595 B.A. 112 V. 1545 F. ·395 C. 36 B. 14. THINNINGS: N. 70 B.A. 5·7. Yorks. 850′. S.E. Mod. shelt. Sandy loam. Millstone Grit. *Pteris, Calluna.*

P. 528.—MAIN CROP: A. 42 H. 33 G. 4½ N. 850 B.A. 117 V. 1415 F. ·367 C. 48 B. 11. THINNINGS: N. 130 B.A. 8 V. 55. Northumberland. 600′. W. Fully exp. Peaty loam. Carboniferous. *Mosses.* (Scanty.)

P. 415.—MAIN CROP: A. 43 H. 36 G. 5 N. 540 B.A. 97 V. 1395 F. ·399 C. 40 B. 12. Yorks. 875′. S.W. Fully exp. Sand. Millstone Grit. *Aspidium f. mas.* (Scanty.)

P. 233.—MAIN CROP: A. 47 H. 41 G. 5¾ N. 625 B.A. 148 V. 2580 F. ·424 B. 12. THINNINGS: N. 85 B.A. 8 Yorks. 560′. W. Fully exp. Sandy loam. Corallian beds of Middle Oolite. Nil.

P. 408.—MAIN CROP: A. 48 H. 40 G. 6½ N. 500 B.A. 143 V. 2445 F. ·427 C. 40 B. 11. THINNINGS: N. 45 B.A. 5 Yorks. 700′. W.S.W. Fully exp. Sand. Millstone Grit. *Pteris, Vaccinium Myrtillus, V. vitis-idæa, Grasses.*

SCOTS PINE—England and Wales—*contd.*

Quality Class III—40-ft.—*contd.*

P. 248.—MAIN CROP: A. 54 H. 44 G. 6¼ N. 620 B.A. 162 V. 2690 F. ·377 C. 34 B. 9. THINNINGS: N. 180 B.A. 24 V. 270. Northumberland. 1000′. N. Mod. shelt. Sand. Millstone Grit. *Vaccinium Myrtillus, Mosses, Aira flexuosa.*

P. 397.—MAIN CROP: A. 58 H. 50 G. 7 N. 490 B.A. 165 V. 3270 F. ·396 C. 41 B. 10. Somerset. 750′. N.E. Mod. exp. Loam. Old Red Sandstone. *Vaccinium Myrtillus, Pteris.*

S.P.Y.11.—MAIN CROP: A. 60 H. 45 G. 7¼ N. 300 B.A. 112 V. 1950 F. ·387 C. 34 B. 13. THINNINGS: N. 40 B.A. 6. Yorks. 1125′. N.E. Fully shelt. Peaty loam. Glacial drift on Yoredale Shales. *Aspidium f. mas. A. aculeatum. Asperula.*

P. 313.—MAIN CROP: A. 61 H. 48 G. 5¾ N. 595 B.A. 137 V. 2595 F. ·394 C. 31 B. 12. THINNINGS: N. 55 B.A. 7 V. 70. Berks. 400′. General. Fully shelt. Sand. Bagshot sands; Upper Eocene. *Mosses.* (Scanty.)

P. 530.—MAIN CROP: A. 62 H. 47 G. 7¼ N. 525 B.A. 191 V. 3275 F. ·365 C. 34 B. 12. THINNINGS: N. 50 B.A. 10 V. 150. Northumberland. 500′. S.W. Fully exp. Peaty loam. Carboniferous. *Pteris, Aspidium f. mas. Blechnum.*

S.P. 30.—MAIN CROP: A. 65 H. 50 G. 8½ N. 335 B.A. 167 V. 3310 F. ·398 C. 37 B. 11. THINNINGS: N. 25 B.A. 5 V. 85. Northumberland 750′. N. Mod. shelt. Peat. Millstone Grit. *Aspidium aculeatum, Oxalis, Aira flexuosa, Galium saxatile, Mosses.*

P. 661.—MAIN CROP: A. 69 H. 55 G. 10½ N. 260 B.A. 200 V. 4350 F. ·395 C. 28 B. 11. THINNINGS: N. 5 B.A. 1. Glamorgan. 600′. S. Fully exp. Sand. Carboniferous. *Aspidium f. mas.* (Scanty.)

P. 319.—MAIN CROP: A. 70 H. 53 G. 7¾ N. 325 B.A. 137 V. 2910 F. ·402 C. 41 B. 11. THINNINGS: N. 25 B.A. 6. Devon. 800′. S. Mod. exp. Peaty loam. Upper Greensand. *Mosses.*

S.P.S. 1.—MAIN CROP: A. 76 H. 54 G. 9 N. 360 B.A. 200 V. 4175 F. ·387 C. 28 B. 7. THINNINGS: N. 40 B.A. 10. Cumberland. 75′. General. Fully exp. Peat. Triassic. *Vaccinium Myrtillus, Empetrum nigrum, Erica tetralix.*

P. 197.—MAIN CROP: A. 76 H. 59 G. 7½ N. 330 B.A. 124 V. 3005 F. ·410 C. 39 B. 9. Beds. 520′. General. Fully shelt. Sand. Lower Greensand. *Mosses. Vaccinium Myrtillus.*

P. 563.—MAIN CROP: A. 82 H. 59 G. 8½ N. 395 B.A. 201 V. 4345 F. ·367 C. 24 B. 6. THINNINGS: N. 100 B.A. 34. Sussex. 120′. General. Mod. exp. Sand. Lower Greensand. *Aira flexuosa, Mosses, Hedera, Rubus fruticosus.*

P. 320.—MAIN CROP: A. 83 H. 55 G. 9¼ N. 225 B.A. 132 V. 2770 F. ·383 C. 42 B. 10. THINNINGS: N. 20 B.A. 3. Devon. 740′. General. Mod. exp. Peaty loam. *Grasses, Mosses, Erica cinerea.*

P. 176.—MAIN CROP: A. 91 H. 62 G. 10¾ N. 175 B.A. 142 V. 3275 F. ·373 C. 38 B. 10. Hants. 160′. S.W. Mod. exp. Sand. Upper Eocene. *Molinia, Erica cinerea, Aira flexuosa.* (Scanty.)

P. 304.—MAIN CROP: A. 91 H. 62 G. 9¾ N. 340 B.A. 225 V. 5655 F. ·406 B. 11. Berks. 400′. S.W. Mod. exp. Sand. Bagshot sands; Upper Eocene. *Mosses, Vaccinium Myrtillus.*

S.P.Y. 65.—MAIN CROP: A. 91 H. 58 G. 9 N. 235 B.A. 135 V. 3470 F. ·424 C. 40 B. 6. THINNINGS: N. 5 B.A. 1. Devon. 780′. W.N.W. Fully exp. Sand. Upper Greensand. *Vaccinium Myrtillus, Mosses.*

SCOTS PINE—England and Wales—*contd.*

Quality Class III—40-ft.—*contd.*

P. 305.—MAIN CROP: A. 92 H. 60 G. 9½ N. 245 B.A. 155 V. 3045 F. ·328 C. 28 B. 10. THINNINGS: N. 5 B.A. 1. Berks. 415′. General. Fully shelt. Sand. Bagshot sands; Upper Eocene. *Mosses.* (Scanty.)

P. 301.—MAIN CROP: A. 93 H. 54 G. 10 N. 170 B.A. 121 V. 2675 F. ·426 C. 34 B. 12. Hants. 320′. S.W. Mod. exp. Sand. Lower Greensand. *Vaccinium Myrtillus, Pteris, Mosses.*

P. 239.—MAIN CROP: A. 96 H. 66 G. 14¼ N. 145 B.A. 207 V. 5370 F. ·392 C. 55 B. 11. Durham. 820′. S.W. Mod. shelt. Loam. Millstone Grit. *Vaccinium Myrtillus, Aira flexuosa, Calluna.*

P. 245.—MAIN CROP: A. 98 H. 62 G. 10 N. 250 B.A. 173 V. 4580 F. ·428 C. 36 B. 10. THINNINGS: N. 10 B.A. 2. Northumberland. 600′. S.W. Mod. exp. Peaty loam. Millstone Grit. *Vaccinium Myrtillus, Mosses.*

P. 356.—MAIN CROP: A. 99 H. 68 G. 10¼ N. 330 B.A. 237 V. 5455 F. ·339 C. 26 B. 10. THINNINGS: N. 80 B.A. 28 V. 295. Devon. 470′. W. Mod. shelt. Peaty loam. Granite. *Pteris, Vaccinium Myrtillus, Mosses.*

P. 621.—MAIN CROP: A. 101 H. 59 G. 11¼ N. 195 B.A. 172 V. 4020 F. ·397 C. 48 B. 10. THINNINGS: N. 10 B.A. 4. Denbigh. 750′. S. Fully exp. Sandy loam. Silurian. *Pteris, Teucrium scorodonia, Anthoxanthum, Rubus fruticosus.*

P. 174.—MAIN CROP: A. 102 H. 66 G. 11¼ N. 170 B.A. 148 V. 3595 F. ·369 C. 33 B. 9. Hants. 50′. General. Mod. exp. Sand. Upper Eocene. *Mosses.*

P. 513.—MAIN CROP: A. 103 H. 60 G. 10¼ N. 250 B.A. 182 V. 4500 F. ·412 C. 23 B. 11. THINNINGS: N. 20 B.A. 6. Somerset. 1030′. S. Fully exp. Peaty loam. Devonian. *Vaccinium Myrtillus, Pteris, Mosses.*

S.P.Y. 7.—MAIN CROP: A. 104 H. 65 G. 12½ N. 190 B.A. 208 V. 5890 F. ·436 C. 28 B. 9. THINNINGS: N. 40 B.A. 30. Yorks. 825′. S.W. Mod. exp. Peat. Millstone Grit. *Grasses.*

P. 177.—MAIN CROP: A. 105 H. 66 G. 10½ N. 240 B.A. 182 V. 4570 F. ·380 C. 31 B. 8. Dorset. 70′. S.W. Mod. exp. Sand. Bagshot sands; Upper Eocene. *Pteris, Mosses.*

P. 185.—MAIN CROP: A. 106 H. 64 G. 10¼ N. 285 B.A. 210 V. 4440 F. ·330 C. 23 B. 9. Dorset. 30′. General. Mod. shelt. Sand. Bagshot Beds; Upper Eocene. *Erica cinerea, Mosses.*

S.P.Y. 66.—MAIN CROP: A. 106 H. 69 G. 11¾ N. 180 B.A. 171 V. 4745 F. ·402; C. 33; B. 8. THINNINGS: N. 15 B.A. 7. Devon. 600′. General. Fully exp. Sandy loam. Upper Greensand. *Poa, Aira, Galium saxatile.*

P. 404.—MAIN CROP: A. 107 H. 62 G. 12¾ N. 160 B.A. 183 V. 4570 F. ·402 C. 31 B. 11. THINNINGS: N. 15 B.A. 7. Yorks. 800′. General. Fully exp. Peaty loam. Millstone Grit. *Aspidium f. mas., Asperula adorata, Grasses.*

P. 175.—MAIN CROP: A. 112 H. 69 G. 12 N. 180 B.A. 178 V. 4545 F. ·370 C. 27 B. 6. Hants. 100′. General. Fully shelt. Sand. Upper Eocene. *Erica cinerea, Calluna, Mosses.*

P. 324.—MAIN CROP: A. 121 H. 63 G. 13½ N. 100 B.A. 129 V. 3450 F. ·426 C. 31 B. 11. Devon. 800′. General. Fully exp. Peaty loam. Upper Greensand. *Grasses, Pteris, Rubus fruticosus, Erica cinerea.*

SCOTS PINE—England and Wales—*contd.*

Quality Class III—40-ft.—*contd.*

P. 551.—MAIN CROP: A. 122 H. 74 G. 13½ N. 170 B.A. 214 V. 5935 F. ·376 C. 27 B. 5. Surrey. 250′. S.W. Fully shelt. Peaty loam. Lower Greensand. *Pteris.* (Scanty.)

Below 40-ft. Class

P. 417.—MAIN CROP: A. 36 H. 25 G. 3¾ N. 1065 B.A. 99 V. 1035 F. ·418 C. 52 B. 18. THINNINGS: N. 85 B.A. 4. Yorks. 850′. S.W. Fully exp. Peaty loam. Millstone Grit. *Aspidium f. mas.* (Scanty.)

S.P. 28.—MAIN CROP: A. 56 H. 38 G. 7½ N. 500 B.A. 198 V. 2830 F. ·376 B. 12. THINNINGS: N. 20 B.A. 3. Durham. 1080′. S.W. Fully exp. Sandy loam. Yoredale shales. *Grasses. Oxalis.*

P. 683.—MAIN CROP: A. 87 H. 43 G. 7¾ N. 225 B.A. 94 V. 1715 F. ·423 C. 24 B. 9. Stafford. 550′. General. Fully exp. Sand. Lower Trias. *Pteris. Aira flexuosa.*

S.P.Y. 3.—MAIN CROP: A. 90 H. 38 G. 6¼ N. 520 B.A. 144 V. 2250 F. ·410 C. 34 B. 13. THINNINGS: N. 30 B.A. 5. Yorks. 1000′. General. Fully exp. Clay loam. Lias. *Grasses* (Scanty.)

S.P.Y. 8.—MAIN CROP: A. 106 H. 50 G. 9½ N. 340 B.A. 212 V. 4200 F. ·396 C. 27 B. 6. THINNINGS.: N. 30 B.A. 7. Yorks. 800′. General. Fully exp. Sand. Millstone Grit. *Calluna. Grasses.*

P. 256.—MAIN CROP: A. 107 H. 49 G. 10¾ N. 285 B.A. 226 V. 4385 F. ·397 C. 38 B. 12. THINNINGS: N. 25 B.A. 7 V. 125. Westmorland. 1150′. S.E. Fully shelt. Loam. Ordovician. *Aira flexuosa. Mosses.*

P. 179.—MAIN CROP: A. 108 H. 55 G. 10¼ N. 222 B.A. 163 V. 3385 F. ·377 C. 35 B. 9. THINNINGS: N. 5 B.A. 2. Dorset. 40′. General. Fully exp. Peaty loam. Bagshot sands; Upper Eocene. *Pteris. Mosses.*

P. 703.—MAIN CROP: A. 112 H. 53 G. 8¼ N. 390 B.A. 186 V. 4210 F. ·426 C. 26 B. 9. Shropshire. 380′. S.W. Fully exp. Sand. Bunter Sandstone; Lower Trias. *Pteris.*

SCOTS PINE—Scotland

Quality Class I—60-ft.

P. 278.—MAIN CROP: A. 19 H. 23 G. 3 N. 1590 B.A. 103 V. 870 F. ·366 C. 54 B. 16. Wigtown. 150′. E. Mod. exp. Loam. Boulder Clay on Greywacke. *Pteris.* (Scanty.)

P. 216.—MAIN CROP: A. 25 H. 31 G. 3½ N. 1430 B.A. 125 V. 1540 F. ·397 C. 42 B. 17. THINNINGS: A. 325 B.A. 10. Roxburgh. 600′. General. Mod. shelt. Clay loam. Boulder Clay on Old Red Sandstone. *Vaccinium Myrtillus, Calluna, Oxalis.* (Scanty.)

P. 115.—MAIN CROP: A. 35 H. 54 G. 6½ N. 500 B.A. 149 V. 3195 F. ·396 C. 35 B. 10. THINNINGS: N. 45 B.A. 5 V. 75. Ross. 100′. E. Fully shelt. Sandy loam. Schists. *Oxalis, Grasses, Pteris, Mosses.* (Scanty.)

P. 114.—MAIN CROP: A. 37 H. 52 G. 6¾ N. 500 B.A. 154 V. 3305 F. ·413 C. 40 B. 11. THINNINGS: N. 65 B.A. 7 V. 95. Ross. 100′. E. Fully shelt. Sandy loam. Schists. *Grasses, Pteris, Mosses.* (Scanty.)

SCOTS PINE—Scotland—*contd.*

Quality Class I—60-ft.—*contd.*

P. 215.—MAIN CROP: A. 43 H. 52 G. 6½ N. 435 B.A. 124 V. 2570 F. ·399 C. 38 B. 13. THINNINGS: N. 25 B.A. 4 V. 80. Roxburgh. 550′. S.E. Mod. exp. Clay loam. Boulder Clay on Old Red Sandstone. *Oxalis, Urtica, Pteris.*

P. 194.—MAIN CROP: A. 46 H. 54 G. 6 N. 630 B.A. 156 V. 3040 F. ·360 C. 32 B. 11. THINNINGS: N. 115 B.A. 13 V. 200. Aberdeen. 350′. N.E. Fully shelt. Sand. Boulder Clay on Quartzite. *Oxalis, Grasses, Pteris, Mosses.*

P. 260.—MAIN CROP: A. 48 H. 56 G. 7¼ N. 420 B.A. 177 V. 3690 F. ·372 C. 30 B. 9. THINNINGS: N. 20 B.A. 4 V. 60. Kirkcudbright. 200′. N.E. Mod. shelt. Sandy loam. Granite. *Oxalis, Pteris.* (Scanty.)

P. 61.—MAIN CROP: A. 52 H. 57 G. 7¼ N. 640 B.A. 229 V. 5045 F. ·387 C. 31 B. 10. THINNINGS: N. 25 B.A. 4 V. 65. Banff. 650′. N.W. Mod. shelt. Sand. Boulder Clay on Moine Schist. *Oxalis, Grasses, Mosses.* (Scanty.)

P. 105.—MAIN CROP: A. 53 H. 59 G. 6½ N. 435 B.A. 127 V. 2790 F. ·373 C. 28 B. 10. THINNINGS: N. 20 B.A. 3 V. 40. Ross. 450′. S.W. Mod. shelt. Sandy loam. Morainic Drift on Muscovite Biotite Gneiss. *Oxalis, Grass, Mosses.* (Scanty.)

P. 152.—MAIN CROP: A. 61 H. 63 G. 8 N. 495 B.A. 222 V. 5130 F. ·366 C. 35 B. 9. THINNINGS: N. 60 B.A. 9 V. 145. Kincardine. 200′. General. Mod. shelt. Sand. Boulder Clay on Granite. *Oxalis, Grass, Mosses.* (Scanty.)

P. 41.—MAIN CROP: A. 72 H. 70 G. 11¼ N. 325 B.A. 286 V. 7195 F. ·360 C. 38 B. 10. Moray. 150′. General. Fully shelt. Sand. Old Red Sandstone. *Grass, Mosses.* (Scanty.)

P. 119.—MAIN CROP: A. 89 H. 77 G. 12¼ N. 180 B.A. 189 V. 6040 F. ·414 C. 27 B. 10. THINNINGS: N. 10 B.A. 3 V. 55. Perth. 350′. General. Mod. exp. Loam. Boulder Clay on Old Red Sandstone. *Oxalis, Grasses, Mosses.*

P. 200.—MAIN CROP: A. 96 H. 79 G. 13¾ N. 205 B.A. 268 V. 7385 F. ·349 C. 32 B. 11. THINNINGS: N. 15 B.A. 8 V. 190. Aberdeen. 300′. General. Fully shelt. Sandy loam. Sand and Peat on Gneiss. *Oxalis, Grasses, Ferns, Mosses.*

P. 388.—MAIN CROP: A. 99 H. 81 G. 13 N. 185 B.A. 216 V. 6115 F. ·350 C. 31 B. 10. Kincardine. 150′. N.E. Mod. shelt. Clay. Boulder Clay on Old Red Sandstone. *Rubus fruticosus, Herbs, Grasses, Mosses.*

P. 224.—MAIN CROP: A. 105 H. 82 G. 12¼ N. 240 B.A. 250 V. 9450 F. ·461 C. 39 B. 10. Berwick. 500′. General. Mod. exp. Clay loam. Boulder Clay on Old Red Sandstone. *Juncus, Spiraea, Ferns.* (Scanty.)

P. 21.—MAIN CROP: A. 113 H. 87 G. 13¾ N. 180 B.A. 233 V. 8050 F. ·397 C. 38 B. 12. THINNINGS: N. 15 B.A. 9 V. 260. Moray. 300′. E. Fully shelt. Sand. Boulder Clay on Quartzite. *Oxalis, Grasses, Pteris, Mosses.*

P. 141.—MAIN CROP: A. 122 H. 95 G. 14¼ N. 150 B.A. 216 V. 8355 F. ·408 C. 33 B. 9. Roxburgh. 500′. General. Mod. shelt. Sand. Boulder Clay on Old Red Sandstone. *Erica cinerea, Vaccinium Myrtillus, Oxalis, Grass.*

P. 139.—MAIN CROP: A. 123 H. 88 G. 14¾ N. 155 B.A. 234 V. 8095 F. ·393 C. 28 B. 9. Roxburgh. 500′. N.W. Mod. shelt. Sand. Boulder Clay on Old Red Sandstone. *Erica cinerea, Vaccinium Myrtillus, Ferns, Mosses.* (Scanty.)

SCOTS PINE—Scotland—*contd.*

Quality Class I—60-ft.—*contd.*

P. 140.—MAIN CROP: A. 124 H. 90 G. 13½ N. 195 B.A. 248 V. 8600 F. ·385 C. 25 B. 8. THINNINGS: N. 5 B.A. 4 V. 135. Roxburgh. 500′. S.E. Mod. shelt. Sand. Boulder Clay on Old Red Sandstone. *Erica cinerea, Oxalis, Vaccinium Myrtillus, Grass.* (Scanty.)

P. 29.—MAIN CROP: A. 126 H. 92 G. 15 N. 165 B.A. 259 V. 10110 F. ·424 C. 36 B. 10. THINNINGS: N. 15 B.A. 13. V. 345. Moray. 350′. N.E. Fully shelt. Sand. Boulder Clay over Old Red Sandstone. *Oxalis, Grasses, Ferns, Mosses.*

S.P. 18.—MAIN CROP: A. 140 H. 98 G. 18¾ N. 175 B.A. 421 V. 15845 F. ·384 C. 38 B. 7. Kirkcudbright. 50′. E. Fully shelt. Sandy loam. Granite. *Pteris, Mosses.* (Scanty,)

Quality Class II—50-ft.

P. 314.—MAIN CROP: A. 27 H. 27 G. 3½ N. 1195 B.A. 95 V. 825 F. ·320 C. 37 B. 20. THINNINGS: N. 160 B.A. 3. Aberdeen. 300′. General. Fully shelt. Sand. Boulder Clay over Granite. *Vaccinium Myrtillus, Grass, Mosses.* (Scanty.)

P. 256.—MAIN CROP: A. 27 H. 29 G. 4¼ N. 1085 B.A. 141 V. 1450 F. ·353 C. 40 B. 13. THINNINGS: N. 100 B.A. 3 V. 15. Kirkcudbright. 200′. N.E. Fully shelt. Peat. Granite. *Oxalis, Pteris.* (Scanty.)

P. 315.—MAIN CROP: A. 28 H. 32 G. 3¾ N. 1160 B.A. 113 V. 1335 F. ·368 C. 36 B. 17. THINNINGS: N. 30 B.A. 1 V. 5. Aberdeen. 300′. General. Mod. shelt. Sand. Boulder Clay over Granite. *Vaccinium Myrtillus, Grasses, Mosses.* (Scanty.)

P. 308.—MAIN CROP: A. 30 H. 35 G. 4 N. 1285 B.A. 141 V. 2045 F. ·415 C. 36 B. 14. THINNINGS: N. 210 B.A. 12 V. 70. Moray. 350′. S.W. Fully shelt. Sand. Boulder Clay over Granite. *Oxalis, Grasses.* (Scanty.)

P. 196.—MAIN CROP: A. 30 H. 28 G. 3¾ N. 1145 B.A. 117 V. 1100 F. ·336 C. 42 B. 16. THINNINGS: N. 105 B.A. 4. Aberdeen. 950′. N. Fully exp. Sand. Felspathic Gneiss. *Vaccinium Myrtillus, Grasses, Mosses.* (Scanty.)

P. 65.—MAIN CROP: A. 30 H. 32 G. 3¾ N. 1300 B.A. 131 V. 1435 F. ·342 C. 40 B. 16. THINNINGS: A. 60 B.A. 2. Inverness. 350′. E. Fully shelt. Peat. Granitized Moine Schist. *Grass, Pteris, Mosses.* (Scanty.)

P. 187.—MAIN CROP: A. 32 H. 30 G. 3¼ N. 1620 B.A. 127 V. 1280 F. ·337 C. 41 B. 16. THINNINGS: N. 295 B.A. 9. Aberdeen. 800′. N.E. Mod. shelt. Sand. Granite. *Vaccinium Myrtillus, Mosses.* (Scanty.)

P. 176.—MAIN CROP: A. 32 H. 31 G. 3¾ N. 1350 B.A. 130 V. 1320 F. ·329 C. 36 B. 20. THINNINGS: N. 135 B.A. 6 V. 25. Kincardine. 350′. General. Mod. shelt. Sand. Granite. *Mosses.* (Scanty.)

P. 195.—MAIN CROP: A. 36 H. 41 G. 4¾ N. 850 B.A. 137 V. 2120 F. ·378 C. 37 B. 12. THINNINGS: N. 165 B.A. 9 V. 65. Aberdeen. 500′. S. Mod. shelt. Sand. Boulder Clay on Quartzite. *Oxalis, Grasses, Mosses.* (Scanty.)

P. 175.—MAIN CROP: A. 36 H. 35 G. 4¼ N. 1100 B.A. 130 V. 1695 F. ·371 C. 33 B. 17. THINNINGS: N. 150 B.A. 6 V. 20. Kincardine. 300′. General. Fully shelt. Sand and Gravel on Granite. *Mosses.* (Scanty.)

P. 306.—MAIN CROP: A. 37 H. 36 G. 5 N. 800 B.A. 143 V. 2350 F. ·457 C. 37 B. 15. THINNINGS: N. 60 B.A. 4 V. 35. Aberdeen. 450′. N. Mod. exp. Sandy loam. Boulder Clay over Granite. *Oxalis, Digitalis, Grasses, Pteris.* (Scanty.)

SCOTS PINE—Scotland—*contd.*

Quality Class II—50-ft.—*contd.*

P. 39.—MAIN CROP: A. 37 H. 40 G. 4½ N. 1150 B.A. 161 V. 2520 F. ·392 C. 36 B. 11. THINNINGS: A. 120 B.A. 8 V. 90. Moray. 400′. General. Fully shelt. Sand. Sand and Gravel on Moine Schists. *Grass, Mosses.* (Scanty.)

P. 121.—MAIN CROP: A. 37 H. 38 G. 4¼ N. 970 B.A. 128 V. 1900 F. ·390 C. 32 B. 15. THINNINGS: N. 45 B.A. 2. Perth. 500′. General. Mod. exp. Loam. Boulder Clay on Old Red Sandstone. *Grasses Mosses.* (Scanty.)

P. 122.—MAIN CROP: A. 37 H. 38 G. 4¼ N. 915 B.A. 115 V. 1920 F. ·439 C. 38 B. 12. THINNINGS: N. 65 B.A. 2 V. 10. Perth. 500′. General. Mod. shelt. Loam. Boulder Clay on Old Red Sandstone. Nil.

P. 123.—MAIN CROP: A. 37 H. 40 G. 4¾ N. 805 B.A. 123 V. 2060 F. ·419 C. 35 B. 13. THINNINGS: N. 35 B.A. 1 V. 10. Perth. 500′. General. Mod. shelt. Loam. Boulder Clay on Old Red Sandstone. Nil.

P. 38.—MAIN CROP: A. 37 H. 41 G. 4¾ N. 1120 B.A. 172 V. 2370 F. ·336 C. 39 B. 14. THINNINGS: N. 115 B.A. 6 V. 55. Moray. 400′. General. Fully shelt. Sand. Sand and Gravel on Moine Schists. *Oxalis, Grasses, Mosses.* (Scanty.)

P. 148.—MAIN CROP: A. 38 H. 43 G. 4¾ N. 1140 B.A. 171 V. 2865 F ·390 C. 36 B. 14. THINNINGS: N. 50 B.A. 3 V. 15. Kincardine. 250′. S. Mod. shelt. Sand. Boulder Clay on Gneiss. *Rubus fruticosus, Vaccinium Myrtillus, Oxalis, Grasses.* (Scanty.)

S.P. 6.—MAIN CROP: A. 40 H. 40 G. 5 N. 840 B.A. 142 V. 2165 F. ·380 C. 37 B. 14. THINNINGS: N. 25 B.A. 2. V. 15. Roxburgh. 600′. S.E. Mod. exp. Clay loam. Boulder Clay on Old Red Sandstone. *Erica, Calluna, Oxalis, Grasses.* (Scanty.)

P. 349.—MAIN CROP: A. 43 H. 43 G. 5½ N. 525 B.A. 114. V. 2065 F. ·420 C. 38 B. 8. THINNINGS: N. 80 B.A. 5 V. 45. Aberdeen. 600′. N.E. Mod. exp. Sand. Morainic Drift on Granite. *Vaccinium Myrtillus Grasses, Mosses.* (Scanty.)

P. 150.—MAIN CROP: A. 45 H. 51 G. 5¾ N. 820 B.A. 197 V. 3975 F. ·396, C. 31 B.13. THINNINGS: N. 95 B.A. 9 V. 140. Kincardine. 250′. W. Mod. shelt. Sand. Boulder Clay on Gneiss. *Oxalis, Mosses.* (Scanty.)

P. 220.—MAIN CROP: A. 46 H. 44 G. 5½ N. 765 B.A. 162 V. 3795 F. ·393 C. 39 B. 12. THINNINGS: N. 85 B.A. 8 V. 95. Roxburgh. 550′. W. Fully exp. Sandy loam. Andesite. *Oxalis, Grass, Ferns.* (Scanty.)

P. 112.—MAIN CROP: A. 47 H. 52 G. 7 N. 410 B.A. 137 V. 2455 F. ·345 C. 34 B. 10. THINNINGS: N. 40 B.A. 5 V. 60. Ross. 450′. W. Mod. shelt. Sandy loam. Morainic Drift on Moine Schist. *Grass, Pteris, Mosses.*

P. 189.—MAIN CROP: A. 47 H. 46 G. 5¾ N. 670 B.A. 152 V. 2775 F. ·396 C. 36 B. 11. THINNINGS: N. 95 B.A. 10 V. 140. Aberdeen. 750′. S. Fully shelt. Sand. Boulder Clay on Granite. *Grasses, Mosses.* (Scanty.)

P. 35.—MAIN CROP: A. 47 H. 52 G. 5¾ N. 730 B.A. 171 V. 2945 F. ·331 C. 31 B. 8. THINNINGS: A. 55 B.A. 6 V. 80. Moray. 200′. General. Fully shelt. Sand. Sand and Gravel on Old Red Sandstone. *Grasses, Mosses.* (Scanty.)

P. 345.—MAIN CROP: A. 48 H. 45 G. 5¼ N. 930 B.A. 176 V. 2920 F. ·369 C. 35 B. 11. THINNINGS: N. 130 B.A. 7 V. 45. Aberdeen. 600′. N.W. Fully shelt. Sand. Morainic Drift on Granite. *Vaccinium Myrtillus, V. vitis-idœa, Goodyera repens, Mosses.*

SCOTS PINE—Scotland—*contd.*

Quality Class II—50-ft.—*contd.*

P. 346.—MAIN CROP: A. 48 H. 44 G. 5¾ N. 795 B.A. 178 V. 2895 F. ·370 C. 35 B. 11. THINNINGS: N. 145 B.A. 11 V. 110. Aberdeen. 600′. N. Mod. shelt. Sand. Morainic Drift on Granite. *Goodyera repens, Grass, Mosses.* (Scanty.)

P. 347.—MAIN CROP: A. 49 H. 45 G. 5¾ N. 660 B.A. 155 V. 2635 F. ·381 C. 37 B. 12. THINNINGS: N. 73 B.A. 7 V. 95. Aberdeen. 850′. N.W. Mod. shelt. Sandy loam. Boulder Clay on Gneiss. *Vaccinium Myrtillus, V. vitis-idæa, Veronica, Grasses, Mosses.*

P. 109.—MAIN CROP: A. 49 H. 51 G. 7 N. 465 B.A. 154 V. 2650 F. ·337 C. 37 B. 10. THINNINGS: N. 45 B.A. 5 V. 70. Ross. 650′. W. Mod. exp. Peat. Morainic Drift on Pelitic Schist. *Oxalis, Grasses, Mosses.* (Scanty.)

P. 198.—MAIN CROP: A. 49 H. 46 G. 6 N. 660 B.A. 171 V. 3045 F. ·387 C. 33 B. 12. THINNINGS: N. 85 B.A. 10 V. 135. Aberdeen. 400′. N. Fully shelt. Sand. Sand and gravel on Granite. *Vaccinium Myrtillus, Oxalis, Grasses, Mosses.* (Scanty.)

P. 310.—MAIN CROP: A. 50 H. 47 G. 3¾ N. 640 B.A. 142 V. 2690 F. ·402 C. 30 B. 12. THINNINGS: N. 35 B.A. 3 V. 25. Aberdeen. 300′. W. Mod. shelt. Sand. Granite. *Grasses, Ferns, Mosses.*

P. 62.—MAIN CROP: A. 50 H. 47 G. 7¼ N. 595 B.A. 223 V. 3570 F. ·341 C. 34 B. 12. THINNINGS: N. 25 B.A. 6 V. 60. Inverness. 400′. S. Fully shelt. Sandy loam. Granitized Moine Schist. *Pteris, Mosses.* (Scanty.)

P. 59.—MAIN CROP: A. 51 H. 48 G. 6 N. 845 B.A. 212 V. 3905 F. ·384 C. 34 B. 12. THINNINGS: N. 135 B.A. 13 V. 135. Banff. 650′. W. Mod. shelt. Sand. Boulder Clay on Moine Schist. *Grasses, Mosses.* (Scanty.)

P. 58.—MAIN CROP: A. 52 H. 52 G. 7 N. 720 B.A. 241 V. 4970 F. ·396 C. 30 B. 11. THINNINGS: N. 85 B.A. 12 V. 175. Banff. 800′. N. Mod. shelt. Sand. Boulder Clay on Moine Schist. *Oxalis, Grasses, Mosses.* (Scanty.)

P. 60.—MAIN CROP: A. 52 H. 53 G. 6½ N. 680 B.A. 205 V. 4335 F. ·400 C. 33 B. 12. THINNINGS: N. 45 B.A. 5 V. 70. Banff. 650′. N. Mod. shelt. Sand. Boulder Clay on Moine Schist. *Oxalis, Grasses, Mosses.* (Scanty.)

P. 34.—MAIN CROP: A. 54 H. 51 G. 6¾ N. 665 B.A. 210 V. 3710 F. ·346 C. 34 B. 8. THINNINGS: A. 60 B.A. 10 V. 125. Moray. 200′. N.W. Fully shelt. Sand. Sand and Gravel on Old Red Sandstone. *Grass, Mosses.* (Scanty.)

P. 80.—MAIN CROP: A. 55 H. 51 G. 7 N. 630 B.A. 214 V. 3925 F. ·360 C. 35 B. 10. THINNINGS: N. 55 B.A. 8 V. 105. Inverness. 500′. S. Mod. exp. Peat. Moine Schists. *Grasses, Pteris, Mosses.*

P. 36.—MAIN CROP: A. 56 H. 54 G. 6 N. 695 B.A. 173 V. 3605 F. ·385 C. 32 B. 11. THINNINGS: A. 30 N. B.A. 4 V. 55. Moray. 150′. General. Fully shelt. Sand. Sand and Gravel on Old Red Sandstone. *Grasses, Mosses.*

P. 48.—MAIN CROP: A. 57 H. 55 G. 6¼ N. 795 B.A. 217 V. 4675 F. ·391 C. 28 B. 11. THINNINGS: N. 30 B.A. 4 V. 45. Moray. 700′. S. Fully shelt. Sand. Fluvio-Glacial Sand and Gravel. *Grasses, Pteris, Mosses.* (Scanty.)

SCOTS PINE—Scotland—*contd.*

Quality Class II—50-ft.—*contd.*

P. 193.—MAIN CROP: A. 57 H. 50 G. 6½ N. 525 B.A. 153 V. 2755. F. ·360 C. 28 B. 11. THINNINGS: N. 75 B.A. 12 V. 165. Aberdeen. 250′. General. Fully shelt. Sand. Alluvium. *Mosses.* (Scanty.)

P. 45.—MAIN CROP: A. 57 H. 58 G. 7 N. 730 B.A. 255 V. 5265 F. ·357 C. 29 B. 11. THINNINGS: N. 30 B.A. 4 V. 65. Moray. 900′. S. Mod. exp. Sandy loam. Morainic Drift on Pelitic Schist. *Oxalis, Grass, Pteris, Mosses.* (Scanty.)

P. 78.—MAIN CROP: A. 57 H. 53 G. 8¼ N. 390 B.A. 178 V. 3375 F. ·357 C. 36 B. 11. THINNINGS: N. 20 B.A. 4 V. 40. Inverness. 400′. S. Mod. shelt. Sandy loam. Moine Schists. *Grasses, Pteris, Mosses.*

P. 44.—MAIN CROP: A. 57 H. 56 G. 6¼ N. 890 B.A. 250 V. 4985 F. ·356 C. 26 B. 10. THINNINGS: N. 65 B.A. 8 V. 90. Moray. 800′. S. Mod. exp. Sand. Pelitic Mica Schist. *Oxalis, Grasses, Mosses.* (Scanty.)

P. 43.—MAIN CROP: A. 59 H. 55 G. 6½ N. 835 B.A. 240 V. 4585 F. ·347 C. 27 B. 13. THINNINGS: N. 75 B.A. 9 V. 145. Moray. 750′. S. Mod. shelt. Sand. Sand and Gravel on Pelitic Mica Schist. *Grass, Mosses.* (Scanty.)

P. 293.—MAIN CROP: A. 59 H. 56 G. 7¾ N. 325 B.A. 133 V. 2940 F. ·396 C. 41 B. 10. Moray. 200′. N.W. Mod. shelt. Sand. Sand and Gravel on Old Red Conglomerate. *Erica cinerea, Goodyera repens, Mosses.* (Scanty.)

P. 289.—MAIN CROP: A. 60 H. 59 G. 8¾ N. 325 B.A. 172 V. 3800 F. ·373 C. 46 B. 9. THINNINGS: N. 25 B.A. 4 V. 75. Banff. 450′. E. Mod. shelt. Sand. Boulder Clay on Mica Schist. *Vaccinium Myrtillus, Erica cinerea, Goodyera repens, Oxalis, Ferns, Mosses.*

P. 151.—MAIN CROP: A. 60 H. 62 G. 7½ N. 530 B.A. 212 V. 4835 F. ·368 C. 31 B. 11. THINNINGS: 30 N. B.A. 5 V. 90. Kincardine. 150′. General. Fully shelt. Sand. River Gravel. *Rubus fruticosus, Oxalis, Mosses.*

P. 183.—MAIN CROP: A. 61 H. 53 G. 7½ N. 490 B.A. 197 V. 3450 F. ·330 C. 32 B. 11. THINNINGS: N. 75 B.A. 16 V. 255. Aberdeen. 500′. N.W. Fully shelt. Sand. Boulder Clay on Quartzite. *Oxalis, Grasses, Mosses.*

P. 185.—MAIN CROP: A. 61 H. 59 G. 7¼ N. 515 B.A. 189 V. 4195 F. ·377 C. 28 B. 9. THINNINGS: N. 80 B.A. 14. Aberdeen. 500′. N. Mod. shelt. Sand. Granite. *Grass.* (Scanty.)

P. 14B.—MAIN CROP: A. 61 H. 53 G. 9 N. 275 B.A. 157 V. 3480 F. ·417 C. 39 B. 10. THINNINGS: N. 30 B.A. 10 V. 230. Nairn. 400′. N. Mod. shelt. Sandy loam. Sand and Gravel on Moine Schist. *Erica cinerea, Vaccinium Myrtillus, Calluna, Grasses, Mosses.*

P. 154.—MAIN CROP: A. 63 H. 60 G. 7½ N. 445 B.A. 178 V. 3725 F. ·348 C. 28 B. 12. THINNINGS: N. 25 B.A. 5 V. 110. Kincardine. 250′. W. Fully shelt. Sandy loam. Gneiss. *Oxalis, Grasses, Pteris, Mosses.*

P. 41B.—MAIN CROP: A. 64 H. 55 G. 9¼ N. 380 B.A. 218 V. 4620 F. ·385 C. 43 B. 10. Sutherland. 75′. N. Mod. exp. Sand. Boulder Clay on Old Red Sandstone. *Erica cinerea, Grasses, Mosses.* (Scanty.)

P. 6B.—MAIN CROP: A. 64 H. 56 G. 9¾ N. 265 B.A. 170 V. 3690 F. ·388 C. 45 B. 9. THINNINGS: N. 35 B.A. 9 V. 185. Nairn. 550′. N. Mod. shelt. Sandy loam. Sand and Gravel on Moine Schist. *Calluna, Grasses, Mosses.* (Scanty.)

SCOTS PINE—Scotland—*contd.*

Quality Class II—50-ft.—*contd.*

P. 375.—MAIN CROP: A. 65 H. 57 G. 7½ N. 470 B.A. 185 V. 3965 F. ·377 C. 38 B. 10. THINNINGS: N. 70 B.A. 11 V. 175. Aberdeen. 350′. S. Mod. shelt. Sandy loam. Boulder Clay on Knotted Andalusite Schist. *Goodyera repens, Oxalis, Grasses, Ferns.*

P. 262.—MAIN CROP: A. 65 H. 62 G. 9 N. 365 B.A. 207 V. 4415 F. ·343 C. 37 B. 10. Kirkcudbright. 250′. S.W. Mod. exp. Loam. Granite. *Vaccinium Myrtillus, Oxalis, Mosses.*

P. 181.—MAIN CROP: A. 65 H. 55 G. 7¾ N. 390 B.A. 159 V. 3320 F. ·380 C. 35 B. 10. Aberdeen. 450′. S. Fully shelt. Sand. Sand and Gravel on Limestone. *Mosses.* (Scanty.)

P. 2B.—MAIN CROP: A. 65 H. 63 G. 10¾ N. 240 B.A. 190 V. 4840 F. ·404 C. 45 B. 9. THINNINGS: N. 25 B.A. 8 V. 170. Nairn. 550′. N.W. Mod. exp. Sandy loam. Peat on Moine Schist. *Calluna, Grasses, Mosses.* (Scanty.)

P. 42B.—MAIN CROP: A. 66 H. 57 G. 9¼ N. 330 B.A. 193 V. 4030 F. ·366 C. 40 B. 13. Sutherland. 150′. S. Mod. exp. Sandy loam. Boulder Clay on Old Red Sandstone. *Erica cinerea, Grasses, Mosses.* (Scanty.)

P. 13B.—MAIN CROP: A. 66 H. 56 G. 10½ N. 245 B.A. 192 V. 4140 F. ·385 C. 45 B. 12. Nairn. 400′. S. Mod. exp. Sandy loam. Alluvium. *Erica cinerea, Grasses, Mosses.*

P. 32B.—MAIN CROP: A. 67 H. 54 G. 8½ N. 340 B.A. 172 V. 3850 F. ·415 C. 41 B. 9. THINNINGS: N. 15 B.A. 5 V. 95. Sutherland. 125′. Mod. shelt. Sandy loam. Old Red Sandstone. *Grasses, Pteris, Mosses.*

P. 38B.—MAIN CROP: A. 67 H. 59 G. 9¾ N. 370 B.A. 248 V. 5990 F. ·410 C. 46 B. 12. Sutherland. 250′. General. Mod. exp. Sandy loam. Boulder Clay on Old Red Sandstone. *Calluna, Erica cinerea, Grasses, Ferns.*

P. 34B.—MAIN CROP: A. 69 H. 61 G. 10¼ N. 305 B.A. 219 V. 5385 F. ·401 C. 37 B. 11. Sutherland. 350′. S.W. Mod. exp. Sandy loam. Boulder Clay on Old Red Sandstone. *Calluna, Grasses, Ferns, Mosses.*

P. 157.—MAIN CROP: A. 69 H. 62 G. 8¾ N. 380 B.A. 204 V. 4680 F. ·370 C. 38 B. 13. THINNINGS: N. 40 B.A. 10 V. 205. Aberdeen. 450′, S. Mod. shelt. Sand. Boulder Clay on Granite. *Rubus fruticosus. Vaccinium Myrtillus, Oxalis, Grasses.* (Scanty.)

P. 43B.—MAIN CROP: A. 71 H. 60 G. 10 N. 340 B.A. 231 V. 5125 F. ·369 C. 41 B. 13. THINNINGS: N. 15 B.A. 4 V. 55. Sutherland. 50′. General. Mod. exp. Sandy loam. Old Red Sandstone. *Grasses, Mosses.*

P. 40.—MAIN CROP: A. 71 H. 67 G. 10 N. 305 B.A. 218 V. 5180 F. ·355 C. 44 B. 8. Moray. 300′. N.W. Fully shelt. Sand. Sand and Gravel on Old Red Sandstone. *Erica cinerea, Grasses, Pteris, Mosses.*

P. 31B.—MAIN CROP: A. 71 H. 61 G. 9¼ N. 310 B.A. 186 V. 4520 F. ·398 C. 34 B. 13. THINNINGS: B. 20 B.A. 5 V. 105. Sutherland. 125′. General. Mod. exp. Sand. Old Red Sandstone. *Erica cinerea, Grasses, Ferns, Mosses.*

P. 285.—MAIN CROP: A. 72 H. 59 G. 11¼ N. 200 B.A. 171 V. 3865 F. ·383 C. 45 B. 10. Banffshire. 300′. N.W. Mod. exp. Loam. Boulder Clay on Norite. *Calluna, Galium saxatile, Grasses, Mosses.*

SCOTS PINE—Scotland—*contd.*

Quality Class II—50-ft.—*contd.*

P. 8B.—MAIN CROP: A. 74 H. 61 G. 10½ N. 210 B.A. 165 V. 3910 F. ·392 C. 39 B. 9. THINNINGS: N. 5 B.A. 2 V. 35. Nairn. 450′. E. Mod. shelt. Clay loam. Boulder Clay on Moine Schist. *Calluna, Erica cinerea, Ulex, Mosses.*

P. 4B.—MAIN CROP: A. 74 H. 65 G. 11 N. 240 B.A. 198 V. 5185 F. ·403 C. 44 B. 10. Nairn. 450′. General. Mod. exp. Clay loam. Boulder Clay on Moine Schist. *Calluna, Grasses, Mosses.* (Scanty.)

P. 3B.—MAIN CROP: A. 74 H. 60 G. 10 N. 265 B.A. 190 V. 4605 F. ·405 C. 42 B. 9. Nairn. 450′. E. Mod. shelt. Clay loam. Boulder Clay on Moine Schist. *Calluna, Juncus, Grasses, Mosses.* (Scanty.)

P. 263.—MAIN CROP: A. 75 H. 67 G. 10¼ N. 400 B.A. 293 V. 6705 F. ·342 C. 33 B. 10. Kirkcudbright. 225′. S.W. Mod. exp. Sandy loam. Granite. *Oxalis, Pteris, Mosses.*

P. 124.—MAIN CROP: A. 75 H. 62 G. 10½ N. 290 B.A. 222 V. 5050 F. ·367 C. 36 B. 7. THINNINGS: N. 10 B.A. 3 V. 50. Ayr. 250′. S. Mod. shelt. Clay loam. Boulder Clay on Calciferous Sandstone. *Rubus fruticosus, Grasses, Pteris.*

P. 171.—MAIN CROP: A. 75 H. 60 G. 9½ N. 235 B.A. 148 V. 3415 F. ·385 C. 40 B. 13. Kincardine. 500′. W. Mod. shelt. Sandy loam. Boulder Clay on Granite. *Oxalis, Grasses, Ferns, Mosses.* (Scanty.)

P. 125.—MAIN CROP: A. 75 H. 62 G. 10 N. 325 B.A. 228 V. 5365 F. ·379 C. 36 B. 11. THINNINGS: N. 5 B.A. 2 V. 30. Ayr. 250′. S. Mod. shelt. Clay loam. Boulder Clay on Calciferous Sandstone. *Rubus fruticosus, Grasses, Pteris.*

P. 129.—MAIN CROP: A. 77 H. 64 G. 10¼ N. 275 B.A. 202 V. 5225 F. ·405 C. 34 B. 9. Perth. 450′. S. Mod. exp. Sandy loam. Boulder Clay on Silurian. *Rubus fruticosus, Oxalis, Grasses, Mosses.* (Scanty.)

P. 1.—MAIN CROP: A. 85 H. 65 G. 12 N. 145 B.A. 148 V. 3720 F. ·387 C. 42 B. 12. THINNINGS: N. 10 B.A. 4 V. 90. Roxburgh. 600′. General. Mod. exp. Sandy loam. Old Red Sandstone. *Calluna, Vaccinium Myrtillus, Ferns, Mosses.*

P. 320.—MAIN CROP: A. 88 H. 67 G. 11¾ N. 185 B.A. 176 V. 4565 F. ·387 C. 37 B. 10. Aberdeen. 450′. N.E. Fully shelt. Sand. Alluvium. *Vaccinium Myrtillus, V. vitis-idœa, Calluna, Erica tetralix. Grasses.*

P. 120.—MAIN CROP: A. 89 H. 77 G. 12¾ N. 175 B.A. 200 V. 5505 F. ·358 C. 31 B. 10. THINNINGS: N. 10 B.A. 4 V. 70. Perth. 350′. General. Mod. exp. Loam. Boulder Clay on Old Red Sandstone. *Oxalis, Grasses, Mosses.*

P. 223.—MAIN CROP: A. 102 H. 78 G. 11¼ N. 295 B.A. 256 V. 8285. F. ·414 C. 29 B. 10. Berwick. 550′. General. Mod. exp. Clay loam. Red Boulder Clay on Old Red Sandstone. *Grasses, Juncus sp., Ferns.* (Scanty.)

P. 225.—MAIN CROP: A. 105 H. 73 G. 11½ N. 185 B.A. 167 V. 5245 F. ·431 C. 30 B. 15. Berwick. 500′. N. Mod. exp. Clay loam. Boulder Clay on old Red Sandstone. *Erica, Vaccinium Myrtillus, Ferns.* (Scanty.)

P. 46.—MAIN CROP: A. 108 H. 74 G. 11¾ N. 265 B.A. 254 V. 6970 F. ·371 C. 22 B. 11. Moray. 700′. General. Fully shelt. Sand. Morainic Drift on Siliceous Schists. *Vaccinium Myrtillus, V. Vitis-idœa, Grasses, Mosses.*

SCOTS PINE—Scotland—*contd.*

Quality Class II—50-ft.—*contd.*

P. 24.—MAIN CROP: A. 111 H. 72 G. 13 N. 220 B.A. 255 V. 7245 F. ·394 C. 40 B. 12. THINNINGS: N. 15 B.A. 10 V. 205. Moray. 550′. S.E. Mod. shelt. Sand. Boulder Clay over Quartzite. *Oxalis, Erica cinerea, Grasses, Mosses.*

P. 23.—MAIN CROP: A. 113 H. 80 G. 13¼ N. 165 B.A. 204 V. 5920 F. ·363 C. 33 B. 12. THINNINGS: N. 10 B.A. 7 V. 155. Moray. 450′. S.E. Mod. shelt. Sand. Boulder Clay over Quartzite. *Oxalis, Erica cinerea. Grasses, Pteris.*

P. 22.—MAIN CROP: A. 113 H. 77 G. 12¼ N. 230 B.A. 242 V. 6810 F. ·366 C. 30 B. 10. THINNINGS: N. 25 B.A. 16 V. 400. Moray. 400′. S.E, Mod. shelt. Sand. Boulder Clay on Quartzite. *Erica cinerea, Grasses, Pteris, Mosses.*

P. 30.—MAIN CROP: A. 123 H. 80 G. 15¼ N. 170 B.A. 277 V. 8510 F. ·385 C. 39 B. 12. Moray. 400′. W. Mod. exp. Sand. Boulder Clay over Quartzite. *Oxalis, Pteris, Mosses.*

P. 222.—MAIN CROP: A. 124 H. 82 G. 12¾ N. 215 B.A. 242 V. 8345 F. ·421 C. 24 B. 10. Berwick. 500′. S. Mod. exp. Clay loam. Boulder Clay on Old Red Sandstone. *Grasses, Ferns.* (Scanty.)

P. 47B.—MAIN CROP: A. 125 H. 78 G. 15 N. 185 B.A. 288 V. 8630 F. ·384 C. 45 B. 8. Perth. 850′. S. Fully exp. Sandy loam. Mica Schist. *Oxalis, Grasses, Pteris.* (Scanty.)

P. 27.—MAIN CROP: A. 127 H. 85 G. 13¾ N. 165 B.A. 212 V. 7035 F. ·391 C. 30 B. 12. THINNINGS: N. 10 B.A. 7 V. 200. Moray. 300′. E. Fully shelt. Sand. Boulder Clay over Old Red Conglomerate. *Oxalis, Erica cinerea, Pteris, Mosses.*

P. 28.—MAIN CROP: A. 132 H. 78 C. 14¾ N. 180 B.A. 276 V. 7895 F. ·367 C. 37 B. 9. THINNINGS: N. 15 B.A. 13 V. 295 Moray. 350′. S. Fully shelt. Sand. Boulder Clay over Old Red Conglomerate. *Oxalis, Pteris, Mosses.* (Scanty.)

P. 45B.—MAIN CROP: A. 136 H. 75 G. 13 N. 235 B.A. 273 V. 9265 F. ·453 C. 27 B. 12. THINNINGS: N. 15 B.A. 5 V. 140. Perth. 1050′. South. Mod. exp. Sandy loam. Mica Schist. *Vaccinium Myrtillus, Grasses, Pteris.*

P. 48B.—MAIN CROP: A. 137 H. 79 G. 16 N. 170 B.A. 300 V. 10025 F. ·423 C. 39 B. 8. THINNINGS: N. 10 B.A. 4 V. 120. Perth. 1050′. S.E. Mod. exp. Sandy loam. Mica Schist. *Oxalis, Grasses, Pteris, Mosses.*

Quality Class III—40-ft.

P. 353.—MAIN CROP: A. 31 H. 27 G. 4¼ N. 1055 B.A. 131 V. 1275 F. ·359 C. 49 B. 20. THINNINGS: N. 125 B.A. 5 V. 20. Aberdeen. 1450′. W. Mod. shelt. Sandy loam. Boulder Clay on Gneiss. *Vaccinium Myrtillus, Potentilla, Galium, Grasses.*

P. 177.—MAIN CROP: A. 32 H. 27 G. 3½ N. 1430 B.A. 127 V. 1205 F. ·353 C. 38 B. 18. THINNINGS: N. 270 B.A. 9 Kincardine. 500′. N. Mod. exp. Sandy loam. Sand and Gravel on Granite. Nil.

P. 51.—MAIN CROP: A. 39 H. 33 G. 3½ N. 2180 B.A. 180 V. 1875 F. ·316 C. 33 B. 17. THINNINGS: B. 270 B.A. 7 V. 20. Inverness. 700′. S. Mod. exp. Sand. Boulder Clay on Pelitic Mica Schist. *Vaccinium Myrtillus, Mosses.* (Scanty.)

SCOTS PINE—Scotland—*contd.*

Quality Class III—40-ft.—*contd.*

P. 333.—MAIN CROP: A. 39 H. 30 G. 5¼ N. 730 B.A. 142 V. 1550 F. ·365 C. 48 B. 15. THINNINGS: N. 20 B.A. 1 V. 5. Aberdeen. 1300′. S.W. Mod. exp. Sandy loam. Knotted Andalusite Schist. *Vaccinium Myrtillus, Trientalis europæus, Grasses.* (Scanty.)

P. 319.—MAIN CROP: A. 39 H. 34 G. 5¼ N. 695 B.A. 130 V. 1570 F. ·355 C. 42 B. 17. THINNINGS: N. 40 B.A. 4 V. 35. Aberdeen. 1200′. S. Fully exp. Sandy loam. Coarse Gneiss. *Vaccinium Myrtillus, Potentilla, Grasses.*

P. 302.—MAIN CROP: A. 39 H. 35 G. 4¼ N. 1245 B.A. 152 V. 1945 F. ·366 C. 31 B. 17. THINNINGS: N. 265 B.A. 16 V. 130. Aberdeen. 700′. General. Mod. shelt. Sand. Boulder Clay on Granite. *Mosses.* (Scanty.)

P. 52.—MAIN CROP: A. 40 H. 37 G. 4½ N. 1395 B.A. 187 V. 2970 F. ·429 C. 35 B. 14. THINNINGS: B. 110 B.A. 5 V. 25. Inverness. 700′. S. Mod. shelt. Sand. Boulder Clay on Pelitic Mica Schist. Nil.

P. 352.—MAIN CROP: A. 40 H. 33 G. 4 N. 1130 B.A. 128 V. 1635 F. ·387 C. 36 B. 15. THINNINGS: N. 150 B.A. 6 V. 20. Aberdeen. 1200′. General. Fully shelt. Sand. Boulder Clay on Moine Gneiss. *Vaccinium vitis-idæa, V. Myrtillus, Galium, Agrostis, Mosses.*

P. 364.—MAIN CROP: A. 40 H. 33 G. 4¾ N. 915 B.A. 140 V. 1620 F. ·351 C. 45 B. 17. THINNINGS: N. 140 B.A. 6 V. 30. Aberdeen. 700′. General. Fully shelt. Sand. Alluvium. *Mosses, Grasses.*

P. 30B.—MAIN CROP: A. 43 H. 35 G. 6 N. 665 B.A. 161 V. 2230 F. ·395 C. 39 B. 13. THINNINGS: A. 145 B.A. 14 V. 170. Ross. 550′. N.W. Mod. exp. Sandy loam. Siliceous Schists. *Oxalis, Grasses, Mosses.* (Scanty.)

P. 313.—MAIN CROP: A. 44 H. 40 G. 4¾ N. 830 B.A. 127 V. 1955 F. ·384 C. 29 B. 13. THINNINGS: N. 85 B.A. 6 V. 50. Aberdeen. 200′ General. Fully shelt. Sand. Boulder Clay over Granite. *Vaccinium Myrtillus, Grasses, Ferns, Mosses.*

P. 379.—MAIN CROP: A. 45 H. 37 G. 4 N. 1065 B.A. 123 V. 1615 F. ·355 C. 37 B. 13. THINNINGS: N. 230 B.A. 9 V. 35. Moray. 50′. General. Mod. exp. Sand. Blown Sand. *Calluna, Goodyera repens, Psamma arenaria.* (Scanty.)

P. 295.—MAIN CROP: A. 45 H. 36 G. 4¼ N. 1160 B.A. 122 V. 1730 F. ·395 C. 40 B. 9. THINNINGS: N. 75 B.A. 2 V. 5. Moray. 25′. General. Mod. exp. Sand. Blown Sand. *Goodyera repens, Mosses.* (Scanty.)

P. 167.—MAIN CROP: A. 46 H. 42 G. 5½ N. 695 B.A. 153 V. 2355 F. ·366 C. 35 B. 13. THINNINGS: N. 30 B.A. 3 V. 40. Aberdeen. 350′. N. Fully shelt. Sandy loam. Sand and Gravel on Granite. *Mosses.* (Scanty.)

P. 325.—MAIN CROP: A. 46 H. 40 G. 5½ N. 780 B.A. 162 V. 2255 F. ·349 C. 33 B. 14. THINNINGS: N. 55 B.A. 4 V. 25. Aberdeen. 400′. General. Mod. exp. Sand. Alluvium. *Vaccinium Myrtillus, Grasses, Mosses.* (Scanty.)

P. 174.—MAIN CROP: A. 47 H. 41 G. 5¼ N. 790 B.A. 152 V. 2280 F. ·367 C. 38 B. 12. THINNINGS: N. 60 B.A. 7 V. 75. Kincardine. 350′. W. Mod. shelt. Sand. Boulder Clay on Granite. *Pteris, Mosses.* (Scanty.)

P. 199.—MAIN CROP: A. 49 H. 35 G. 4¾ N. 995 B.A. 149 V. 1980 F. ·379 C. 37 B. 14. THINNINGS: N. 150 B.A. 7 V. 35. Aberdeen. 500′. W. Fully shelt. Sand. Sand and Gravel on Granite. *Erica cinerea, Vaccinium Myrtillus, Mosses.* (Scanty.)

SCOTS PINE—Scotland—*contd.*

Quality Class III—40-ft.—*contd.*

P. 324.—MAIN CROP: A. 49 H. 42 G. 6 N. 670 B.A. 164 V. 2710 F. ·394 C. 33 B. 13. THINNINGS: N. 30 B.A. 3 V. 40. Aberdeen. 450′. S. Mod. exp. Sand. Alluvium. *Vaccinium Myrtillus, Grasses, Mosses.*

P. 350.—MAIN CROP: A. 49 H. 44 G. 4¾ N. 760 B.A. 126 V. 2020 F. ·365 C. 34 B. 12. THINNINGS: N. 140 B.A. 7 V. 40. Aberdeen. 650′. S.W. Mod. exp. Sand. Morainic Drift on Granite. *Grasses, Mosses.* (Scanty.)

P. 47.—MAIN CROP: A. 54 H. 44 G. 4¾ N. 1075 B.A. 171 V. 2825 F. ·375 C. 32 B. 13. THINNINGS: N. 60 B.A. 4 V. 30. Moray. 700′. S. Fully shelt. Sand. Fluvio-Glacial Sand and Gravel. *Vaccinium Myrtillus, V. vitis-idoea, Grasses, Mosses.* (Scanty.)

P. 163.—MAIN CROP: A. 58 H. 49 G. 6¾ N. 490 B.A. 160 V. 2845 F. ·362 C. 33 B. 11. THINNINGS: N. 30 B.A. 4 V. 60. Kincardine. 300′. General. Mod. shelt. Sand. Boulder Clay on Gneiss. *Grasses, Mosses.* (Scanty.)

P. 180.—MAIN CROP: A. 59 H. 50 G. 7 N. 550 B.A. 194 V. 3390 F. ·350 C. 31 B. 12. THINNINGS: N. 85 B.A. 14 V. 205. Aberdeen. 500′. General. Mod. shelt. Sand. Quartzite. *Mosses.* (Scanty.)

P. 316.—MAIN CROP: A. 59 H. 44 G. 7 N. 520 B.A. 181 V. 3025 F. ·379 C. 29 B. 13. Aberdeen. 900′. S. Mod. exp. Sandy loam. Boulder Clay over Granite. *Digitalis, Oxalis, Grasses, Pteris.* (Scanty.)

P. 179.—MAIN CROP: A. 60 H. 47 G. 6¼ N. 555 B.A. 148 V. 2690 F. ·388 C. 32 B. 15. THINNINGS: N. 110 B.A. 14 V. 195. Kincardine. 750′. S.E. Mod. shelt. Sandy loam. Granite. *Vaccinium Myrtillus, Oxalis, Grasses, Pteris.* (Scanty.)

P. 1B.—MAIN CROP: A. 61 H. 51 G. 9½ N. 260 B.A. 164 V. 3420 F. ·408 C. 41 B. 10. THINNINGS: N. 10 B.A. 1 V. 20. Nairn. 550′. N. Mod. exp. Sandy loam. Peat on Moine Schist. *Calluna, Mosses.* (Scanty.)

P. 37B.—MAIN CROP: A. 63 H. 50 G. 8¼ N. 435 B.A. 202 V. 3755 F. ·371 C. 41 B. 12. THINNINGS: B. 80 B.A. 20 V. 355. Sutherland. 200′. E. Mod. exp. Sandy loam. Boulder Clay on Old Red Sandstone. *Erica cinerea, Mosses.* (Scanty.)

P. 296.—MAIN CROP: A. 64 H. 51 G. 7 N. 470 B.A. 156 V. 3545 F. ·445 C. 46 B. 13. THINNINGS: N. 130 B.A. 9 V. 125. Moray. 50′. General. Mod. shelt. Sand. Marine Alluvium. *Calluna, Goodyera repens, Empetrum nigrum, Juncus, Grasses.*

P. 23B.—MAIN CROP: A. 66 H. 46 G. 7½ N. 490 B.A. 194 V. 3545 F. ·397 C. 37 B. 12. Ross. 350′. S.W. Mod. exp. Sand. Morainic Drift over Siliceous Schist. *Grasses, Mosses.* (Scanty.)

P. 22B.—MAIN CROP: A. 67 H. 51 G. 8¼ N. 430 B.A. 208 V. 4215 F. ·397 C. 39 B. 13. Ross. 250′. S.W. Mod. exp. Sand. Morainic Drift over Siliceous Schist. *Grasses, Pteris, Mosses.* (Scanty.)

P. 36B.—MAIN CROP: A. 67 H. 49 G. 8½ N. 450 B.A. 225 V. 4050 F. ·367 C. 43 B. 12. Sutherland. 400′. W. Mod. exp. Sandy loam. Boulder Clay on Old Red Sandstone. *Erica cinerea, Grasses, Ferns.*

P. 25B.—MAIN CROP: A. 67 H. 53 G. 8¾ N. 440 B.A. 238 V. 4975 F. ·394 C. 35 B. 12. Ross. 150′. General. Mod. exp. Sandy loam. Sand and Gravel over Moine Schist. *Grasses, Mosses, Pteris.* (Scanty.)

P. 27B.—MAIN CROP: A. 68 H. 48 G. 8¾ N. 340 B.A. 175 V. 3280 F. ·392 C. 40 B. 15. Ross. 350′. E. Mod. shelt. Sand. Morainic Drift over Siliceous Schist. *Oxalis, Grasses, Mosses.*

SCOTS PINE—Scotland—*contd.*

Quality Class III—40-ft.—*contd.*

P. 39B.—MAIN CROP: A. 69 H. 56 G. 9 N. 345 B.A. 195 V. 4295 F. ·394 C. 39 B. 11. THINNINGS: N. 15 B.A. 6 V. 125. Sutherland. 200′. N.W. Mod. exp. Sandy loam. Boulder Clay on Old Red Sandstone. *Vaccinium Myrtillus, Grasses, Mosses.* (Scanty.)

P. 230.—MAIN CROP: A. 70 H. 53 G. 7½ N. 515 B.A. 204 V. 4015 F. ·372 C. 33 B. 16. THINNINGS: N. 40 B.A. 9 V. 185. Berwick. 550′. General. Fully exp. Loam. Boulder Clay on Old Red Sandstone. *Grasses, Ferns.* (Scanty.)

P. 229.—MAIN CROP: A. 71 H. 55 G. 8 N. 480 B.A. 211 V. 4975 F. ·428 C. 33 B. 16. THINNINGS: N. 55 B.A. 11 V. 190. Berwick. 550′. S. Mod. exp. Loam. Boulder Clay on Old Red Sandstone. *Grasses, Ferns, Mosses.* (Scanty.)

P. 300.—MAIN CROP: A. 73 H. 52 G. 8¼ N. 330 B.A. 156 V. 3350 F. ·413 C. 42 B. 13. THINNINGS: N. 15 B.A. 2 V. 30. Moray. 25′. General. Mod. shelt. Sand. Marine Alluvium. *Calluna, Mosses.*

P. 294.—MAIN CROP: A. 74 H. 53 G. 8¼ N. 255 B.A. 135 V. 2980 F. ·416 C. 39 B. 10. Moray. 25′. General. Mod. shelt. Sand. Marine Alluvium. Nil.

P. 26B.—MAIN CROP: A. 74 H. 50 G. 11 N. 225 B.A. 192 V. 3815 F. ·398 C. 42 B. 13. Ross. 150′. E. Mod. shelt. Sandy loam. Morainic Drift over Siliceous Schist. *Oxalis, Grasses, Mosses.*

P. 11B.—MAIN CROP: A. 74 H. 57 G. 9¼ N. 255 B.A. 170 V. 4015 F. ·415 C. 43 B. 10. THINNINGS: N. 15 B.A. 6 V. 115. Nairn. 450′. General. Mod. shelt. Clay loam. Boulder Clay on Moine Schist. *Oxalis, Calluna, Grasses, Mosses.*

P. 9B.—MAIN CROP: A. 74 H. 56 G. 9¼ N. 250 B.A. 166 V. 3505 F. ·373 C. 42 B. 10. Nairn. 450′. General. Mod. shelt. Clay loam. Boulder Clay on Moine Schist. *Calluna, Grasses, Mosses.*

P. 10B.—MAIN CROP: A. 75 H. 58 G. 9¾ N. 245 B.A. 166 V. 3755 F. ·391 C. 43 B. 10. THINNINGS: N. 10 B.A. 3 V. 70. Nairn. 450′. General. Fully shelt. Clay loam. Boulder Clay on Moine Schist. *Calluna, Grasses, Mosses.*

P. 12B.—MAIN CROP: A. 75 H. 56 G. 9½ N. 240 B.A. 152 V. 3280 F. ·385 C. 40 B. 10. THINNINGS: N. 30 B.A. 8 V. 135. Nairn. 450′. General. Mod. Shelt. Clay loam. Boulder Clay on Moine Schist. *Calluna, Grasses, Mosses.*

P. 5B.—MAIN CROP: A. 75 H. 59 G. 9¾ N. 270 B.A. 181 V. 4410 F. ·412 C. 39 B. 10. THINNINGS: N. 10 B.A. 3 V. 50. Nairn. 450′. S. Mod. exp. Loam. Boulder Clay on Moine Schist. *Calluna, Grasses, Mosses.* (Scanty.)

P. 42.—MAIN CROP: A. 77 H. 57 G. 9¾ N. 325 B.A. 212 V. 4455 F. ·369 C. 36 B. 9. Moray. 700′. General. Mod. exp. Sand. Boulder Clay on Moine Schists. *Erica cinerea, Oxalis, Mosses.* (Scanty.)

P. 351.—MAIN CROP: A. 79 H. 57 G. 8 N. 440 B.A. 192 V. 3670 F. ·335 C. 33 B. 18. THINNINGS: N. 65 B.A. 12 V. 215. Aberdeen. 550′. W. Fully shelt. Sand. Morainic Drift on Granite. *Erica cinerea, Goodyera repens, Mosses.*

P. 359.—MAIN CROP: A. 86 H. 60 G. 9 N. 415 B.A. 231 V. 4890 F. ·353 C. 31 B. 11. THINNINGS: N. 45 B.A. 10 V. 165. Aberdeen. 800′. S. Fully shelt. Sand. Fresh Water Alluvium. *Vaccinium Myrtillus, Empetrum nigrum, Calluna, Pteris.*

SCOTS PINE—Scotland—*contd.*

Quality Class III—40-ft.—*contd.*

P. 28B.—MAIN CROP: A. 86 H. 56 G. 10½ N. 270 B.A. 196 V. 4415. F. ·402 C. 37 B. 9. Sutherland. 200′. W. Mod. exp. Sand. Mica Schist. *Vaccinium Myrtillus, Calluna, Grasses, Mosses.*

P. 29B.—MAIN CROP: A. 87 H. 61 G. 11¼ N. 235 B.A. 207 V. 4860 F. ·384 C. 42 B. 10. Sutherland. 100′. S.W. Mod. exp. Sand. Mica Schist. *Urtica, Calluna, Pteris, Ferns.*

P. 128.—MAIN CROP: A. 89 H. 60 G. 10¾ N. 285 B.A. 224 V. 5380 F. ·400 C. 35 B. 8. THINNINGS: N. 10 B.A. 3 V. 60. Ayr. 450′. S. Mod. exp. Sandy loam. Boulder Clay on Silurian. *Rubus fruticosus, Oxalis, Grasses, Ferns.* (Scanty.)

P. 2.—MAIN CROP: A. 89 H. 60 G. 10¾ N. 145 B.A. 116 V. 2865 F. ·411 C. 48 B. 15. THINNINGS: N. 10 B.A. 5 V. 105. Roxburgh. 700′. W. Mod. exp. Sandy loam. Old Red Sandstone. *Vaccinium Myrtillus, Ferns.* (Scanty.)

P. 197.—MAIN CROP: A. 91 H. 63 G. 10¼ N. 230 B.A. 166 V. 4045 F. ·388 C. 36 B. 10. Aberdeen. 400′. S.W. Mod. exp. Sandy loam. Boulder Clay on Granite. *Erica cinerea, Vaccinium Myrtillus, Mosses.*

P. 143.—MAIN CROP: A. 99 H. 62 G. 10½ N. 315 B.A. 242 V. 5950 F. ·397 C. 29 B. 8. THINNINGS: N. 10 B.A. 4 V. 85. Roxburgh. 750′. S.W. Mod. exp. Sand. Boulder Clay on Old Red Sandstone. *Grasses.* (Scanty.)

P. 371.—MAIN CROP: A. 107 H. 69 G. 12½ N. 210 B.A. 230 V. 6070 F. ·382 C. 32 B. 10. THINNINGS: N. 5 B.A. 2 V. 45. Aberdeen. 850′. General. Fully shelt. Sandy loam. Boulder Clay on Epidiorite Hornblende Schist. *Vaccinium vitis-idœa, V. Myrtillus, Goodyera repens, Mosses.*

P. 25.—MAIN CROP: A. 117 H. 65 G. 11¾ N. 180 B.A. 172 V. 4305 F. ·385 C. 33 B. 10. THINNINGS: N. 10 B.A. 4 V. 100. Moray. 650′. E. Mod. exp. Sand. Boulder Clay over Quartzite. *Vaccinium Myrtillus, Calluna, Grasses, Mosses.*

P. 234.—MAIN CROP: A. 117 B. 63 G. 12¾ N. 140 B.A. 160 V. 4700. F. ·465 C. 41 B. 9. Dumfries. 650′. General. Fully exp. Loam. Boulder Clay on Silurian. *Rubus fruticosus, Vaccinium Myrtillus, Calluna, Grasses.*

P. 88.—MAIN CROP: A. 134 H. 65 G. 11¼ N. 330 B.A. 290 V. 6185 F. ·328 C. 32 B. 12. THINNINGS: N. 15 B.A. 6 V. 120. Inverness. 500′. General. Mod. shelt. Sandy Loam. Morainic Drift on Moine Schists. *Vaccinium Myrtillus, Pteris, Mosses.*

P. 292.—MAIN CROP: A. 149 H. 77 G. 13½ N. 160 B.A. 208 V. 7205 F. ·445 C. 37 B. 7. Moray. 350′. W. Mod. exp. Sand. Sand and Gravel on Old Red Conglomerate. *Erica cinerea, Calluna, Oxalis, Pteris, Rubus.*

Below 40-ft. Class.

P. 322.—MAIN CROP: A. 45 H. 31 G. 4½ N. 975 B.A. 133 V. 1590 F. ·385 C. 34 B. 16. THINNINGS: N. 125 B.A. 6 V. 30. Aberdeen. 1200′. S. Fully exp. Sandy loam. Knotted Andalusite Schist. *Vaccinium Myrtillus, Galium, Grasses, Mosses.*

P. 35B.—MAIN CROP: A. 65 H. 37 G. 6½ N. 665 B.A. 190 V. 2465 F. ·352 C. 40 B. 13. THINNINGS: N. 105 B.A. 10 V. 100. Sutherland. 350′. N.E. Mod. shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Calluna, Mosses.*

SCOTS PINE—Scotland—*contd.*

Below 40-ft. Class—*contd.*

P. 21B.—MAIN CROP: A. 67 H. 41 G. 6½ N. 550 B.A. 169 V. 2805 F. ·404 C. 33 B. 13. THINNINGS: N. 50 B.A. 5 V. 70. Ross. 450′. S.W. Mod. exp. Sandy loam. Morainic Drift over Siliceous Schist. *Grasses, Mosses.* (Scanty.)

P. 44B.—MAIN CROP: A. 73 H. 46 G. 8¼ N. 365 B.A. 176 V. 3030 F. ·374 C. 35 B. 12. THINNINGS: N. 55 B.A. 17 V. 355. Sutherland. 150′. N. Mod. exp. Sandy loam. Old Red Sandstone. *Calluna, Vaccinium Myrtillus, Grasses, Mosses.*

P. 291.—MAIN CROP: A. 78 H. 44 G. 6¾ N. 490 B.A. 150 V. 2435 F. ·370 C. 37 B. 12. THINNINGS: N. 20 B.A. 2 V. 20. Motay. 650′. N.E. Mod. exp. Sand. Sand and Gravel on Old Red Conglomerate. *Calluna, Erica cinerea, Vaccinium Myrtillus, Goodyera repens.*

P. 24B.—MAIN CROP: A. 88. H. 45 G. 8 N. 355 B.A. 161 V. 2845 F. ·391 C. 43 B. 15. Sutherland. 150′. S.W. Mod. shelt. Sand. Morainic Drift over Siliceous Schist. *Calluna, Mosses.* (Scanty.)

P. 337.—MAIN CROP: A. 91 H. 48 G. 8¾ N. 365 B.A. 196 V. 3815 F. ·405 C. 40 B. 12. Aberdeen. 1250′. S.W. Mod. shelt. Sandy loam. Epidiorite Hornblende Schist. *Vaccinium vitis-idœa, V. Myrtillus, Oxalis, Herbs.*

P. 73.—MAIN CROP: A. 93 H. 49 G. 7½ N. 520 B.A. 206 V. 3600 F. ·357 C. 38 B. 12. THINNINGS: N. 40 B.A. 4 V. 35. Inverness. 650′. N.E. Mod. exp. Sandy loam. Moine Schists. *Vaccinium Myrtillus, V. vitis-idœa, Calluna, Pteris.*

P. 365.—MAIN CROP: A. 97 H. 52 G. 9 N. 260 B.A. 147 V. 2765 F. ·363 C. 34 B. 11. THINNINGS: N. 25 B.A. 6 V. 85. Aberdeen. 1200′. S.W. Mod. shelt. Sandy loam. Boulder Clay on Moine Gneiss. *Calluna, Vaccinium Myrtillus, Scabiosa, Agrostis.*

P. 184.—MAIN CROP: A. 98 H. 54 G. 10½ N. 300 B.A. 227 V. 4565 F. ·373 C. 33 B. 12. THINNINGS: N. 35 B.A. 12 V. 165. Aberdeen. 950′. N.W. Fully exp. Sand. Quartzite. *Oxalis, Grasses, Pteris, Mosses.* (Scanty.)

P. 182.—MAIN CROP: A. 103 H. 54 G. 9½ N. 305 B.A. 192 V. 4205 F. ·406 C. 39 B. 10. THINNINGS: N. 20 B.A. 5 V. 80. Aberdeen. 650′. N.W. Mod. shelt. Sand. Quartzite. *Pteris, Mosses.* (Scanty.)

P. 326.—MAIN CROP: A. 118 H. 55 G. 9¾ N. 200 B.A. 134 V. 2885 F. ·373 C. 30 B. 15. Aberdeen. 1050′. N.E. Fully shelt. Sand. Boulder Clay on Mica Schist. *V. vitis-idœa, V. Myrtillus, Calluna, Oxalis.*

P. 366.—MAIN CROP: A. 118 H. 47 G. 9¼ N. 225 B.A. 130 V. 2605 F. ·426 C. 36 B. 13. Aberdeen. 1350′. S.W. Fully exp. Sandy loam. Boulder Clay on Moine Gneiss. *Calluna, Vaccinium Myrtillus, Grasses, Mosses.*

P. 360.—MAIN CROP: A. 118 H. 52 G. 8½ N. 455 B.A. 222 V. 4590 F. ·397 C. 25 B. 10. THINNINGS: N. 70 B.A. 14 V. 230. Aberdeen. 1250′. N. Mod. exp. Sand. Boulder Clay on Granite. *Grasses, Mosses.* (Scanty.)

P. 358.—MAIN CROP: A. 120 H. 56 G. 11 N. 250 B.A. 207 V. 4140 F. ·358 C. 34 B. 13. THINNINGS: N. 20 B.A. 6 V. 100. Aberdeen. 1160′. N. Mod. exp. Sand. Boulder Clay on Granite. *Calluna, Mosses.* (Scanty.)

EUROPEAN LARCH

Quality Class I—80-ft.

S.P. 7.—MAIN CROP: A. 16 H. 32 G. 3¼ N. 990 B.A. 71 V. 810 F. ·356 C. 42 B. 17. Brecknock. 620′. N.E. Mod. shelt. Loam. Old Red Sandstone. *Mercurialis, Urtica, Grass, Moss.*

P. 673.—MAIN CROP: A. 17 H. 32 G. 3½ N. 870 B.A. 72 V. 720 F. ·312 C. 55 B. 16. THINNINGS: N. 50 B.A. 2. Hereford. 700′. E. Fully shelt. Loam. Silurian. *Grass, Moss.*

P. 344.—MAIN CROP: A. 17 H. 36 G. 4¼ N. 905 B.A. 109 V. 1340 F. ·342 C. 44 B. 20. THINNINGS: N. 370 B.A. 21 V. 210. Devon. 460′. S. Fully shelt. Loam. Millstone Grit. *Pteris, Mercurialis, Grass.* (Scanty.)

P. 208.—MAIN CROP: A. 17 H. 32 G. 3¾ N. 990 B.A. 92 V. 1030 F. ·351 C. 54 B. 16. THINNINGS: N. 55 B.A. 2 V. 10. Suffolk. 150′. General. Mod. exp. Sandy loam. Chalk. Nil.

P. 351.—MAIN CROP: A. 18 H. 32 G. 3¼ N. 1150 B.A. 85 V. 970 F. ·355 C. 41 B. 19. THINNINGS: N. 280 B.A. 9. V. 45. Devon. 850′. E.N.E. Mod. shelt. Sand. Granite. *Pteris, Urtica.*

P. 180.—MAIN CROP: A. 19 H. 41 G. 4 N. 890 B.A. 95 V. 1360 F. ·347 C. 46 B. 15. THINNINGS: N. 80 B.A. 1 Dorset. 100′. General. Fully shelt. Sandy loam. Bagshot beds. Eocene. *Grass.* (Scanty.)

P. 115.—MAIN CROP: A. 19 H. 36 G. 3¾ N. 870 B.A. 85 V. 985 F. ·321 C. 39 B. 20 THINNINGS: N. 165 B.A. 5. Brecknock. 520′. S.W. Mod. exp. Loam. Devonian. *Grass, Nepeta, Urtica.*

P. 576.—MAIN CROP: A. 20 H. 42 G. 3¾ N. 1195 B.A. 116 V. 1810 F. ·372 C. 42 B. 16. THINNINGS: N. 325 B.A. 9. Sussex. 550′. S.W. Fully exp. Sand. Lower Greensand. Nil.

P. 595.—MAIN CROP: A. 20 H. 38 G. 4¼ N. 750 B.A. 96 V. 1465 F. ·400 C. 37 B. 17. THINNINGS: N. 490 B.A. 31 V. 190. Hants. 500′. N.W. Fully shelt. Clay. Chalk. Nil.

P. 108.—MAIN CROP: A. 21 H. 41 G. 4 N. 1010 B.A. 114 V. 1580 F. ·337 C. 45 B. 17. THINNINGS: N. 30 B.A. 12 V. 5. Brecknock. 950′. W.S.W. Fully exp. Loam. Old Red Sandstone. *Grass. Galium saxatile.*

S.P. 116.—MAIN CROP: A. 21 H. 38 G. 3¾ N. 890 B.A. 83 V. 1275 F. ·403 C. 1 B. 15. THINNINGS: N. 10 B.A. 1. Somerset. 650′. E.N.E. Fully shelt. Loam. Devonian. *Moss, Rubus fruticosus.* (Scanty.)

P. 556.—MAIN CROP: A. 22 H. 48 G. 4¾ N. 650 B.A. 103 V. 2025 F. ·410 C. 44 B. 17. THINNINGS: N. 10 B.A. 4. Surrey. 450′. N.N.E. Fully shelt. Sandy loam. Lower Greensand. *Grass, Moss, Rubus, Sambucus.*

P. 649.—MAIN CROP: A. 22 H. 41 G. 4½ N. 740 B.A. 106 V. 1550 F. ·355 C. 40 B. 20. THINNINGS: N. 50 B.A. 3 Radnor. 1000′. N.E. Fully shelt. Loam. Silurian shale. *Pteris, Moss.* (Scanty.)

S.P.S. 7.—MAIN CROP: A. 22 H. 46 G. 4½ N. 775 B.A. 113 V. 2090 F. ·402 C. 37 B. 17. THINNINGS: N. 25 B.A. 2. Sussex. 425′. N.W. Fully shelt. Loam. Wealden—Hastings beds. *Pteris, Moss.*

P. 318.—MAIN CROP: A. 25 H. 46 G. 5½ N. 545 B.A. 117 V. 2145 F. ·397 C. 47 B. 17. THINNINGS: N. 75 B.A. 4. V. 15. Nairn. 100′. W. Mod. exp. Sandy loam. Old Red Sandstone. *Calluna, Oxalis, Rubus, Herbs, Mosses.*

P. 600.—MAIN CROP: A. 26 H. 55 G. 5 N. 670 B.A. 113 V. 2770 F. ·444 C. 28 B. 16. THINNINGS. N. 25 B.A. 2 Hants. 180′. General. Mod. shelt. Loam. Lower Eocene. *Oxalis, Anemone, Hedera.*

EUROPEAN LARCH—*contd.*

Quality Class I—80-ft.—*contd.*

P. 636.—MAIN CROP: A. 29 H. 52 G. 5¾ N. 565 B.A. 131 V. 2385 F. ·349 C. 34 B. 21. THINNINGS: N. 45 B.A. 5 V. 30. Montgomery. 1050′. W. Fully shelt. Loam. Silurian. *Grass, Pteris, Moss.* (Scanty.)

P. 111.—MAIN CROP: A. 29 H. 52 G. 5¼ N. 655 B.A. 121 V. 2505 F. ·399 C. 33 B. 15. THINNINGS: N. 50 B.A. 5 V. 75. Brecknock. 580′. S.W. Fully exp. Loam. Old Red Sandstone. *Sambucus, Oxalis, Pteris, Rubus fruticosus.*

P. 122.—MAIN CROP: A. 30 H. 59 G. 7 N. 310 B.A. 103 V. 2415 F. ·399 C. 34 B. 15. THINNINGS: N. 40 B.A. 8 V. 145. Brecknock. 680′. N. Fully shelt. Sandy loam. Old Red Sandstone. *Moss, Oxalis, Grass.*

P. 134.—MAIN CROP: A. 30 H. 56 G. 6¾ N. 335 B.A. 105 V. 2460 F. ·418 C. 36 B. 20. Ayr. 300′. N.W. Fully shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis, Rubus, Grass, Digitalis.*

P. 620.—MAIN CROP: A. 30 H. 58 G. 6 N. 560 B.A. 139 V. 3155 F. ·392 C. 33 B. 19. THINNINGS: N. 30 B.A. 5. Montgomery. 1000′. N.W. Mod. shelt. Loam. Silurian. *Mercurialis, Sambucus, Urtica.*

P. 546.—MAIN CROP: A. 30 H. 65 G. 8 N. 290 B.A. 125 V. 3310 F. ·407 C. 35 B. 17. Sussex. 300′. S. Mod. shelt. Clay Loam. Hastings Beds. *Grass, Moss, Rubus, Sambucus.* (Scanty.)

P. 599.—MAIN CROP: A. 31 H. 56 G. 5 N. 735 B.A. 124 V. 2850 F. ·411 C. 27 B. 21. THINNINGS: N. 45 B.A. 4. Hants. 180′. S. Fully exp. Loam. Lower Eocene. *Moss, Grass, Rubus.*

P. 601.—MAIN CROP: A. 31 H. 61 G. 5½ N. 615 B.A. 120 V. 3210 F. ·438 C. 27 B. 16. Hants. 200′. W.S.W. Fully exp. Sandy loam. Upper Eocene. *Grass, Moss.* (Scanty.)

P. 602.—MAIN CROP: A. 32 H. 60 G. 5½ N. 570 B.A. 118 V. 3040 F. ·428 C. 28 B. 19. Hants. 150′. General. Mod. shelt. Sandy loam. Upper Eocene. Nil.

P. 587.—MAIN CROP: A. 32 H. 57 G. 5 N. 680 B.A. 119 V. 2875 F. ·426 C. 28 B. 17. THINNINGS: N. 180 B.A. 19 V. 335. Bucks. 600′. S.E. Mod. shelt. Loam. Chalk. *Rubus fruticosus, Sambucus, Anemone, Oxalis.*

P. 542.—MAIN CROP: A. 32 H. 60 G. 5 N. 675 B.A. 120 V. 3170 F. ·442 C. 24 B. 18. THINNINGS: N. 65 B.A. 5 V. 130. Sussex. 400′. N. Fully shelt. Loam. Wealden—Hastings beds. *Sambucus, Moss.* (Scanty.)

S.P.Y. 70.—MAIN CROP: A. 34 H. 63 G. 6¾ N. 465 B.A. 141 V. 3390 F. ·380 C. 33 B. 21. THINNINGS: N. 25 B.A. 5. Somerset. 700′. N.E. Mod. exp. Loam. Devonian. Nil.

P. 669.—MAIN CROP: A. 35 H. 61 G. 5¼ N. 655 B.A. 129 V. 3190 F. ·404 C. 29 B. 17. Shropshire. 300′. S.E. Mod. shelt. Clay. Old Red Sandstone. *Anemone, Aspidium felix-mas.*

P. 696.—MAIN CROP: A. 36 H. 72 G. 8½ N. 260 B.A. 130 V. 4300 V. ·459 C. 31 B. 16. THINNINGS: N. 10 B.A. 2. Somerset. 700′. N.E. Fully shelt. Sandy loam. Devonian. *Oxalis, Fern.*

S.P.S. 9.—MAIN CROP: A. 36 H. 62 G. 6¼ N. 495 B.A. 135 V. 3490 F. ·418 C. 28 B. 17. THINNINGS: N. 60 B.A. 9 V. 105. Sussex. 300′. S.W. Fully shelt. Loam. Hastings Sands. Nil.

EUROPEAN LARCH—*contd.*

Quality Class I—80-ft.—*contd.*

S.P.Y. 81.—MAIN CROP: A. 37 H. 64 G. 8¾ N. 225 B.A. 119 V. 3135 F. ·410 C. 33 B. 17. THINNINGS: N. 5 B.A. 1. Wilts. 500′. N.W. Fully exp. Loam. Oolite: Corallian sands. *Rubus, Grass, Mercurialis, Sambucus.*

P. 509.—MAIN CROP: A. 40 H. 66 G. 7¾ N. 320 B.A. 134 V. 4020 F. ·454 C. 28 B. 16. THINNINGS: N. 35 B.A. 7 V. 105. Somerset. 650′. S.E. Mod. shelt. Clay loam. Devonian. *Pteris, Urtica, Nepeta.*

P. 118.—MAIN CROP: A. 42 H. 68 G. 6½ N. 370 B.A. 108 V. 3150 F. ·430 C. 26 B. 19. THINNINGS: N. 125 B.A. 18 V. 440. Brecknock. 700′. N. Fully shelt. Clay Loam. Old Red Sandstone. *Moss, Oxalis, Urtica, Pteris.*

P. 507.—MAIN CROP: A. 44 H. 75 G. 8 N. 305 B.A. 132 V. 4075 F. ·411 C. 30 B. 15. THINNINGS: N. 18 B.A. 5 V. 150. Somerset. 500′. N. Mod. shelt. Loam. Devonian. *Sambucus, Rubus, Oxalis.*

P. 343.—MAIN CROP: A. 44 H. 80 G. 8 N. 280 B.A. 121 V. 4020 F. ·417 C. 25 B. 19. THINNINGS: N. 115 B.A. 28 V. 825. Devon. 350′. S.S.E. Fully shelt. Loam. Millstone grit. *Pteris, Mercurialis, Rubus.*

P. 116.—MAIN CROP: A. 44 H. 82 G. 10¼ N. 215 B.A. 153 V. 5015 F. ·399 C. 37 B. 17. THINNINGS: N. 5 B.A. 1 V. 40. Ross. 150′. S.W. Fully shelt. Sandy loam. Morainic Drift on Moine Schist. *Oxalis, Grasses, Mosses.*

P. 590.—MAIN CROP: A. 45 H. 72 G. 7¾ N. 315 B.A. 131 V. 3755 F. ·398 C. 31 B. 18. THINNINGS: N. 55 B.A. 14 V. 240. Wilts. 680′. S.E. Mod. shelt. Sandy loam. Chalk. Nil.

P. 668.—MAIN CROP: A. 45 H. 74 G. 8¾ N. 285 B.A. 149 V. 4170 F. ·378 C. 28 B. 20. Shropshire. 550′. S.W. Mod. exp. Loam. Old Red Sandstone. *Rubus, Mercurialis, Urtica, Grass.*

P. 375.—MAIN CROP: A. 47 H. 75 G. 7¾ N. 315 B.A. 128 V. 3990 F. ·416. C. 26 B. 20. THINNINGS: N. 75 B.A. 20 V. 565. Devon. 300′. N.E. Fully shelt. Loam. Culm measures. *Hedera, Fern.*

P. 106.—MAIN CROP: A. 48 H. 74 G. 8¾ N. 350 B.A. 189 V. 5225 F. ·374 C. 29 B. 16. THINNINGS: N. 30 B.A. 6 V. 115. Ross. 300′. W. Mod. shelt. Sandy loam. Pelitic Mica Schist. *Oxalis, Mosses.*

P. 598.—MAIN CROP: A. 48 H. 76 G. 7½ N. 405 B.A. 157 V. 5095 F. ·428 C. 22 B. 20. THINNINGS: N. 15 B.A. 2. Hants. 180′. W. Mod. exp. Loam. Lower Eocene. *Moss, Grass.*

P. 103.—MAIN CROP: A. 49 H. 83 G. 9¼ N. 280 B.A. 163 V. 5185 F. ·383 C. 31 B. 16. THINNINGS: N. 35 B.A. 3 V. 75. Ross. 300′. W. Mod. shelt. Sandy loam. Moine Schist. *Oxalis, Pteris, Moss.*

P. 101.—MAIN CROP: A. 49 H. 78 G. 9 N. 345 B.A. 197 V. 5810 F. ·379 C. 31 B. 17. THINNINGS: N. 60 B.A. 13 V. 295. Ross. 550′. W. Mod. shelt. Sandy loam. Moine Schist. *Oxalis, Mosses.*

P. 100.—MAIN CROP: A. 49 H. 76 G. 8¾ N. 365 B.A. 193 V. 5705 F. ·390 C. 28 B. 15. THINNINGS: N. 30 B.A. 8 V. 245. Ross. 550′. W. Mod. Shelt. Sandy loam. Glacial on Muscovite Biotite Gneiss. *Oxalis, Mosses.*

P. 99.—MAIN CROP: A. 49 H. 84 G. 9½ N. 315 B.A. 202 V. 5285 F. ·370. C. 26 B. 18. THINNINGS: N. 50 B.A. 13. V. 415. Ross. 650′. S.W. Mod. exp. Sandy loam. Pelitic Mica Schist. *Oxalis, Mosses.*

EUROPEAN LARCH—*contd.*

Quality Class I—80-ft.—*contd.*

P. 102.—MAIN CROP: A. 50 H. 80 G. 8½ N. 370 B.A. 185 V. 5870 F. ·397 C. 25 B. 18. THINNINGS: N. 50 B.A. 11 V. 360. Ross. 250′. W. Mod. shelt. Sandy loam. Moine Schist. *Oxalis, Pteris, Mosses.*

P. 111.—MAIN CROP: A. 50 H. 78 G. 11 N. 205 B.A. 170 V. 4660 F. ·351 C. 36 B. 19. THINNINGS: N. 20 B.A. 9 V. 240. Ross. 250′. W. Mod. shelt. Sandy loam. Pelitic Mica Schist. *Oxalis, Pteris, Mosses.*

P. 107.—MAIN CROP: A. 50 H. 78 G. 9¼ N. 260 B.A. 158 V. 4840 F. ·393 C. 32 B. 18. THINNINGS: N. 45 B.A. 13 V. 380. Ross. 400′. W. Mod. shelt. Sandy loam. Moine Schist. *Oxalis, Pteris, Mosses.*

P. 121.—MAIN CROP: A. 51 H. 83 G. 8½ N. 260 B.A. 129 V. 4470 F. ·418 C. 23 B. 16. THINNINGS: N. 40 B.A. 10 V. 240. Hereford. 520′. S.S.E. Mod. shelt. Loam. Old Red Sandstone. *Moss, Oxalis, Digitalis, Sambucus.*

P. 104.—MAIN CROP: A. 52 H. 80 G. 8½ N. 360 B.A. 182 V. 5860 F. ·401 C. 29 B. 17. THINNINGS: N. 30 B.A. 8 V. 235. Ross. 550′. W. Mod. shelt. Sandy loam. Pelitic Mica Schist. *Oxalis, Mosses.*

P. 87.—MAIN CROP: A. 60 H. 83 G. 11 N. 195 B.A. 165 V. 4890 F. ·357 C. 32 B. 20. THINNINGS: N. 10 B.A. 2 V. 45. Inverness. 500′. S. Mod. exp. Sandy loam. Morainic Drift, Moine type. *Oxalis, Grasses, Pteris, Mosses.*

S.P. 8.—MAIN CROP: A. 61 H. 89 G. 10¼ N. 160 B.A. 116 V. 4515 F. ·438 C. 23 B. 16. THINNINGS: N. 30. Hereford. 480′. S.S.E. Mod. shelt. Loam. Old Red Sandstone. *Moss, Oxalis, Mercurialis, Pteris.*

P. 655.—MAIN CROP: A. 61 H. 89 G. 9 N. 225 B.A. 130 V. 4405 F. ·381 C. 20 B. 17. Brecknock. 550′. E. Fully shelt. Loam. Old Red Sandstone. *Mercurialis, Urtica.*

P. 535.—MAIN CROP: A. 62. H. 85 G. 9½ N. 265 B.A. 162 V. 5340 F. ·389 C. 25 B. 20. THINNINGS: N. 15 B.A. 4. Sussex. 400′. N.W. Mod. shelt. Clay loam. Wealden—Hastings Beds. *Sambucus, Pteris.*

P. 606.—MAIN CROP: A. 66 H. 90 G. 10½ N. 205 B.A. 152 V. 5570 F. ·407 C. 23 B. 17. THINNINGS: N. 70 B.A. 39 V. 1095. Denbighshire. 50′. General. Mod. Shelt. Loam. Recent. *Grass.*

P. 228.—MAIN CROP: A. 67 H. 90 G. 11¾ N. 160 B.A. 152 V. 5720 F. ·417 C. 22 B. 17. Yorks. 250′. General. Mod. exp. Sandy loam. Middle Oolite. *Pteris.*

P. 555.—MAIN CROP: A. 73 H. 97 G. 11¼ N. 170 B.A. 149 V. 5470 F. ·378 C. 23 B. 21. THINNINGS: N. 15 B.A. 7. Surrey. 300′. N. Mod. shelt. Sandy loam. Lower Greensand. *Pteris, Rubus, Digitalis.*

P. 10.—MAIN CROP: A. 76 H. 96 G. 13¼ N. 120 B.A. 142 V. 4995 F. ·366 C. 56 B. 20. Perth. 550′. N. Fully shelt. Sandy loam. Clay Slates. *Oxalis, Grass, Pteris.*

P. 557.—MAIN CROP: A. 88 H. 102 G. 12¼ N. 190 B.A. 195 V. 8250 F. ·415 B. 19. Surrey. 600′. S.E. Mod. exp. Loam. Lower Greensand. *Rubus, Sambucus.*

Quality Class II—70-ft.

S.P. 4.—MAIN CROP: A. 14 H. 25 G. 2¾ N. 1360 B.A. 70 V. 515 F. ·294 C. 57 B. 19. Brecknock. 730′. N.N.W. Mod. Shelt. Loam. Silurian. *Grass, Rubus fruticosus, Pteris.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

P. 274.—MAIN CROP: A. 15 H. 24 G. 2¾ N. 1495 B.A. 74 V. 510 F. ·289 C. 52 B. 16. Wigtown. 300′. S.E. Mod. shelt. Clay loam. Boulder Clay on Silurian. *Oxalis, Pteris.*

S.P.Y. 2.—MAIN CROP: A. 15 H. 23 G. 2¼ N. 2215 B.A. 73 V. 240 F. ·143 C. 58 B. 18. Yorks. 675′. S.W. Mod. exp. Sandy loam. Middle Oolite. *Rubus, fruticosus, Pteris, Sambucus nigra.*

S.P. 102.—MAIN CROP: A. 16 H. 27 G. 3½ N. 1050 B.A. 83 V. 690 F. ·308 C. 50 B. 17. THINNINGS: N. 310 B.A. 7. Devon. 600′. S.W. Shelt. Sandy loam. Upper Greensand. *Scilla nutans, Pteris, Rubus fruticosus.*

S.P.Y. 30.—MAIN CROP: A. 17 H. 28 G. 2½ N. 1780 B.A. 79 V. 540 F. ·246 C. 44 B. 16. THINNINGS: N. 230 B.A. 6. Glos. 470′. S. Fully shelt. Loam. Oolite Limestone. *Grass.*

P. 275.—MAIN CROP: A. 20 H. 32 G. 3¼ N. 1370 B.A. 99 V. 1145 F. ·360 C. 37 B. 16. THINNINGS: N. 155 B.A. 5. Wigtown. 250′. N.E. Mod. exp. Peat 6″–12″. Silurian. *Oxalis, Pteris.* (Scanty.)

P. 677.—MAIN CROP: A. 21 H. 32 G. 3¼ N. 1220 B.A. 83 V. 775 F. ·292 C. 40 B. 21. THINNINGS: N. 110 B.A. 3. Stafford. 280′. General. Mod. shelt. Sand. Lower Trias. Nil.

P. 133.—MAIN CROP.: A. 21 H. 32 G. 3¼ N. 1255 B.A. 95 V. 1035 F. ·339 C. 40 B. 21. THINNINGS: N. 130 B.A. 4. Ayr. 350′. N. Fully shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis, Pteris, Mosses.*

P. 135.—MAIN CROP: A. 23 H. 38 G. 4 N. 1000 B.A. 108 V. 1550 F. ·379 C. 33 B. 16. THINNINGS: N. 95 B.A. 3. Ayr. 400′. N. Mod. shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis, Ferns.*

S.P. 12.—MAIN CROP: A. 23 H. 38 G. 4 N. 660 B.A. 71 V. 1045 F. ·386 C. 40 B. 25. Dumfries. 600′. E. Fully shelt. Loam. Silurian. *Oxalis, Grasses, Pteris.*

P. 580.—MAIN CROP: A. 23 H. 38 G. 3½ N. 1155 B.A. 104 V. 1320 F. ·333 C. 35 B. 18. THINNINGS: N. 705 B.A. 21 V. 90. Hants. 625′. S.E. Fully exp. Clay. Chalk. *Rubus fruticosus, Moss, Ferns.*

P. 586.—MAIN CROP: A. 24 H. 41 G. 4¼ N. 780 B.A. 100 V. 1675 F. ·407 C. 46 B. 17. THINNINGS: N. 110 B.A. 8 V. 65. Hants. 600′. N.W. Mod. exp. Loam. Chalk. *Moss, Ferns, Mercurialis perenne.* (Scanty.)

P. 364.—MAIN CROP: A. 24 H. 40 G. 3½ N. 1135 B.A. 97 V. 1465 F. ·378 C. 42 B. 21. THINNINGS: N. 305 B.A. 11 V. 55. Devon. 200′. S.E. Fully shelt. Loam. Millstone Grit. *Hedera.*

S.P.S. 20.—MAIN CROP: A. 24 H. 38 G. 4¼ N. 835 B.A. 101 V. 1200 F. ·313 C. 37 B. 21. THINNINGS: N. 20 B.A. 1. Radnor. 1000′. N. Mod. shelt. Loam. Ordovician shales. *Grass, Pteris, Moss.*

P. 136.—MAIN CROP: A. 24 H. 35 G. 4 N. 860 B.A. 91 V. 1205 F. ·379 C. 32 B. 17. THINNINGS: N. 85 B.A. 3. Ayr. 300′. N.W. Mod. shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis, Grass, Moss.* (Scanty.)

S.P. 110.—MAIN CROP: A. 25 H. 41 G. 5½ N. 640 B.A. 129 V. 1575 F. ·298 C. 40 B. 24. THINNINGS: N. 90 B.A. 5. Devon. 900′. S.E. Mod. shelt. Sand. Granite. *Pteris, Oxalis, Moss.*

P. 237.—MAIN CROP: A. 25 H. 40 G. 4¼ N. 655 B.A. 85 V. 1195 F. ·352 C. 45 B. 21. THINNINGS: N. 140 B.A. 6 V. 40. Dumfries. 500′. N.E. Mod. shelt. Clay. Silurian. *Oxalis, Grass, Pteris, Moss.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

P. 272.—MAIN CROP: A. 26 H. 43 G. 5¾ N. 445 B.A. 100 V. 1615 F. ·374 C. 35 B. 24. THINNINGS: N. 20 B.A. 1 V. 10. Kirkcudbright. 200′, E. Mod. shelt. Loam. Silurian Greywacke. *Oxalis, Pteris, Moss.* (Scanty.)

P. 318.—MAIN CROP: A. 26 H. 46 G. 4½ N. 705 B.A. 95 V. 1760 F. ·403 C. 38 B. 18. THINNINGS: N. 170 B.A. 11 V. 155. Devon. 300′. N.E. Mod. shelt. Loam. Trias. *Pteris.* (Scanty.)

P. 406.—MAIN CROP: A. 27 H. 41 G. 4½ N. 815 B.A. 110 V. 1665 F. ·369 C. 42 B. 18. THINNINGS: N. 200 B.A. 12. Yorks. 450′. W. Mod. exp. Clay loam. Millstone Grit with Glacial deposits. *Sambucus nigra.* (Scanty.)

P. 355.—MAIN CROP: A. 27 H. 40 G. 4¾ N. 730 B.A. 111 V. 1590 F. ·360 C. 42 B. 22. THINNINGS: N. 95 B.A. 9 V. 45. Devon. 760′. S. Mod. shelt. Loam. Granite. *Pteris, Oxalis, Grass, Moss.* (Scanty.)

P. 579.—MAIN CROP: A. 27 H. 44 G. 4¼ N. 850 B.A. 105 V. 1760 F. ·379 C. 33 B. 15. THINNINGS: N. 410 B.A. 20 V. 155. Hants. 675′. General. Fully exp. Clay loam. Chalk. *Oxalis, Moss, Fern.*

P. 578.—MAIN CROP: A. 28 H. 45 G. 4 N. 1055 B.A. 118 V. 2010 F. ·378 C. 27 B. 21. THINNINGS: N. 255 B.A. 16 V. 215. Hants. 650′. General. Fully shelt. Clay. Chalk. *Oxalis, Moss.* (Scanty.)

S.P. 49.—MAIN CROP: A. 28 H. 43 G. 6¼ N. 490 B.A. 130 V. 2130 F. ·382 C. 44 B. 15. Wigtown. 200′. S.W. Fully exp. Loam. Alluvium or Boulder Clay on Ordovician. *Oxalis, Ferns.* (Scanty.)

P. 203.—MAIN CROP: A. 28 H. 41 G. 4 N. 955 B.A. 105 V. 1475 F. ·341 C. 29 B. 20. THINNINGS: N. 130 B.A. 8 V. 60. Peebles. 1000′. N. Mod. exp. Sandy loam. Grits and Debris on Silurian. *Oxalis, Grass, Moss.* (Scanty.)

P. 246.—MAIN CROP: A. 28 H. 45 G. 5½ N. 540 B.A. 108 V. 1720 F. ·353 C. 45 B. 21. THINNINGS: N. 60 B.A. 4 V. 50. Dumfries. 400′. S. Fully exp. Sandy loam. Silurian. *Oxalis, Pteris.* (Scanty.)

P. 249.—MAIN CROP: A. 28 H. 46 G. 5½ N. 600 B.A. 124 V. 2225 F. ·388 C. 47 B. 20. THINNINGS: N. 40 B.A. 3 V. 40. Dumfries. 350′. S.W. Mod. exp. Sandy loam. Silurian. *Oxalis, Pteris.* (Scanty.)

S.P. 23.—MAIN CROP: A. 28 H. 45 G. 5¼ N. 460 B.A. 85 V. 1370 F. ·357 C. 41 B. 22. THINNINGS: N. 50 B.A. 5. Carmarthen. 570′. E. Fully shelt. Loam. Ordovician. *Pteris, Grass, Moss.* (Scanty.)

P. 133.—MAIN CROP: A. 28 H. 47 G. 4¾ N. 590 B.A. 89 V. 1530 F. ·366 C. 31 B. 21. THINNINGS: N. 140 B.A. 12 V. 195. Brecknock. 1080′. S.E. Fully shelt. Loam. Old Red Sandstone. *Grass, Moss, Pteris, Digitalis.*

P. 126.—MAIN CROP: A. 28 H. 43 G. 4¼ N. 700 B.A. 92 V. 1415 F. ·357 C. 40 B. 18. THINNINGS: N. 255 B.A. 20 V. 220. Carmarthen. 900′. E. Fully shelt. Loam. Ordovician. *Grass, Digitalis.* (Scanty.)

P. 686.—MAIN CROP: A. 28 H. 45 G. 5 N. 565 B.A. 100 V. 1840 F. ·405 C. 38 B. 16. THINNINGS: N. 70 B.A. 4. Shropshire. 500′. N.W. Mod. shelt. Sand. Lower Trias. *Rubus fruticosus.* (Scanty.)

P. 667.—MAIN CROP: A. 28 H. 49 G. 4¾ N. 620 B.A. 102 V. 1840 F. ·369 C. 39 B. 19. THINNINGS: N. 15 B.A. 1. Hereford. 600′. N. Mod. shelt. Loam. Silurian shale and limestone. *Pteris, Rubus fruticosus Oxalis, Grass.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

P. 638.—MAIN CROP: A. 28 H. 42 G. 5¼ N. 665 B.A. 130 V. 1915 F. ·350 C. 34 B. 21. THINNINGS: N. 65 B.A. 5 V. 15. Montgomery. 1250′. W. Mod. exp. Loam. Silurian. *Grass, Galium saxatile.*

P. 345.—MAIN CROP: A. 28 H. 48 G. 5 N. 680 B.A. 118 V. 1810 F. ·319 C. 36 B. 20. THINNINGS: N. 105 B.A. 9 V. 130. Devon. 480′. N.E. Fully shelt. Loam. Millstone Grit. *Pteris.* (Scanty.)

P. 637.—MAIN CROP: A. 29 H. 47 G. 5¾ N. 610 B.A. 142 V. 2220 F. ·333 C. 41 B. 19. THINNINGS: N. 65 B.A. 7 V. 70. Montgomery. 1150′. W. Mod. shelt. Loam. Silurian. *Grass, Fern.* (Scanty.)

P. 674.—MAIN CROP: A. 29 H. 51 G. 5¼ N. 595 B.A. 116 V. 2285 F. ·386 C. 35 B. 17. THINNINGS: N. 70 B.A. 5. Hereford. 550′. W.S.W. Mod. shelt. Loam. Silurian (Ludlow Beds). *Pteris, Oxalis, Moss.* (Scanty.)

S.P. 6.—MAIN CROP: A. 29 H. 50 G. 5½ N. 450 B.A. 94 V. 1805 F. ·386 C. 31 B. 23. Brecknock. 640′. S.W. Fully exp. Loam. Old Red Sandstone. *Sambucus, Moss.*

S.P.S. 28.—MAIN CROP: A. 29 H. 48 G. 4½ N. 710 B.A. 103 V. 2040 F. ·414 C. 35 B. 17. THINNINGS: N. 90 B.A. 5. Shropshire. 600′. S.S.W. Fully exp. Loam. Old Red Sandstone. *Moss, Sambucus.* (Scanty.)

P. 610.—MAIN CROP: A. 29 H. 50 G. 4¾ N. 695 B.A. 110 V. 2050 F. ·373 C. 30 B. 19. THINNINGS: N. 145 B.A. 12 V. 120. Carnarvon. 100′. S.W. Fully shelt. Loam. Ordovician. *Oxalis, Moss, Digitalis.*

P. 561.—MAIN CROP: A. 29 H. 50 G. 4½ N. 695 B.A. 102 V. 2150 F. ·421 C. 30 B. 14. THINNINGS: N. 100 B.A. 8. Sussex. 200′. Mod. shelt, Clay loam. Wealden. *Pteris, Grass, Moss.*

S.P.S. 6.—MAIN CROP: A. 30 H. 53 G. 5¾ N. 630 B.A. 144 V. 3500 F. ·458 C. 34 B. 12. Sussex. 300′. General. Fully exp. Sandy loam. Wealden. Weald Clay. *Corylus, Ligustrum.*

P. 138.—MAIN CROP: A. 30 H. 48 G. 5 N. 640 B.A. 116 V. 2095 F. ·378 C. 30 B. 14. THINNINGS: N. 15 B.A. 1 V. 10. Ayr. 350′. N. Mod. exp. Sandy loam. Boulder Clay on Old Red Sandstone (L). *Oxalis, Grass, Moss.* (Scanty.)

P. 257.—MAIN CROP: A. 30 H. 51 G. 5¾ N. 560 B.A. 133 V. 2620 F. ·386 C. 43 B. 16. Kirkcudbright. 200′. N.E. Mod. shelt. Sandy loam. Granite. *Pteris, Oxalis, Ferns.*

P. 139.—MAIN CROP: A. 31 H. 46 G. 5½ N. 570 B.A. 124 V. 2215 F. ·388 C. 33 B. 18. THINNINGS: N. 135 B.A. 13 V. 185. Cardigan. 240′. S. Mod. shelt. Loam. Silurian. *Teucrium, Grass, Pteris.*

P. 514.—MAIN CROP: A. 31 H. 44 G. 4½ N. 710 B.A. 99 V. 1690 F. ·387 C. ·42 B. 21. THINNINGS: N. 165 B.A. 9 V. 125. Somerset. 900′. N. Mod. shelt. Loam. Devonian. *Pteris, Grass, Moss.*

P. 647.—MAIN CROP: A. 31 H. 50 G. 6 N. 420 B.A. 106 V. 2045 F. ·384 C. 35 B. 19. THINNINGS: N. 10 B.A. 1. Radnor. 690′. General. Fully exp. Loam. Silurian shale. *Grasses.*

P. 630.—MAIN CROP: A. 31 H. 54 G. 6 N. 495 B.A. 125 V. 2525 F. ·374 C. 30 B. 17 THINNINGS: N. 15 B.A. 2. Devon. 300′. N.W. Mod. exp. Sandy loam. Upper Trias. *Digitalis, Nepeta.* (Scanty.)

P. 671.—MAIN CROP: A. 31 H. 46 G. 5¼ N. 365 B.A. 70 V. 1210 F. ·373 C. 37 B. 15. Shropshire. 780′. N.W. Mod. exp. Sandy loam. Millstone Grit. *Grasses.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

P. 704.—MAIN CROP: A. 31 H. 49 G. 3¾ N. 1045 B.A. 107 V. 1805 F. ·344 C. 30 B. 19. THINNINGS: N. 265 B.A. 13 V. 95. Somerset. 300′. N.E. Fully shelt. Clay loam. Lias. Nil.

S.P.S. 15.—MAIN CROP: A. 31 H. 46 G. 4¾ N. 695 B.A. 107 V. 1735 F. ·353 C. 37 B. 20. THINNINGS: N. 60 B.A. 6. Carnarvon. 200′. E. Fully shelt. Sandy loam. Ordovician. *Oxalis, Moss.*

S.P.Y. 73.—MAIN CROP: A. 33 H. 56 G. 6½ N. 435 B.A. 131 V. 3135 F. ·427 C. 42 B. 20. THINNINGS: N. 45 B.A. 7. Wilts. 680′. S.E. Fully exp. Sandy loam. Upper Greensand. *Pteris, Moss.* (Scanty.)

P. 628.—MAIN CROP: A. 32 H. 53 G. 5¾ N. 490 B.A. 109 V. 2120 F. ·366 C. 32 B. 21. THINNINGS: N. 20 B.A. 4. Devon. 400′. N.W. Mod. shelt. Loam. Permian. *Rubus fruticosus, Teucrium, Moss.* (Scanty.)

P. 597.—MAIN CROP: A. 32 H. 50 G. 4¾ N. 705 B.A. 114 V. 2460 F. ·433 C. 32 B. 13. THINNINGS: N. 175 B.A. 17 V. 265 Hants. 600′. S.W. Fully exp. Loam. Chalk. *Moss.* (Scanty.)

P. 333.—MAIN CROP: A. 32 H. 50 G. 5¼ N. 685 B.A. 126 V. 2280 F. ·362 C. 34 B. 19. THINNINGS: N. 220 B.A. 21 V. 290. Devon. 640′. E. Mod. exp. Clay loam. Millstone Grit. *Oxalis, Hedera, Grass, Moss.*

P. 682.—MAIN CROP: A. 32 H. 49 G. 4½ N. 740 B.A. 99 V. 1840 F. ·379 C. 32 B. 18. THINNINGS: N. 260 B.A. 12. Stafford. 270′. General. Fully shelt. Sand. Lower Trias. Nil.

S.P. 2.—MAIN CROP: A. 32 H. 48 G. 5¼ N. 540 B.A. 99 V. 1940 F. ·407 C. 31 B. 18. Brecknock. 780′. S.W. Fully exp. Loam. Old Red Sandstone. *Grasses, Galium saxatile.*

S.P. 21.—MAIN CROP: A. 32 H. 54 G. 6 N. 500 B.A. 124 V. 2685 F. ·407 C. 34 B. 16. THINNINGS: N. 20 B.A. 2. Carmarthen. 600′. General. Mod. shelt. Loam. Silurian. *Grass.*

P. 331.—MAIN CROP: A. 33 H. 52 G. 4¾ N. 645 B.A. 102 V. 1970 F. ·371 C. 29 B. 20. THINNINGS: N. 300 B.A. 27 V. 380. Devon. 540′. N.W. Fully shelt. Clay loam. Millstone Grit. *Oxalis.*

P. 131.—MAIN CROP: A. 33 H. 49 G. 5½ N. 535 B.A. 110 V. 1935 F. ·359 C. 34 B. 25. THINNINGS: N. 60 B.A. 6 V. 80. Brecknock. 1000′. E.N.E. Fully shelt. Sandy loam. *Grass, Moss.*

P. 692.—MAIN CROP: A. 33 H. 49 G. 5½ N. 490 B.A. 104 V. 1855 F. ·365 C. 41 B. 19. THINNINGS: N. 90 B.A. 5. Shropshire. 300′. General. Fully exp. 7″ peaty humus on sandy loam. Lower Trias. Nil.

P. 258.—MAIN CROP: A. 34 H. 56 G. 5¾ N. 695 B.A. 162 V. 3360 F. ·370 C. 34 B. 18. THINNINGS: N. 35 B.A. 3 V. 40. Kirkcudbright. 300′. N.E. Mod. exp. Sandy loam. Granite. *Oxalis, Moss.* (Scanty.)

P. 259.—MAIN CROP: A. 34 H. 52 G. 5¾ N. 625 B.A. 149 V. 2880 F. ·373 C. 33 B. 18. THINNINGS: N. 30 B.A. 2 V. 35. Kirkcudbright. 200′. S. Mod. shelt. Sandy loam. Granite. *Oxalis, Mosses.* (Scanty.)

P. 363.—MAIN CROP: A. 34 H. 52 G. 6 N. 445 B.A. 111 V. 2135 F. ·371 C. 41 B. 20. THINNINGS: N. 155 B.A. 8 V. 55. Aberdeen. 600′. N.E. Fully exp. Sandy loam. Boulder Clay on Epidiorite Hornblende Schist. *Oxalis, Grass, Moss.*

P. 332.—MAIN CROP: A. 34 H. 48 G. 4¾ N. 745 B.A. 120 V. 2110 F. ·366 C. 32 B. 22. THINNINGS: N. 265 B.A. 22 V. 270. Devon. 600′. S.E. Fully shelt. Clay loam. Millstone Grit. *Moss.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

S.P.Y. 28.—MAIN CROP: A. 34 H. 55 G. 5½ N. 655 B.A. 137 V. 2990 F. ·395 C. 33 B. 20. THINNINGS: N. 140 B.A. 16 V. 340. Wilts. 650′. S.W. Mod. exp. Sandy loam. Upper Greensand. *Moss.* (Scanty.)

P. 592.—MAIN CROP: A. 35 H. 52 G. 6 N. 480 B.A. 115 V. 2345 F. ·391 C. 32 B. 19. THINNINGS: N. 150 B.A. 19 V. 330. Hants. 600′. S.W. Mod. exp. Clay. Chalk. Nil.

S.P.Y. 25.—MAIN CROP: A. 35 H. 53 G. 5¾ N. 445 B.A. 99 V. 2155 F. ·411 C. 28 B. 23. THINNINGS: N. 60 B.A. 7. Bucks. 500′. S.S.W. Mod. shelt. Loam. Chalk. *Rubus fruticosus, Rosa canina, Grass.*

S.P.Y. 14.—MAIN CROP: A. 37 H. 57 G. 6¼ N. 390 B.A. 110 V. 2575 F. ·411 C. 28 B. 19. THINNINGS: N. 10 B.A. 1. Surrey. 600′. S. Mod. exp. Clay. Chalk. *Rubus fruticosus, Digitalis, Grass.*

P. 596.—MAIN CROP: A. 37 H. 62 G. 7½ N. 355 B.A. 142 V. 3220 F. ·366 C. 31 B. 21. THINNINGS: N. 40 B.A. 7. Hants. 600′. General. Fully exp. Clay. Chalk. *Sambucus, Pteris.*

P. 650.—MAIN CROP: A. 37 H. 58 G. 7¼ N. 400 B.A. 149 V. 3245 F. ·375 C. 30 B. 18. THINNINGS: N. 30 B.A. 6. Radnor. 900′. N. Fully shelt. Sandy loam. Silurian shale. *Sambucus, Grasses, Pteris.* (Scanty.)

P. 366.—MAIN CROP: A. 37 H. 59 G. 5½ N. 490 B.A. 106 V. 2445 F. ·391 C. 34 B. 22. THINNINGS: N. 130 B.A. 15 V. 365. Devon. 200′. S.E. Fully shelt. Loam. Millstone Grit. *Pteris, Hedera, Ferns.* (Scanty.)

S.P.Y. 61.—MAIN CROP: A. 37 H. 59 G. 6¾ N. 420 B.A. 131 V. 2875 F. ·371 C. 35 B. 20. THINNINGS: N. 102 B.A. 16. Devon. 700′. N.W. Mod. shelt. Sand. Upper Trias. *Ferns.* (Scanty.)

S.P.Y. 64.—MAIN CROP: A. 37 H. 62 G. 7 N. 440 B.A. 147 V. 4035 F. ·443 C. 30 B. 17. THINNINGS: N. 80 B.A. 16. Devon. 450′. W. Mod. exp. Loam. Upper Greensand. *Ferns.* (Scanty.)

S.P. 14.—MAIN CROP: A. 38 H. 61 G. 6½ N. 380 B.A. 111 V. 2450 F. ·361 C. 39 B. 20. THINNINGS: N. 30 B.A. 5. Cardigan. 580′. N. Mod. shelt. Loam. Silurian. *Grass, Moss.*

P. 693.—MAIN CROP: A. 38 H. 55 G. 7¼ N. 375 B.A. 140 V. 3335 F. ·433 B. 18. Devon. 450′. N. Mod. exp. Sand. Trias. Nil.

P. 126.—MAIN CROP: A. 39 H. 57 G. 7 N. 400 B.A. 131 V. 2875 F. ·384 C. 31 B. 20. THINNINGS: N. 10 B.A. 1 V. 30. Ayr. 500′. S. Mod. shelt. Sandy loam. Dolerite. *Pteris, Oxalis, Digitalis, Grass, Moss.*

P. 386.—MAIN CROP: A. 40 H. 59 G. 5¾ N. 520 B.A. 121 V. 2815 F. ·395 C. 35 B. 20. THINNINGS: N. 70 B.A. 8 V. 175. Devon. 400′. W.N.W. Fully shelt. Loam. Devonian. *Oxalis, Ferns.*

P. 378.—MAIN CROP: A. 41 H. 64 G. 8 N. 290 B.A. 131 V. 3110 F. ·375 C. 42 B. 16. THINNINGS: N. 45 B.A. 9 V. 145. Moray. 600′. W. Mod. shelt. Sand. Sand and gravel on Moine Schist. *Herbs, Grasses.*

P. 91.—MAIN CROP: A. 41 H. 59 G. 6¾ N. 410 B.A. 131 V. 3385 F. ·440 C. 27 B. 19. THINNINGS: N. 7 B.A. 1 V. 10. Inverness. 400′. N. Mod. shelt. Sandy loam. Granitized Moine Schist. *Oxalis, Grass, Moss.*

P. 92.—MAIN CROP: A. 41 H. 58 G. 6½ N. 435 B.A. 130 V. 3495 F. ·463 C. 24 B. 20. THINNINGS: N. 20 B.A. 3 V. 50. Inverness. 350′. N. Mod. shelt. Sandy loam. Granitized Moine Schist. *Oxalis, Grass, Moss.*

S.P.Y. 44.—MAIN CROP: A. 41 H. 60 G. 7¼ N. 315 B.A. 118 V. 2620 F. ·370 C. 33 B. 24. THINNINGS: N. 40 B.A. 7. Pembroke. 80′. E. Fully shelt. Sandy loam. Millstone Grit. *Pteris, Digitalis.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

P. 541.—MAIN CROP: A. 42 H. 59 G. 6½ N. 485 B.A. 138 V. 3085 F. ·379 C. 30 B. 19. THINNNGS: N. 65 B.A. 7 V 130 Sussex. 400′. W. to N.W. Mod. exp. Sand. Lower Greensand. *Pteris.*

P. 571.—MAIN CROP: A. 42 H. 67 G. 7¾ N. 300 B.A. 124 V. 3365 F. ·406 C. 32 B. 18. THINNINGS: N. 35 B.A. 8. Sussex. 100′. General. Mod. exp. Clay loam. Lower Greensand. *Pteris, Erica cinerea, Moss.*

P. 653.—MAIN CROP: A. 42 H. 64 G. 7¼ N. 305 B.A. 110 V. 2455 F. ·347 C. 32 B. 20. THINNINGS.: N. 15 B.A. 3. Brecknock. 900′. N.E. Mod. shelt. Loam. Silurian shale. *Rubus fruticosus, Digitalis, Pteris, Grass.*

P. 135.—MAIN CROP: A. 42 H. 61 G. 7¼ N. 340 B.A. 121 V. 3145 F. ·426 C. 33 B. 21. THINNINGS: N. 45 B.A. 7 V. 155. Carmarthen. 500′. W. Mod. exp. Loam. Silurian. *Grass, Moss.* (Scanty.)

P. 632.—MAIN CROP: A. 43 H. 68 G. 8 N. 305 B.A. 134 V. 3225 F. ·354 C. 29 B. 21. THINNINGS: N. 35 B.A. 6. Montgomery. 650′. N.E. Mod. exp. Clay loam. Ordovician shales. *Rubus fruticosus, Pteris, Grass.*

S.P.Y. 19.—MAIN CROP: A. 43 H. 67 G. 7 N. 385 B.A. 134 V. 3475 F. ·387 C. 29 B. 22. THINNINGS: N. 65 B.A. 14. Sussex. 450′. W. Mod. shelt. Sand. Lower Greensand. *Pteris, Moss.*

S.P.Y. 47.—MAIN CROP: A. 43 H. 63 G 7¾ N. 310 B.A. 125 V. 3080 F. ·390 B. 21. THINNINGS: N. 40 B.A. 6. Carmarthen. 800′. N. Fully exp. Loam. Silurian. *Grass, Oxalis, Rubus fruticosus.*

S.P. 104.—MAIN CROP: A. 44 H. 66 G. 8¼ N. 280 B.A. 131 V. 3255 F. ·375 C. 29 B. 26. THINNINGS: N. 50 B.A. 9 V. 175. Devon. 700′. S.S.W. Fully shelt. Loam. Granite. *Pteris, Oxalis, Rubus fruticosus.*

P. 593.—MAIN CROP: A. 44 H. 65 G. 7¼ N. 385 B.A. 142 V. 3655 F. ·397 C. 33 B. 19. THINNINGS: N. 50 B.A. 10 V. 205. Hants. 575′. S.W. Mod. shelt. Clay. Chalk. *Mercurialis, Pteris.* (Scanty.)

P. 143.—MAIN CROP: A. 45 H. 66 G. 8¾ N. 255 B.A. 138 V. 3205 F. ·352 C. 37 B. 21. THINNINGS: N. 25 B.A. 7 V. 155. Cardigan. 780′. W.S.W. Fully exp. Loam. Silurian. *Oxalis.*

P. 123.—MAIN CROP: A. 45 H. 69 G. 8½ N. 210 B.A. 103 V. 3070 F. ·430 C. 31 B. 20. THINNINGS: N. 20 B.A. 4 V. 115. Brecknock. 700′. E.N.E. Fully shelt. Loam. Old Red Sandstone. *Rubus fruticosus, Pteris, Mercurialis, Grass.*

P. 339.—MAIN CROP: A. 46 H. 63 G. 7½ N. 310 B.A. 117 V. 2605 F. ·352 C. 44 B. 21. THINNINGS: N. 40 B.A. 6 V. 100. Aberdeen. 1200′. N.E. Mod. shelt. Loam. Epidiorite Hornblende Schist. *Oxalis, Grass, Moss.* (Scanty.)

P. 594.—MAIN CROP: A. 46 H. 67 G. 7½ N. 355 B.A. 139 V. 3510 F. ·376 C. 30 B. 19. THINNINGS: N. 25 B.A. 6 V. 115. Hants. 600′. General. Fully exp. Loam. Chalk. *Pteris, Digitalis, Sambucus.* (Scanty.)

P. 511.—MAIN CROP: A. 47 H. 64 G. 7¼ N. 290 B.A. 108 V. 2880 F. ·418 C. 33 B. 18. THINNINGS: N. 15 B.A. 4. Somerset. 600′. N. Fully shelt. Clay loam. Devonian. *Grass, Oxalis.*

P. 398.—MAIN CROP: A. 47 H. 66 G. 8¼ N. 280 B.A. 133 V. 3725 F. ·426 C. 32 B. 14. THINNINGS: N. 5 B.A. 1. Somerset. 580′. E.N.E. Mod. exp. Sandy loam. Old Red Sandstone. *Oxalis, Pteris, Moss.* (Scanty.)

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

S.P. 103.—MAIN CROP: A. 48 H. 64 G. 7¾ N. 260 B.A. 111 V. 2805 F. ·396 C. 31 B. 24. THINNINGS: N. 20 B.A. 5. Devon. 680′. S. Fully shelt. Loam. Millstone Grit. *Rubus fruticosus, Pteris, Grass.*

S.P. 108.—MAIN CROP: A. 48 H. 72 G. 8 N. 310 B.A. 139 V. 3850 F. ·387 C. 27 B. 17. Devon. 420′. N. Fully shelt. 4″–6″ peaty loam on loam. Millstone Grit. *Grass, Oxalis, Rubus fruticosus.*

P. 547.—MAIN CROP: A. 48 H. 67 G. 6½ N. 425 B.A. 128 V. 3595 F. ·421 C. 26 B. 18. THINNINGS: N. 90 B.A. 15 V. 375. Sussex. 100′. N.W. Fully shelt. Clay loam. Lower Greensand. *Pteris, Grass, Moss.* (Scanty.)

P. 136.—MAIN CROP: A. 49 H. 67 G. 8½ N. 235 B.A. 118 V. 3050 F. ·385 C. 40 B. 23. THINNINGS: N. 15 B.A. 2. Brecknock. 700′. S.W. Fully shelt. Clay loam. Devonian Old Red Sandstone. *Digitalis, Grass.* (Scanty.)

P. 558.—MAIN CROP: A. 49 H. 72 G. 7¼ N. 365 B.A. 135 V. 3740 F. ·383 B. 18. THINNINGS: N. 55 B.A. 12. Sussex. 500′. N. Mod. shelt. Sand. Hastings Sands. *Pteris, Oxalis, Nepeta.*

S.P.Y. 77.—MAIN CROP: A. 49 H. 69 G. 7¾ N. 350 B.A. 150 V. 4310 F. ·417 C. 31 B. 20. THINNINGS: N. 10 B.A. 2. Wilts. 670′. N.W. Mod. shelt. Sandy loam. Upper Greensand. Nil.

P. 98.—MAIN CROP: A. 50 H. 70 G. 7¼ N. 465 B.A. 168 V. 4470 F. ·379 C. 27 B. 17. THINNINGS: N. 65 B.A. 10 V. 220. Ross. 700′. S.W. Mod. exp. Sandy loam. Pelitic Mica Schist. *Oxalis, Grass, Moss.*

P. 113.—MAN CROP: A. 50 H. 69 G. 7¾ N. 375 B.A. 160 V. 4470 F. ·405 C. 29 B. 17. THINNINGS: N. 25 B.A. 4 V. 85. Ross. 600′. W. Mod. exp. Sandy loam. Moine Schist. *Oxalis, Grass, Moss.*

P. 117.—MAIN CROP: A. 50 H. 71 G. 8 N. 430 B.A. 191 V. 4985 F. ·368 C. 31 B. 19. THINNINGS: N. 30 B.A. 5 V. 110. Ross. 750′. W. Mod. exp. Sandy loam. Moine Schist. *Oxalis, Grass, Moss.*

P. 619.—MAIN CROP: A. 50 H. 69 G. 8 N. 270 B.A. 119 V. 3100 F. ·377 C. 27 B. 20. THINNINGS: N. 25 B.A. 6 V. 115. Shropshire. 600′. S.E. Mod. exp. Clay loam. Silurian shales. *Rubus fruticosus, Mercurialis, Oxalis.*

S.P. 5.—MAIN CROP: A. 50 H. 66 G. 7½ N. 310 B.A. 117 V. 3255 F. ·420 C. 31 B. 16. Brecknock. 900′. S.W. Mod. shelt. Sandy loam. Old Red Sandstone. *Mercurialis, Aspidium, Moss.*

P. 672.—MAIN CROP: A. 51 H. 69 G. 7¾ N. 335 B.A. 136 V. 3790 F. ·405 C. 33 B. 17. Shropshire. 750′. N.N.W. Fully shelt. Loam. Silurian. *Sambucus, Rubus fruticosus, Mercurialis, Oxalis.*

P. 656.—MAIN CROP: A. 51 H. 72 G. 8¼ N. 285 B.A. 137 V. 4005 F. ·406 C. 29 B. 19. THINNINGS: N. 40 B.A. 8. Brecknock. 800′. N.N.E. Mod. exp. Loam. Old Red Sandstone. *Pteris, Grass.*

P. 108.—MAIN CROP: A. 51 H. 75 G. 8 N. 385 B.A. 175 V. 5100 F. ·388 C. 28 B. 17. THINNINGS: N. 60 B.A. 13 V. 320. Ross. 550′. W. Mod. exp. Sandy loam. Pelitic Mica Schist. *Oxalis, Grass, Moss.* (Scanty.)

P. 110.—MAIN CROP: A. 52 H. 69 G. 8½ N. 365 B.A. 179 V. 4600 F. ·372 C. 27 B. 19. THINNINGS: N. 60 B.A. 13 V. 270. Ross. 500′. W. Mod. exp. Sandy loam. Boulder Clay on Pelitic Schist. *Oxalis, Grass, Moss.* (Scanty.)

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

P. 618.—MAIN CROP: A. 52 H. 67 G. 7¼ N. 275 B.A. 103 V. 2815 F. ·409 C. 30 B. 20. THINNINGS: N. 50 B.A. 10. Denbigh. 1000′. E. Mod. shelt. Sandy loam. Ordovician. *Oxalis, Pteris, Aspidium.*

P. 118.—MAIN CROP: A. 53 H. 72 G. 8¾ N. 250 B.A. 128 V. 3475 F. ·376 C. 35 B. 17. THINNINGS: N. 5 B.A. 2 V. 40. Ross. 550′. N.E. Mod. shelt. Sandy loam. *Oxalis, Grass, Moss.*

P. 155.—MAIN CROP: A. 53 H. 69 G. 8½ N. 260 B.A. 132 V. 3575 F. ·392 C. 36 B. 21. Kincardine. 650′. General. Fully shelt. Sandy loam. Gneiss. *Oxalis, Grass, Moss.* (Scanty.)

P. 112.—MAIN CROP: A. 53 H. 72 G. 7½ N. 340 B.A. 138 V. 3930 F. ·405 C. 24 B. 19. THINNINGS: N. 10 B.A. 2 V. 50. Brecknock. 1050′. N.E. Mod. shelt. Sandy loam. Old Red Sandstone. *Grass, Pteris.*

S.P.Y. 16.—MAIN CROP: A. 54 H. 76 G. 7½ N. 335 B.A. 128 V. 3715 F. ·381 C. 24 B. 18. THINNINGS: N. 40 B.A. 5. Sussex. 450′. E. Mod. shelt. Clay loam. Wealden. Hastings Beds. *Pteris, Grass, Moss.*

P. 537.—MAIN CROP: A. 54 H. 70 G. 6¾ N. 470 B.A. 151 V. 3910 F. ·371 C. 22 B. 19. THINNINGS: N. 35 B.A. 9 V. 140. Sussex. 490′. S. Fully exp. Clay. Wealden-Hastings Beds. *Pteris.*

P. 538.—MAIN CROP: A. 54 H. 73 G. 7¾ N. 330 B.A. 139 V. 3730 F. ·370 C. 24 B. 18. THINNINGS: N. 45 B.A. 11 V. 75. Sussex. 490′. E. Fully shelt. Clay loam. Wealden-Hastings Beds. *Pteris.*

P. 539.—MAIN CROP: A. 55 H. 78 G. 10½ N. 220 B.A. 171 V. 4595 F. ·345 C. 31 B. 19. THINNINGS: N. 20 B.A. 9. Sussex. 475′. E.S.E. Fully shelt. Clay loam. Wealden-Hastings Beds. *Pteris.* (Scanty.)

P. 191.—MAIN CROP: A. 56 H. 71 G. 8¼ N. 280 B.A. 130 V. 3385 F. ·366 C. 27 B. 20. THINNINGS: N. 55 B.A. 9 V. 135. Aberdeen. 650′. General. Mod. exp. Sand. Granite and Felspathic Gneiss. *Oxalis, Grass, Pteris.*

P. 697.—MAIN CROP: A. 56 H. 77 G. 10¾ N. 200 B.A. 163 V. 4860 F. ·387 C. 34 B. 18. THINNINGS: N. 15 B.A. 7. Somerset. 650′. N. Fully shelt. Sandy loam. Devonian. *Rubus fruticosus, Aspidium.*

P. 77.—MAIN CROP: A. 57 H. 79 G. 10¾ N. 195 B.A. 155 V. 3855 F. ·315 C. 37 B. 21. THINNINGS: N. 10 B.A. 1 V. 15. Inverness. 400′. S. Mod. shelt. Sandy loam. Morainic Drift. *Pteris, Oxalis, Grass, Moss.*

P. 110.—MAIN CROP: A. 57 H. 72 G. 9 N. 230 B.A. 125 V. 3830 F. ·424 C. 31 B. 20. THINNINGS: N. 10 B.A. 2 V. 57. Brecknock. 1030′. E. Fully shelt. Sandy loam. Old Red Sandstone. *Pteris, Grass.*

P. 159.—MAIN CROP: A. 58 H. 80 G. 10¾ N. 145 B.A. 119 V. 3670 F. ·385 C. 24 B. 20. THINNINGS: N. 15 B.A. 7 V. 185. Hants. 100′. General. Mod. shelt. Clay loam. Oligocene. *Pteris, Moss, Grass.*

P. 161.—MAIN CROP: A. 58 H. 71 G. 8¾ N. 260 B.A. 140 V. 3870 F. ·391 C. 23 B. 19. THINNINGS: N. 45 B.A. 10 V. 250. Hants. 120′. W. Fully shelt. Sandy loam. Oligocene. *Rubus fruticosus, Pteris, Grass.*

P. 545.—MAIN CROP: A. 58 H. 76 G. 8¾ N. 215 B.A. 116 V. 3300 F. ·374 C. 21 B. 20. THINNINGS: N. 10 B.A. 2. Sussex. 350′. N.E. Mod. shelt. Clay. Wealden-Hastings Beds. *Pteris, Rubus fruticosus, Moss.*

P. 86.—MAIN CROP: A. 58 H. 74 G. 8¼ N. 310 B.A. 150 V. 4025 F. ·363 C. 33 B. 22. THINNINGS: N. 25 B.A. 4 V. 60. Inverness. 450′. S. Mod. exp. Sandy loam. Morainic Drift. *Pteris, Oxalis, Grass, Moss.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

P. 76.—MAIN CROP: A. 58 H. 74 G. 9¼ N. 290 B.A. 169 V. 4360 F. ·349 C. 32 B. 22. THINNINGS: N. 20 B.A. 2 V. 30. Inverness. 450′. S. Mod. exp. Sandy loam. Morainic Drift. *Pteris, Grass, Moss.*

P. 33.—MAIN CROP: A. 58 H. 76 G. 8½ N. 280 B.A. 142 V. 4035 F. ·374 C. 32 B. 22. THINNINGS: N. 15 B.A. 2 V. 40. Moray. 200′. N.W. Fully shelt. Sand. Old Red Sandstone. *Grass, Moss.*

P. 63.—MAIN CROP: A. 59 H. 72 G. 10¼ N. 220 B.A. 163 V. 3665 F. ·312 C. 37 B. 22. Inverness. 300′. S. Fully shelt. Sandy loam. Granitized Moine Schist. *Pteris, Oxalis, Grass, Moss.*

P. 612.—MAIN CROP: A. 59 H. 72 G. 7¾ N. 375 B.A. 152 V. 3985 F. ·365 C. 26 B. 24. THINNINGS: N. 80 B.A. 12 V. 220. Merioneth. 900′. N.N.W. Fully shelt. Sandy loam. Ordovician. *Grass, Moss.*

P. 369.—MAIN CROP: A. 59 H. 76 G. 9 N. 265 B.A. 147 V. 4345 F. ·388 C. 27 B. 21. THINNINGS: N. 50 B.A. 17 V. 490. Devon. 500′. S. Mod. exp. Loam. Millstone Grit. *Rubus fruticosus, Oxalis, Pteris.*

P. 75.—MAIN CROP: A. 60 H. 73 G. 9 N. 290 B.A. 164 V. 4000 F. ·334 C. 34 B. 21. THINNINGS: N. 25 B.A. 4 V. 85. Inverness. 500′. S.W. Mod. shelt. Sandy loam. Morainic Drift. *Pteris, Oxalis, Grass, Moss.*

P. 84.—MAIN CROP: A. 60 H. 76 G. 9¼ N. 285 B.A. 170 V. 4630 F. ·359 C. 36 B. 21. THINNINGS: N. 15 B.A. 2 V. 40. Inverness. 350′. S. Mod. exp. Sandy loam. Morainic Drift. *Oxalis, Grasses, Pteris, Mosses.*

P. 316.—MAIN CROP: A. 60 H. 80 G. 9¾ N. 185 B.A. 120 V. 4085 F. ·422 C. 29 B. 18. Devon. 215′. S.E. Fully shelt. Sandy loam. Permian. *Hedera, Rubus fruticosus, Urtica.*

S.P.Y. 17.—MAIN CROP: A. 60 H. 75 G. 8¾ N. 240 B.A. 130 V. 3875 F. ·397 C. 27 B. 18. THINNINGS: N. 6 B.A. 1. Sussex. 400′. S.E. Mod. exp. Clay loam. Wealden-Hastings Beds. *Pteris, Grass.*

P. 116.—MAIN CROP: A. 61 H. 74 G. 8¾ N. 245 B.A. 131 V. 4015 F. ·413 C. 26 B. 18. Brecknock. 900′. W. Fully exp. Sandy loam. Old Red Sandstone. *Grasses, Pteris.*

P. 227.—MAIN CROP: A. 61 H. 80 G. 8¾ N. 245 B.A. 129 V. 4450 F. ·430 C. 23 B. 19. THINNINGS: N. 5 B.A. 2. Yorks. 300′. N. Mod. shelt. Sandy loam. Middle Oolite. *Rubus fruticosus, Oxalis, Scilla nutans.*

P. 81.—MAIN CROP: A. 61 H. 75 G. 9¼ N. 265 B.A. 156 V. 4350 F. ·372 C. 33 B. 19. THINNINGS: N. 15 B.A. 2 V. 45. Inverness. 450′. S. Mod. shelt. Sandy loam. Morainic Drift. *Pteris, Oxalis, Grass, Moss.*

P. 190.—MAIN CROP: A. 61 H. 79 G. 8¼ N. 410 B.A. 199 V. 5925 F. ·378 C. 20 B. 24. THINNINGS: N. 15 B.A. 4. Dorset. 500′. S.W. Mod. exp. Clay loam. Chalk. *Moss.*

P. 379.—MAIN CROP: A. 61 H. 78 G. 9¼ N. 250 B.A. 142 V. 4375 F. ·395 C. 31 B. 19. THINNINGS: N. 40 B.A. 10 V. 275. Devon. 400′. N.E. Mod. shelt. Loam. Culm measures. *Rubus fruticosus, Pteris, Oxalis, Sambucus.*

P. 203.—MAIN CROP: A. 61 H. 81 G. 10¼ N. 195 B.A. 146 V. 4950 F. ·420 C. 26 B. 20. Yorks. 225′. S.S.W. Mod. exp. Sandy loam. Corallian beds of Middle Oolite. *Pteris.*

S.P.Y. 26.—MAIN CROP: A. 62 H. 77 G. 9 N. 235 B.A. 132 V. 4065 F. ·399 C. 27 B. 19. THINNINGS: N. 30 B.A. 9. Bucks. 300′. W. Mod. shelt. Sandy loam. Chalk. *Pteris.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

S.P. 11.—MAIN CROP: A. 63 H. 76 G. 9¼ N. 210 B.A. 128 V. 4520 F. ·466 C. 30 B. 16. Brecknock. 980′. S.E. Fully shelt. Clay loam. Silurian. *Grasses, Pteris.*

P. 705.—MAIN CROP: A. 63 H. 79 G. 9¼ N. 250 B.A. 147 V. 4535 F. ·391 C. 27 B. 19. THINNINGS: N. 5 B.A. 1. Wilts. 800′. S.E. Mod. exp. Sandy loam. Upper Greensand. *Pteris, Oxalis, Galium, Grass, Moss.*

P. 223.—MAIN CROP: A. 67 H. 78 G. 9½ N. 225 B.A. 137 V. 4305 F. ·402 C. 24 B. 20. THINNINGS: N. 10 B.A. 4 V. 165. Yorks. 625′. N.N.W. Mod. shelt. Loam. Corallian Limestone of the Middle Oolite. *Pteris, Grass.*

P. 380.—MAIN CROP: A. 68 H. 85 G. 11¼ N. 175 B.A. 155 V. 4410 F. ·335 C. 35 B. 20. Moray. 400′. N. Mod. shelt. Clay loam. Boulder Clay. *Oxalis, Herbs, Pteris, Mosses.*

P. 629.—MAIN CROP: A. 71 H. 83 G. 10¼ N. 200 B.A. 149 V. 4770 F. ·386 C. 34 B. 17. THINNING: N. 35 B.A. 15. Montgomery. 700′. W. Fully exp. Loam. Ordovician. *Grasses, Moss, Pteris, Oxalis.*

P. 192.—MAIN CROP: A. 72 H. 85 G. 9¾ N. 215 B.A. 142 V. 4410 F. ·366 C. 34 B. 22. THINNINGS: N. 20 B.A. 5 V. 135. Aberdeen. 700′. E. Mod. shelt. Sand. Boulder Clay on Granite. *Pteris, Oxalis, Grass.*

P. 226.—MAIN CROP: A. 73 H. 82 G. 10½ N. 175 B.A. 137 V. 4425 F. ·394 C. 23 B. 18. Yorks. 250′. S.W. Mod. shelt. Sandy loam. Middle Oolite. *Grass, Pteris.* (Scanty.)

P. 134.—MAIN CROP: A. 74 H. 89 G. 10½ N. 200 B.A. 150 V. 5245 F. ·384 C. 24 B. 19. THINNINGS: N. 20 B.A. 10 V. 265. Carmarthen. 450′. S.E. Mod. shelt. Loam. Silurian. *Pteris, Rubus fruticosus, Oxalis, Grass.*

P. 12.—MAIN CROP: A. 75 H. 90 G. 11½ N. 150 B.A. 134 V. 4815 F. ·400 C. 33 B. 21. THINNINGS: N. 12 B.A. 2 V. 50. Perth. 600′. E. Fully shelt. Sandy loam. Schists. *Pteris, Oxalis, Grass, Moss.*

P. 9.—MAIN CROP: A. 79 H. 88 G. 11¼ N. 180 B.A. 159 V. 5315 F. ·380 C. 68 B. 19. Perth. 350′. N. Mod. shelt. Sandy loam. Clay Slates. *Pteris, Oxalis, Grass, Moss.*

P. 7.—MAIN CROP: A. 80 H. 94 G. 12 N. 125 B.A. 125 V. 4570 F. ·390 C. 48 B. 18. Perth. 800′. N. Mod. shelt. Sandy loam. Clay Slates. *Pteris, Grass, Moss.*

P. 516.—MAIN CROP: A. 80 H. 88 G. 10½ N. 180 B.A. 138 V. 4685 F. ·387 C. 25 B. 18. Somerset. 800′. S. Fully shelt. Loam. Devonian. *Grass, Moss, Pteris.*

P. 14.—MAIN CROP: A. 81 H. 90 G. 12¼ N. 110 B.A. 114 V. 4095 F. ·399 C. 30 B. 21. THINNINGS: N. 10 B.A. 3 V. 105. Perth. 700′. E. Mod. exp. Sandy loam. Schists. *Pteris, Oxalis, Grass, Moss.*

P. 8.—MAIN CROP: A. 81 H. 88 G. 11¼ N. 140 B.A. 124 V. 4140 F. ·376 C. 33 B. 20. THINNINGS: N. 10 B.A. 3 V. 65. Perth. 900′. N. Mod. shelt. Sandy loam. Clay Slates. *Pteris, Vaccinium vitis-idæa, Grass, Moss.*

P. 124.—MAIN CROP: A. 82 H. 92 G. 12¾ N. 130 B.A. 149 V. 5320 F. ·395 C. 33 B. 18. THINNINGS: N. 15 B.A. 7 V. 220. Carmarthen. 580′. W.S.W. Mod. exp. Loam. Silurian shales. *Grass, Pteris, Rubus fruticosus, Herbs.*

EUROPEAN LARCH—*contd.*

Quality Class II—70-ft.—*contd.*

P. 32.—MAIN CROP: A. 84 H. 89 G. 11¼ N. 215 B.A. 192 V. 6280 F. ·367 C. 28 B. 22. THINNINGS: N. 10 B.A. 5 V. 160. Moray. 450′. N.E. Mod. shelt. Sand. Boulder Clay on Quartzite. *Pteris, Oxalis, Grass, Moss.*

P. 515.—MAIN CROP: A. 85 H. 88 G. 11 N. 180 B.A. 152 V. 5345 F. ·395 C. 26 B. 19. Somerset. 900′. S.E. Mod. shelt. Loam. Devonian. *Grass, Oxalis, Rubus fruticosus, Pteris.*

P. 225.—MAIN CROP: A. 114 H. 95 G. 13¾ N. 114 B.A. 149 V. 5245 F. ·371 C. 25 B. 9. Yorks. 450′. N. Fully shelt. Sandy loam. Middle Oolite. *Mercurialis, Ferns.*

Quality Class III—60-ft.

P. 684.—MAIN CROP: A. 23 H. 27 G. 3¼ N. 950 B.A. 72 V. 620 F. ·320 C. 59 B. 18. THINNINGS: N. 125 B.A. 4. Stafford. 650′. N.E. Fully shelt. Sand. Lower Trias. *Galium, Moss.* (Scanty.)

P. 209.—MAIN CROP: A. 24 H. 30 G. 3 N. 1500 B.A. 87 V. 855 F. ·326 C. 40 B. 25. THINNINGS: N. 245 B.A. 7. Peebles. 850′. S.E. Mod. shelt. Clay loam. Silurian. *Pteris, Oxalis, Grass, Moss.* (Scanty.)

P. 210.—MAIN CROP: A. 25 H. 35 G. 4 N. 710 B.A. 75 V. 1310 F. ·497 C. 48 B. 23. THINNINGS: N. 95 B.A. 3. Peebles. 800′. S.W. Mod. exp. Clay loam. Silurian. *Oxalis, Grass, Moss.* (Scanty.)

P. 238.—MAIN CROP: A. 25 H. 36 G. 4 N. 720 B.A. 78 V. 990 F. ·352 C. 42 B. 24. THINNINGS: N. 140 B.A. 7. Dumfries. 650′. E. Mod. shelt. Loam. Silurian. *Pteris, Oxalis, Grass, Moss.*

P. 214.—MAIN CROP: A. 26 H. 32 G. 4 N. 825 B.A. 97 V. 1090 F. ·353 C. 39 B. 25. THINNINGS: N. 50 B.A. 2 V. 15. Peebles. 1000′. W. Mod. exp. Sandy loam. Silurian Greywacke. *Oxalis, Digitalis, Grass, Moss.*

P. 303.—MAIN CROP: A. 27 H. 38 G. 4¼ N. 705 B.A. 93 V. 1190 F. ·335 C. 43 B. 23. THINNINGS: N. 130 B.A. 6 V. 20. Aberdeen. 650′. S.E. Fully shelt. Sandy loam. Granite. *Pteris, Digitalis, Oxalis, Grass.* (Scanty.)

S.P. 12.—MAIN CROP: A. 28 H. 39 G. 5¼ N. 370 B.A. 84 V. 1045 F. ·320 C. 47 B. 20. THINNINGS: N. 30 B.A. 5. Brecknock. 1020′. S.S.E. Fully shelt. Loam. Old Red Sandstone. *Agrostis, Pteris, Oxalis.*

P. 218.—MAIN CROP: A. 28 H. 39 G. 5 N. 500 B.A. 89 V. 1220 F. ·351 C. 37 B. 24. THINNINGS: N. 50 B.A. 3 V. 30. Roxburgh. 600′. N.W. Mod. shelt. Clay loam. Boulder Clay on Old Red Sandstone. *Oxalis, Spiræa, Grass.* (Scanty.)

P. 205.—A. 29 H. 39 G. 4 N. 985 B.A. 112 V. 1485 F. ·339 C. 33 B. 20. THINNINGS: N. 120 B.A. 7 V. 55. Peebles. 1150′. N. Mod. exp. Sandy loam. Silurian. *Pteris, Oxalis, Grass, Moss.* (Scanty.)

P. 204.—MAIN CROP: A. 29 H. 39 G. 4 N. 965 B.A. 110 V. 1535 F. ·367 C. 28 B. 18. THINNINGS: N. 90 B.A. 6 V. 85. Peebles. 1000′. N. Mod. exp. Sandy loam. Silurian. *Pteris, Oxalis, Moss.* (Scanty.)

P. 201.—MAIN CROP: A. 29 H. 36 G. 4½ N. 575 B.A. 80 V. 1035 F. ·360 C. 36 B. 20. THINNINGS: N. 30 B.A. 2 V. 15. Peebles. 850′. W. Mod. exp. Sandy loam. Silurian. *Sambucus, Pteris, Oxalis, Grass.* (Scanty.)

EUROPEAN LARCH—*contd.*

Quality Class III—60-ft.—*contd.*

P. 250.—MAIN CROP: A. 29 H. 38 G. 4 N. 945 B.A. 104 V. 1325 F. ·336 C. 38 B. 19. THINNINGS: N. 160 B.A. 6. Dumfries. 650′. N. Mod. shelt. Sandy loam. Silurian. *Calluna, Grass, Ferns.*

P. 283.—MAIN CROP: A. 29 H. 39 G. 5¼ N. 675 B.A. 124 V. 1930 F. ·397 C. 38 B. 15. Wigtown. 200′. N.W. Mod. exp. Loam. Boulder Clay on Ordovician. *Oxalis, Ferns.* (Scanty.)

P. 127.—MAIN CROP: A. 30 H. 38 G. 4 N. 755 B.A. 87 V. 1090 F. ·328 C. 35 B. 23. THINNINGS: N. 244 B.A. 14 V. 145. Carmarthen. 600′. E.S.E. Fully shelt. Loam. Silurian. *Rubus fruticosus, Agrostis, Pteris, Moss.*

S.P. Y. 51.—MAIN CROP: A. 30 H. 42 G. 4½ N. 760 B.A. 107 V. 1725 F. ·385 C. 36 B. 22. THINNINGS: N. 140 B.A. 12. Carmarthen. 600′. S.E. Mod. shelt. Loam. Silurian. *Rubus fruticosus, Oxalis, Grass.*

P. 271.—MAIN CROP: A. 31 H. 45 G. 4¾ N. 840 B.A. 130 V. 2490 F. ·426 C. 33 B. 16. THINNINGS: N. 105 B.A. 7 V. 55. Kirkcudbright. 400′. W. Mod. exp. Loam. Silurian Hard Greywacke. *Pteris, Oxalis, Moss.* (Scanty.)

S.P. 47.—MAICN CROP: A. 32 H. 38 G. 5 N. 895 B.A. 153 V. 2270 F. ·390 C. 34 B. 20. Wigtown. 300′. E. Mod. exp. Sandy loam. Ordovician. *Pteris, Digitalis, Nepeta.*

P. 138.—MAIN CROP: A. 32 H. 37 G. 4 N. 955 B.A. 107 V. 1395 F. ·352 C. 34 B. 21. THINNINGS: N. 265 B.A. 14 V. 130. Cardiganshire. 400′. S.S.E. Fully exp. Loam. Silurian. *Pteris, Ferns, Moss.*

P. 255.—MAIN CROP: A. 32 H. 45 G. 5¼ N. 655 B.A. 128 V. 2165 F. ·374 C. 34 B. 17. Dumfries. 350′. S.W. Fully exp. Sandy loam. Silurian. *Pteris, Oxalis, Grass, Moss.*

P. 349.—MAIN CROP: A. 33 H. 43 G. 4½ N. 685 B.A. 97 V. 1585 F. ·379 C. 35 B. 20. THINNINGS: N. 170 B.A. 10 V. 95. Devon. 250′. N. Fully shelt. Loam. Old Red Sandstone. *Hedera, Lonicera, Oxalis, Urtica.*

P. 254.—MAIN CROP: A. 33 H. 44 G. 5¼ N. 530 B.A. 98 V. 1670 F. ·387 C. 42 B. 17. Dumfries. 450′. S.W. Fully exp. Sandy Loam. Silurian. *Pteris, Oxalis, Grass, Moss.*

P. 382.—MAIN CROP: A. 33 H. 39 G. 4¾ N. 650 B.A. 105 V. 1550 F. ·376 C. 45 B. 21. THINNINGS: N. 95 B.A. 5 V. 35. Kincardine. 500′. N. Mod. exp. Loam. Boulder Clay on Old Red Conglomerate. *Oxalis, Ajuga, Galium, Grass.*

P. 396.—MAIN CROP: A. 33 H. 44 G. 5¾ N. 500 B.A. 116 V. 1920 F. ·377 C. 39 B. 22. THINNINGS: N. 45 B.A. 2 V. 175. Forfar. 600′. N.E. Fully shelt. Sandy loam. Mica Schist. *Grass, Moss.*

P. 666.—MAIN CROP: A. 33 H. 40 G. 4½ N. 700 B.A. 103 V. 1545 F. ·373 C. 37 B. 21. THINNINGS: N. 35 B.A. 2. Shropshire. 1150′. S.W. Fully exp. Loam. Old Red Sandstone. *Grass, Galium, Digitalis.*

P. 252.—MAIN CROP: A. 34 H. 46 G. 5½ N. 490 B.A. 105 V. 1860 F. ·385 C. 47 B. 20. THINNINGS: N. 40 B.A. 3 V. 45. Kirkcudbright. 350′. N. Mod. shelt. Sandy loam. Silurian. *Pteris, Oxalis, Digitalis, Grass, Moss.*

EUROPEAN LARCH—*contd.*

Quality Class III—60-ft.—*contd.*

S.P. 109.—MAIN CROP: A. 34 H. 47 G. 4 N. 910 B.A. 105 V. 1870 F. ·378 C. 31 B. 20. THINNINGS: N. 150 B.A. 7 V. 50. Devon. 200′. N. Fully shelt. Loam. Devonian. *Lonicera, Mercurialis, Oxalis, Hedera.* (Scanty.)

P. 107.—MAIN CROP: A. 35 H. 46 G. 5¼ N. 744 B.A. 139 V. 2015 F. ·312 C. 38 B. 22. THINNINGS: N. 105 B.A. 7 V. 60. Radnorshire. 1300′. N.N.W. Fully shelt. Loam. Silurian. *Pteris, Galium saxatile, Grass.* (Scanty.)

P. 146.—MAIN CROP: A. 35 H. 49 G. 6¼ N. 425 B.A. 112 V. 1870 F. ·338 C. 35. B. 21. THINNINGS: N. 80 B.A. 13 V. 185. Cardigan. 800′. N.E. Fully shelt. Loam. Silurian. *Pteris, Moss.* (Scanty.)

P. 348.—MAIN CROP: A. 35 H. 47 G. 4¾ N. 640 B.A. 99 V. 1725 F. ·372 C. 35 B. 20. THINNINGS: N. 165 B.A. 13 V. 155. Devon. 300′. N.N.E. Fully shelt. Loam. Old Red Sandstone. *Hedera, Mercurialis, Oxalis.* (Scanty.)

P. 615.—MAIN CROP: A. 35 H. 50 G. 5½ N. 610 B.A. 131 V. 2420 F. ·369 C. 34 B. 21. THINNINGS: N. 155 B.A. 15 V. 185. Merioneth. 650′. S.E. Mod. shelt. Sandy loam. Ordovician. *Oxalis, Mercurialis, Digitalis, Aspidium felix-mas.*

S.P.Y. 37.—MAIN CROP: A. 36 H. 47 G. 5 N. 600 B.A. 103 V. 1860 F. ·384 C. 40 B. 23. THINNINGS: N. 70 B.A. 6. Merioneth. 400′. N. Mod. exp. Loam. Cambrian. *Grass, Blechnum, Galium saxatile, Moss.*

S.P.S. 18.—MAIN CROP: A. 36 H. 50 G. 6¼ N. 470 B.A. 125 V. 2460 F. ·394 C. 30 B. 22. THINNINGS: N. 15 B.A. 2. Radnor. 1250′. S. Fully exp. Loam. Silurian. *Pteris, Oxalis, Grass, Moss.*

P. 154.—MAIN CROP: A. 37 H. 50 G. 6¼ N. 400 B.A. 110 V. 1855 F. ·338 C. 46 B. 24. THINNINGS: N. 30 B.A. 5. Cardigan. 720′. N. Fully shelt. Loam. Silurian. *Grass, Moss.* (Scanty.)

S.P.Y. 38.—MAIN CROP: A. 37 H. 52 G. 6½ N. 385 B.A. 109 V. 2250 F. ·397 C. 35 B. 19. THINNINGS: N. 15 B.A. 3. Denbigh. 1000′. E. Mod. exp. Loam. Silurian. *Pteris, Oxalis, Grass.*

P. 114.—MAIN CROP: A. 38 H. 52 G. 5¾ N. 465 B.A. 105 V. 2270 F. ·417 C. 35 B. 20. THINNINGS: N. 30 B.A. 3 V. 25. Brecknock. 1180′. W. Fully exp. Loam. Old Red Sandstone. *Pteris, Grass.*

S.P. 3.—MAIN CROP: A. 38 H. 51 G. 6¾ N. 270 B.A. 90 V. 1515 F. ·331 C. 39 B. 23. Brecknock. 1200′. W. Mod. exp. Sandy loam. Old Red Sandstone. *Grass, Pteris, Rubus fruticosus.*

P. 129.—MAIN CROP: A. 39 H. 51 G. 5½ N. 580 B.A. 118 V. 2305 F. ·384 C. 26 B. 21. THINNINGS: N. 60 B.A. 8 V. 130. Cardiganshire. 380′. N.N.W. Mod. shelt. Loam. Silurian. *Moss.*

P. 89.—MAIN CROP: A. 39 H. 47 G. 6¼ N. 610 B.A. 162 V. 2575 F. ·339 C. 34 B. 21. THINNINGS: N. 85 B.A. 7 V. 85. Inverness. 1100′. N. Fully exp. Sandy loam. Granitized Moine Schist. *Oxalis, Grass, Moss.* (Scanty.)

P. 127.—MAIN CROP: A. 39 H. 46 G. 6 N. 530 B.A. 133 V. 2280 F. ·372 C. 32 B. 20. THINNINGS: N. 15 B.A. 1 V. 15. Ayr. 550′. S. Mod. exp. Sandy loam. Dolerite. *Pteris, Oxalis, Grass, Moss.* (Scanty.)

P. 149.—MAIN CROP: A. 39 H. 48 G. 6 N. 390 B.A. 101 V. 1840 F. ·379 C. 42 B. 21. THINNINGS: N. 35 B.A. 6 V. 90. Cardigan. 900′. N. Mod. shelt. Loam. Silurian. *Grass, Moss.*

EUROPEAN LARCH—*contd.*

Quality Class III—60-ft.—*contd.*

P. 96.—MAIN CROP: A. 39 H. 50 G. 6 N. 630 B.A. 154 V. 3285 F. ·426 C. 33 B. 17. THINNINGS: N. 60 B.A. 8 V. 120. Inverness. 900′. N.W. Mod. exp. Peat 6″—12″. Granitized Moine Schists. *Oxalis, Moss.* (Scanty.)

S.P. 117.—MAIN CROP: A. 39 H. 49 G. 6 N. 560 B.A. 141 V. 2750 F. ·398 C. 34 B. 24. Somerset. 1150′. N.E. Mod. shelt. Clay loam. Devonian. *Grass, Moss, Vaccinium Myrtillus.*

P. 90.—MAIN CROP: A. 40 H. 48 G. 5¾ N. 675 B.A. 160 V. 2890 F. ·379 C. 30 B. 19. THINNINGS: N. 85 B.A. 8 V. 110. Inverness. 1000′. N.W. Mod. exp. Sandy loam. Granitized Moine Schist. *Oxalis, Grass, Moss.* (Scanty.)

P. 382.—MAIN CROP: A. 40 H. 45 G. 5¼ N. 640 B.A. 122 V. 1880 F. ·343 C. 38 B. 23. THINNINGS: N. 45 B.A. 5. Devon. 650′. S. Fully exp. Loam. Culm measures. *Pteris.* (Scanty.)

S.P.S. 21.—MAIN CROP: A. 40 H. 56 G. 6½ N. 440 B.A. 129 V. 2875 F. ·391 C. 36 B. 21. THINNINGS: N. 45 B.A. 4 V. 50. Brecknock. 850′. N. Fully shelt. Loam. Silurian. *Grass, Moss.*

P. 117.—MAIN CROP: A. 41 H. 55 G. 7½ N. 320 B.A. 122 V. 2500 F. ·373 C. 33 B. 22. Brecknock. 1200′. N.E. Fully shelt. Sandy loam. Old Red Sandstone. *Pteris, Grass.* (Scanty.)

P. 354.—MAIN CROP: A. 41 H. 47 G. 5¼ N. 580 B.A. 115 V. 1760 F. ·327 C. 37 B. 23. THINNINGS: N. 185 B.A. 17 V. 195. Devon. 800′. W.S.W. Mod. shelt. Peaty loam. Granite. *Pteris, Oxalis, Scilla nutans, Moss.* (Scanty.)

P. 253.—MAIN CROP: A. 41 H. 51 G. 5¾ N. 600 B.A. 137 V. 2860 F. ·409 C. 31 B. 20. Kirkcudbright. 550′. N.E. Mod. shelt. Sandy loam. Silurian. *Pteris, Oxalis, Grass, Moss.*

P. 604.—MAIN CROP: A. 41 H. 52 G. 5¼ N. 710 B.A. 135 V. 2350 F. ·335 C. 28 B. 25. THINNINGS: N. 105 B.A. 13. Carnarvon. 400′. W.N.W. Mod. exp. Loam. Ordovician. *Vaccinium Myrtillus, Moss.* (Scanty.)

P. 603.—MAIN CROP: A. 41 H. 54 G. 5¾ N. 605 B.A. 136 V. 2705 F. ·367 C. 31 B. 23. THINNINGS: N. 70 B.A. 9. Carnarvon. 600′. N.W. Mod. exp. Loam. Ordovician. *Vaccinium Myrtillus, Moss.*

P. 634.—MAIN CROP: A. 42 H. 50 G. 5½ N. 635 B.A. 128 V. 2105 F. ·328 C. 32 B. 24. THINNINGS: N. 155 B.A. 14 V. 165. Montgomery. 1200′. S.E. Fully shelt. Loam. Ordovician shales. *Pteris, Galium saxatile, Grass.*

P. 616.—MAIN CROP: A. 42 H. 51 G. 6½ N. 510 B.A. 149 V. 2385 F. ·314 C. 38 B. 23. THINNINGS: N. 130 B.A. 16. Merioneth. 800′. S. Fully exp. Sandy loam. Ordovician. *Scilla nutans, Oxalis.*

P. 643.—MAIN CROP: A. 43 H. 52 G. 6¼ N. 525 B.A. 140 V. 2445 F. ·336 C. 33 B. 21. THINNINGS: N. 35 B.A. 3·4. Radnor. 1150′. N.N.W. Mod. exp. Loam. Silurian. *Galium saxatile, Grass.* (Scanty.)

P. 670.—MAIN CROP: A. 43 H. 55 G. 6¼ N. 430 B.A. 119 V. 2475 F. ·377 C. 34 B. 17. THINNINGS: N. 20 B.A. 2. Shropshire. 750′. S. Fully exp. Loam. Silurian. *Pteris, Oxalis, Sambucus, Mercurialis.*

P. 156.—MAIN CROP: A. 44 H. 57 G. 5¾ N. 555 B.A. 131 V. 2865 F. ·384 C. 27 B. 23. THINNINGS: N. 120 B.A. 18 V. 260. Montgomery. 800′. W. Fully shelt. Loam. Silurian. *Rubus fruticosus, Grass.*

EUROPEAN LARCH—*contd.*

Quality Class III—60-ft.—*contd.*

P. 332.—MAIN CROP: A. 44 H. 51 G. 5¾ N. 455 B.A. 105 V. 2190 F. ·410 C. 38 B. 21. THINNINGS: N. 55 B.A. 3 V. 30. Aberdeen. 950′. N.E. Fully shelt. Sandy loam. Glacial on Knotted Andalusite Schist. *Oxalis Grass, Blechnum, Aspidium.*

P. 591.—MAIN CROP: A. 44 H. 58 G. 5¾ N. 525 B.A. 124 V. 2905 F. ·405 C. 26 B. 20. THINNINGS: N. 200 B.A. 25 V. 400. Hants. 700′. S. Fully exp. Clay. Chalk. Nil.

P. 390.—MAIN CROP: A. 44 H. 58 G. 8½ N. 233 B.A. 120 V. 2300 F. ·373 C. 45 19. THINNINGS: N. 40 B.A. 6 V. 115. Kincardine. 400′. S. Fully exp. Loam. Boulder Clay on Old Red Sandstone. *Pteris, Viola, Ranunculus, Grass.*

S.P.Y. 53.—MAIN CROP: A. 44 H. 57 G. 6¾ N. 460 B.A. 144. V. 3025 F. ·369 C. 31 B. 20. THINNINGS: N. 50 B.A. 10. Carmarthen. 750′. S.W. Mod. exp. Loam. Silurian. *Galium saxatile, Grass, Ferns.* (Scanty.)

P. 506.—MAIN CROP: A. 45 H. 60 G. 8 N. 320 B.A. 137 V. 3320 F. ·404 C. 35 B. 21. THINNINGS: N. 20 B.A. 4 V. 110. Somerset. 1000′. S. Mod. exp. Loam. Old Red Sandstone. *Oxalis, Digitalis, Grass, Moss.* (Scanty.)

S.P.S. 19.—MAIN CROP: A. 45 H. 52 G. 6¼ N. 435 B.A. 117 V. 2120 F. ·438 C. 33 B. 21. THINNINGS: N. 30 B.A. 4. Radnor. 1150′. N. Fully shelt. Loam. Silurian. *Grass, Moss.*

S.P.Y. 57.—MAIN CROP: A. 45 H. 54 G. 6¼ N. 405 B.A. 107 V. 2260 F. ·391 C. 39 B. 21. THINNINGS: N. 75 B.A. 10 V. 135. Montgomery. 400′. W.N.W. Mod. exp. Loam. Ordovician. *Oxalis, Grass, Moss.* (Scanty.)

P. 120.—MAIN CROP: A. 45 H. 54 G. 5¾ N. 605 B.A. 143 V. 2975 F. ·384 C. 28 B. 19. THINNINGS: N. 130 B.A. 14 V. 220. Brecknock. 1020′. S.S.W. Mod. exp. Sandy loam. Old Red Sandstone. *Mercurialis, Grass, Aspidium felix-mas.*

P. 141.—MAIN CROP: A. 45 H. 58 G. 7¾ N. 325 B.A. 133 V. 2850 F. ·368 C. 35 B. 22. Cardigan. 750′. S. Mod. exp. Loam. Silurian. *Pteris, Grass, Moss.*

P. 142.—MAIN CROP: A. 45 H. 55 G. 7¼ N. 415 B.A. 151 V. 3225 F. ·389 C. 36 B. 20. THINNINGS: N. 50 B.A. 8 V. 100. Cardigan. 880′. S.S.W. Mod. exp. Loam. Silurian. *Grass, Rubus, Pteris, Moss.* (Scanty.)

P. 153.—MAIN CROP: A. 45 H. 58 G. 6¾ N. 410 B.A. 134 V. 2935 F. ·378 C. 25 B. 24. THINNINGS: N. 115 B.A. 20 V. 410. Cardigan. 500′. S. Fully exp. Loam. Silurian. *Grass, Oxalis, Pteris.*

S.P.Y. 48.—MAIN CROP: A. 45 H. 58 G. 6½ N. 470 B.A. 137 V. 3045 F. ·383 C. 28 B. 23. THINNINGS: N. 90 B.A. 17. Carmarthen. 550′. Mod. exp. Loam. Ordovician. *Ferns, Rubus, Hedera, Sambucus.*

P. 413.—MAIN CROP: A. 45 H. 54 G. 6½ N. 340 B.A. 102 V. 2000 F. ·361 C. 45 B. 22. Forfar. 550′. N. Mod. shelt. Clay loam. Glacial on Porphyritic Andesite. *Oxalis, Rubus, Herbs, Grasses, Mosses.*

P. 409.—MAIN CROP: A. 46 H. 60 G. 6½ N. 320 B.A. 96 V. 2080 F. ·362 C. 39 B. 23. THINNINGS: N. 60 B.A. 8 V. 115. Forfar. 900′. N.E. Mod. exp. Loam. Schistose Grits. *Oxalis, Galium, Vaccinium Myrtillus, Grasses, Mosses.*

P. 543.—MAIN CROP: A. 46 H. 60 G. 6 N. 530 B.A. 132 V. 2940 F. ·371 C. 27 B. 19. THINNINGS: N. 35 B.A. 7 V. 95. Sussex. 400′. S.-S.W. Mod. shelt. Clay. Weald Clay. Nil.

EUROPEAN LARCH—*contd.*

Quality Class III—60-ft.—*contd.*

P. 106.—MAIN CROP: A. 46 H. 59 G 6¼ N. 475 B.A. 129 V. 2695 F. ·374 C. 31 B. 23. THINNINGS: N. 60 B.A. 8 V. 125. Radnorshire. 1250′. N.N.W. Fully shelt. Clay loam. Silurian. *Grass, Galium saxatile. Ferns.* (Scanty.)

P. 220.—MAIN CROP: A. 47 H. 58 G 6¾ N. 370 B.A. 119 V. 2920 F. ·423 C. 27 B. 21. THINNINGS: N. 30 B.A. 4 V. 80. York. 575′. N.E. Fully shelt. Clay loam. Corallian Limestone of the Middle Oolite. *Grass, Pteris.*

P. 625.—MAIN CROP: A. 47 H. 56 G. 7¼ N. 345 B.A. 126 V. 2700 F. ·383 C. 44 B. 18. THINNINGS: N. 40 B.A. 7 V. 55. Carmarthen. 900′. S.E. Mod. exp. Loam. Silurian. *Galium saxatile, Grass, Pteris. Moss.*

P. 406.—MAIN CROP: A. 47 H. 57 G. 7¾ N. 295 B.A. 120 V. 2370 F. ·347 C. 43 B. 23. THINNINGS: N. 80 B.A. 13 V. 210. Forfar. 750′. S.W. Mod. exp. Clay loam. Boulder Clay on Schistose Grits. *Oxalis, Herbs, Pteris, Moss.*

S.P.Y. 42.—MAIN CROP: A. 47 H. 60 G. 6 N. 495 B.A. 120 V. 2775 F. ·386 C. 29 B. 26. THINNINGS: N. 65. Carmarthen. 400′. W. Mod. exp. Loam. Ordovician. *Rubus, Pteris, Digitalis, Vaccinium Myrtillus.*

P. 166.—MAIN CROP: A. 49 H. 59 G. 7½ N. 340 B.A. 136 V. 2870 F. ·357 C. 30 B. 24. THINNINGS: N. 20 B.A. 2 V. 25. Kincardine. 400′. E. Fully shelt. Sandy loam. Gneiss. *Oxalis, Moss.*

P. 648.—MAIN CROP: A. 49 H. 56 G. 6¾ N. 455 B.A. 147 V. 3010 F. ·366 C. 30 B. 20. THINNINGS: N. 55 B.A. 8. Radnor. 1150′. N.N.E. Mod. shelt. Loam. Silurian. *Moss, Grass.*

P. 680.—MAIN CROP.: A. 49 H. 59 G. 7½ N. 305 B.A. 117 V. 2380 F. ·346 C. 37 B. 21. THINNINGS: N. 20 B.A. 4. Shropshire. 1000′. N.N.E. Fully shelt. Loam. Silurian. *Grasses, Oxalis, Pteris.*

P. 326.—MAIN CROP: A. 50 H. 56 G. 7 N. 335 B.A. 112 V. 2260 F. ·360 C. 31 B. 19. THINNINGS: N. 45 B.A. 11 V. 215. Devon. 625′. General. Mod. shelt. Clay loam. Millstone Grit. *Grass.*

P. 335.—MAIN CROP: A. 50 H. 58 G. 7¾ N. 280 B.A. 115 V. 2335 F. ·349 C. 36 B. 17. THINNINGS: N. 30 B.A. 8 V. 145. Devon. 650′. General. W. Mod. shelt. Clay loam. Culm Measures. *Moss.*

P. 365.—MAIN CROP: A. 50 H. 65 G. 6¾ N. 325 B.A. 101 V. 2705 F. ·413 C. 34 B. 20. THINNINGS: N. 75 B.A. 10 V. 205. Devon. 200′. S.E. Fully shelt. Loam. Millstone Grit. *Moss, Oxalis, Rubus, Pteris.*

P. 611.—MAIN CROP: A. 50 H. 56 G. 6 N. 565 B.A. 145 V. 2960 F. ·364 C. 30 B. 24. THINNINGS: N. 33 B.A. 5. Merioneth. 1000′. W. Fully exp. Sandy loam. Ordovician. *Grasses.*

P. 633.—MAIN CROP: A. 50 H. 59 G. 7¼ N. 375 B.A. 135 V. 2780 F. ·348 C. 32 B. 23. THINNINGS: N. 15 B.A. 3. Radnor. 1100′. N. Fully shelt. Loam. Ordovician. *Grasses, Galium saxatile, Pteris, Moss.*

P. 635.—MAIN CROP: A. 50 H. 61 G. 7 N. 395 B.A. 130 V. 2995 F. ·378 C. 31 B. 22. THINNINGS: N. 40 B.A. 5 V. 100. Montgomery. 800′. N. Mod. shelt. Loam. Ordovician. *Grasses, Pteris, Hedera, Moss, Rubus.*

P. 627.—MAIN CROP: A. 51 H. 57 G. 7 N. 325 B.A. 115 V. 2475 F. ·379 C. 35 B. 19. THINNINGS: N. 90 B.A. 18. Carmarthen. 750′. E.N.E. Fully shelt. Loam. Silurian. *Oxalis, Grass, Pteris, Rubus.*

EUROPEAN LARCH—*contd.*

Quality Class III—60-ft.—*contd.*

P. 71.—MAIN CROP: A. 52 H. 66 G. 8¼ N. 370 B.A. 181 V. 4640 F. ·388 C. 33 B. 20. Inverness. 400′. S. Mod. shelt. Sandy loam. Granitized Moine Schist. *Oxalis, Grasses, Ferns, Mosses.*

P. 70.—MAIN CROP: A. 52 H. 62 G. 8 N. 410 B.A. 184 V. 3920 F. ·344 C. 34 B. 21. THINNINGS: N. 15 B.A. 2 V. 10. Inverness. 350′. S. Mod. shelt. Sandy loam. Granitized Moine Schist. *Oxalis, Grasses, Ferns.*

P. 109.—MAIN CROP: A. 53 H. 62 G. 6¼ N. 470 B.A. 125 V. 2990 F. ·385 C. 29 B. 21. THINNINGS: N. 30 B.A. 4 V. 95. Brecknock. 1100′. S.W. Fully exp. Loam. Old Red Sandstone. *Grasses.*

P. 69.—MAIN CROP: A. 53 H. 64 G. 8¼ N. 385 B.A. 177 V. 4195 F. ·370 C. 36 B. 20. Inverness. 250′. S. Mod. shelt. Sandy loam. Granitized Moine Schist. *Oxalis, Grasses, Pteris.*

P. 260.—MAIN CROP: A. 53 H. 61 G. 9¾ N. 160 B.A. 106 V. 2765 F. ·428 C. 43 B. 16. Cumberland. 450′. N.E. Mod. shelt. Loam. Lower Greensand. *Mosses, Grass.*

P. 357.—MAIN CROP: A. 53 H. 67 G. 6¾ N. 375 B.A. 117 V. 2980 F. ·380 C. 26 B. 23. THINNINGS: N. 85 B.A. 12 V. 230. Devon. 600′. W. Mod. exp. Peaty loam. Granite. *Rubus, Vaccinium Myrtillus, Oxalis, Moss.*

S.P. 10.—MAIN CROP: A. 53 H. 64 G. 6½ N. 440 B.A. 128 V. 3120 F. ·382 C. 29 B. 20. THINNINGS: N. 90. Brecknock. 850′. S.W. Fully exp. Loam. Old Red Sandstone. Not entered.

P. 325.—MAIN CROP: A. 54 H. 64 G. 7½ N. 305 B.A. 119 V. 3075 F. ·402 C. 29 B. 21. THINNINGS: N. 30 B.A. 7 V. 170. Devon. 310′. N.W. Fully shelt. Clay. Culm measures. *Rubus, Hedera, Lonicera, Oxalis.*

P. 418.—MAIN CROP: A. 54 H. 65 G. 8 N. 285 B.A. 123 V. 3185 F. ·398 C. 35 B. 23. THINNINGS: N. 80 B.A. 16. Yorks. 600′. S.S.W. Mod. shelt. Sandy loam. Millstone Grit. *Pteris, Grass.*

P. 128.—MAIN CROP: A. 55 H. 69 G. 7¼ N. 315 B.A. 119 V. 3255 F. ·395 C. 25 B. 22. THINNINGS: N. 50 B.A. 10 V. 270. Carmarthen. 830′. N.E. Mod. exp. Loam. Ordovician. *Grass, Moss.*

P. 386.—MAIN CROP: A. 55 H. 62 G. 7¼ N. 300 B.A. 112 V. 2885 F. ·414 C. 32 B. 19. THINNINGS: N. 95 B.A. 15 V. 300. Kincardine. 500′. N.W. Mod. exp. Loam. Boulder Clay on Old Red Sandstone. *Oxalis, Grasses, Pteris, Mosses.*

P. 37.—MAIN CROP: A. 55 H. 69 G. 7½ N. 350 B.A. 134 V. 3585 F. ·389 C. 35 B. 20. THINNINGS: N. 10 B.A. 1 V. 20. Moray. 450′. N. Fully shelt. Sand. Sand and Gravel on Moine Schist. *Oxalis, Grass, Moss.*

S.P.Y. 13.—MAIN CROP: A 55. H. 59 G. 7¼ N. 330 B.A. 123 V. 2990 F. ·413 C. 30 B. 21. THINNINGS: N. 20 B.A. 5. Yorks. 900′. E.N.E. Fully shelt. Sandy loam. Millstone Grit. *Pteris, Grasses.*

P. 64.—MAIN CROP: A. 56 H. 68 G. 9½ N. 365 B.A. 222 V. 4875 F. ·323 C. 36 B. 21. THINNINGS: N. 20 B.A. 3 V. 45. Inverness. 450′. S. Fully shelt. Sandy loam. Granitized Moine Schist. *Oxalis, Grasses, Pteris, Mosses.*

P. 79.—MAIN CROP: A. 57 H. 70 G. 8¾ N. 290 B.A. 154 V. 3645 F. ·338 C. 38 B. 21. THINNINGS: N. 10 B.A. 1 V. 20. Inverness. 500′. S. Mod. exp. Sandy loam. Morainic Drift, Moine Type. *Oxalis, Grasses, Pteris, Mosses.*

EUROPEAN LARCH—*contd.*

Quality Class III—60-ft.—*contd.*

P. 352.—MAIN CROP: A. 57 H. 63½ G. 6¼ N. 495 B.A. 138 V. 3495 F. ·397 C. 29 B. 22. THINNINGS: N. 115 B.A. 15 V. 325. Devon. 800′. S.S.E. Mod. shelt. Peaty loam. Granite. *Pteris.* (Scanty.)

P. 362.—MAIN CROP: A. 57 H. 63 G. 7¼ N. 360 B.A. 133 V. 3210 F. ·383 C. 27 B. 21. THINNINGS: N. 145 B.A. 34 V. 810. Devon. 400′. S. Mod. exp. Loam. Devonian. *Hedera, Rubus.*

S.P.Y. 58.—MAIN CROP: A. 57 H. 66 G. 6½ N. 355 B.A. 101 V. 2920 F. ·439 C. 30 B. 17. THINNINGS: N. 65 B.A. 10. Montgomery. 450′. N.N.E. Mod. shelt. Loam. Ordovician. *Grass, Oxalis, Ferns, Mosses.*

P. 687.—MAIN CROP: A. 58 H. 63 G. 7½ N. 295 B.A. 112 V. 2650 F. ·376 C. 28 B. 19. Shropshire. 440′. S.W. Mod. exp. Loam. Cambrian. *Pteris, Rubus, Sambucus, Grass.*

P. 663.—MAIN CROP: A. 58 H. 65 G. 10 N. 175 B.A. 126 V. 2860 F. ·350 C. 36 B. 19. Glamorgan. 750′. W.S.W. Mod. shelt. Sandy loam. Pennant sandstone on Coal Measures. *Pteris, Aspidium felix-mas.*

P. 173.—MAIN CROP: A. 58 H. 67 G. 8½ N. 225 B.A. 117 V. 3125 F. ·407 C. 41 B. 24. THINNINGS: N. 5 B.A. 1 V. 35 Kincardine. 350′. E. Fully shelt. Loam. Boulder Clay on Granite. *Oxalis, Grasses, Mosses.*

S.P. 56.—MAIN CROP: A. 58 H. 65 G. 9¾ N. 180 B.A. 119 V. 2940 F. ·380 C. 47 B. 22. Wigtown. 200′. N.W. Mod. shelt. Loam. Boulder Clay on Ordovician. *Oxalis, Grasses, Pteris.*

S.P.S. 10.—MAIN CROP: A. 59 H. 67 G. 8¼ N. 420 B.A. 199 V. 5345 F. ·400 C. 26 B. 20. Sussex. 400′. General. Fully exp. Loam. Lower Greensand. *Pteris, Rubus.*

S.P.Y. 21.—MAIN CROP: A. 59 H. 64 G. 9¼ N. 300 B.A. 175 V. 3760 F. ·336 C. 24 B. 22. THINNINGS: N. 10 B.A. 2. Hants. 120′. W. Mod. exp. Sandy loam. Upper Eocene. *Pteris, Hedera.*

S.P.S. 13.—MAIN CROP: A. 59 H. 70 G. 8 N. 340 B.A. 149 V. 3825 F. ·366 C. 28 B. 25. THINNINGS: N. 65 B.A. 12 V. 195. Hants. 600′. S.W. Mod. exp. Loam. Chalk. *Pteris, Mercurialis, Hedera.* (Scanty.)

P. 85.—MAIN CROP: A. 60 H. 68 G. 8¼ N. 300 B.A. 142 V. 3260 F. ·339 C. 40 B. 23. THINNINGS: N. 30 B.A. 4 V. 45. Inverness. 400′. S. Mod. shelt. Sandy loam. Morainic Drift, Moine Schists. *Oxalis, Grasses, Mosses.*

P. 149.—MAIN CROP: A. 60 H. 68 G. 8¼ N. 270 B.A. 131 V. 3460 F. ·390 C. 28 B. 22. THINNINGS: N. 10 B.A. 2 V. 25. Kincardine. 300′. N. Fully shelt. Sand. Gneiss. *Oxalis, Grasses, Pteris, Mosses.*

P. 202.—MAIN CROP: A. 60 H. 70 G. 7¾ N. 315 B.A. 135 V. 3755 F. ·397 C. 25 B. 20. THINNINGS: N. 60 B.A. 13 V. 265. Yorks. 350′. S.W. Fully exp. Sandy loam. Corallian beds of Lower Oolite. Nil.

S.P.Y. 12.—MAIN CROP: A. 60 H. 66 G. 8¾ N. 240 B.A. 129 V. 3125 F. ·368 C. 30 B. 18. THINNINGS: N. 30 B.A. 8. Yorks. 625′. N.W. Mod. exp. Sand. Millstone Grit. *Grass, Pteris.*

P. 188.—MAIN CROP: A. 61 H. 68 G. 7¼ N. 375 B.A. 137 V. 3325 F. ·356 C. 36 B. 21. THINNINGS: N. 110 B.A. 19 V. 440. Aberdeen. 900′. E. Mod. shelt. Sandy loam. Granite. *Oxalis, Grasses, Ferns, Mosses.*

P. 222.—MAIN CROP: A. 61 H. 71 G. 8 N. 265 B.A. 116 V. 3475 F. ·424 C. 23 B. 20. THINNINGS: N. 35 B.A. 7 V. 180. Yorks. 700′. S. Fully shelt. Sandy loam. Corallian Limestone of the Middle Oolite. *Grass, Pteris.*

EUROPEAN LARCH—*contd.*

Quality Class III—60-ft.—*contd.*

P. 393.—MAIN CROP: A. 62 H. 65 G. 7¼ N. 320 B.A. 117 V. 3205 F. ·420 C. 30 B. 20. THINNINGS: N. 100 B.A. 15 V. 305. Kincardine. 700′. S.W. Fully exp. Sandy loam. Clay Slate on Mica Schist. *Oxalis, Grasses, Pteris, Mosses.*

S.P. 28.—MAIN CROP: A. 63 H. 65 G. 8½ N. 400 B.A. 195 V. 4425 F. ·350 C. 39 B. 19. THINNINGS: N. 65 B.A. 11 V. 105. Forfar. 950′. E. Mod. exp. Sandy loam. Micaceous Gneiss. *Oxalis, Digitalis, Grasses, Pteris, Mosses.*

P. 651.—MAIN CROP: A. 63 H. 66 G. 8¾ N. 230 B.A. 122 V. 3110 F. ·386 C. 30 B. 22. THINNINGS: N. 15 B.A. 3. Radnor. 1230′. N.E. Mod. shelt. Sandy loam. Silurian. *Grasses.*

S.P.Y. 40.—MAIN CROP: A. 63 H. 67 G. 8¼ N. 310 B.A. 150 V. 4135 F. ·411 C. 26 B. 17. THINNINGS: N. 40 B.A. 11. Flint. 600′. S. Fully shelt. Loam. Carboniferous Limestone. Ferns.

P. 410.—MAIN CROP: A. 67 H. 68 G. 9 N. 205 B.A. 114 V. 3100 F. ·399 C. 36 B. 19. THINNINGS: N. 80 B.A. 25 V. 305. Yorks. 775′. W. Fully exp. Sand. Millstone Grit. *Mercurialis, Pteris, Sambucus.*

P. 510.—MAIN CROP: A. 67 H. 75 G. 9½ N. 220 B.A. 137 V. 4330 F. ·423 C. 35 B. 17. Somerset. 950′. S.S.E. Fully shelt. Clay loam. Devonian. *Pteris, Rubus, Grasses, Mosses.*

S.P.Y. 4.—MAIN CROP: A. 67 H. 69 G. 10¼ N. 110 B.A. 80 V. 2135 F. ·388 C. 30 B. 24. THINNINGS: N. 20 B.A. 3. Yorks. 675′. N.E. Fully shelt. Clay. Upper Lias. *Pteris, Oxalis, Grass.*

P. 298.—MAIN CROP: A. 70 H. 73 G. 11¾ N. 120 B.A. 115 V. 3050 F. ·364 C. 51 B. 16. Moray. 900′. S.W. Fully exp. Peat 6″—12″. Moine Schist. *Oxalis, Herbs, Grasses, Mosses.*

S.P.Y. 23.—MAIN CROP: A. 71 H. 77 G. 8 N. 415 B.A. 186 V. 5060 F. ·353 C. 21 B. 21. THINNINGS: N. 50 B.A. 16. Hants. 250′. S.W. Mod. exp. Clay loam. Lower Eocene. *Hedera, Rubus, Mercurialis.*

P. 15B.—MAIN CROP: A. 73 H. 75 G. 11 N. 200 B.A. 171 V. 4730 F. ·369 C. 37 B. 21. Ross-shire. 300′. S.W. Mod. shelt. Sandy loam. Morainic Drift over Siliceous Schists. *Oxalis, Grasses, Pteris, Moss.*

S.P. 22.—MAIN CROP: A. 73 H. 77 G. 9 N. 210 B.A. 115 V. 3405 F. ·383 C. 30 B. 19. THINNINGS: N. 10. Carmarthen. 440′. N.W. Mod. exp. Loam. Silurian. *Moss, Pteris, Rubus, Grass.*

P. 17B.—MAIN CROP: A. 75 H. 72 G. 11¾ N. 195 B.A. 186 V. 4760 F. ·355 C. 47 B. 21. Ross. 400′. S.W. Mod. exp. Sandy loam. Morainic Drift over Siliceous Schists. *Oxalis, Grasses, Pteris, Moss.*

P. 54.—MAIN CROP: A. 75 H. 76 G. 10¼ N. 240 B.A. 178 V. 4505 F. ·333 C. 35 B. 22. Moray. 900′. S. Mod. exp. Sandy loam. Moine Schist. *Oxalis, Vaccinium vitis-idœa, Grasses, Mosses.*

P. 13.—MAIN CROP: A. 76 H. 74 G. 10¼ N. 185 B.A. 132 V. 3330 F. ·343 C. 39 B. 19. THINNINGS: N. 10 B.A.4 V. 60. Perth. 1000′. S.W, Fully exp. Sandy loam. Clay Slates. *Oxalis, Vaccinium vitis-idœa. Calluna, Pteris, Grasses.*

P. 53.—MAIN CROP: A. 76 H. 82 G. 11 N. 215 B.A. 176 V. 4985 F. ·346 C. 36 B. 23. Moray. 800′. S. Mod. exp. Sandy loam. Moine Schist. *Oxalis, Grasses, Pteris, Mosses.*

P. 708.—MAIN CROP: A. 76 H. 81 G. 9 N. 310 B.A. 171 V. 5570 F. ·402 C. 23 B. 20. THINNINGS: N. 80 B.A. 21. Wiltshire. 700′. S. Mod. shelt. Loam. Chalk. *Moss, Mercurialis, Pteris, Sambucus.*

EUROPEAN LARCH—*contd.*

Quality Class III—50-ft.—*contd.*

P. 195.—MAIN CROP: A. 77 H. 73 G. 8½ N. 245 B.A. 123 V. 3630 F. ·404 C. 24 B. 18. Beds. 250′. S.W. Mod. shelt. Sand. Lower Greensand. *Grass, Pteris.*

S.P.Y. 55.—MAIN CROP: A. 80 H. 79 G. 11 N. 195 B.A. 164 V. 5215 F. ·403 C. 35 B. 20. THINNINGS: N. 5 B.A. 4. Montgomery, 550′. N.W. Mod. exp. Loam. Ordovician. *Grass, Oxalis, Moss, Galium, Pteris.*

S.P.Y. 63.—MAIN CROP: A. 81 H. 82 G. 10½ N. 200 B.A. 162 V. 5205 F. ·392 C. 24 B. 16. THINNINGS: N. 10 B.A. 2. Devon. 300′. N. Fully shelt. Sand. Gravel of Upper Trias. Nil.

P. 16.—MAIN CROP: A. 86 H. 78 G. 13¾ N. 95 B.A. 123 V. 3650 F. ·380 C. 49 B. 18. Perth. 1050′. E. Mod. shelt. Sandy loam. Mica Schists. *Oxalis, Grass, Pteris, Moss.*

P. 130.—MAIN CROP: A. 94 H. 88 G. 11¾ N. 160 B.A. 154 V. 5445 F. ·402 C. 29 B. 19. Brecknock. 1050′. Fully shelt. Loam. Old Red Sandstone. *Grass, Pteris, Rubus.*

P. 228.—MAIN CROP: A. 94 H. 86 G. 12½ N. 150 B.A. 165 V. 5880 F. ·414 C. 43 B. 19. Berwick. 650′. W. Mod. exp. Sandy loam. Old Red Sandstone. *Oxalis, Digitalis, Grasses.*

P. 227.—MAIN CROP: A. 95 H. 83 G. 11 N. 190 B.A. 160 V. 5325 F. ·402 C. 39 B. 21. Berwick. 600′. W. Mod. exp. Sandy loam. Boulder Clay on Felsite. *Oxalis, Digitalis, Grasses, Ferns.*

S.P.Y. 36.—MAIN CROP: A. 99 H. 83 G. 12 N. 170 B.A. 174 V. 5350 F. ·370 B. 17. Carnarvon. 550′. S.E. Mod. exp. Sandy loam. Ordovician. *Moss, Grass, Pteris, Oxalis.*

P. 224.—MAIN CROP: A. 103 H. 83 G. 10¾ N. 165 B.A. 131 V. 4385 F. ·403 C. 25 B. 20. Yorks. 750′. W.N.W. Fully exp. Sand. Corallian Rocks of the Middle Oolite. *Vaccinium Myrtillus, Ferns, Grasses, Calluna.*

P. 221.—MAIN CROP: A. 108 H. 87 G. 12½ N. 130 B.A. 142 V. 4865 F. ·394 B. 20. Yorks. 600′. W. Mod. shelt. Loam. Corallian Limestone of the Middle Oolite. *Pteris, Mercurialis, Rubus.*

P. 370.—MAIN CROP: A. 110 H. 84 G. 11 N. 235 B.A. 192 V. 6155 F. ·381 C. 38 B. 20. Aberdeen. 950′. N.E. Mod. exp. Sand. Glacial on Schists. *Pteris, Grass, Mosses.*

P. 46B.—MAIN CROP: A. 119 H. 87 G. 13 N. 210 B.A. 242 V. 7205 F. ·342 C. 40 B. 22. THINNINGS: N. 20 B.A. 8 V. 200. Perth. 1450′. S. Mod. exp. Sandy loam. Mica Schist. *Oxalis, Grasses, Pteris, Mosses.*

Quality Class IV—50-ft.

P. 403.—MAIN CROP: A. 18 H. 20 G. 2¼ N. 1485 B.A. 54 V. 200 F. ·186 C. 71 B. 26. Yorks. 770′. W.N.W. Fully exp. Sandy loam. Lower Oolite. *Grass, Pteris.*

P. 304.—MAIN CROP: A. 26 H. 29 G. 3 N. 1250 B.A. 83 V. 700 F. ·290 C. 41 B. 21. THINNINGS: N. 405 B.A. 8. Aberdeen. 850′. S. Mod. exp. Sand. Granite. *Oxalis, Grass, Pteris, Moss.*

S.P. 1.—MAIN CROP: A. 29 H. 29 G. 3¼ N. 1205 B.A. 89 V. 900 F. ·346 C. 33 B. 19. THINNINGS: N. 120 B.A. 4. Peebles. 1100′. N. Mod. exp. Loam. Silurian. *Oxalis, Grasses, Pteris, Mosses.*

P. 665.—MAIN CROP: A. 32 H. 33 G. 4 N. 905 B.A. 105 V. 1085 F. ·311 C. 44 B. 20. THINNINGS: N. 140 B.A. 6 V. 25. Glamorgan. 1250′. W. Fully exp. Sandy loam. Carboniferous. *Pteris.*

EUROPEAN LARCH—*contd.*

Quality Class IV—50-ft.—*contd.*

S.P. 26.—MAIN CROP: A. 35 H. 40 G. 4¾ N. 685 B.A. 113 V. 1590 F. ·353 C. 46 B. 20. THINNINGS: N. 210 B.A. 8. Aberdeen. 1050′. W. Mod. exp. Sandy loam. Granite. *Juniperus, Grasses, Mosses.*

P. 148.—MAIN CROP: A. 35 H. 39 G. 4¼ N. 645 B.A. 80 V. 1265 F. ·402 C. 37 B. 16. THINNINGS: N. 155 B.A. 9 V. 85. Cardigan. 900′. N. Mod. exp. Loam. Silurian. *Mosses.*

P. 132.—MAIN CROP: A. 36 H. 38 G. 5¾ N. 475 B.A. 105 V. 1315 F. ·331 C. 39 B. 24. THINNINGS: N. 85 B.A. 11 V. 130. Montgomeryshire. 1000′. S.S.E. Fully exp. Loam. Silurian. *Grass, Moss, Pteris.*

P. 286.—MAIN CROP: A. 36 H. 35 G. 4½ N. 760 B.A. 111 V. 1425 F. ·367 C. 53 B. 20. THINNINGS: N. 310 B.A. 10 V. 20. Banffshire. 750′. W. Mod. exp. Sandy loam. Foliated Granite. *Oxalis, Colluna, Vaccinium Myrtillus, Herbs, Mosses.* (Scanty.)

P. 646.—MAIN CROP: A. 36 H. 40½ G. 5¼ N. 595 B.A. 118 V. 1765 F. ·369 C. 39 B. 21. THINNINGS: N. 75 B.A. 7. Radnor. 1150′. S. Mod. exp. Loam. Silurian shale. *Pteris, Moss, Grass.*

P. 137.—MAIN CROP: A. 36 H. 40 G. 4¾ N. 720 B.A. 110 V. 1540 F. ·350 C. 37 B. 21. THINNINGS: N. 105 B.A. 9 V. 100. Brecknock. 1050′. N.W. Fully exp. Loam. Old Red Sandstone. *Moss, Grass.*

P. 690.—MAIN CROP: A. 36 H. 39 G. 3¾ N. 785 B.A. 81 V. 1050 F. ·332 C. 37 B. 20. THINNINGS: N. 85 B.A. 4. Shropshire. 350′. General. Mod. exp. Clay loam. Cambrian. *Rubus, Grass, Fern.*

P. 309.—MAIN CROP: A. 37 H. 42 G. 4½ N. 795 B.A. 113 V. 1755 F. ·369 C. 34 B. 21. THINNINGS: N. 95 B.A. 4 V. 20. Aberdeen. 650′. S.E. Mod. shelt. Sandy loam. Boulder Clay (Gneiss Debris) over Granite. *Oxalis, Grass, Pteris.*

S.P.S. 14.—MAIN CROP: A. 38 H. 43 G. 4¾ N. 815 B.A. 131 V. 2070 F. ·367 C. 31 B. 20. THINNINGS: N. 165 B.A. 10. Carnarvonshire. 500′. W. Fully exp. Loam. Silurian. *Digitalis, Mosses.*

P. 605.—MAIN CROP: A. 39 H. 36 G. 4¾ N. 730 B.A. 113 V. 1350 F. ·330 C. 38 B. 28. THINNINGS: N. 80 B.A. 4. Carnarvon. 550′. W. Fully exp. Loam. Silurian. *Moss, Digitalis, Hedera.*

S.P.Y. 52.—MAIN CROP: A. 40 H. 40 G. 5 N. 535 B.A. 97 V. 1445 F. ·372 C. 39 B. 20. THINNINGS: N. 80 B.A. 7. Carmarthen. 840′. N.W. Mod. exp. Sandy loam. Silurian. *Grass, Oxalis, Ferns.*

S.P.S. 22.—MAIN CROP: A. 41 H. 43 G. 5 N. 740 B.A. 130 V. 2080 F. ·373 C. 33 B. 24. THINNINGS: N. 35 B.A. 3 V. 35. Brecknock. 950′. N. Mod. exp. Loam. Silurian shales. *Moss.*

S.P.S. 11.—MAIN CROP: A. 42 H. 45 G. 4¾ N. 695 B.A. 111 V. 1825 F. ·364 C. 35 B. 19. THINNINGS: N. 10 B.A. 1. Sussex. 350′. S. Mod. exp. Sand. Lower Greensand. *Pteris.* (Scanty.)

P. 340.—MAIN CROP: A. 43 H. 49 G. 5¾ N. 475 B.A. 109 V. 1825 F. ·342 C. 39 B. 23. THINNINGS: N. 40 B.A. 3 V. 30. Aberdeen. 1100′. N.E. Mod. exp. Sandy loam. Epidiorite Hornblende Schist. *Oxalis, Vaccinium vitis-idœa, Trientalis, Grass, Mosses.*

P. 342.—MAIN CROP: A. 44 H. 42 G. 5½ N. 635 B.A. 128 V. 1870 F. ·348 C. 41 B. 19. THINNINGS: N. 315 B.A. 17 V. 155. Aberdeen. 1300′. N.W. Mod. exp. Sandy loam. Epidiorite Hornblende Schist. *Oxalis, Vaccinium vitis-idœa and V. Myrtillus, Herbs, Grass, Moss.* (Scanty.)

S.P.Y. 54.—MAIN CROP: A. 45 H. 49 G. 6¾ N. 320 B.A. 98 V. 2145 F. ·448 C. 41 B. 21. THINNINGS: N. 30 B.A. 6. Carmarthen. 950′. N.N.E. Mod. exp. Loam. Silurian. *Grass, Galium saxatile, Fern, Moss.* (Scanty.)

EUROPEAN LARCH—*contd.*

Quality Class IV—50-ft.—*contd.*

P. 395.—MAIN CROP: A. 46 H. 46 G. 5¾ N. 585 B.A. 126 V. 2145 F. ·370 C. 34 B. 18. THINNINGS: N. 90 B.A. 14 V. 240. Somerset. 1050′. N.N.W. Mod. exp. Loam. Old Red Sandstone. *Oxalis, Grass.*

P. 393.—MAIN CROP: A. 46 H. 49 G. 5¼ N. 510 B.A. 100 V. 1940 F. ·395 C. 27 B. 22. THINNINGS: N. 125 B.A. 13 V. 200. Somerset. 900′. W.N.W. Mod. exp. Sandy loam. Old Red Sandstone. *Grass, Moss, Oxalis, Vaccinium Myrtillus, Pteris.* (Scanty.)

P. 168.—MAIN CROP: A. 46 H. 47 G. 6 N. 380 B.A. 94 V. 1410 F. ·318 C. 42 B. 25. Aberdeen. 600′. N. Mod. shelt. Sandy loam. Granite. *Oxalis, Grasses, Mosses.*

S.P.Y. 39.—MAIN CROP: A. 48 H. 48 G. 6½ N. 355 B.A. 107 V. 1715 F. ·333 C. 37 B. 23. THINNINGS: N. 30 B.A. 3. Denbigh. 400′. N. Fully shelt. Sandy loam. Silurian. *Pteris.*

S.P.S. 17.—MAIN CROP: A. 48 H. 50 G. 6 N. 550 B.A. 137 V. 2870 F. ·418 C. 30 B. 19. THINNINGS: N. 50 B.A. 6. Brecknock. 1250′. S. Mod. shelt. Sandy loam. Silurian. *Pteris, Moss, Grass, Vaccinium Myrtillus.* (Scanty.)

P. 416.—MAIN CROP: A. 49 H. 50 G. 6¼ N. 505 B.A. 136 V. 2460 F. ·361 C. 37 B. 21. THINNINGS: N. 20 B.A. 3. Yorks. 450′. S.W. Mod. exp. Sandy loam. Millstone Grit. *Grass.* (Scanty.)

S.P. 1.—MAIN CROP: A. 50 H. 54 G. 7¼ N. 360 B.A. 132 V. 2520 F. ·354 C. 41 B. 21. Brecknock. 1050′. N.W. Fully exp. Loam. Old Red Sandstone. *Grass, Pteris, Digitalis.*

P. 410.—MAIN CROP: A. 50 H. 48 G. 7 N. 330 B.A. 112 V. 1700 F. ·315 C. 55 B. 22. THINNINGS: N. 80 B.A. 5 V. 35. Forfar. 700′. N.E. Mod. shelt. Sandy loam. Old Red Conglomerate. *Vaccinium Myrtillus, Grass, Moss.*

P. 259.—MAIN CROP: A. 51 H. 55 G. 8½ N. 255 B.A. 127 V. 2255 F. ·322 B. 21. THINNINGS: N. 20 B.A. 4. Lancashire. 570′. S.S.W. Fully exp. Loam. Silurian. *Pteris, Grass, Moss.*

P. 360.—MAIN CROP: A. 52 H. 48 G. 6¼ N. 525 B.A. 138 V. 2300 F. ·347 C. 30 B. 24. THINNINGS: N. 122 B.A. 14 V. 190. Devon. 900′. S.E. Mod. exp. Peaty loam on loam. Granite. *Grass, Digitalis.*

P. 350.—MAIN CROP: A. 53 H. 52 G. 6¾ N. 480 B.A. 148 V. 2785 F. ·360 C. 29 B. 21. THINNINGS: N. 35 B.A. 8. Devon. 1000′. S.S.E. Mod. exp. Loam. Granite. *Oxalis, Digitalis, Rubus.*

P. 330.—MAIN CROP: A. 53 H. 56 G. 5½ N. 585 B.A. 119 V. 2750 F. ·413 C. 22 B. 22. THINNINGS: N. 190 B.A. 24 V. 520. Devon. 900′. N.W. Mod. exp. Clay. Millstone Grit. *Grass, Oxalis.*

P. 97.—MAIN CROP: A. 53 H. 52 G. 6½ N. 725 B.A. 209 V. 3970 F. ·365 C. 33 B. 18. THINNINGS: N. 195 B.A. 18 V. 205. Ross. 900′. S.W. Fully exp. Sandy loam. Moine Schist. *Oxalis, Moss.*

P. 151.—MAIN CROP: A. 53 H. 52 G. 6½ N. 380 B.A. 112 V. 2155 F. ·371 C. 38 B. 23. THINNINGS: N. 15 B.A. 2 V. 40. Cardigan. 1120′. S.E. Fully exp. Loam. Silurian. *Grass, Moss.* (Scanty.)

P. 145.—MAIN CROP: A. 55 H. 53 G. 7¼ N. 250 B.A. 93 V. 1930 F. ·391 C. 44 B. 20. Cardigan. 1050′. N. Mod. exp. Loam. Silurian. *Grass, Moss.* (Scanty.)

P. 178.—MAIN CROP: A. 55 H. 50 G. 6¼ N. 525 B.A. 141 V. 2640 F. ·374 C. 33 B. 25. THINNINGS: N. 55 B.A. 5 V. 70. Kincardine. 950′. S.W. Mod. exp. Sandy loam. Granite. *Oxalis, Grass, Pteris, Moss.* (Scanty.)

EUROPEAN LARCH—*contd.*

Quality Class IV—50-ft.—*contd.*

P. 230.—MAIN CROP: A. 55 H. 59 G. 6¼ N. 425 B.A. 120 V. 2725 F. ·385 C. 33 B. 20. THINNINGS: N. 90 B.A. 10 V. 170. Yorks. 400′. N. Mod. exp. Sandy loam. Corallian. Middle Oolite. *Grass, Oxalis.*

P. 404.—MAIN CROP: A. 55 H. 53 G. 6¾ N. 295 B.A. 94 V. 1895 F. ·379 C. 49 B. 21. THINNINGS: N. 95 B.A. 10 V. 80. Forfar. 900′. E. Mod. exp. Loam. Boulder Clay on Schistose Grits. *Oxalis, Galium, Grass, Moss.*

P. 153.—MAIN CROP: A. 56 H. 50 G. 5½ N. 550 B.A. 113 V. 2130 F. ·375 C. 34 B. 27. THINNINGS: N. 65 B.A. 6 V. 75. Kincardine. 800′. S. Mod. exp. Sandy loam. Gneiss. *Grass, Pteris, Moss.*

P. 194.—MAIN CROP: A. 56 H. 58 G. 7 N. 325 B.A. 111 V. 2495 F. ·387 C. 27 B. 20. Beds. 330′. W. Mod. exp. Sand. Lower Greensand. *Grass, Pteris.*

P. 626.—MAIN CROP: A. 57 H. 56 G. 7¼ N. 360 B.A. 127 V. 2695 F. ·378 C. 32 B. 16. THINNINGS: N. 85 B.A. 19. Carmarthen. 850′. S.W. Mod. exp. Loam. Silurian. *Grass, Moss.*

P. 402.—MAIN CROP: A. 57 H. 58 G. 8 N. 240 B.A. 105 V. 2275 F. ·372 C. 46 B. 22. Forfar. 1000′. W. Fully exp. Clay loam. Schistose Grits. *Galium, Luzula, Grass, Pteris, Moss.*

S.P. 9.—MAIN CROP: A. 58 H. 60 G. 6½ N. 310 B.A. 94 V. 2385 F. ·425 C. 32 B. 22. Brecknock. 950′. N. Mod. Shelt. Sandy loam. Old Red Sandstone. *Moss, Grass, Pteris.*

P. 645.—MAIN CROP: A. 58 H. 53 G. 7¾ N. 365 B.A. 148 V. 2845 F. ·363 C. 36 B. 21. THINNINGS: N. 15 B.A. 2. Radnor. 1350′. N.N.W. Mod. exp. Sandy loam. Silurian shale. *Grass, Galium saxatile.* (Scanty.)

P. 144.—MAIN CROP: A. 58 H. 55 G. 8½ N. 200 B.A. 100 V. 1990 F. ·362 C. 43 B. 21. Cardigan. 950′. N. Mod. exp. Loam. Silurian. *Grass, Moss.*

P. 411.—MAIN CROP: A. 59 H. 54 G. 7 N. 350 B.A. 120 V. 2490 F. ·386 C. 31 B. 21. THINNINGS: N. 130 B.A. 28 V. 450. Yorks. 850′. W.N.W. Fully exp. Sandy loam. Millstone Grit. *Pteris, Grass.* (Scanty.)

S.P. 55.—MAIN CROP: A. 60 H. 59 G. 9¾ N. 214 B.A. 140 V. 3195 F. ·386 C. 45 B. 24. Wigtown. 200′. S.W. Fully exp. Loam. Boulder Clay on Ordovician. *Oxalis, Digitalis, Grass, Ferns.*

S.P. 54.—MAIN CROP: A. 60 H. 61 G. 9¼ N. 280 B.A. 163 V. 3635 F. ·364 C. 47 B. 19. Wigtown. 200′. S.W. Fully exp. Loam. Boulder Clay on Ordovician. *Oxalis, Digitalis, Grass, Ferns.*

S.P.Y. 6.—MAIN CROP: A. 60 H. 58 G. 7¾ N. 280 B.A. 120 V. 2650 F. ·380 C. 32 B. 17. THINNINGS: N. 40 B.A. 7. Yorks. 800′. N.E. Mod. exp. Loam. Millstone Grit. *Grass.*

P. 297.—MAIN CROP: A. 60 H. 59 G. 8 N. 265 B.A. 118 V. 2540 F. ·364 C. 39 B. 23. Moray. 400′. S.W. Mod. exp. Sandy loam. Boulder Clay on Quartzite. *Oxalis, Rubus, Erica cinerea, Grass, Pteris, Moss.*

P. 50.—MAIN CROP: A. 60 H. 61 G. 7¼ N. 395 B.A. 145 V. 3310 F. ·373 C. 34 B. 24. THINNINGS: N. 30 B.A. 4 V. 65. Moray. 1150′. S.E. Mod. exp. Sandy loam. Morainic Drift on Granite. *Vaccinium vitis-idœa, Grass, Moss.* (Scanty.)

P. 238.—MAIN CROP: A. 62 H. 59 G. 7¾ N. 340 B.A. 146 V. 3150 F. ·365 C. 32 B. 19. THINNINGS: N. 75 B.A. 12 V. 210. Durham. 760′. Fully exp. Sandy loam. Coal Measures. *Grass, Pteris, Oxalis.*

EUROPEAN LARCH—*contd.*

Quality Class IV—50-ft.—*contd.*

P. 644.—MAIN CROP: A. 64 H. 60 G. 7¾ N. 330 B.A. 139 V. 3325 F. ·400 C. 29 B. 22. THINNINGS: N. 5 B.A. 1. Radnor. 1350′. N.N.E. Mod. shelt. Sandy loam. Silurian Shale. *Grass, Galium saxatile.*

P. 7B.—MAIN CROP: A. 66 H. 62 G. 9¾ N. 230 B.A. 154 V. 3080 F. ·323 C. 62 B. 25. THINNINGS: N. 26 B.A. 6 V. 110. Nairn. 600′. S. Mod. exp. Sandy loam. Glacial Sand and Gravel on Moine Schist. *Calluna, Grass, Moss.*

P. 213.—MAIN CROP: A. 67 H. 62 G. 10½ N. 155 B.A. 123 V. 2570 F. ·337 C. 46 B. 19. Peebles. 1300′. E. Mod. shelt. Sandy loam. Silurian Grits and Shales. *Oxalis, Grass, Moss.*

P. 19B.—MAIN CROP: A. 71 H. 65 G. 10 N. 230 B.A. 160 V. 3165 F. ·304 C. 47 B. 25. Ross. 250′. S.W. Mod. exp. Sandy loam. Morainic Drift over Siliceous Schist. *Oxalis, Grass, Moss.*

P. 395.—MAIN CROP: A. 72 H. 64 G. 8¾ N. 300 B.A. 159 V. 3695 F. ·353 C. 50 B. 11. THINNINGS: N. 55 B.A. 11 V. 185. Kincardine. 400′. N. Mod. exp. Sandy loam. Boulder Clay on Old Red Conglomerate. *Herbs, Grass, Moss.*

P. 231.—MAIN CROP: A. 72 H. 60 G. 7¾ N. 300 B.A. 126 V. 2905 F. ·384 C. 27 B. 23. THINNINGS: N. 30 B.A. 6 V. 100. Yorks. 600′. E.S.E. Fully exp. Clay. Middle Oolite. *Grass, Ferns.*

P. 18B.—MAIN CROP: A. 73 H. 69 G. 9¾ N. 235 B.A. 152 V. 3565 F. ·340 C. 44 B. 23. Ross. 350′. S. Mod. shelt. Sandy loam. Morainic Drift over Siliceous Schist. *Oxalis, Grass, Pteris, Moss.*

P. 16B.—MAIN CROP: A. 75 H. 68 G. 10¼ N. 200 B.A. 145 V. 3240 F. ·328 C. 42 B. 23. THINNINGS: N. 20 B.A. 5 V. 85. Ross. 300′. W. Mod. shelt. Sandy loam. Morainic Drift over Siliceous Schists. *Oxalis, Grass, Pteris, Moss.*

P. 357.—MAIN CROP: A. 75 H. 70 G. 9½ N. 210 B.A. 132 V. 3305 F. ·358 C. 36 B. 23. THINNINGS: N. 20 B.A. 4 V. 100. Aberdeen. 1050′. N. Mod. exp. Loam. Sand and gravel on Gneiss. *Oxalis, Vaccinium vitis-idæa and V. Myrtillus, Grass, Moss.*

P. 679.—MAIN CROP: A. 75 H. 69 G. 9½ N. 150 B.A. 94 V. 2410 F. ·372 C. 26 B. 18. Stafford. 320′. W. Mod. exp. Sand. Lower Trias. *Pteris, Moss.*

P. 346.—MAIN CROP: A. 77 H. 72 G. 9¾ N. 230 B.A. 150 V. 3565 F. ·329 C. 30 B. 22. THINNINGS: N. 30 B.A. 11 V. 175. Devon. 600′. S.S.W. Fully shelt. Loam. Millstone Grit. *Pteris, Rubus, Hedera.*

P. 208.—MAIN CROP: A. 77 H. 63 G. 8¾ N. 245 B.A. 127 V. 3165 F. ·397 C. 29 B. 21. Peebles. 1450′. N.E. Mod. shelt. Sandy loam. Grits and Debris on Silurian. *Oxalis, Grass, Pteris, Moss.*

P. 207.—MAIN CROP: A. 77 H. 64 G. 8½ N. 215 B.A. 111 V. 2635 F. ·372 C. 33 B. 24. THINNINGS: N. 15 B.A. 3 V. 50. Peebles. 1350′. E. Mod. shelt. Sandy loam. Grits and Debris on Silurian. *Oxalis, Grass, Pteris, Moss.*

P. 206.—MAIN CROP: A. 79 H. 70 G. 9¾ N. 165 B.A. 110 V. 2920 F. ·380 C. 38 B. 22. Peebles. 1250′. E. Mod. shelt. Sandy loam. Grits and Debris on Silurian. *Oxalis, Pteris, Grass, Moss.*

P. 353.—MAIN CROP: A. 88 H. 69 G. 10½ N. 240 B.A. 181 V. 4380 F. ·351 C. 30 B. 19. THINNINGS: N. 40 B.A. 6 V. 175. Devon. 750′. W.S.W. Mod. shelt. Peaty loam. Granite. *Pteris, Oxalis, Scilla nutans, Moss.*

EUROPEAN LARCH—*contd.*

Quality Class IV—50-ft.—*contd.*

P. 226.—MAIN CROP: A. 93 H. 72 G. 9¼ N. 230 B.A. 135 V. 3770 F. ·388 C. 39 B. 24. Berwick. 700′. N. Mod. exp. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis, Digitalis, Grass, Fern.*

P. 31.—MAIN CROP: A. 123 H. 92 G. 14½ N. 135 B.A. 201 V. 6335 F. ·343 C. 40 B. 22. Moray. 350′. N.E. Fully shelt. Sand. Boulder Clay on Quartzite. *Oxalis, Erica cinerea, Grass, Ferns, Moss.*

Quality Class V—40-ft.

P. 334.—MAIN CROP: A. 39 H. 36 G. 4 N. 865 B.A. 93 V. 1105 F. ·330 C. 44 B. 22. THINNINGS: N. 135 B.A. 6 V. 50. Aberdeen. 1250′. W. Mod. shelt. Sandy loam. Knotted Andalusite Schist. *Vaccinium vitis-idæa, Grass, Moss.*

P. 617.—MAIN CROP: A. 41 H. 37 G. 4 N. 945 B.A. 108 V. 1395 F. ·349 C. 30 B. 24. THINNINGS: N. 460 B.A. 22. Denbigh. 900′. W. Fully exp. Sandy loam. Ordovician. *Moss, Grass, Pteris.*

P. 101.—MAIN CROP: A. 44 H. 36 G. 4 N. 1050 B.A. 114 V. 1520 F. ·370 C. 40 B. 23. Merioneth. 1250′. N. Mod. shelt. Clay loam. Ordovician. *Grass, Moss.*

S.P.Y. 5.—MAIN CROP: A. 45 H. 40 G. 5 N. 480 B.A. 85 V. 1300 F. ·385 C. 43 B. 22. THINNINGS: N. 90 B.A. 9. Yorks. 710′. E. Fully shelt. Clay loam. Lias. *Scilla, Oxalis, Aspidium spinulosum.*

S.P. 114.—MAIN CROP: A. 46 H. 36 G. 4¾ N. 790 B.A. 118 V. 1295 F. ·306 C. 45 B. 25. THINNINGS: N. 160 B.A. 12 V. 60. Somerset. 1150′. S. Fully exp. Loam. Devonian. *Moss, Oxalis.*

P. 392.—MAIN CROP: A. 46 H. 41 G. 4¾ N. 770 B.A. 119 V. 1615 F. ·331 C. 30 B. 24. THINNINGS: N. 230 B.A. 17 V. 170. Somerset. 1000′. N.W. Mod. exp. Loam. Devonian. *Oxalis, Moss.*

P. 321.—MAIN CROP: A. 49 H. 39 G. 5¾ N. 420 B.A. 94 V. 1345 F. ·367 C. 56 B. 24. THINNINGS: N. 95 B.A. 4 V. 15. Aberdeen. 1200′. S. Fully exp. Sandy loan. Knotted Andalusite Schist. *Vaccinium Myrtillus, Grasses, Mosses.*

P. 335.—MAIN CROP: A. 50 H. 43 G. 5 N. 555 B.A. 105 V. 1700 F. ·377 C. 45 B. 21. THINNINGS: N. 125 B.A. 6 V. 5. Aberdeen. 950′. N.E. Fully exp. Sandy loam. Epidiorite Hornblende Schist. *Oxalis. Rubus fruticosus, Grass, Moss.*

S.P. 34.—MAIN CROP: A. 52 H. 45 G. 7½ N. 250 B.A. 99 V. 1580 F. ·356 C. 28 B. 23. Cumberland. 1200′. S.W. Fully exp. Loam. Skiddaw slates. *Pteris, Grass, Moss.*

P. 255.—MAIN CROP: A. 53 H. 47 G. 7¼ N. 310 B.A. 108 V. 1870 F. ·369 C. 36 B. 23. Cumberland. 1100′. S.W. Fully exp. Loam. Skiddaw slates. *Pteris, Grass.*

S.P. 19.—MAIN CROP: A. 53 H. 45 G. 5½ N. 560 B.A. 121 V. 2155 F. ·395 C. 34 B. 22. THINNINGS: N. 100 B.A. 9. Yorks. 500′. N. Mod. exp. Sandy loam. Corallian. Middle Oolite. *Grass, Oxalis.*

S.P. 26.—MAIN CROP: A. 56 H. 44 G. 4½ N. 650 B.A. 93 V. 1490 F. ·364 C. 26 B. 23. THINNINGS: N. 100 B.A. 9. Yorks. 350′. N.N.E. Mod. exp. Loam. *Chalk, Sambucus, Urtica, Herbs.*

P. 237.—MAIN CROP: A. 64 H. 49 G. 6½ N. 410 B.A. 118 V. 2110 F. ·365 C. 40 B. 23. THINNINGS: N. 30 B.A. 4 V. 35. Durham. 950′. S.W. Mod. shelt. Sandy loam. Coal Measures. *Grass, Oxalis.*

EUROPEAN LARCH—*contd.*

Quality Class V—40-ft.—*contd.*

S.P. 31.—MAIN CROP: A. 69 H. 56 G. 7¼ N. 370 B.A. 132 V. 2460 F. ·332 C. 39 B. 22. THINNINGS: N. 20 B.A. 2. Durham. 800′. W. Fully exp. Sand. , Coal Measures. *Grass, Oxalis.*

P. 609.—MAIN CROP: A. 69 H. 54 G. 6¼ N. 530 B.A. 147 V. 2965 F. ·373 C. 24 B. 22. THINNINGS: N. 30 B.A. 5. Denbigh. 1075′. General. Fully exp. Clay. Silurian. *Oxalis, Grass, Moss.*

P. 243.—MAIN CROP: A. 75 H. 61 G. 7¾ N. 295 B.A. 125 V. 2880 F. ·379 C. 28 B. 21. THINNINGS: N. 45 B.A. 10 V. 145. Durham. 880′. N. Mod. exp. Sandy loam. Coal Measures. *Grass, Oxalis.* (Scanty.)

P. 348.—MAIN CROP: A. 79 H. 61 G. 8¼ N. 240 B.A. 112 V. 2380 F. ·349 C. 35 B. 24. THINNINGS: N. 20 B.A. 4 V. 55. Aberdeen. 1200′. N.E. Fully exp. Sandy loam. Coarse Gneiss. *Vaccinium vitis-idœa, Luzula silvatica, Grass, Ferns, Moss.*

P. 290.—MAIN CROP: A. 79 H. 62 G. 8¼ N. 275 B.A. 126 V. 2760 F. ·353 C. 40 B. 22. THINNINGS: N. 55 B.A. 6 V. 65. Aberdeen. 800′. N.W. Mod. exp. Sandy loam. Troctolite. *Oxalis, Grass, Moss.*

P. 19.—MAIN CROP: A. 86 H. 60 G. 10 N. 125 B.A. 87 V. 1695 F. ·324 C. 54 B. 24. Perth. 1400′. N.E. Mod. exp. Sandy loam. Mica Schist. *Vaccinium Myrtillus and V. vitis-idœa, Grass, Moss.*

P. 367.—MAIN CROP: A. 89 H. 62 G. 9½ N. 195 B.A. 121 V. 2585 F. ·345 C. 45 B. 22. Aberdeen. 1100′. General. Fully shelt. Sandy loam. Sand and Gravel on Moine Gneiss. *Grass, Moss.*

P. 17.—MAIN CROP: A. 90 H. 66 G. 9½ N. 135 B.A. 85 V. 2105 F. ·377 C. 42 B. 24. Perth. 1250′. E. Mod. exp. Sandy loam. Mica Schist. *Vaccinium Myrtillus and V. vitis-idœa, Grass, Ferns, Moss.*

P. 689.—MAIN CROP: A. 90 H. 58 G. 9¾ N. 175 B.A. 113 V. 2455 F. ·374 C. 27 B. 23. Shropshire. 1150′. General. Fully exp. Sandy loam. Volcanic. *Grass, Pteris.*

P. 18.—MAIN CROP: A. 91 H. 62 G. 10¼ N. 130 B.A. 96 V. 2035 F. ·341 C. 49 B. 24. Perth. 1150′. E. Mod. exp. Sandy loam. Mica Schists. *Vaccinium Myrtillus and V. vitis-idœa, Grass, Moss.*

P. 336.—MAIN CROP: A. 91 H. 65 G. 10¼ N. 155 B.A. 111 V. 2300 F. ·319 C. 57 B. 23. Aberdeen. 1400′. N.E. Mod. shelt. Sandy loam. Epidiorite Hornblende Schist. *Oxalis, Vaccinium Myrtillus and V. vitis-idœa, Grass, Moss.*

P. 688.—MAIN CROP: A. 93 H. 67 G. 10¾ N. 155 B.A. 123 V. 3015 F. ·366 C. 33 B. 22. Shropshire. 1300′. S.S.E. Fully exp. Sandy loam. Volcanic. *Pteris, Grass.*

P. 150.—MAIN CROP: A. 93 H. 66 G. 10¼ N. 190 B.A. 142 V. 3170 F. ·338 C. 35 B. 23. THINNINGS: N. 5 B.A. 1. Cardigan. 1150′. S. Fully Exp. Loam. Silurian. *Moss, Grass.*

P. 355.—MAIN CROP: A. 93 H. 69 G. 8¾ N. 300 B.A. 158 V. 4185 F. ·383 C. 43 B. 21. THINNINGS: N. 120 B.A. 22 V. 365. Aberdeen. 1700′. N. Mod. exp. Loam. Quartzite. *Oxalis, Vaccinium vitis-idœa, Grass. Moss.*

P. 248.—MAIN CROP: A. 95 H. 70 G. 9¾ N. 165 B.A. 112 V. 2705 F. ·345 C. 45 B. 22. Dumfries. 800′. N.W. Fully exp. Sandy loam. Silurian. *Vaccinium vitis-idœa, Calluna, Grass, Moss.*

EUROPEAN LARCH—*contd.*

Quality Class V—40-ft.—*contd.*

P. 152.—MAIN CROP: A. 99 H. 52 G. 7¼ N. 315 B.A. 116 V. 2325 F. ·385 C. 37 B. 25. Cardigan, 1400′. E. Mod. exp. Loam. Silurian. *Moss, Aira flexuosa, Molinia caerulea.*

P. 147.—MAIN CROP: A. 115 H. 73 G. 10½ N. 205 B.A. 161 V. 4970 F. ·422 C. 28 B. 18. THINNINGS: N. 10 B.A. 5. Cardigan. 1150′. W.N.W. Fully exp. Loam. Silurian. *Moss, Grass.*

Below 40-ft. Class

P. 343.—MAIN CROP: A. 65 H. 34 G. 5½ N. 525 B.A. 106 V. 1195 F. ·333 C. 41 B. 28. THINNINGS: N. 90 B.A. 6 V. 35. Aberdeen. 1600′. E. Mod. exp. Sandy loam. Mica Gneiss. *Vaccinium Myrtillus, Grass, Moss.*

P. 640.—MAIN CROP: A. 65 H. 42 G. 5¼ N. 760 B.A. 146 V. 1855 F. ·302 C. 31 B. 26. THINNINGS: N. 115 B.A. 9 V. 90. Radnor. 1550′. E.S.E. Fully exp. Loam. Ordovician. *Galium saxatile.* (Scanty.)

S.P. 2.—MAIN CROP: A. 75 H. 49 G. 7¾ N. 345 B.A. 145 V. 2475 F. ·348 C. 37 B. 24. Peebles. 1600′. E. Fully exp. Sandy loam. Silurian Grit and Debris. *Oxalis, Vaccinium Myrtillus and V. vitis-idœa, Steris, Grass, Moss.* (Scanty.)

P. 20.—MAIN CROP: A. 77 H. 50 G. 8¾ N. 140 B.A. 76 V. 1280 F. ·336 C. 55 B. 23. Perth. 1500′. N.E. Mod. exp. Sandy loam. Mica Schist. *Oxalis, Vaccinium vitis-idœa, Grass, Moss.*

P. 400.—MAIN CROP: A. 83 H. 54 G. 7½ N. 395 B.A. 154 V. 2805 F. ·337 C. 41 B. 24. THINNINGS: N. 35 B.A. 6 V. 90. Forfar. 850′. S. Fully exp. Loam. Boulder Clay on Old Red Conglomerate. *Oxalis, Rumex, Grass, Moss.*

P. 341.—MAIN CROP: A. 85 H. 54 G. 8 N. 345 B.A. 153 V. 2785 F. ·337 C. 51 B. 24. THINNINGS: N. 10 B.A. 1 V. 5. Aberdeen. 1300′. Mod. exp. Sandy loam. Epidiorite Hornblende Schist. *Oxalis, Vaccinium vitis-idœa and V. Myrtillus, Luzula, Grass, Moss.*

P. 361.—MAIN CROP: A. 90 H. 53 G. 7½ N. 325 B.A. 126 V. 2245 F. ·337 C. 38 B. 21. THINNINGS: N. 25 B.A. 4 V. 50. Aberdeen. 1600′. W. Fully exp. Loam. Granite. *Vaccinium vitis-idœa and V. Myrtillus, Calluna, Grass, Moss.* (Scanty.)

P. 344.—MAIN CROP: A. 92 H. 45 G. 6¾ N. 475 B.A. 149 V. 2370 F. ·339 C. 48 B. 25. THINNINGS: N. 50 B.A. 5 V. 35. Aberdeen. 1700′. W. Fully exp. Sandy loam. Epidiorite Hornblende Schist. *Vaccinium Myrtillus and V. vitis-idœa, Galium, Luzula, Grass, Moss.*

P. 408.—MAIN CROP: A. 99 H. 59 G. 8½ N. 240 B.A. 117 V. 2370 F. ·343 C. 41 B. 25. Forfar. 1300′. S.W. Fully exp. Peat 6″–12″. Schistose Grits. *Oxalis, Vaccinium Myrtillus, Luzula, Grass, Moss.*

P. 369.—MAIN CROP: A. 106 H. 46 G. 7 N. 480 B.A. 159 V. 2325 F. ·316 C. 39 B. 25. THINNINGS: N. 85 B.A. 7 V. 45. Aberdeen. 2000′. N. Mod. exp. Sandy loam. *Vaccinium vitis-idœa, Grass, Moss.*

NORWAY SPRUCE

Quality Class I—80-ft.

S.P. 113.—MAIN CROP: A. 21 H. 36 G. 4¼ N. 920 B.A. 117 V. 1625 F. ·387 C. 59 B. 14. THINNINGS: N. 120 B.A. 5. Devon. 300′. S. Fully shelt. Loam. Devonian. Nil.

S.P.Y. 45.—MAIN CROP: A. 24 H. 42 G. 4½ N. 1015 B.A. 151 V. 2730 F. ·430 C. 49 B. 11. THINNINGS: N. 30 B.A. 22. Carmarthen. 100′. N.E. Fully shelt. Clay loam. Silurian. Nil.

P. 5.—MAIN CROP: A. 25 H. 40 G. 5½ N. 760 B.A. 161 V. 2805 F. ·435 C. 50 B. 11. THINNINGS: N. 190 B.A. 8 V. 45. Perth. 300′. W. Mod. exp. Sandy loam. Old Red Sandstone. Nil.

S.P. 44.—MAIN CROP: A. 27 H. 44 G. 5½ N. 765 B.A. 162 V. 2885 F. ·405 C. 52 B. 11. THINNINGS: N. 60 B.A. 4 V. 40. Wigtown. 250′. General. Mod. exp. Peat 6″–12″. Silurian Hard Greywacke. *Calluna, Pteris.*

P. 125.—MAIN CROP: A. 28 H. 50 G. 5¾ N. 730 B.A. 174 V. 3635 F. ·417 C. 49 B. 8. THINNINGS: N. 245 B.A. 20. Carmarthenshire. 600′. General. Mod. exp. 4″–10″ black peat on 6″ peaty loam. Silurian. Nil.

P. 4.—MAIN CROP: A. 33. H. 60 G. 7 N. 495 B.A. 170 V. 4510 F. ·442 C. 46 B. 11. THINNINGS: N. 35 B.A. 5 V. 55. Perth. 200′. N. Mod. exp. Sandy loam. Old Red Sandstone. Nil.

P. 3.—MAIN CROP: A. 34 H. 66 G. 8½ N. 280 B.A. 138 V. 3520 F. ·386 C. 56 B. 10. THINNINGS: N. 45 B.A. 7 V. 90. Perth. 150′. N.E. Fully shelt. Sandy loam. Old Red Sandstone. Nil.

P. 526.—MAIN CROP: A. 38 H. 63 G. 7¾ N. 345 B.A. 145 V. 3885 F. ·424 C. 46 B. 8. Northumberland. 450′. General. Fully shelt. Sandy loam. Carboniferous. Nil.

S.P.Y. 18.—MAIN CROP: A. 40 H. 69 G. 8¾ N. 300 B.A. 156 V. 5150 F. ·478 C. 41 B. 10. THINNINGS: N. 10 B.A. 4. Hants. 380′. N.E. Mod. shelt. Sandy loam. Lower Eocene. Nil.

P. 373.—MAIN CROP: A. 41 H. 76 G. 7¼ N. 295 B.A. 212 V. 7395 F. ·459 C. 41 B. 10. Devon. 420′. S. Fully shelt. Clay loam. Millstone Grit. Nil.

P. 6.—MAIN CROP: A. 42 H. 72 G. 9¾ N. 400 B.A. 265 V. 7315 F. ·383 C. 44 B. 11. Perth. 100′. S.W. Mod. exp. Sandy loam. Old Red Sandstone. Nil.

S.P.Y. 41.—MAIN CROP: A. 42 H. 72 G. 8 N. 390 B.A. 172 V. 6240 F. ·505 C. 41 B. 11. THINNINGS: N. 150 B.A. 43. Cardigan. 300′. N. Fully shelt. Clay loam. Ordovician. *Moss, Hedera.* (Scanty.)

P. 377.—MAIN CROP: A. 43 H. 69 G. 8½ N. 350 B.A. 179 V. 5765 F. ·466 C. 41 B. 10. THINNINGS: N. 5 B.A. 2. Devon. 100′. E. Fully shelt. Clay loam. Millstone Grit. Nil.

P. 67.—MAIN CROP: A. 44 H. 71 G. 8¼ N. 380 B.A. 179 V. 5430 F. ·428 C. 51 B. 10. Inverness. 300′. N. Fully shelt. Sandy loam. Granitized Moine Schist with Morainic Drift. *Oxalis, Ferns, Moss.*

P. 66.—MAIN CROP: A. 45 H. 78 G. 9¼ N. 350 B.A. 210 V. 7260 F. ·444 C. 47 B. 10. THINNINGS: N. 20 B.A. 2 V. 30. Inverness. 200′. N. Fully shelt. Sandy loam. Granitized Moine Schist with Morainic Drift. Nil.

P. 102.—MAIN CROP: A. 45 H. 75 G. 9¼ N. 370 B.A. 231. THINNINGS: N. 65 B.A. 13. Merioneth. 520′. E. Mod. shelt. Deep peat. Ordovician. Nil.

NORWAY SPRUCE—*contd.*

Quality Class I—80-ft.—*contd.*

S.P.Y. 43.—MAIN CROP: A. 46 H. 76 G. 9 N. 420 B.A. 239 V. 7945 F. ·438 C. 35 B. 9. THINNINGS: N. 135 B.A. 44. Carmarthen. 450′. E. Fully shelt. Peaty humus on clay loam. Ordovician. *Oxalis, Moss, Fern.*

P. 370.—MAIN CROP: A. 49 H. 78 G. 10¾ N. 235 B.A. 188 V. 6250 F. ·427 C. 36 B. 12. THINNINGS: N. 10 B.A. 5 V. 120. Devon. 400′. S. Fully shelt. Clay loam. Millstone Grit. *Pteris.* (Scanty.)

P. 372.—MAIN CROP: A. 51 H. 84 G. 10 N. 325 B.A. 226 V. 8010 F. ·423 C. 34 B. 10. THINNINGS: N. 55 B.A. 15. Devon. 200′. General. W. Fully shelt. Clay loam. Culm measures. *Hedera.* (Scanty.)

P. 83.—MAIN CROP: A. 52 H. 87 G. 13¾ N. 230 B.A. 303 V. 9535 F. ·362 C. 44 B. 9. Inverness. 300′. S. Mod. exp. Sandy loam. Morainic Drift, Moine type. *Oxalis, Moss.* (Scanty.)

P. 82.—MAIN CROP: A. 52 H. 83 G. 13½ N. 230 B.A. 294 V. 8950 F. ·367 C. 42 B. 9. Inverness. 300′. S. Mod. exp. Peat 6″–12″. Morainic Drift, Moine type. Nil.

P. 74.—MAIN CROP: A. 53 H. 90 G. 14¼ N. 230 B.A. 317 V. 10455 F. ·367 C. 40 B. 10. THINNINGS: N. 10 B.A. 3 V. 75 Inverness. 300′. S. Fully shelt. Sandy loam. Morainic Drift, Moine Type. *Oxalis, Moss.* (Scanty.)

Quality Class II—70-ft.

P. 399.—MAIN CROP: A. 27 H. 38 G. 6 N. 660 B.A. 161 V. 2425 F. ·397 C. 50 B. 11. THINNINGS: N. 85 B.A. 4 V. 20. Forfar. 250′. General. Mod. shelt. Clay loam. Boulder Clay on Old Red Sandstone. *Moss.*

P. 372.—MAIN CROP: A. 27 H. 41 G. 4½ N. 1220 B.A. 171 V. 2680 F. ·383 C. 48 B. 10. THINNINGS: N. 235 B.A. 8 V. 25. Aberdeen. 200′. West. Fully shelt. Clay loam. Boulder Clay on Old Red Sandstone. Nil.

S.P.Y. 84.—MAIN CROP: A. 29 H. 40 G. 4¼ N. 975 B.A. 125 V. 2575 F. ·502 C. 43 B. 12. THINNINGS: N. 255 B.A. 18. Wilts. 400′. N. Fully shelt. Loam. Lower Eocene. Nil.

P. 384.—MAIN CROP: A. 29 H. 45 G. 5¼ N. 885 B.A. 164 V. 2895 F. ·391 C. 51 B. 11. THINNINGS: N. 150 B.A. 9 V. 60. Kincardine. 500′. S. Mod. shelt. Loam. Boulder Clay on Mica Schist. *Moss.*

P. 231.—MAIN CROP: A. 30 H. 43 G. 5¾ N. 715 B.A. 158 V. 2710 F. ·399 C. 49 B. 12. THINNINGS: N. 110 B.A. 6. Berwick. 400′. General. Mod. shelt. Sandy loam. Boulder Clay on Calciferous Sandstone. *Grass, Fern, Moss.*

P. 130.—MAIN CROP: A. 35 H. 49 G. 6½ N. 610 B.A. 180 V. 4120 F. ·467 C. 42 B. 9. THINNINGS: N. 25 B.A. 1. Ayr. 600′. S. Mod. exp. Loam. Boulder Clay on Old Red Sandstone. Nil.

P. 368.—MAIN CROP: A. 35 H. 53 G. 8 N. 360 B.A. 165 V. 4095 F. ·469 C. 42 B. 12. Devon. 500′. S. Mod. exp. Clay. Millstone Grit. Nil.

S.P.S. 3.—MAIN CROP: A. 36 H. 51 G. 8¾ N. 335 B.A. 176 V. 4080 F. ·456 C. 58 B. 9. Northumberland. 400′. N.E. Fully shelt. Peat and peaty loam. Carboniferous. Nil.

P. 94.—MAIN CROP: A. 37 H. 53 G. 6¼ N. 800 B.A. 220 V. 5100 F. ·427 C. 35 B. 7. THINNINGS: N. 35 B.A. 3 V. 40. Inverness. 550′. N. Mod. exp. Clay loam. Old Red Sandstone. Nil.

NORWAY SPRUCE—*contd.*

Quality Class II—70-ft.—*contd.*

P. 95.—MAIN CROP: A. 37 H. 53 G. 6½ N. 705 B.A. 209 V. 4380 F. ·396 C. 41 B. 8. THINNINGS: N. 25 B.A. 3 V. 40. Inverness. 600′. N. Mod. exp. Clay loam. Old Red Sandstone. Nil.

P. 93.—MAIN CROP: A. 37 H. 53 G. 6½ N. 630 B.A. 178 V. 4255 F. ·451 C. 37 B. 11. THINNINGS: N. 35 B.A. 2 V. 25. Inverness. 550′. N. Mod. exp. Clay loam. Old Red Sandstone. Nil.

P. 394.—MAIN CROP: A. 37 H. 50 G. 6½ N. 475 B.A. 138 V. 3105 F. ·451 C. 47 B. 8. THINNINGS: N. 25 B.A. 3 V. 50. Forfar. 400′. N. Mod. shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis. Viola, Luzula, Moss.*

P. 301.—MAIN CROP: A. 38 H. 53 G. 7 N. 680 B.A. 234 V. 5530 F. ·446 C. 37 B. 10. THINNINGS: N. 115 B.A. 15 V. 310. Aberdeen. 650′. S. Fully shelt. Sandy loam. Thin Boulder Clay on Granite. *Moss.* (Scanty.)

P. 202.—MAIN CROP: A. 38 H. 52 G. 6¼ N. 555 B.A. 151 V. 3295 F. ·412 C. 50 B. 10. THINNINGS: N. 110 B.A. 7. Peebles. 600′. N.E. Mod. shelt. Clay loam. Fluvio-glacial sand and gravel on Silurian. *Oxalis, Moss.* (Scanty.)

P. 613.—MAIN CROP: A. 41 H. 62 G. 8 N. 485 B.A. 216 V. 5530 F. ·413 C. 35 B. 10. THINNINGS: N. 20 B.A. 6. Merioneth. 630′. S. Mod. exp. Sandy loam. Ordovician. Nil.

P. 191.—MAIN CROP: A. 42 H. 57 G. 6 N. 705 B.A. 180 V. 4335 F. ·423 C. 34 B. 12. THINNINGS: N. 55 B.A. 7 V. 105. Dorset. 500′. S.W. Mod. exp. Clay loam. Chalk. Nil.

S.P.Y. 50.—MAIN CROP: A. 43 H. 64 G. 9¾ N. 290 B.A. 198 V. 6130 F. ·484 C. 41 B. 12. THINNINGS: N. 20 B.A. 4. Carmarthen. 320′. S. Fully shelt. Sandy loam. Ordovician. Nil.

P. 161.—MAIN CROP: A. 43 H. 62 G. 7½ N. 500 B.A. 202 V. 5570 F. ·445 C. 43 B. 8. Kincardine. 300′. W. Fully shelt. Sand. Gneiss. *Oxalis.* (Scanty.)

P. 675.—MAIN CROP: A. 44 H. 66 G. 10 N. 220 B.A. 157 V. 4465 F. ·431 C. 56 B. 8.—THINNINGS: N. 20 B.A. 3. Shropshire. 1300′. E.N.E. Fully shelt. Sandy loam. Old Red Sandstone. Nil.

P. 68.—MAIN CROP: A. 44 H. 65 G. 7½ N. 400 B.A. 160 V. 4565 F. ·439 C. 47 B. 9. THINNINGS: N. 30 B.A. 3 V. 55. Inverness. 250′. N. Fully shelt. Sandy loam. Granitized Moine Schist with Morainic Drift. Nil.

P. 522.—MAIN CROP: A. 45 H. 61 G. 8¼ N. 390 B.A. 184 V. 4530 F. ·403 C. 48 B. 9. THINNINGS: N. 20 B.A. 4. Cumberland. 150′. General. Mod. exp. Peat and peaty loam. Permian. Nil.

S.P.Y. 59.—MAIN CROP: A. 46 H. 71 G. 11¾ N. 210 B.A. 198 V. 5720 F. ·408 C. 46 B. 12. THINNINGS: N. 15 B.A. 9. Montgomery. 50′. E. Fully shelt. Loam. Ordovician. *Sambucus.* (Scanty.)

P. 376.—MAIN CROP: A. 47 H. 70 G. 8½ N. 330 B.A. 165 V. 5240 F. ·454 C. 55 B. 10. THINNINGS: N. 30 B.A. 5. Devon. 200′. General. Mod. shelt. Clay. Millstone Grit. Nil.

S.P. 21.—MAIN CROP: A. 48 H. 64 G. 9⅛ N. 515 B.A. 313 V. 7410 F. ·370 C. 42 B. 12. THINNINGS: N. 75 B.A. 12 V. 260. Aberdeen. 550′. General. Fully shelt. Sandy loam. Boulder Clay on Granite. *Oxalis, Moss.* (Scanty.)

NORWAY SPRUCE—*contd.*

Quality Class II—70-ft.—*contd.*

P. 140.—MAIN CROP: A. 48 H. 65 G. 9 N. 275 B.A. 154 V. 4485 F. ·448 C. 53 B. 10. Cardigan. 100′. General. Fully shelt. Loam. Ordovician. *Moss, Fern.* (Scanty.)

P. 229.—MAIN CROP: A. 48 H. 71 G. 8¾ N. 365 B.A. 196 V. 5695 F. ·409 C. 35 B. 9. THINNINGS: N. 5 B.A. 1. Yorks. 150′. W. Mod. exp. Clay loam. Middle Oolite. Nil.

P. 340.—MAIN CROP: A. 48 H. 64 G. 9¼ N. 310 B.A. 179 V. 4530 F. ·396 C. 44 B. 10. Devon. 900′. N.N.E. Mod. shelt. Peat loam. Granite. *Grass, Vaccinium Myrtillus, Rubus fruticosus.*

P. 244.—MAIN CROP: A. 51 H. 67 G. 10 N. 360 B.A. 245 V. 6690 F. ·408 C. 46 B. 10. THINNINGS: N. 20 B.A. 3 V. 70. Dumfries. 850′. N.E. Mod. shelt. Clay loam. Boulder Clay over Ordovician shales. *Moss.*

S.P.S. 8.—MAIN CROP: A. 52 H. 68 G. 11 N. 185 B.A. 155 V. 4355 F. ·413 C. 42 B. 12. Sussex. 300′. W. Fully shelt. Clay loam. Hastings Beds. Nil.

P. 172.—MAIN CROP: A. 54 H. 69 G. 10 N. 305 B.A. 209 V. 5965 F. ·414 C. 41 B. 9. Kincardine. 350′. E. Fully shelt. Peat over 12″. Boulder Clay on Granite. Nil.

P. 403.—MAIN CROP: A. 55 H. 72 G. 9¼ N. 505 B.A. 296 V. 9275 F. ·436 C. 42 B. 9. THINNINGS: N. 30 B.A. 8 V. 175. Forfar. 850′. S.E. Mod. shelt. Sandy loam. Alluvium on Schistose Grits. *Oxalis, Veronica, Urtica, Pteris, Moss.* (Scanty.)

P. 407.—MAIN CROP: A. 55 H. 72 G. 10½ N. 280 B.A. 214 V. 6295 F. ·410 C. 46 B. 12. THINNINGS: N. 75 B.A. 30 V. 715. Forfar. 400′. S. Mod. exp. Loam. Old Red Conglomerate. *Rubus fruticosus, Oxalis, Digitalis, Urtica, Viola.* (Scanty.)

P. 376.—MAIN CROP: A. 68 H. 84 G. 9½ N. 380 B.A. 242 V. 8470 F. ·416 C. 28 B. 9. THINNINGS: N. 15 B.A. 4 V. 95. Aberdeen. 300′. General. Fully shelt. Loam. Fresh Water Alluvium. *Oxalis, Pteris, Moss.* (Scanty.)

P. 49B.—MAIN CROP: A. 116 H. 103 G. 17¾ N. 175 B.A. 392 V. 13745 F. ·341 C. 56 B. 10. Perth. 950′. S. Mod. exp. Sandy loam. Mica Schist. *Oxalis, Grass, Pteris, Moss.* (Scanty.)

Quality Class III—60-ft.

P. 241.—MAIN CROP: A. 26 H. 33 G. 3½ N. 1795 B.A. 142 V. 1585 F. ·337 C. 39 B. 14. THINNINGS: N. 220 B.A. 6. Dumfries. 350′. W. Mod. exp. Loam. Fluvio-Glacial Gravel on Silurian. *Grass, Pteris.* (Scanty.)

P. 311.—MAIN CROP: A. 30 H. 36 G. 3¾ N. 1740 B.A. 180 V. 2955 F. ·456 C. 42 B. 9. THINNINGS: N. 225 B.A. 8. Aberdeen. 600′. S.E. Fully shelt. Sandy loam. Boulder Clay (Gneiss Debris) over Gneiss. Nil.

S.P.Y. 9.—MAIN CROP: A. 31 H. 39 G. 4 N. 1230 B.A. 134 V. 2345 F. ·450 C. 42 B. 12. THINNINGS: N. 305 B.A. 14 V. 75. Yorks. 475′. General. Mod. exp. Loam Millstone Grit. Nil.

S.P. 27.—MAIN CROP: A. 32 H. 38 G. 5¼ N. 1030 B.A. 197 V. 3175 F. ·425 C. 42 B. 12. THINNINGS: N. 100 B.A. 6 V. 45. Kincardine. 600′. N. Mod. shelt. Loam. Boulder Clay on Old Red Conglomerate. *Calluna, Juncus, Moss.* (Scanty.)

NORWAY SPRUCE—*contd.*

Quality Class III—60-ft.—*contd.*

P. 307.—MAIN CROP: A. 33 H. 44 G. 4¾ N. 980 B.A. 160 V. 3180 F. ·452 C. 46 B. 11. THINNINGS: N. 115 B.A. 6 V. 40. Aberdeen. 400′. N.E. Fully shelt. Sandy loam. Boulder Clay (Gneiss Debris) over Granite. *Moss.* (Scanty.)

S.P. 29.—MAIN CROP: A. 34 H. 44 G. 5½ N. 920 B.A. 199 V. 3895 F. ·445 C. 49 B. 9. THINNINGS: N. 205 B.A. 12 V. 125. Forfar. 700′. W. Mod. exp. Loam. Porphyritic Andesite. *Anemone, Rubus idæus, Moss, Grass.* (Scanty.)

P. 221.—MAIN CROP: A. 34 H. 41 G. 5 N. 1145 B.A. 201 V. 3365 F. ·408 C. 38 B. 15. THINNINGS: N. 95 B.A. 6 V. 70. Roxburgh. 900′. S. Mod. exp. Clay loam. Boulder Clay on Upper Silurian. *Juncus, Grass, Pteris.* (Scanty.)

P. 383.—MAIN CROP: A. 34 H. 46 G. 6½ N. 605 B.A. 181 V. 3765 F. ·451 C. 56 B. 10. THINNINGS: N. 25 B.A. 2. Devon. 650′. S. Mod. exp. Clay loam. Culm measures. Nil.

P. 411.—MAIN CROP: A. 34 H. 42 G. 5¾ N. 735 B.A. 163 V. 2990 F. ·438 C. 52 B. 11. THINNINGS: N. 150 B.A. 9 V. 95. Forfar. 500′. General. Mod. shelt. Clay loam. Boulder Clay on Old Red Conglomerate. *Moss* (Scanty.)

P. 681.—MAIN CROP: A. 35 H. 44 G. 5½ N. 765 B.A. 158 V. 2925 F. ·421 C. 41 B. 8. THINNINGS: N. 65 B.A. 5. Shropshire. 1500′. E.N.E. Mod. exp. Sandy loam. Junction of Old Red Sandstone with Coal Measures. Nil.

P. 676.—MAIN CROP: A. 35 H. 44 G. 5 N. 730 B.A. 121 V. 2420 F. ·455 C. 46 B. 10. THINNINGS: N. 50 B.A. 3. Shropshire. 500′. S.S.E. Fully exp. Clay. Old Red Sandstone. Nil.

P. 287.—MAIN CROP: A. 35 H. 39 G. 5½ N. 670 B.A. 148 V. 2585 F. ·449 C. 57 B. 10. THINNINGS: N. 150 B.A. 5 V. 10. Banff. 700′. N. Mod. exp. Peat 6″–12″. Foliated Granite. *Calluna, Oxalis, Moss.*

P. 251.—MAIN CROP: A. 35 H. 43 G. 6¾ N. 465 B.A. 150 V. 2620 F. ·412 C. 53 B. 12. THINNINGS: N. 15 B.A. 1 V. 10. Dumfries. 300′. General. Mod. shelt. Loam. Fresh Water Alluvium. *Moss, Fern.* (Scanty.)

P. 405.—MAIN CROP: A. 36 H. 41 G. 4½ N. 1195 B.A. 160 V. 3005 F. ·471 C. 43 B. 9. THINNINGS: N. 320 B.A. 13 V. 75. Forfar. 850′. S.E. Mod. Shelt. Clay. Schistose Grits. *Juncus communis, Calluna, Moss.*

S.P.S. 4.—MAIN CROP: A. 38 H. 51 G. 8½ N. 330 B.A. 163 V. 3205 F. ·386 C. 66 B. 8. Northumberland. 500′. E. Mod. shelt. Clay. Carboniferous. Nil.

P. 277.—MAIN CROP: A. 38 H. 43 G. 4¾ N. 890 B.A. 140 V. 2755 F. ·458 C. 53 B. 11. THINNINGS: N. 40 B.A. 3 V. 30. Wigtown. 300′. S. Fully exp. Loam. Greywacke and Grits. *Pteris.* (Scanty.)

P. 288.—MAIN CROP: A. 39 H. 51 G. 7½ N. 485 B.A. 194 V. 4290 F. ·433 C. 51 B. 8. THINNINGS: N. 30 B.A. 6 V. 135. Banff. 700′. N.W. Mod. exp. Sand. Boulder Clay on Black Schist. Nil.

P. 336.—MAIN CROP: A. 39 H. 45 G. 6¼ N. 580 B.A. 159 V. 3055 F. ·429 C. 53 B. 11. THINNINGS: N. 145 B.A. 16 V. 260. Devon. 700′. N.W. Mod. shelt. Peat and peaty loam. Culm Measures. *Oxalis.* (Scanty.)

NORWAY SPRUCE—*contd.*

Quality Class III—60-ft.—*contd.*

P. 337.—MAIN CROP: A. 45 H. 56 G. 7¾ N. 415 B.A. 170 V. 3535 F. ·371 C. 39 B. 13. THINNINGS: N. 50 B.A. 11 V. 185. Devon. 600′. S. Mod. exp. Peat and peaty loam. Millstone Grit. *Oxalis, Grass.* (Scanty.)

P. 381.—MAIN CROP: A. 39 H. 49 G. 6 N. 615 B.A. 152 V. 3350 F. ·450 C. 56 B. 14. THINNINGS: N. 60 B.A. 4 V. 60. Devon. 650′. General. Mod. exp. Clay. Culm measures. Nil.

P. 381.—MAIN CROP: A. 40 H. 53 G. 5 N. 1015 B.A. 182 V. 4525 F. ·470 C. 45 B. 8. THINNINGS: N. 160 B.A. 6 V. 35. Aberdeen. 400′. N.E. Fully shelt. Clay loam. Sand and Gravel on Old Red Sandstone. *Oxalis, Goodyera, Vaccinium Myrtillus, Ilex.* (Scanty.)

P. 147.—MAIN CROP: A. 40 H. 47 G. 5 N. 1165 B.A. 204 V. 4360 F. ·454 C 35 B. 11. THINNINGS: N. 70 B.A. 4 V. 55. Kincardine. 600′. N. Fully shelt. Peat 6″–12″. Felspathic Gneiss. Nil.

P. 419.—MAIN CROP: A. 41 H. 48 G. 6½ N. 600 B.A. 173 V. 3595 F. ·433 C. 42 B. 12. THINNINGS: N. 40 B.A. 4. Yorks. 875′. E.N.E. Mod. exp. Sandy loam. Millstone Grit. Nil.

S.P. 19.—MAIN CROP: A. 41 H. 55 G. 8 N. 500 B.A. 220 V. 4835 F. ·400 C. 37 B. 7. Kircudbright. 200′. N.E. Fully shelt. Peat over 12″. Granite. *Pteris.* (Scanty.)

S.P. 23.—MAIN CROP: A. 66 H. 78 G. 13½ N. 170 B.A. 214 V. 6115 F. ·366 C. 59 B. 13. Kincardine. 500′. N. Fully shelt. Peat over 12″. Boulder Clay on Granite. Nil.

P. 165.—MAIN CROP: A. 41 H. 54 G. 6¼ N. 710 B.A. 198 V. 4715 F. ·441 C. 37 B. 10. THINNINGS: N. 45 B.A. 3 V. 50. Kincardine. 350′. General. Mod. shelt. Loam. Boulder Clay on Gneiss. Nil.

P. 367.—MAIN CROP: A. 42 H. 55 G. 8 N. 380 B.A. 173 V. 4295 F. ·451 C. 34 B. 11. THINNINGS: N. 10 B.A. 1. Devon. 500′. S. Mod. exp. Clay loam. Millstone Grit. Nil.

P. 639.—MAIN CROP: A. 42 H. 51 G. 8 N. 420 B.A. 184 V. 3805 F. ·405 C. 44 B. 19. THINNINGS: N. 5 B.A. 1. Radnor. 1250′. N.E. Fully shelt. Clay loam. Ordovician. Nil.

P. 211.—MAIN CROP: A. 43 H. 50 G. 8½ N. 335 B.A. 170 V. 3395 F. ·398 C. 49 B. 10. Peebles. 1100′. N. Mod. shelt. Loam. Boulder Clay on Silurian. *Oxalis, Moss.* (Scanty.)

P. 186.—MAIN CROP: A. 43 H. 52 G. 6 N. 760 B.A. 184 V. 4335 F. ·452 C. 40 B. 14. THINNINGS: N. 120 B.A. 8 V. 95. Aberdeen. 650′. S. Fully shelt. Peat over 12″. Boulder Clay over Granite. *Ferns, Moss.* (Scanty.)

P. 524.—MAIN CROP: A. 45 H. 58 G. 7 N. 640 B.A. 223 V. 5115 F. ·395 C. 44 B. 10. THINNINGS: N. 10 B.A. 1. Northumberland. 400′. N.W. Mod. shelt. Loam. Carboniferous. Nil.

P. 219.—MAIN CROP: A. 47 H. 62 G. 8 N. 430 B.A. 189 V. 4740 F. ·404 C. 30 B. 13. THINNINGS: N. 20 B.A. 4 V. 55. Roxburgh. 250′. S. Mod. exp. Sandy loam. Sand and Gravel on Calciferous Sandstone. *Urtica.* (Scanty.)

S.P.Y. 79.—MAIN CROP: A. 47 H. 59 G. 7¼ N. 490 B.A. 177 V. 4185 F. ·400 C. 26 B. 15. THINNINGS: N. 125 B.A. 31. Wilts. 600′. S. Fully exp. Sandy loam. Oolite. Portland Beds. Nil.

P. 5 7—MAIN CROP: A. 47 H. 57 G. 8¼ N. 685 B.A. 335 V. 8575 F. ·449 C. 30 B. 9. Banff. 800′. N. Mod. shelt. Sand. Boulder Clay on Moine Schist. *Oxalis.* (Scanty.)

NORWAY SPRUCE—*contd.*

Quality Class III—60-ft.—*contd.*

P. 72.—MAIN CROP: A. 48 H. 63 G. 8¾ N. 375 B.A. 203 V. 5400 F. ·423 C. 38 B. 11. Inverness. 300′. West. Mod. shelt. Sandy loam. Granitized Moine Schist. *Oxalis.* (Scanty.)

P. 56.—MAIN CROP: A. 48 H. 59 G. 7¾ N. 740 B.A. 315 V. 8330 F. ·448 C. 27 B. 9. Banff. 700′. N. Mod. shelt. Sand. Boulder Clay on Moine Schist. *Oxalis.* (Scanty.)

P. 55.—MAIN CROP: A. 49 H. 61 G. 8 N. 690 B.A. 316 V. 9115 F. ·473 C. 31 B. 9. Banff. 700′. N. Mod. shelt. Sand. Boulder Clay on Moine Schist. *Oxalis.* (Scanty.)

P.312.—MAIN CROP: A. 49 H. 62 G. 7¾ N. 570 B.A. 243 V. 6755 F. ·449 C. 39 B. 9. THINNINGS: N. 115 B.A. 13 V. 305. Aberdeen. 600′. N.E. Fully shelt. Sandy loam. Boulder Clay (Gneiss Debris) over Granite. Nil.

S.P. 17.—MAIN CROP: A. 49 H. 63 G. 7½ N. 610 B.A. 239 V. 5920 F. ·393 C. 54. B. 7. Dumfries. 350′. S. Mod. exp. Sandy loam. Silurian. *Pteris.* (Scanty.)

P. 235.—MAIN CROP: A. 49 H. 63 G. 10¼ N. 280 B.A. 200 V. 4795 F. ·381 C. 50 B. 10. THINNINGS: N. 5. Yorks. 850′. N. Mod. shelt. Loam. Carboniferous Limestone. *Fern, Grass, Galium saxatile.* (Scanty.)

P. 339.—MAIN CROP: A. 49 H. 62 G. 10¾ N. 282 B.A. 228 V. 5850 F. ·414 C. 58 B. 12. Devon. 1020′. S.E. Mod. exp. Peat and peaty loam. *Grass, Pteris.* (Scanty.)

P. 414.—MAIN CROP: A. 50 H. 64 G. 8 N. 300 B.A. 154 V. 3860 F. ·391 C. 38 B. 10. THINNINGS: N. 60 B.A. 11 V. 315. Yorks. 550′. N.N.E. Fully shelt. Sandy loam. Millstone Grit. Nil.

P. 284.—MAIN CROP: A. 50 H. 57 G. 8 N. 590 B.A. 260 V. 6840 F. ·461 C. 40 B. 8. THINNINGS: N. 70 B.A. 8 V. 150. Banff. 900′. N.W. Fully shelt. Clay loam. Boulder Clay on Mica Schist. *Calluna, Goodyera, Oxalis, Grass, Moss.*

S.P. 29.—MAIN CROP: A. 50 H. 57 G. 8 N. 480 B.A. 215 V. 4940 F. ·403 C. 43 B. 8. THINNINGS: N. 10 B.A. 2. Durham. 1250′. E. Fully shelt. Sandy loam. Yoredale shales. Nil.

P. 614.—MAIN CROP: A. 51 H. 61 G. 8½ N. 530 B.A. 268 V. 7710 F. ·471 C. 32 B. 11. Merioneth. 1000′. General. Mod. exp. Sandy loam. Nil.

P. 389.—MAIN CROP: A. 54 H. 65 G. 8½ N. 365 B.A. 187 V. 5390 F. ·445 C. 35 B. 8. Kincardine. 200′. N.E. Fully exp. Loam. Boulder Clay on Old Red Sandstone. *Rubus idæus, Epilobium angustifolium.* (Scanty.)

P. 642.—MAIN CROP: A. 54 H. 60 G. 7 N. 550 B.A. 193 V. 5390 F. ·466 C. 37 B. 10. THINNINGS: N. 110 B.A. 19 V. 455. Radnor. 1200′. E.N.E. Mod. shelt. Loam. Silurian shales. Nil.

P. 156.—MAIN CROP: A. 54 H. 67 G. 8½ N. 375 B.A. 191 V. 5820 F. ·455 C. 51 B. 10. Kincardine. 300′. N.W. Mod. shelt. Sandy loam. Gneiss. Nil.

S.P.Y. 78.—MAIN CROP: A. 57 H. 69 G. 8¾ N. 395 B.A. 205 V. 6435 F. ·455 C. 30 B. 13. THINNINGS: N. 40 B.A. 16. Wilts. 500′. N.W. Mod. shelt. Clay loam. Upper Oolite-Purbeck Beds. Nil.

NORWAY SPRUCE—*contd.*

Quality Class III—60-ft.—*contd.*

P. 250.—MAIN CROP: A. 57 H. 63 G. 11 N. 265 B.A. 195 V. 4480 F. ·364 C. 57 B. 8. THINNINGS: N. 15 B.A. 5 V. 70. Northumberland. 1100′. General. Fully shelt. 12″–24″ black peat. Carboniferous Limestone. Nil.

P. 40B.—MAIN CROP: A. 58 H. 64 G. 11¾ N. 200 B.A. 194 V. 4710 F. ·380 C. 53 B. 12. Sutherland. 200′. General. Mod. shelt. Loam. Boulder Clay on Old Red Sandstone. *Grass, Moss.* (Scanty.)

P. 559.—MAIN CROP: A. 59 H. 71 G. 8¼ N. 310 B.A. 147 V. 4880 F. ·467 C. 36 B. 10. THINNINGS: N. 45 B.A. 10. Sussex. 650′. N.E. Mod. exp. Clay loam. Hastings Beds. Nil.

S.P. 105.—MAIN CROP: A. 60 H. 72 G. 11 N. 310 B.A. 257 V. 8630 F. ·466 C. 27 B. 11. THINNINGS: N. 30 B.A. 11. Devon. 1080′. S.W. Mod. exp. Sandy loam. Granite. *Grass, Digitalis.*

P. 412.—MAIN CROP: A. 60 H. 67 G. 10¼ N. 270 B.A. 200 V. 5555 F. ·415 C. 34 B. 11. THINNINGS: N. 15 B.A. 2. Yorks. 925′. W.N.W. Very exp. Sandy loam. Millstone Grit. Nil.

P. 388.—MAIN CROP: A. 64 H. 66 G. 10¼ N. 275 B.A. 202 V. 6170 F. ·462 C. 37 B. 9. THINNINGS: N. 30 B.A. 8 V. 230. Somerset. 1250′. S.E. Mod. shelt. Loam. Devonian. *Oxalis.*

P. 246.—MAIN CROP: A. 64 H. 67 G. 10¼ N. 280 B.A. 188 V. 5495 F. ·437 C. 37 B. 9. THINNINGS: N. 15 B.A. 6 V. 110. Northumberland. 750′. General. Mod. shelt. Peat and peaty loam. Millstone Grit. Nil.

S.P.Y. 75.—MAIN CROP: A. 65 G. 74 G. 9½ N. 255 B.A. 162 V. 5520 F. ·459 C. 36 B. 10. THINNINGS: N. 5 B.A. 3. Wilts. 700′. E.N.E. Fully exp. Loam. Chalk. *Fern.* (Scanty.)

P. 33B.—MAIN CROP: A. 68 H. 69 G. 11½ N. 280 B.A. 257 V. 6850 F. ·386 C. 40 B. 11. THINNINGS: N. 5 B.A. 3 V. 60. Sutherland. 300′. S. Mod. shelt. Loam. Old Red Sandstone. *Juncus, Grass, Ferns, Pteris, Moss.*

P. 523.—MAIN CROP: A. 70 H. 75 G. 11¼ N. 215 B.A. 186 V. 5590 F. ·400 C. 45 B. 10. THINNINGS: N. 10 B.A. 3. Northumberland. 400′. N.E. Mod. exp. Clay loam. Carboniferous. Nil.

P. 11.—MAIN CROP: A. 71 H. 81 G. 11 N. 270 B.A. 225 V. 7285 F. ·399 C. 53 B. 10. THINNINGS: N. 50 B.A. 9 V. 245. Perth. 800′. E. Mod. shelt. Sandy loam. Grits and Schists. *Oxalis, Moss.* (Scanty.)

Quality Class IV—50-ft.

P. 323.—MAIN CROP: A. 28 H. 29 G. 3¼ N. 1525 B.A. 115 V. 1320 F. ·396 C. 55 B. 17. THINNINGS: N. 195 B.A. 6. Devon. 720′. N.W. Mod. shelt. Peat. Upper Greensand. Nil.

P. 338.—MAIN CROP: A. 33 H. 36 G. 4½ N. 1100 B.A. 164 V. 2820 F. ·476 C. 47 B. 11. THINNINGS: N. 360 B.A. 15 V. 100. Aberdeen. 1400′. S.E. Mod. exp. Loam. Mica Schist. *Viola, Scabiosa, Trientalis, Grass, Moss.* (Scanty.)

S.P. 24.—MAIN CROP: A. 35 H. 35 G. 4 N. 1380 B.A. 160 V. 2410 F. ·430 C. 50 B. 14. THINNINGS: N. 315 B.A. 11. Aberdeen. 950′. E. Mod. shelt. Sandy loam. Granite. Nil.

NORWAY SPRUCE—*contd.*

Quality Class IV—50-ft.—*contd.*

P. 397.—MAIN CROP: A. 35 H. 38 G. 4¾ N. 1220 B.A. 194 V. 3150 F. ·427 C. 50 B. 10. THINNINGS: N. 245 B.A. 11 V. 70. Forfar. 1050′. S.W. Fully exp. Sandy loam. Boulder Clay over Quartzite. *Calluna, Grass, Moss.* (Scanty.)

S.P. 107.—MAIN CROP: A. 38 H. 38 G. 5½ N. 660 B.A. 132 V. 2240 F. ·445 C. 47 B. 13. THINNINGS: N. 30 B.A. 3. Devon. 1450′. N.E. Fully exp. Peaty loam. Granite. *Grass, Fern, Pteris, Vaccinium Myrtillus.*

P. 113.—MAIN CROP: A. 41 H. 44 G. 4¾ N. 1080 B.A. 175 V. 3295 F. ·427 C. 41 B. 13. THINNINGS: N. 100 B.A. 6 V. 65. Brecon. 1180′. W. Fully exp. Loam. Old Red Sandstone. Nil.

P. 394.—MAIN CROP: A. 41 H. 45 G. 6 N. 555 B.A. 135 V. 2955 F. ·487 C. 46 B. 10. THINNINGS: N. 135 B.A. 14 V. 330. Somerset. 1050′. N.E. Fully shelt. Loam. Old Red Sandstone. Nil.

P. 327.—MAIN CROP: A. 41 H. 46 G. 6¼ N. 690 B.A. 183 V. 3600 F. ·427 C. 42 B. 12. THINNINGS: N. 50 B.A. 5 V. 75. Aberdeen. 1000′. S.E. Mod. shelt. Sandy loam. Boulder Clay on Old Red Sandstone. Nil.

P. 412.—MAIN CROP: A. 41 H. 45 G. 6½ N. 615 B.A. 177 V. 3680 F. ·461 C. 52 B. 10. THINNINGS: N. 110 B.A. 6 V. 65. Forfar. 550′. N.E. Mod. shelt. Clay loam. Sand and Gravel on Old Red Conglomerate. *Oxalis, Fern, Moss* (Scanty.)

P. 239.—MAIN CROP: A. 42 H. 46 G. 5½ N. 1020 B.A. 209 V. 4695 F. ·488 C. 34 B. 9. THINNINGS: N. 60 B.A. 4 V. 65. Dumfries. 550′. N.E. Mod. exp. Clay loam. Boulder Clay on Permian Sandstone. Nil.

P. 242.—MAIN CROP: A. 44 H. 45 G. 5¾ N. 955 B.A. 222 V. 4285 F. ·429 C. 40 B. 13. THINNINGS: N. 90 B.A. 7 V. 95. Dumfries. 700′. N.E. Mod. exp. Loam. Boulder Clay over Coal Measures. *Juncus, Grass.* (Scanty.)

P. 243.—MAIN CROP: A. 44 H. 47 G. 6¾ N. 750 B.A. 230 V. 4345 F. ·403 C. 40 B. 12. THINNINGS: N. 40 B.A. 4. Dumfries. 650′. N.E. Mod. shelt. Loam. Boulder Clay over Coal Measures. *Juncus, Grass.* (Scanty.)

S.P. 25.—MAIN CROP: A. 45 H. 43 G. 6½ N. 720 B.A. 190 V. 3870 F. ·473 C. 45 B. 11. Aberdeen. 1050′. N.W. Mod. exp. Sandy loam. Boulder Clay. Epidiorite Hornblende Schist. *Moss.* (Scanty.)

S.P. 35.—MAIN CROP: A. 47 H. 44 G. 6 N. 630 B.A. 163 V. 3035 F. ·422 C. 36 B. 12. THINNINGS: N. 170 B.A. 22 V. 170. Westmorland. 950′. E. Fully exp. Clay loam. Yoredale Limestone. Nil.

S.P. 3.—MAIN CROP: A. 48 H. 50 G. 8½ N. 380 B.A. 195 V. 4395 F. ·451 C 44 B. 10. Peebles. 1050′. N.W. Mod. shelt. Loam. Boulder Clay on Silurian shales. *Calluna, Oxalis, Juncus.* (Scanty.)

P. 323.—MAIN CROP: A. 51 H. 62 G. 6¼ N. 520 B.A. 144 V. 3795 F. ·497 C. 39 B. 11. THINNINGS: N. 35 B.A. 4 V. 65. Aberdeen. 500′. General. Fully shelt. Sand. Fresh Water Alluvium. *Moss.* (Scanty.)

P. 317.—MAIN CROP: A. 52 H. 54 G. 6¾ N. 695 B.A. 226 V. 6045 F. ·495 C. 30 B. 10. THINNINGS: N. 155 B.A. 10 V. 120. Aberdeen. 900′. S. Mod. exp. Sandy loam. Boulder Clay (Gneiss Debris) over Granite. *Oxalis.* (Scanty.)

P. 331.—MAIN CROP: A. 52 H. 53 G. 7¼ N. 485 B.A. 200 V. 4830 F. ·456 C. 43 B. 10. THINNINGS: N. 75 B.A. 8 V. 170. Aberdeen. 1000′. S.E. Fully shelt. Sandy loam. Sand and gravel on Old Red Sandstone. *Calluna, Vaccinium Myrtillus, Grass, Moss.* (Scanty.)

NORWAY SPRUCE—*contd.*

Quality Class IV—50-ft.—*contd.*

P. 385.—MAIN CROP: A. 53 H. 57 G. 6¾ N. 710 B.A. 228 V. 4915 F. ·378 C. 47 B. 12. THINNINGS: N. 75 B.A. 8 V. 145. Kincardine. 550′. N.W. Mod. exp. Loam. Boulder Clay on Old Red Conglomerate. *Ulex, Juncus, Ranunculus, Fern.*

P. 401.—MAIN CROP: A. 57 H. 56 G. 7 N. 680 B.A. 238 V. 5675 F. ·426 C. 32 B. 9. THINNINGS: N. 175 B.A. 25 V. 55. Forfar. 1100′. S. Mod. exp. Clay loam. Clay Slates and Grits. *Oxalis, Urtica, Juncus, Prunella.* (Scanty.)

P. 391.—MAIN CROP: A. 57 H. 60 G. 7¼ N. 445 B.A. 167 V. 4295 F. ·429 C. 32 B. 9. THINNINGS: N. 120 B.A. 26 V. 540. Somerset. 1000′. N.W. Mod. exp. Clay loam. Devonian. Nil.

P. 387.—MAIN CROP: A. 57 H. 58 G. 8¼ N. 440 B.A. 215 V. 5580 F. ·448 C. 40 B. 8. THINNINGS: N. 50 B.A. 13 V. 290. Somerset. 1200′. N. Mod. exp. Loam. Devonian. *Oxalis, Ferns.* (Scanty.)

P. 249.—MAIN CROP: A. 57 H. 59 G. 9½ N. 355 B.A. 199 V. 4490 F. ·383 C. 59 B. 9. Northumberland. 1250′. S. Mod. exp. Loam. Carboniferous Limestone. Nil.

P. 162.—MAIN CROP: A. 59 H. 57 G. 6½ N. 435 B.A. 124 V. 3280 F. ·466 C. 39 B. 13. THINNINGS: N. 5 B.A. 1 V. 20. Hants. 100′. General. Fully shelt. Clay. Oligocene. *Moss.*

P. 413.—MAIN CROP: A. 59 H. 60 G. 8¾ N. 345 B.A. 182 V. 4065 F. ·372 C. 46 B. 11. THINNINGS: N. 21 B.A. 6. Yorks. 750′. S.W. Fully exp. Loam. Millstone Grit. Nil.

P. 390.—MAIN CROP: A. 60 H. 62 G. 7½ N. 500 B.A. 200 V. 6020 F. ·486 C. 27 B. 6. THINNINGS: N. 175 B.A. 38 V. 1045. Somerset. 1000′. S.S.E. Fully shelt. Loam. Devonian. Nil.

S.P.S. 2.—MAIN CROP: A. 60 H. 62 G. 8½ N. 470 B.A. 239 V. 6045 F. ·408 C. 40 B. 11. THINNINGS: N. 25 B.A. 8. Northumberland. 600′. General. Mod. exp. Peaty loam. Carboniferous. Nil.

S.P. 106.—MAIN CROP: A. 61 H. 63 G. 9½ N. 320 B.A. 200 V. 4800 F. ·377 C. 38 B. 12. Devon. 1000′. N.E. Fully shelt. Peaty loam. Granite. Nil.

S.P.Y. 60.—MAIN CROP: A. 61 H. 57 G. 7½ N. 460 B.A. 186 V. 5410 F. ·509 C. 38 B. 9. THINNINGS: N. 85 B.A. 23. Devon. 780′. E. Mod. exp. Clay loam. Upper Greensand. Nil.

P. 398.—MAIN CROP: A. 61 H. 59 G. 7¼ N. 670 B.A. 245 V. 6035 F. ·418 C. 45 B. 12. THINNINGS: N. 140 B.A. 17 V. 30. Forfar. 850′. General. Fully exp. Sandy loam. Fresh Water Alluvium. *Calluna, Grass, Moss.* (Scanty.)

P. 342.—MAIN CROP: A. 62 H. 58 G. 9½ N. 270 B.A. 167 V. 4120 F. ·427 C. 38 B. 12. THINNINGS: N. 10 B.A. 3. Devon. 1050′. N. Mod. shelt. Peat and peaty loam. Granite. *Grass, Oxalis.*

P. 391.—MAIN CROP: A. 62 H. 62 G. 10 N. 325 B.A. 228 V. 5505 F. ·390 C. 43 B. 12. THINNINGS: N. 35 B.A. 8 V. 125. Kincardine. 200′. S.W. Fully exp. Sandy loam. Boulder Clay on Schistose Grits. *Oxalis, Grass, Pteris, Moss.*

P. 362.—MAIN CROP: A. 63 H. 64 G. 8¾ N. 440 B.A. 235 V. 6225 F. ·414 C. 40 B. 11. THINNINGS: N. 65 B.A. 12 V. 240. Aberdeen. 1300′. W. Mod. exp. Sandy loam. Boulder Clay on Granite. Nil.

NORWAY SPRUCE—*contd.*

Quality Class IV—50-ft.—*contd.*

P. 20B.—MAIN CROP: A. 63 H. 56 G. 9 N. 305 B.A. 174 V. 4000 F. ·411 C. 48 B. 10. Ross. 150′. General. Mod. shelt. Sandy loam. Sand and Gravel over Moine Schist. *Oxalis, Moss.*

S.P. 38.—MAIN CROP: A. 65 H. 61 G. 8½ N. 355 B.A. 181 V. 4720 F. ·428 C. 43 B. 9. THINNINGS: N. 25 B.A. 9. Cumberland. 1750′. E.N.E. Fully shelt. Clay loam. Yoredale Limestone. *Moss.* (Scanty.)

P. 389.—MAIN CROP: A. 65 H. 58 G. 10¼ N. 340 B.A. 251 V. 6020 F. ·413 C. 33 B. 9. THINNINGS: N. 15 B.A. 6 V. 115. Somerset. 1250′. S.W. Mod. shelt. Loam. Devonian. *Grass, Ferns.* (Scanty.)

S.P. 4.—MAIN CROP: A. 66 H. 63 G. 9¼ N. 305 B.A. 182 V. 4335 F. ·378 C. 42 B. 11. Peebles. 700′. N.E. Mod. shelt. Loam. Sand and Gravel on Silurian Greywacke. *Sambucus, Urtica.* (Scanty.)

P. 354.—MAIN CROP: A. 84 H. 77 G. 10 N. 345 B.A. 244 V. 7180 F. ·382 C. 61 B. 11. THINNINGS: N. 140 B.A. 34 V. 870. Aberdeen. 1500′. N. Mod. shelt. Sandy loam. Quartzite. *Vaccinium vitis-idæa, Grass, Luzula, Ferns, Moss.*

P. 192.—MAIN CROP: A. 70 H. 63 G. 8½ N. 305 B.A. 150 V. 3835 F. ·403 C. 37 B. 15. THINNINGS: N. 35 B.A. 6 V. 85. Dorset. 680′. N.E. Fully shelt. Clay loam. Chalk. *Moss.*

S.P. 39.—MAIN CROP: A. 73 H. 64 G. 11½ N. 270 B.A. 252 V. 5305 F. ·330 C. 51 B. 11. THINNINGS: N. 10 B.A. 3. Cumberland. 1700′. W. Fully shelt. Loam. Glacial deposits on Yoredale Limestone. *Moss.* (Scanty.)

P. 368.—MAIN CROP: A. 75 H. 61 G. 8½ N. 300 B.A. 151 V. 3630 F. ·350 C. 60 B. 13. THINNINGS: N. 35 B.A. 5 V. 95. Aberdeen. 1250′. S.W. Mod. exp. Sandy loam. Boulder Clay on Moine Schists. *Moss.* (Scanty.)

S.P.Y. 27.—MAIN CROP: A. 75 H. 71 G. 8¼ N. 285 B.A. 140 V. 4730 F. ·476 C. 33 B. 16. THINNINGS: N. 90 B.A. 25. Bucks. 800′. N.E. Mod. exp. Clay loam. Chalk. *Mercurialis, Sambucus.* (Scanty.)

P. 305.—MAIN CROP: A. 78 H. 62 G. 6½ N. 700 B.A. 203 V. 5445 F. ·433 C. 28 B. 19. THINNINGS: N. 50 B.A. 7 V. 175. Aberdeen. 350′. N.E. Fully shelt. Sandy loam. Boulder Clay (Gneiss Debris) over Gneiss. *Oxalis, Moss.* (Scanty.)

Quality Class V—40-ft.

P. 328.—MAIN CROP: A. 39 H. 34 G. 4¼ N. 1340 B.A. 173 V. 2605 F. ·442 C. 45 B. 12. THINNINGS: N. 255 B.A. 9 V. 35. Aberdeen. 1100′. W. Mod. exp. Sandy loam. Grey Slates. *Calluna, Vaccinium Myrtillus, Empetrum, Erica tetralix, Juncus, Moss.* (Scanty.)

P. 329—MAIN CROP: A. 40 H. 33 G. 4½ N. 1045 B.A. 148 V. 2305 F. ·473 C. 49 B. 12. THINNINGS: N. 245 B.A. 7. Aberdeen. 1150′. N.W. Mod. shelt. Sandy loam. Grey Slates. *Calluna, Vaccinium vitis-idæa, Empetrum, Moss.* (Scanty.)

P. 387.—MAIN CROP: A. 40 H. 34 G. 4½ N. 925 B.A. 136 V. 1910 F. ·413 C. 39 B. 15. THINNINGS: N. 145 B.A. 6 V. 30. Kincardine. 500′. S. Fully exp. Loam. Boulder Clay on Old Red Conglomerate. *Cytisus scoparius, Grass.* (Scanty.)

NORWAY SPRUCE—*contd.*

Quality Class V—40-ft.—*contd.*

S.P. 115.—MAIN CROP: A. 43 H. 39 G. 5¼ N. 1000 B.A. 184 V. 3540 F. ·492 C. 39 B. 11. THINNINGS: N. 190 B.A. 24 V. 240. Somerset. 1280′. S.S.W. Fully exp. Peat and peaty loam. Devonian. Nil.

P. 407.—MAIN CROP: A. 48 H. 39 G. 6¼ N. 570 B.A. 150 V. 2620 F. ·448 C. 45 B. 9. THINNINGS: N. 15 B.A. 2. Yorks. 1600′. N.E. Mod. exp. Peat. Yoredale Series of the Carboniferous. *Asperula.* (Scanty.)

P. 254.—MAIN CROP: A. 53 H. 44 G. 6¾ N. 580 B.A. 190 V. 3280 F. ·393 C. 56 B. 11. THINNINGS: N. 105 B.A. 14 V. 130. Cumberland. 1700′. W.N.W. Mod. exp. Loam. Glacial deposits on Yoredale Limestone. *Moss, Fern.* (Scanty.)

S.P. 36.—MAIN CROP: A. 60 H. 45 G. 7¾ N. 460 B.A. 194 V. 3640 F. ·417 C. 52 B. 11. THINNINGS: N. 50 B.A. 6. Cumberland. 1680′. W. Mod. exp. Peat and peaty loam. Glacial deposits on Yoredale Limestone. *Moss.* (Scanty.)

P. 258.—MAIN CROP: A. 61 H. 46 G. 7 N. 380 B.A. 132 V. 2370 F. ·309 C. 56 B. 10. THINNINGS: N. 70 B.A. 10 V. 130. Cumberland. 1660′. W.N.W. Mod. exp. Loam. Glacial deposits on Yoredale Limestone. *Moss, Grass, Fern.* (Scanty.)

S.P. 33.—MAIN CROP: A. 66 H. 52 G. 7 N. 540 B.A. 187 V. 4230 F. ·435 C. 48 B. 10. THINNINGS: N. 80 B.A. 13. Cumberland. 1880′. E.N.E. Mod. exp. Loam. Glacial deposits on Yoredale Limestone. *Moss, Grass.* (Scanty.)

P. 330.—MAIN CROP: A. 66 H. 50 G. 7¼ N. 410 B.A. 153 V. 3225 F. ·421 C. 43 B. 10. THINNINGS: N. 115 B.A. 13 V. 205. Aberdeen. 1300′. S.E. Mod. shelt. Sandy loam. Boulder Clay on Gneiss. *Vaccinium vitis-idæa and V. Myrtillus, Grass, Fern, Moss.* (Scanty.)

P. 253.—MAIN CROP: A. 66 H. 54 G. 8½ N. 445 B.A. 225 V. 4760 F. ·391 C. 45 B. 9. THINNINGS: N. 15 B.A. 3 V. 45. Cumberland. 1660′. N.W. Mod. exp. Loam. Glacial deposits on Yoredale Limestone. Nil.

P. 242.—MAIN CROP: A. 66 H. 53 G. 10¾ N. 255 B.A. 200 V. 3830 F. ·360 C. 61 B. 11. Durham. 1600′. S.W. Mod. exp. Clay loam. Yoredale shales. *Oxalis.* (Scanty.)

S.P.S. 24.—MAIN CROP: A. 68 H. 50 G. 6¼ N. 540 B.A. 151 V. 3380 F. ·447 C. 33 B. 10. Radnor. 1600′. S.E. Mod. shelt. Peat and peaty loam. Silurian shales. Nil.

S.P. 37.—MAIN CROP: A. 70 H. 49 G. 7¾ N. 410 B.A. 175 V. 3695 F. ·432 C. 48 B. 12. THINNINGS: N. 40 B.A. 11. Cumberland. 1600′. General. Mod. exp. Peat and peaty loam. Glacial deposits on Yoredale Limestone. Nil.

Below 40-ft. Class

S.P. 40.—MAIN CROP: A. 66 H. 42 G. 7¼ N. 465 B.A. 171 V. 2825 F. ·394 C. 44 B. 9. THINNINGS: N. 20 B.A. 2. Cumberland. 1730′. E.S.E. Mod. exp. Clay loam. Glacial deposits on Yoredale Limestone. *Moss.* (Scanty.)

S.P. 32.—MAIN CROP: A. 68 H. 39 G. 5¾ N. 710 B.A. 163 V. 2680 F. ·422 C. 45 B. 11. THINNINGS: N. 45 B.A. 5. Cumberland. 1860′. N.E. Mod. exp. Peat and peaty loam. Glacial deposits on Yoredale Limestone. Nil.

DOUGLAS FIR

Temporary Sample Plots

Quality Class I—110-ft.

P. 384.—MAIN CROP: A. 12 H. 38 G. 3½ N. 1790 B.A. 150 V. 2045 F. ·359 C. 59 B. 13. THINNINGS: N. 165 B.A. 6 V. 25. Devon. 500′. E. Fully shelt. Clay loam. Old Red Sandstone. Nil.

P. 374.—MAIN CROP: A. 13 H. 30 G. 3¼ N. 1375 B.A. 99 V. 795 F. ·269 C. 75 B. 15. THINNINGS: N. 70 B.A. 2. Devon. 100′. N. Fully shelt. Loam. Culm Measures. Nil.

S.P. 46.—MAIN CROP: A. 15 H. 35 G. 3½ N. 1555 B.A. 129 V. 1705 F. ·376 C. 48 B. 15. Wigtown. 150′. General. Fully shelt. Loam. Boulder Clay on Silurian Greywacke. Nil.

P. 512.—MAIN CROP: A. 16 H. 38 G. 3¾ N. 1350 B.A. 139 V. 2085 F. ·396 C. 53 B. 13. THINNINGS: N. 105 B.A. 8 V. 125. Somerset. 650′. N. Fully shelt. Loam. Millstone Grit. Nil.

P. 707.—MAIN CROP: A. 17 H. 42 G. 3¼ N. 1615 B.A. 126 V. 1980 F. ·374 C. 51 B. 13. THINNINGS: N. 390 B.A. 14 V. 145. Wiltshire. 600′. S. Fully shelt. Sand. Upper Greensand. Nil.

P. 373.—MAIN CROP: A. 18 H. 44 G. 5 N. 805 B.A. 133 V. 2045 F. ·349 C. 60 B. 11. THINNINGS: N. 155 B.A. 7 V. 35. Aberdeen. 200′. E. Fully shelt. Loam. Boulder Clay on Old Red Sandstone (L). Nil.

P. 504.—MAIN CROP: A. 21 H. 52 G. 6 N. 620 B.A. 153 V. 3025 F. ·381 C. 53 B. 11. THINNINGS: N. 40 B.A. 4 V. 50. Somerset. 600′. N.E. Fully shelt. Loam. Old Red Sandstone. Nil.

P. 654.—MAIN CROP: A. 23 H. 66 G. 6¾ N. 435 B.A. 137 V. 3235 F. ·359 C. 52 B. 10. Brecknock. 420′. E. Fully shelt. Loam. Old Red Sandstone. *Sambucus, Urtica.* (Scanty.)

S.P.Y. 71.—MAIN CROP: A. 36 H. 85 G. 13½ N. 160 B.A. 202 V. 6635 F. ·387 C. 49 B. 10. THINNINGS: N. 10 B.A. 2. Somerset. 600′. Fully shelt. Loam. Devonian. Nil.

P. 396.—MAIN CROP: A. 31 H. 81 G. 12¼ N. 170 B.A. 174 V. 5255 F. ·374 C. 55 B. 10. Somerset. 400′. N.N.E. Mod. shelt. Sandy loam. Old Red Sandstone. *Ferns.* (Scanty.)

DOUGLAS FIR

Permanent Sample Plots

Quality Class I—110-ft.

P. 50.—MAIN CROP: A. 23 H. 58½ G. 5½ N. 685 B.A. 144 V. 3160 F. ·376 C. 48 B. 11. THINNINGS: N. 35 B.A. 3 V. 35. Somerset. 600′. W. Mod. shelt. Sand. Greensand. Nil.

P. 51.—MAIN CROP: A. 23 H. 60½ G. 6 N. 555 B.A. 140 V. 3115 F. ·368 C. 48 B. 11. THINNINGS: N. 95 B.A. 23 V. 515. Somerset. 600′. W. Mod. shelt. Sand. Greensand. Nil.

„ —MAIN CROP: A. 28 H. 68½ G. 7 N. 500 B.A. 173 V. 4390 F. ·371 C. 36 B. 15. THINNINGS: N. 50 B.A. 9 V. 225.

P. 19.—MAIN CROP: A. 43 H. 94 G. 11⅞ N. 215 B.A. 211 V. 7300 F. ·370 B. 12. Glos. 80′. N.E. Fully shelt. Clay loam. Silurian (Llandovery series). *Sambucus, Digitalis, Oxalis, Rubus, Scilla.*

„ —MAIN CROP: A. 50 H. 106 G. 12⅝ N. 195 B.A. 215 V. 7535 F. ·330 B. 12. THINNINGS: N. 25 B.A. 12 V. 305.

„ —MAIN CROP: A. 55 H. 112½ G. 13¼ N. 175 B.A. 211 V. 8160 F. ·344 B. 13. THINNINGS: N. 20 B.A. 16 V. 485.

DOUGLAS FIR—*contd.*

Temporary Sample Plots

Quality Class II—100-ft.

S.P. 42.—MAIN CROP: A. 15 H. 34 G. 3 N. 1895 B.A. 112 V. 1030 F. ·270 C. 77 B. 16. THINNINGS: N. 535 B.A. 9. Kirkcudbright. 300′. E. Fully shelt. Sandy loam. Silurian Hard Greywacke. Nil.

S.P.Y. 46.—MAIN CROP: A. 15 H. 33 G. 2¾ N. 1965 B.A. 106 V. 890 F. ·253 C. 55 B. 16. THINNINGS: N. 430 B.A. 9. Carmarthen. 500′. N. Mod. shelt. Loam. Old Red Sandstone. Nil.

P. 207.—MAIN CROP: A. 15 H. 33 G. 2¾ N. 2570 B.A. 139 V. 1335 F. ·290 C. 46 B. 17. THINNINGS: N. 700 B.A. 14. Norfolk. 120′. General. Fully shelt. Sand. Glacial drift on Pleiocene. Nil.

P. 265.—MAIN CROP: A. 17 H. 38 G. 3¾ N. 1040 B.A. 103 V. 1220 F. ·311 C. 59 B. 11. Kirkcudbright. 250′. E. Mod. shelt. Sandy loam. Silurian Hard Greywacke. Nil.

P. 377.—MAIN CROP: A. 18 H. 41 G. 3¾ N. 1335 B.A. 129 V. 2040 F. ·385 C. 58 B. 10. THINNINGS: N. 245 B.A. 6 V. 5. Aberdeen. 250′. N. Fully shelt. Loam. Boulder clay on Knotted Andalusite Schist. Nil.

S.P. 24.—MAIN CROP: A. 19 H. 44 G. 5 N. 850 B.A. 149 V. 2280 F. ·349 C. 58 B. 12. THINNINGS: N. 160 B.A. 8. Carmarthen. 600′. E.S.E. Fully shelt. Loam. Silurian. *Mosses.* (Scanty.)

P. 701.—MAIN CROP: A. 19 H. 42 G. 4¼ N. 745 B.A. 94 V. 1510 F. ·381 C. 53 B. 12. THINNINGS: N. 150 B.A. 9 V. 80. Somerset. 520′. E.N.E. Mod. exp. Loam. Devonian. Nil.

P. 517.—MAIN CROP: A. 20 H. 46 G. 6 N. 605 B.A. 148 V. 2480 F. ·363 C. 50 B. 12. THINNINGS: N. 25 B.A. 2. Somerset. 500′. N.E. Fully shelt. Loam. Devonian. Nil.

P. 159.—MAIN CROP: A. 20 H. 41 G. 3¾ N. 1595 B.A. 165 V. 2605 F. ·385 C. 44 B. 15. THINNINGS: N. 295 B.A. 11 V. 50. Kincardine. 350′. N. Fully shelt. Sand. Boulder Clay on Granite. Nil.

P. 162.—MAIN CROP: A. 20 H. 41 G. 4 N. 1540 B.A. 180 V. 2780 F. ·377 C. 45 B. 16. THINNINGS: N. 255 B.A. 10 V. 25. Kincardine. 300′. N. Fully shelt. Sandy loam. Boulder Clay on Gneiss. Nil.

P. 158.—MAIN CROP: A. 21 H. 45 G. 4 N. 1610 B.A. 177 V. 3330 F. ·417 C. 43 B. 14. THINNINGS: N. 195 B.A. 7. Kincardine. 350′. E. Mod. shelt. Sandy loam. Boulder clay on Gneiss. Nil.

P. 299.—MAIN CROP: A. 21 H. 49 G. 5 N. 860 B.A. 152 V. 3040 F. ·409 C. 60 B. 10. Moray. 100′. General. Mod. exp. Sand. Sand and gravel on Old Red Sandstone. Nil.

P. 392.—MAIN CROP: A. 22 H. 48 G. 6¼ N. 645 B.A. 182 V. 3155 F. ·362 C. 55 B. 11. THINNINGS: N. 40 B.A. 2 V. 20. Kincardine. 400′. General. Mod. shelt. Loam. Boulder Clay on Old Red Conglomerate. Nil.

P. 706.—MAIN CROP: A. 22 H. 49 G. 4¾ N. 1020 B.A. 155 V. 2730 F. ·359 C. 46 B. 12. THINNINGS: N. 95 B.A. 6 V. 44. Wilts. 500′. E. Mod. shelt. Loam. Upper Greensand. Nil.

P. 698.—MAIN CROP: A. 24 H. 56 G. 6¼ N. 510 B.A. 139 V. 2930 F. ·376 C. 51 B. 11. THINNINGS: N. 10 B.A. 1. Somerset. 500′. S.E. Mod. shelt. Loam. Devonian. Nil.

P. 501.—MAIN CROP: A. 24 H. 57 G. 7¼ N. 490 B.A. 173 V. 4145 F. ·420 C. 47 B. 11. Somerset. 350′. S.S.W. Mod. shelt. Loam. Upper Trias. Nil.

DOUGLAS FIR—*contd.*

Temporary Sample Plots—contd.

Quality Class II—100-ft.—*contd.*

P. 378.—MAIN CROP: A. 25 H. 54 G. 9¼ N. 240 B.A. 140 V. 2115 F. ·280 C. 61 B. 12. THINNINGS: N. 10 B.A. 1. Devon. 250′. S.S.E. Fully shelt. Loam. Millstone Grit. Nil.

P. 155.—MAIN CROP: A. 28 H. 66 G. 8⅓ N. 285 B.A. 144 V. 3110 F. ·326 C. 55 B. 14. THINNINGS: N. 10 B.A. 1. Montgomery. 650′. E. Fully shelt. Loam. Silurian. *Moss.* (Scanty.)

S.P.Y. 82.—MAIN CROP: A. 28 H. 65 G. 6¼ N. 455 B.A. 126 V. 3040 F. ·372 C. 43 B. 9. THINNINGS: N. 48 B.A. 7. Wilts. 450′. E. Fully shelt. Sand. Oolite; Corallian sands. Nil.

P. 508.—MAIN CROP: A. 30 H. 67 G. 11¼ N. 205 B.A. 182 V. 4120 F. ·338 C. 55 B. 15. Somerset. 850′. S.W. Fully shelt. Loam. Devonian. Nil.

P. 245.—MAIN CROP: A. 37 H. 80 G. 12¾ N. 160 B.A. 179 V. 4115 F. ·287 C. 53 B. 12. Dumfries. 250′. N.W. Mod. shelt. Sandy loam Fluvio-Glacial Gravels on Permian Red Sandstone. Nil.

S.P.Y. 56.—MAIN CROP: A. 43 H. 88 G. 15½ N. 135 B.A. 225 V. 6065 F. ·306 C. 46 B. 11. Montgomery. 150′. W. Fully shelt. Loam. Ordovician. Nil.

S.P.Y. 33.—MAIN CROP: A. 45 H. 94 G. 12¼ N. 255 B.A. 269 V. 7655 F. ·303 C. 32 B. 7. THINNINGS: N. 45 B.A. 28. Wilts. 600′. S. Fully shelt. Sandy loam. Upper Greensand. Nil.

P. 15.—MAIN CROP: A. 55 H. 106 G. 23¼ N. 65 B.A. 239 V. 7940 F. ·314 C. 46 B. 9. Perth. 150′. General. Fully shelt. Sandy loam. Sand and Gravel over Old Red Sandstone. *Oxalis.* (Scanty.)

DOUGLAS FIR

Permanent Sample Plots

Quality Class II—100-ft.

P. 42.—MAIN CROP: A. 12 H. 28 G. 2⅞ N. 1580 B.A. 90 V. 725 F. ·295 C. 71 B. 13. Somerset. 350′. E. Fully shelt. Loam. Devonian. Nil.

,, —MAIN CROP: A. 18 H. 37 G. 4 N. 990 B.A. 111 V. 1780 F. ·435 C. 46 B. 10. THINNINGS: N. 590 B.A. 43 V. 285.

P. 24.—MAIN CROP: A. 12 H. 22 G. 2⅜ N. 1715 B.A. 69 V. 340 F. ·223 C. 79 B. 15. Montgomery. 850′. W.S.W. Mod. exp. Clay loam. Silurian. Nil.

,, —MAIN CROP: A. 17 H. 32½ G. 3½ N. 1095 B.A. 96 V. 1100 F. ·353 C. 59 B. 14. THINNINGS: N. 620 B.A. 33 V. 260.

P. 38.—MAIN CROP: A. 15 H. 36 G. 3⅛ N. 1990 B.A. 133 V. 1430 F. ·299 C. 59 B. 12. THINNINGS: N. 820 B.A. 20 V. 30. Inverness. 100′. N.E. Fully shelt. Loam. Old Red Sandstone. Nil.

,, —MAIN CROP: A. 21 H. 50 G. 4⅛ N. 1365 B.A. 159 V. 2685 F. ·338 C. 47 B. 14. THINNINGS: N. 505 B.A. 22 V. 145.

P. 63.—MAIN CROP: A. 14 H. 33½ G. 3¼ N. 1510 B.A. 114 V. 1215 F. ·318 C. 58 B. 11. THINNINGS: N. 895 B.A. 41 V. 302. Argyll. 350′. E. Mod. shelt. Loam. Epidiorite Hornblende Schist. Nil.

DOUGLAS FIR—*contd.*

Permanent Sample Plots—contd.

Quality Class II—100-ft.—*contd.*

P. 12.—MAIN CROP: A. 22 H. 50 G. 4¼ N. 1120 B.A. 178 V. 3540 F. ·398 C. 43 B. 12. THINNINGS: N. 510 B.A. 23 V. 175. Kincardine. 300′. N. Fully shelt. Sandy loam. Gneiss. Nil.

P. 26.—MAIN CROP: A. 23 H. 56 G. 5¼ N. 585 B.A. 135 V. 2655 F. ·350 C. 51 B. 11. THINNINGS: N. 175 B.A. 19 V. 310. Montgomery. 850′. E. Mod. shelt. Loam. Silurian. Nil.

,, —MAIN CROP: A. 28 H. 63 G. 6¼ N. 490 B.A. 153 V. 3830 F. ·397 C. 46 B. 11. THINNINGS: N. 95 B.A. 18 V. 395.

P. 44.—MAIN CROP: A. 27 H. 59 G. 7½ N. 375 B.A. 144 V. 3160 F. ·370 C. 47 B. 12. Somerset. 300′. S.W. Mod. shelt. Loam. Devonian. Nil.

P. 20.—MAIN CROP: A. 29 H. 66 G. 9⅞ N. 205 B.A. 138 V. 3700 F. ·380. Glos. 80′. N. Mod. exp. Loam. Silurian (Llandovery). Nil.

,, —MAIN CROP: A. 36 H. 78½ G. 10⅛ N. 180 B.A. 127 V. 3390 F. ·341. THINNINGS: N. 15 B.A. 3 V. 45.

,, —MAIN CROP: A. 41 H. 88 G. 10⅜ N. 165 B.A. 132 V. 4005 F. ·344 B. 15. THINNINGS: N. 15 B.A. 5 V. 110.

DOUGLAS FIR

Temporary Sample Plots

Quality Class III—90-ft.

S.P.Y. 1.—MAIN CROP: A. 14 H. 19 G. 2¼ N. 2065 B.A. 74 V. 250 F. ·157 B. 21. Yorks. 575′. S.S.W. Very exp. Loam. Middle Oolite. Nil.

S.P. 15.—MAIN CROP: A. 17 H. 33 G. 3¼ N. 1750 B.A. 129 V. 1430 F. ·335 C. 56 B. 17. Dumfries. 200′. S.W. Fully shelt. Sandy loam. Silurian. Nil.

S.P. 43.—MAIN CROP: A. 17 H. 31 G. 3 N. 2125 B.A. 140 V. 1340 F. ·308 C. 54 B. 14. Kirkcudbright. 250′. E. Fully shelt. Sandy loam. Silurian Hard Greywacke. Nil.

P. 363.—MAIN CROP: A. 18 H. 33 G. 3 N. 1725 B.A. 110 V. 1065 F. ·295 C. 61 B. 13. THINNINGS: N. 305 B.A. 6. Cornwall. 200′. N.W. Fully shelt. Loam. Devonian. Nil.

P. 383.—MAIN CROP: A. 19 H. 36 G. 4¼ N. 905 B.A. 142 V. 1855 F. ·362 C. 59 B. 10 THINNINGS: N. 115 B.A. 3. Kincardine. 250′. W. Fully exp. Loam. Boulder Clay on Schistose Grits. Nil.

P. 160.—MAIN CROP: A. 20 H. 38 G. 4 N. 1495 B.A. 175 V. 2620 F. ·394 C. 49 B. 15. THINNINGS: N. 215 B.A. 7. Kincardine. 250′. General. Fully shelt. Sand. Boulder Clay margin on Granite. Nil.

P. 652.—MAIN CROP: A. 32 H. 69 G. 11 N. 200 B.A. 171 V. 3005 F. ·254 C. 62 B. 12. Radnor. 670′. S.S.E. Mod. shelt. Loam. Ordovician. Nil.

P. 520.—MAIN CROP: A. 36 H. 73 G. 10¾ N. 250 B.A. 197 V. 4645 F. ·323 C. 45 B. 10. THINNINGS: N. 25 B.A. 6. Cumberland. 100′. General. Mod. exp. Sandy loam. Permian. Nil.

DOUGLAS FIR—*contd.*

Permanent Sample Plots

Quality Class III—90-ft.

P. 41.—MAIN CROP: A. 16 H. 27 G. 3 N. 1805 B.A. 113 V. 930 F. ·305 C. 60 B. 14. THINNINGS: N. 150 B.A. 2 V. 5. Perth. 500′. E.N.E. Mod. shelt. Sandy loam. Old Red Sandstone. Nil.

P. 23.—MAIN CROP: A. 18 H. 35½ G. 3⅝ N. 810 B.A. 74 V. 845 F. ·336 C. 63 B. 13. THINNINGS: N. 1070 B.A. 45 V. 315. Peebles. 850′. S.S.E Fully shelt. Clay loam. Silurian (Llandovery). Nil.

„ —MAIN CROP: A. 23 H. 46½ G. 4⅞ N. 645 B.A. 106 V. 1920 F. ·390 C. 57 B. 11. THINNINGS: N. 165 B.A. 21 V. 345.

P. 32.—MAIN CROP: A. 21 H. 45 G. 5⅜ N. 655 B.A. 131 V. 2045 F. ·346 C. 57 B. 15. THINNINGS: N. 450 B.A. 35 V. 440. Aberdeen. 800′. N.N.W. Mod. shelt. Clay loam. Mica Gneiss. *Galium, Viola, Blechnum.* (Scanty.)

„ —MAIN CROP: A. 26 H. 54½ G. 6⅝ N. 505 B.A. 153 V. 2980 F. ·357 C. 49 B. 15. THINNINGS: N. 150 B.A. 26 V. 450.

P. 11.—MAIN CROP: A. 23 H. 50 G. 4¾ N. 1210 B.A. 188 V. 3760 F. ·400 C. 43 B. 12. THINNINGS: N. 375 B.A. 21 V. 190. Kincardine. 300′. N. Fully shelt. Sandy loam. Gneiss. Nil.

„ —MAIN CROP: A. 26 H. 55 G. 5⅜ N. 930 B.A. 187 V. 3970 F. ·386 C. 45 B. 14. THINNINGS: N. 280 B.A. 26 V. 395.

„ —MAIN CROP: A. 29 H. 59 G. 5⅞ N. 755 B.A. 185 V. 4272 F. ·392 C. 40 B. 13. THINNINGS: N. 175 B.A. 23 V. 510.

P. 76.—MAIN CROP: A. 25 H. 50 G. 4⅝ N. 1025 B.A. 154 V. 2755 F. ·359 C. 42 B. 13. THINNINGS: N. 585 B.A. 31 V. 295. Ross. 250′. S.E. Fully exp. Sandy loam. Old Red Sandstone. Nil.

P. 45.—MAIN CROP: A. 27 H. 54 G. 7⅛ N. 335 B.A. 119 V. 2440 F. ·389 C. 49 B. 12. THINNINGS: N. 105 B.A. 28 V. 550. Somerset. 350′. S.W. Fully shelt. Loam. Devonian. Nil.

„ —MAIN CROP: A. 32 H. 57½ G. 8⅛ N. 300 B.A. 141 V. 3420 F. ·413 C. 50 B. 12. THINNINGS: N. 35 B.A. 9 V. 175.

P. 18.—MAIN CROP: A. 33 H. 74 G. 8¼ N. 350 B.A. 167 V. 4395 F. ·355 B. 12. THINNINGS: N. 90 B.A. 61 V. 760. Somerset. 350′. N.N.E. Fully shelt. Loam. Devonian. *Digitalis, Galium, Grasses.*

„ —MAIN CROP: A. 39 H. 81 G. 10 N. 230 B.A. 161 V. 5120 F. ·392 B. 12. THINNINGS: N. 20 B.A. 7 V. 180.

„ —MAIN CROP: A. 44 H. 85½ G. 10⅝ N. 225 B.A. 173 V. 5865 F. ·396 B. 10. THINNINGS: N. 5 V. 140.

DOUGLAS FIR

Temporary Sample Plots

Quality Class IV—80-ft.

P. 48.—MAIN CROP: A. 21 H. 35 G. 5 N. 835 B.A. 150 V. 2120 F. ·404 C. 62 B. 12. Wigtown. 150′. N.W. Fully shelt. Loam. Boulder Clay on Ordovician. Nil.

P. 206.—MAIN CROP: A. 21 H. 32 G. 3¼ N. 1370 B.A. 96 V. 970 F. ·317 C. 63 B. 14. THINNINGS: N. 160 B.A. 45. Norfolk. 110′. S. Fully shelt. Sandy loam. Glacial drift on Pleiocene. Nil.

DOUGLAS FIR—*contd.*

Temporary Sample Plots—contd.

Quality Class IV—80-ft.—*contd.*

P. 584.—MAIN CROP: A. 23 H. 40 G. 4½ N. 950 B.A. 129 V. 2215 F. ·429 C. 52 B. 13. THINNINGS: N. 350 B.A. 16 V. 70. Hants. 380′. W. Fully shelt. Loam. Lower Eocene. Nil.

P. 415.—MAIN CROP: A. 26 H. 50 G. 4¾ N. 970 B.A. 160 V. 3050 F. ·382 B. 11. THINNINGS: N. 220 B.A. 14 V. 150. Perth. 250′. N. E. Mod. shelt. Loam. River alluvium. *Grasses, Mosses.* (Scanty.)

S.P. 16.—MAIN CROP: A. 28 H. 65 G. 7½ N. 500 B.A. 192 V. 4970 F. ·398 C. 63 B. 13. Dumfries. 300′. S. Mod. shelt. Sandy loam. Silurian. Nil.

S.P.S. 5.—MAIN CROP: A. 32 H. 58 G. 12½ N. 160 B.A. 173 V. 3225 F. ·321 C. 77 B. 10. Northumberland. 375′. S. Fully exp. Sand. Carboniferous. Nil.

P. 356.—MAIN CROP: A. 35 H. 61 G. 8½ N. 345 B.A. 176 V. 3705 F. ·345 C. 47 B. 9. THINNINGS: N. 45 B.A. 5 V. 95. Aberdeen. 1000′. N. Mod. exp. Sandy loam. Sand and Gravel on Granite. Nil.

P. 414.—MAIN CROP: A. 54 H. 82 G. 12¼ N. 215 B.A. 224 V. 6575 F. ·358 C. 40 B. 12. THINNINGS: N. 10 B.A. 3 V. 70. Ross. 100′. S. Mod. shelt. Loam. Hornblende Schist. *Oxalis, Hypericum, Moss.* (Scanty.)

DOUGLAS FIR

Permanent Sample Plots

Quality Class IV—80-ft.

P. 31.—MAIN CROP: A. 38 H. 64 G. 8⅜ N. 435 B.A. 213 V. 5095 F. ·373 C. 49 B. 15. THINNINGS: N. 90 B.A. 16 V. 260. Aberdeen. 1000′. E. Mod. shelt. Sandy loam. Granite. Nil.

„ —MAIN CROP: A. 43 H. 72 G. 9⅜ N. 391 B.A. 236 V. 6155 F. ·363 C. 39 B. 14. THINNINGS: N. 45 B.A. 11 V. 235.

CORSICAN PINE—England, Wales and Scotland

Temporary Sample Plots

Quality Class I—70-ft.

S.P.Y. 31.—MAIN CROP: A. 13 H. 19 G. 2¾ N. 2340 B.A. 108 V. 585 F. ·285 C. 64 B. 27. THINNINGS: N. 265 B.A. 3. Glos. 470′. S. Fully shelt. Loam. Oolitic Limestone. Nil.

P. 583.—MAIN CROP: A. 17 H. 32 G. 3½ N. 1580 B.A. 143 V. 1480 F. ·323 C. 45 B. 17. THINNINGS: N. 295 B.A. 16 V. 65. Hants. 400′. N.E. Fully shelt. Sandy loam. Lower Eocene. *Rubus fruticosus, Mosses.* (Scanty.)

P. 361.—MAIN CROP: A. 17 H. 29 G. 3½ N. 1255 B.A. 104 V. 1010 F. ·335 C. 61 B. 23. THINNINGS: N. 180 B.A. 3. Devon. 200′. S.S.W. Fully shelt. Loam. Devon Shales. *Pteris, Hedera.* (Scanty.)

P. 505.—MAIN CROP: A. 19 H. 29 G. 3¾ N. 1490 B.A. 140 V. 1375 F. ·339 C. 73 B. 18. THINNINGS: N. 130 B.A. 7 V. 55. Somerset. 700′. N. Mod. shelt. Loam. Old Red Sandstone. *Mosses.* (Scanty.)

P. 399.—MAIN CROP: A. 20 H. 27 G. 3½ N. 1630 B.A. 148 V. 1380 F. ·346 C. 68 B. 22. THINNINGS: N. 30 B.A. 4 V. 45. Somerset. 500′. N.E. Mod. shelt. Loam. Old Red Sandstone. *Pteris.* (Scanty.)

CORSICAN PINE—England, Wales and Scotland—*contd.*

Temporary Sample Plots—contd.

Quality Class I—70-ft.—*contd.*

P. 699.—MAIN CROP: A. 20 H. 32 G. 4 N. 1170 B.A. 131 V. 1670 F. ·398 C. 51 B. 16. THINNINGS: N. 100 B.A. 6. Somerset. 620′. N.W. Mod. exp. Sandy loam. Devonian. Nil.

S.P. 41.—MAIN CROP: A. 21 H. 34 G. 3¾ N. 1285 B.A. 125 V. 1780 F. ·419 C. 42 B. 12. THINNINGS: N. 215 B.A. 8. Kirkcudbright. 300′. E. Fully shelt. Sandy loam. Silurian Hard Greywacke. *Pteris.* (Scanty.)

P. 700.—MAIN CROP: A. 22 H. 38 G. 4½ N. 1090 B.A. 153 V. 2455 F. ·422 C. 50 B. 13. THINNINGS: N. 35 B.A. 5. Somerset. 500′. N.N.E. Mod. exp. Loam. Devonian. Nil.

P. 502.—MAIN CROP: A. 24 H. 36 G. 4¾ N. 1135 B.A. 170 V. 2365 F. ·387 C. 61 B. 17. THINNINGS: N. 140 B.A. 10 V. 60. Somerset. 600′. S. Mod. exp. Loam. Upper Trias. Nil.

P. 536.—MAIN CROP: A. 30 H. 44 G. 5¼ N. 855 B.A. 162 V. 2595 F. ·363 C. 49 B. 13. THINNINGS: N. 200 B.A. 18 V. 60. Kent. 230′. General. N. Mod. exp. Loam. Eocene. London Clay. *Pteris.* (Scanty.)

P. 662.—MAIN CROP: A. 37 H. 52 G. 8¾ N. 300 B.A. 159 V. 3655 F. ·443 C. 43 B. 15. THINNINGS: N. 20 B.A. 3. Glamorgan. 130′. General. Mod. exp. Loam. Triassic. *Sambucus.* (Scanty.)

P. 622.—MAIN CROP: A. 47 H. 73 G. 10 N. 270 B.A. 192 V. 6635 F. ·473 C. 39 B. 12. THINNINGS: N. 55 B.A. 21. Carnarvon. 50′. N.W. Fully shelt. Loam. Ordovician. *Mercurialis, Pteris, Oxalis.*

S.P. 111.—MAIN CROP: A. 47 H. 70 G. 10½ N. 270 B.A. 209 V. 5220 F. ·356 C. 43 B. 16. THINNINGS: N. 10 B.A. 4. Devon. 450′. S.S.W. Mod. exp. Loam. Devonian. *Rubus.* (Scanty.)

P. 568.—MAIN CROP: A. 50 H. 69 G. 8½ N. 360 B.A. 184 V. 5185 F. ·408 C. 33 B. 16. THINNINGS: N. 15 B.A. 5. Hants. 150′. S. Mod. exp. Sandy loam. Upper Eocene. *Pteris, Hedera.*

P. 157.—MAIN CROP: A. 52 H. 73 G. 10 N. 235 B.A. 160 V. 5150 F. ·441 C. 36 B. 14. THINNINGS: N. 45 B.A. 13 V. 335. Hants. 100′. General. Mod. shelt. Sand. Oligocene. *Molinia.* (Scanty.)

S.P.Y. 24.—MAIN CROP: A. 80 H. 104 G. 17 N. 105 B.A. 217 V. 9935 F. ·440 C. 49 B. 18. THINNINGS: N. 10 B.A. 3. Hants. 350′. S.E. Mod. exp. Sandy loam. Lower Eocene. *Erica cinerea.* (Scanty.)

CORSICAN PINE

Permanent Sample Plots

Quality Class I—70-ft.

P. 59.—MAIN CROP: A. 19 H. 34 G. 3⅝ N. 1520 B.A. 138 V. 1540 F. ·328 C. 53 B. 20. THINNINGS: N. 390 B.A. 11 V. 25. Hants. 400′. N.N.W. Mod. shelt. Clay loam. Bagshot and Bracklesham Beds. *Rubus, Mosses.* (Scanty.)

„ —MAIN CROP: A. 24 H. 42½ G. 4½ N. 1130 B.A. 157 V. 2430 F. ·364 C. 46 B. 22. THINNINGS: N. 385 B.A. 20 V. 25.

P. 66.—MAIN CROP: A. 20 H. 29 G. 3¼ N. 1720 B.A. 129 V. 1270 F. ·340 C. 60 B. 18. THINNINGS: N. 285 B.A. 7 V. 10. Cheshire. 250′. N.W. Mod. exp. Sand. Keuper Red Marls. *Pteris.* (Scanty.)

CORSICAN PINE—*contd.*

Permanent Sample Plots—contd.

Quality Class I—70-ft.—*contd.*

P. 66.—MAIN CROP: A. 25 H. 36½ G. 4⅛ N. 1145 B.A. 136 V. 1800 F. ·364 C. 47 B. 18. THINNINGS: N. 175 B.A. 25 V. 135. Cheshire. 250′. N.W. Mod. exp. Sand. Keuper Red Marls. *Pteris.* (Scanty.)

P. 57.—MAIN CROP: A. 21 H. 37½ G. 3⅝ N. 1145 B.A. 104 V. 1290 F. ·330 C. 50 B. 20. THINNINGS: N. 275 B.A. 29 V. 385. Hants. 400′. E. Mod. shelt. Clay loam. Bagshot and Bracklesham Beds. *Rubus fruticosus, Grasses.* (Scanty.)

P. 58.—MAIN CROP: A. 21 H. 38 G. 3⅞ N. 1475 B.A. 150 V. 1925 F. ·338 C. 50 B. 20. THINNINGS: N. 185 B.A. 8 V. 45. Hants. 400′. E. Mod. shelt. Clay loam. Bagshot and Bracklesham Beds. *Rubus, Grasses, Mosses.* (Scanty.)

„ —MAIN CROP: A. 26 H. 47½ G. 4¾ N. 920 B.A. 145 V. 1785 F. ·405 C. 32 B. 18. THINNINGS: N. 405 B.A. 24 V. 195.

P. 46.—MAIN CROP: A. 22 H. 32 G. 4⅛ N. 1510 B.A. 181 V. 2070 F. ·358 C. 55 B. 18. THINNINGS: N. 165 B.A. 6 V. 25. Somerset. 650′. S.E. Fully exp. Loam. Devonian. *Mosses, Oxalis, Viola.* (Scanty.)

„ —MAIN CROP: A. 27 H. 41 G. 4⅞ N. 1200 B.A. 200 V. 3220 F. ·383 C. 46 B. 16. THINNINGS: N. 310 B.A. 15 V. 155.

P. 83.—MAIN CROP: A. 37 H. 65 G. 7⅛ N. 465 B.A. 165 V. 4470 F. ·418 C. 41 B. 19. THINNINGS: N. 100 B.A. 17 V. 365. Hants. 150′. S.W. Mod. exp. Sandy loam. Eocene. London Clay. *Oxalis, Galium, Pteris, Mosses.*

CORSICAN PINE

Temporary Sample Plot

Quality Class II—60-ft.

S.P.Y. 10.—MAIN CROP: A. 21 H. 23 G. 2½ N. 2545 B.A. 114 V. 555 F. ·211 C. 49 B. 27. THINNINGS: N. 330 B.A. 7. Yorks. 950′. N.N.E. Mod. exp. Sand. Millstone Grit. *Pteris, Aspidium.* (Scanty.)

CORSICAN PINE

Permanent Sample Plots

Quality Class II—60-ft.

P. 40.—MAIN CROP: A. 28 H. 39½ G. 4¾ N. 1180 B.A. 183 V. 2625 F. ·364 C. 62 B. 19. THINNINGS: N. 125 B.A. 6 V. 35. Somerset. 650′. S.S.W. Fully exp. Sandy loam. Devonian. *Mosses.* (Scanty.)

„ —MAIN CROP: A. 33 H. 43 G. 5⅝ N. 845 B.A. 183 V. 2920 F. ·370 C. 64 B. 20. THINNINGS: 335 B.A. 35 V. 435.

P. 25.—MAIN CROP: A. 32 H. 37 G. 5¼ N. 960 B.A. 185 V. 2525 F. ·368 C. 51 B. 21. THINNINGS: N. 290 B.A. 20 V. 180. Montgomery. 900′. S.W. Fully exp. Loam. Silurian. *Rosa canina, Viola, Digitalis, Hieracium.*

„ —MAIN CROP: A. 37 H. 45 G. 5¾ N. 810 B.A. 190 V. 3290 F. ·385 C. 49 B. 20. THINNINGS: N. 150 B.A. 23 V. 320.

CORSICAN PINE—*contd.*

Temporary Sample Plots

Quality Class III—50-ft.

P. 281.—MAIN CROP: A. 33 H. 34 G. 5 N. 810 B.A. 134 V. 1915 F. ·418 C. 52 B. 18. THINNINGS: N. 125 B.A. 7 V. 45. Wigtown. 200′. N.E. Mod. shelt. Sandy loam. Sand and Gravel on Ordovician. *Grasses, Pteris.* (Scanty.)

P. 280.—MAIN CROP: A. 34 H. 35 G. 4¾ N. 1115 B.A. 172 V. 3040 F. ·504 C. 46 B. 13. THINNINGS: N. 85 B.A. 4 V. 25. Wigtown. 200′. E. Mod. exp. Loam. Sand and Gravel on Ordovician. *Grasses.* (Scanty.)

P. 190.—MAIN CROP: A. 37 H. 40 G. 6¾ N. 465 B.A. 152 V. 2045 F. ·394 C. 40 B. 21. THINNINGS: N. 40 B.A. 5 V. 55. Aberdeen. 550′. N.W. Fully shelt. Sand. Boulder Clay on Limestone. *Erica cinerea, Oxalis, Grasses, Pteris.*

SITKA SPRUCE

Temporary Sample Plot

Quality Class I—100-ft.

P. 582.—MAIN CROP: A. 19 H. 47 G. 4¾ N. 805 B.A. 128 V. 2590 F. ·431 C. 51 B. 8. THINNINGS: N. 150 B.A. 13 V. 225. Hants. 400′. N. Mod. shelt. Loam. Chalk. Nil.

SITKA SPRUCE

Permanent Sample Plots

Quality Class I—100-ft.

P. 41.—MAIN CROP: A. 13 H. 32½ G. 3¼ N. 1645 B.A. 125 V. 1295 F. ·324 C. 78 B. 13. THINNINGS: N. 10. Somerset. 300′. E.N.E. Mod. shelt. Loam. Devonian. Nil.

„ —MAIN CROP: A. 16 H. 42 G. 4 N. 980 B.A. 115 V. 1795 F. ·378 C. 55 B. 12. THINNINGS: N. 660 B.A. 40 V. 440.

„ —MAIN CROP: A. 18 H. 47 G. 4¾ N. 905 B.A. 140 V. 2780 F. ·423 C. 51 B. 12½. THINNINGS: N. 75 B.A. 6 V. 70.

P. 57.—MAIN CROP: A. 20 H. 47 G. 4¾ N. 685 B.A. 110 V. 2010 F. ·396 C. 62 B. 9. THINNINGS: N. 125 B.A. 3 V. 8. Argyll. 200′. N.E. Fully shelt. Loam. Porphyrite. Nil.

SITKA SPRUCE

Temporary Sample Plots

Quality Class II—90-ft.

S.P. 8.—MAIN CROP: A. 17 H. 35 G. 4½ N. 1030 B.A. 139 V. 1860 F. ·382 C. 69 B. 10. Dumfries. 600′. W. Mod. exp. Loam. Boulder Clay on Silurian. *Vaccinium Myrtillus, Grasses.* (Scanty.)

P. 232.—MAIN CROP: A. 20 H. 41 G. 6½ N. 535 B.A. 152 V. 2340 F. ·375 C. 59 B. 13. Dumfries. 600′. W. Mod. exp. Loam. Boulder Clay on Silurian. *Vaccinium Myrtillus, Grasses, Ferns.* (Scanty.)

P. 233.—MAIN CROP: A. 20 H. 39 G. 5¼ N. 795 B.A. 153 V. 2315 F. ·387 C. 58 B. 12. THINNINGS: N. 175 B.A. 8. Dumfries. 650′. General. Fully exp. Loam. Boulder Clay on Silurian. Nil.

P. 416.—MAIN CROP: A. 41 H. 77 G. 8¾ N. 465 B.A. 248 V. 770 F. ·403 B. 8. Argyll. 350′. N.E. Mod. shelt. Clay loam. Morainic on Chlorite Schist. Nil.

SITKA SPRUCE—*contd.*

Permanent Sample Plots

Quality Class II—90-ft.

P. 70.—MAIN CROP: A. 15 H. 25 G. 3 N. 2175 B.A. 137 V. 1045 F. ·305 B. 12. THINNINGS: N. 295 B.A. 4. Northumberland. 75′. S.E. Mod. exp. Peaty loam over clay. Carboniferous Limestone. Nil.

P. 69.—MAIN CROP: A. 16 H. 30½ G. 3¼ N. 1610 B.A. 115 V. 1160 F. ·331 B. 12. THINNINGS: N. 655 B.A. 27 V. 180. Northumberland. 75′. S.E. Mod. exp. Peaty loam over clay. Carboniferous Limestone. Nil.

P. 9.—MAIN CROP: A. 21 H. 42½ G. 6¾ N. 570 B.A. 160 V. 2570 F. ·378 C. 59 B. 12. THINNINGS: N. 10 B.A. 1 V. 8. Dumfries. 600′. W. Fully exp. Sandy loam. Calciferous sandstone. *Aspidium, Pteris, Scilla.* (Scanty.)

,, —MAIN CROP: A. 26 H. 58 G. 7½ N. 515 B.A. 198 V. 4630 F. ·403 C. 47 B. 11. THINNINGS: N. 55 B.A. 5 V. 71.

P. 73.—MAIN CROP: A. 23 H. 45½ G. 5¼ N. 872 B.A. 174 V. 3235 F. ·409 C. 42 B. 9. THINNINGS: N. 200 B.A. 8 V. 40. Dumfries. 650′. N.W. Mod. exp. Peaty loam. Calciferous sandstone. *Blechnum, Aspidium, Mosses.* (Scanty.)

SITKA SPRUCE

Permanent Sample Plots

Quality Class III—80-ft.

P. 13.—MAIN CROP: A. 38 H. 62 G. 8¼ N. 430 B.A. 196 V. 4780 F. ·393 C. 42 B. 8. THINNINGS: N. 55 B.A. 11 V. 210. Kincardine. 800′. N. Mod. exp. Peat. Boulder Clay over Felspathic Gneiss. Nil.

,, —MAIN CROP: A. 43 H. 69½ G. 9 N. 370 B.A. 201 V. 5865 F. ·420 C. 39 B. 8. THINNINGS: N. 55 B.A. 15 V. 450.

P. 14.—MAIN CROP: A. 38 H. 64½ G. 7 N. 570 B.A. 196 V. 5280 F. ·418 C. 40 B. 8. THINNINGS: N. 90 B.A. 11 V. 240. Kincardine. 800′. S.E. Mod. exp. Peat. Boulder Clay over Felspathic Gneiss. Nil.

,, —MAIN CROP: A. 41 H. 68 G. 7½ N. 510 B.A. 199 V. 5745 F. ·424 C. 35 B. 10. THINNINGS: N. 65 B.A. 13 V. 325.

,, —MAIN CROP: A. 44 H. 71 G. 7¾ N. 505 B.A. 206 V. 6045 F. ·414 C. 23 B. 10. THINNINGS: N. 5 B.A. 2 V. 40.

SITKA SPRUCE

Temporary Sample Plots

Quality Class IV—70-ft.

P. 711.—MAIN CROP: A. 24 H. 32½ G. 3 N. 2010 B.A. 125 V. 1318 F. ·324 C. 51 B. 13. THINNINGS: N. 1165 B.A. 17. Hampshire. 300′. S.W. Mod. shelt. Clay loam. Greensand. Nil.

S.P. 10.—MAIN CROP: A. 29 H. 46 G. 6 N. 415 B.A. 105 V. 1920 F. ·396 C. 73 B. 11. Dumfries. 350′. S.W. Fully shelt. Clay loam. Boulder Clay on Permian Red Sandstone. *Oxalis, Ferns.* (Scanty.)

P. 146.—MAIN CROP: A. 40 H. 59 G. 6¾ N. 695 B.A. 227 V. 5740 F. ·428 C. 40 B. 9. THINNINGS: N. 75 B.A. 7 V. 130. Kincardine. 800′. E. Mod. exp. Peat. Felspathic Gneiss. Nil.

JAPANESE LARCH

Temporary Sample Plots

Quality Class I—35-ft.

P. 144.—MAIN CROP: A. 12 H. 27 G. 2½ N. 2160 B.A. 98 V. 600 F. ·226 C. 56 B. 20. THINNINGS: N. 400 B.A. 5. Roxburgh. 600′. N.W. Mod. shelt. Sandy loam. Old Red Sandstone. Nil.

P. 119.—MAIN CROP: A. 13 H. 27½ G. 3¼ N. 1335 B.A. 92 V. 810 F. ·320 C. 50 B. 14. Brecknock. 680′. N.N.W. Mod. exp. Loam. Silurian. *Mosses, Agrostis.* (Scanty.)

S.P.Y. 69.—MAIN CROP: A. 14 H. 40 G. 4½ N. 655 B.A. 89 V. 1275 F. ·360 C. 47 B. 19. THINNINGS: N. 165 B.A. 7. Somerset. 500′. E. Fully shelt. Loam. Devonian. *Nepeta.* (Scanty.)

P. 624.—MAIN CROP: A. 14 H. 35 G. 3 N. 1445 B.A. 91 V. 975 F. ·307 C. 43 B. 14. THINNINGS: N. 205 B.A. 7. Carmarthen. 200′. N.N.W. Mod. shelt. Loam. Coal Measures. Nil.

P. 421.—MAIN CROP: A. 14 H. 33 G. 4 N. 570 B.A. 65 V. 770 F. ·357 C. 60 B. 19. THINNINGS: N. 35 B.A. 1. Yorks. 550′. E. Mod. shelt. Loam. Millstone Grit. Nil.

P. 137.—MAIN CROP: A. 15 H. 37 G. 4¼ N. 1280 B.A. 153 V. 2360 F. ·418 C. 36 B. 13. THINNINGS: N. 105 B.A. 4. Ayrshire. 450′. S.W. Fully shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis.* (Scanty.)

P. 567.—MAIN CROP: A. 15 H. 38 G. 3¾ N. 1030 B.A. 106 V. 1530 F. ·381 C. 41 B. 15. THINNINGS: N. 25 B.A. 1. Hants. 120′. S.W. Fully shelt. Sandy loam. Lower Eocene. *Moss.* (Scanty.)

P. 385.—MAIN CROP: A. 15 H. 40 G. 4¾ N. 730 B.A. 111 V. 1665 F. ·376 C. 48 B. 14. THINNINGS: N. 55 B.A. 3 V. 25. Devon. 400′. S.W. Fully shelt. Loam. Devonian. Nil.

P. 660.—MAIN CROP: A. 16 H. 41 G. 4 N. 955 B.A. 110 V. 1595 F. ·355 C. 38 B. 15. THINNINGS: N. 200 B.A. 10. Glamorgan. 250′. S. Mod. shelt. Sandy loam. Coal Measures. *Sambucus, Aspidium.* (Scanty.)

P. 588.—MAIN CROP: A. 16 H. 36 G. 4 N. 880 B.A. 102 V. 1380 F. ·375 C. 41 B. 17. THINNINGS: N. 85 B.A. 5 V. 35. Bucks. 550′. S. Mod. shelt. Loam. Chalk. Nil.

S.P.Y. 35.—MAIN CROP: A. 16 H. 37 G. 5¼ N. 750 B.A. 137 V. 1845 F. ·364 C. 41 B. 14. THINNINGS: N. 60 B.A. 5. Carnarvon. 200′. E. Fully shelt. Loam. Cambrian. *Digitalis, Grasses.*

P. 235.—MAIN CROP: A. 16 H. 37 G. 4¼ N. 740 B.A. 96 V. 1400 F. ·395 C. 53 B. 17. Dumfries. 300′. S.E. Fully shelt. Loam. Permian Red Sandstone. *Oxalis, Digitalis, Pteris.* (Scanty.)

P. 267.—MAIN CROP: A. 16 H. 33 G. 2¾ N. 1945 B.A. 97 V. 790 F. ·245 C. 44 B. 18. Kirkcudbright. 400′. E. Mod. shelt. Sandy loam. Silurian Hard Greywacke. Nil.

S.P. 7.—MAIN CROP: A. 16 H. 40 G. 3½ N. 1530 B.A. 134 V. 2055 F. ·384 C. 35 B. 17. Berwick. 400′. S.W. Fully shelt. Sandy loam. Boulder Clay on Silurian. *Grasses, Pteris.* (Scanty.)

S.P. 9.—MAIN CROP: A. 16 H. 35 G. 4 N. 670 B.A. 78 V. 1125 F. ·409 C.53 B. 17. Dumfries. 400′. W. Mod. exp. Loam. Boulder Clay on Carboniferous Limestone. *Oxalis, Grasses, Pteris.* (Scanty.)

JAPANESE LARCH—*contd.*

Temporary Sample Plots—contd.

Quality Class I—35-ft.—*contd.*

S.P. 52.—MAIN CROP: A. 16 H. 33 G. 5 N. 775 B.A. 140 V. 1930 F. ·418 C. 49 B. 17. Wigtown. 150′. General. Mod. shelt. Peat. Alluvium. *Pteris, Urtica.* (Scanty.)

P. 261.—MAIN CROP: A. 17 H. 36 G. 3¾ N. 1385 B.A. 137 V. 1755 F. ·356 C. 37 B. 16. Dumfries. 75′. S. Fully exp. Loam. Permian Red Sandstone. *Grasses, Pteris.* (Scanty.)

S.P. 18.—MAIN CROP: A. 17 H. 35 G. 3¼ N. 1530 B.A. 110 V. 1220 F. ·317 C. 34 B. 19. THINNINGS: N. 140 B.A. 4. Norfolk. 35′. General. Fully shelt. Sand. Lower Greensand. Nil.

P. 374.—MAIN CROP: A. 17 H. 35 G. 3½ N. 1260 B.A. 114 V. 1355 F. ·341 C. 51 B. 20. THINNINGS: N. 330 B.A. 9. Aberdeen. 350′. N.E. Fully shelt. Loam. Boulder Clay on Knotted Andalusite Schist. *Oxalis, Mosses.* (Scanty.)

P. 358.—MAIN CROP: A. 18 H. 43 G. 4 N. 840 B.A. 97 V. 1535 F. ·366 C. 38 B. 17. THINNINGS: N. 165 B.A. 11 V. 130. Devon. 320′. W.S.W. Fully shelt. Clay loam. Devonian. *Oxalis, Hedera.* (Scanty.)

S.P. 45.—MAIN CROP: A. 18 H. 38 G. 4¼ N. 1000 B.A. 125 V. 1970 F. ·415 C. 45 B. 11. THINNINGS: N. 25 B.A. 1 V. 20. Wigtown. 150′. S.W. Mod. exp. Loam. Boulder Clay on Silurian Greywacke. *Urtica, Grasses, Pteris.* (Scanty.)

P. 132.—MAIN CROP: A. 18 H. 38 G. 4¼ N. 915 B.A. 115 V. 1740 F. ·399 C. 36 B. 15. THINNINGS: N. 70 B.A. 2 V. 10. Ayr. 350′. N. Fully shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis, Ferns, Mosses.* (Scanty.)

P. 268.—MAIN CROP: A. 19 H. 40 G. 4 N. 1115 B.A. 124 V. 1920 F. ·385 C. 36 B. 17. THINNINGS: N. 230 B.A. 8 V. 10. Kirkcudbright. 450′. E. Mod. shelt. Sandy loam. Silurian Hard Greywacke. *Pteris.* (Scanty.)

S.P.Y. 83.—MAIN CROP: A. 19 H. 39 G. 3¼ N. 1345 B.A. 104 V. 1485 F. ·365 C. 31 B. 15. THINNINGS: N. 205 B.A. 8. Wilts. 250′. W. Fully shelt. Sandy loam. Middle Oolite–Corallian. *Holcus, Urtica.* (Scanty.)

P. 264.—MAIN CROP: A. 20 H. 41 G. 3¾ N. 1325 B.A. 126 V. 1815 F. ·352 C. 32 B. 16. Kirkcudbright. 100′. E. Mod. shelt. Sandy loam. Silurian Hard Greywacke. Nil.

S.P.Y. 76.—MAIN CROP: A. 20 H. 44 G. 3½ N. 1315 B.A. 119 V. 1880 F. ·359 C. 39 B. 17. THINNINGS: N. 45 B.A. 2. Wilts. 600′. N.E. Fully shelt. Sandy loam. Upper Greensand. Nil.

P. 657.—MAIN CROP: A. 21 H. 44 G. 5¾ N. 455 B.A. 105 V. 1710 F. ·371 C. 45 B. 14. THINNINGS: N. 120 B.A. 7 V. 45. Brecknock, 800′. N.E. Mod. exp. Loam. Old Red Sandstone. Nil.

P. 585.—MAIN CROP: A. 23 H. 46 G. 5¼ N. 560 B.A. 111 V. 2010 F. ·396 C. 42 B. 14. THINNINGS: N. 20 B.A. 3. Hants. 480′. W.N.W. Fully shelt. Loam. Lower Eocene. *Moss.* (Scanty.)

JAPANESE LARCH—*contd.*

Permanent Sample Plots

Quality Class I—35-ft.

P. 23.—MAIN CROP: A. 13 H. 26½ G. 2½ N. 1580 B.A. 68 V. 395 F. ·219 C. 45 B. 20. THINNINGS: N. 323 B.A. 13 V. 65. Montgomery. 950′. N.N.E. Mod. shelt. Loam. Silurian. *Oxalis, Digitalis, Aspidium. Mosses.* (Scanty.)

,, —MAIN CROP: A. 18 H. 36½ G. 2⅝ N. 915 B.A. 81 V. 1035 F. ·350 C. 40 B. 17. THINNINGS: N. 650 B.A. 25 V. 185.

P. 27.—MAIN CROP: A. 15 H. 31 G. 2⅞ N. 1235 B.A. 68 V. 615 F. ·292 C. 39 B. 17. THINNINGS: N. 1255 B.A. 35 V. 114. Kirkcudbright, 250′. N.E. Mod. shelt. Loam. Silurian (Llandovery). *Mercurialis, Scilla, Oxalis, Lonicera, Anemone.*

P. 28.—MAIN CROP: A. 15 H. 31 G. 2⅝ N. 1750 B.A. 83 V. 665 F. ·260 C. 39 B. 17. THINNINGS: N. 795 B.A. 14 V. 10. Kirkcudbright. 250′. N.E. Mod. shelt. Loam. Silurian (Llandovery). *Mercurialis, Scilla, Oxalis, Lonicera.* (Scanty.)

,, —MAIN CROP: A. 20 H. 39½ G. 3¼ N. 1300 B.A. 99 V. 1170 F. ·299 C. 32 B. 15.. THINNINGS: N. 504 B.A. 13 V. 45.

P. 10.—MAIN CROP: A. 17 H. 37½ G. 4¼ N. 816 B.A. 101 V. 1400 F. ·371 C. 53 B. 15. Dumfries. 300′. S. Mod. shelt. Clay loam. Permian. *Rubus, Oxalis, Digitalis, Cerastium, Pteris.*

,, —MAIN CROP: A. 20 H. 43 G. 4¾ N. 602 B.A. 93 V. 1495 F. ·372 C. 35 B. 16. THINNINGS: N. 216 B.A. 26 V. 380.

,, —MAIN CROP: A. 23 H. 49½ G. 5¼ N. 500 B.A. 94 V. 1785 F. ·383 C. 36 B. 17. THINNINGS: N. 100 B.A. 15 V. 270.

P. 55.—MAIN CROP: A. 17 H. 35½ G. 2⅞ N. 2090 B.A. 120 V. 1145 F. ·270 C. 37 B. 16. THINNINGS: N. 250 B.A. 4 V. 5. Wilts. 850′. General. Mod. shelt. Clay loam. Greensand. *Mosses.* (Scanty.)

,, —MAIN CROP: A. 22 H. 42 G. 3½ N. 1430 B.A. 123 V. 1645 F. ·319 C. 29 B. 17. THINNINGS: N. 650 B.A. 23 V. 75

P. 56.—MAIN CROP: A. 17 H. 34½ G. 2⅝ N. 2055 B.A. 95 V. 760 F. ·233 C. 37 B. 16. THINNINGS: N. 540 B.A. 29 V. 300. Wilts. 850′. General. Mod. shelt. Clay loam. Greensand. *Mosses.* (Scanty.)

,, —MAIN CROP: A. 22 H. 44 G. 3½ N. 990 B.A. 87 V. 1315 F. ·344 C. 32 B. 18. THINNINGS: N. 1030 B.A. 36 V. 160.

P. 18.—MAIN CROP: A. 19 H. 35 G. 4 N. 920 B.A. 102 V. 1295 F. ·362 C. 51 B. 17. THINNINGS: N. 490 B.A. 23 V. 175. Aberdeen. 300′. N.E. Fully shelt. Loam. Knotted Andalusite Schist. *Oxalis, Digitalis, Mosses, Ferns.* (Scanty.)

P. 65.—MAIN CROP: A. 20 H. 40½ G. 4½ N. 575 B.A. 83 V. 1405 F. ·431 B. 11. Hants. 500′. S.E. Mod. shelt. Clay loam Bagshot and Bracklesham Beds. *Rubus, Sambucus, Mercurialis, Listera.* (Scanty.)

,, —MAIN CROP: A. 26 H. 49½ G. 5¾ N. 310 B.A. 70 V. 1270 F. ·365 C. 31 B. 15. THINNINGS: N. 265 B.A. 49 V. 835.

,, —MAIN CROP: A. 31 H. 52½ G. 6⅜ N. 300 B.A. 84 V. 1635 F. ·373 C. 35 B. 16.

JAPANESE LARCH—*contd.*

Temporary Sample Plots

Quality Class II—25-ft.

P. 402.—MAIN CROP: A. 13 H. 20 G. 2¼ N. 1810 B.A. 58 V. 175 F. ·151 C. 67 B. 22. Yorks. 625′. N. Mod. shelt. Sandy loam. Middle Oolite. *Grasses, Pteris.* (Scanty.)

P. 279.—MAIN CROP: A. 13 H. 23 G. 2¾ N. 1910 B.A. 99 V. 645 F. ·282 C. 50 B. 18. Wigtown. 200′. N. Mod. exp. Loam. Boulder Clay on Greywacke. Nil.

P. 145.—MAIN CROP: A. 14 H. 28 G. 2¾ N. 1910 B.A. 107 V. 855 F. ·285 C. 38 B. 17. THINNINGS: N. 340 B.A. 2. Roxburgh. 350′. S.E. Mod. shelt. Sandy loam. Red Boulder Clay on Old Red Sandstone. *Ferns.* (Scanty.)

P. 247.—MAIN CROP: A. 15 H. 30 G. 3 N. 1380 B.A. 93 V. 915 F. ·328 C. 44 B. 18. THINNINGS: N. 115 B.A. 4. Dumfries. 450′. S.W. Fully exp. Sandy loam. Silurian. Nil.

P. 282.—MAIN CROP: A. 16 H. 25 G. 3 N. 2025 B.A. 121 V. 965 F. ·318 C. 47 B. 19. Wigtown. 200′. E. Mod. exp. Sandy loam. Boulder Clay on Ordovician. Nil.

P. 240.—MAIN CROP: A. 16 H. 31 G. 4 N. 910 B.A. 105 V. 1155 F. ·357 C. 48 B. 18. Dumfries. 400′. W. Fully shelt. Loam. Boulder Clay on Silurian. *Oxalis.* (Scanty.)

S.P.Y. 29.—MAIN CROP: A. 16 H. 27 G. 2¾ N. 1935 B.A. 105 V. 800 F. ·284 C. 40 B. 23. THINNINGS: N. 520 B.A. 13. Glos. 470′. S. Fully shelt. Loam. Oolitic Limestone. Nil.

P. 273.—MAIN CROP: A. 17 H. 33 G. 3½ N. 1465 B.A. 127 V. 1615 F. ·386 C. 38 B. 14. Wigtown. 300′. S.E. Mod. shelt. Clay loam. Alluvium on Silurian. Nil.

P. 269.—MAIN CROP: A. 17 H. 29 G. 3 N. 1710 B.A. 111 V. 1125 F. ·348 C. 44 B. 15. THINNINGS: N. 375 B.A. 8. Kirkcudbright. 400′. E. Mod. shelt. Sandy loam. Silurian Hard Greywacke. *Pteris.* (Scanty.)

P. 405.—MAIN CROP: A. 18 H. 29 G. 3¼ N. 1145 B.A. 81 V. 725 F. ·309 C. 36 B. 16. THINNINGS: N. 355 B.A. 15 V. 70. York. 875′. N.E. Mod. shelt. Loam. Millstone Grit. Nil.

P. 270.—MAIN CROP: A. 18 H. 31 G. 3¼ N. 1715 B.A. 124 V. 1340 F. ·350 C. 40 B. 20. THINNINGS: N. 200 B.A. 5. Kirkcudbright. 350′. S.W. Mod. exp. Loam. Silurian Hard Greywacke. *Oxalis, Pteris.* (Scanty.)

S.P. 14.—MAIN CROP: A. 18 H. 34 G. 4¾ N. 705 B.A. 107 V. 1380 F. ·380 C. 41 B. 16. Dumfries. 750′. S. Mod. exp. Sandy loam. Boulder Clay on Dolerite. *Grasses, Pteris.* (Scanty.)

S.P.20.—MAIN CROP: A. 19 H. 36 G. 3½ N. 1415 B.A. 123 V. 1365 F. ·308 C. 41 B. 20. THINNINGS: N. 75 B.A. 3 V. 15. Kirkcudbright. 300′. E. Fully shelt. Sandy loam. Silurian on Hard Greywacke. Nil.

P. 131.—MAIN CROP: A. 20 H. 38 G. 3¾ N. 1055 B.A. 104 V. 1565 F. ·395 C. 33 B. 16. THINNINGS: N. 125 B.A. 2. Ayr. 300′. N. Fully shelt. Sandy loam. Boulder Clay on Old Red Sandstone. *Oxalis, Mosses.* (Scanty.)

S.P. 22.—MAIN CROP: A. 21 H. 39 G. 4 N. 1370 B.A. 146 V. 2225 F. ·391 C. 28 B. 18. THINNINGS: N. 140 B.A. 7 V. 55. Kincardine. 300′. N.W. Fully shelt. Sandy loam. Boulder Clay on Gneiss. *Oxalis.* (Scanty.)

JAPANESE LARCH—*contd.*

Temporary Sample Plots—contd.

Quality Class II—25-ft.—*contd.*

P. 236.—MAIN CROP: A. 21 H. 38 G. 4½ N. 805 B.A. 110 V. 1610 F. ·383 C. 44 B. 14. Dumfries. 600′. W. Fully exp. Clay loam. Fluvio-Glacial Gravel on Silurian. Nil.

P. 169.—MAIN CROP: A. 22 H. 30 G. 3½ N. 1540 B.A. 105 V. 920 F. ·293 C. 43 B. 21. THINNINGS: N. 280 B.A. 5. Kincardine. 700′. Mod. shelt. Sand. Morainic Gravel on Granite. Nil.

P. 659.—MAIN CROP: A. 33 H. 53 G. 4¾ N. 745 B.A. 121 V. 2420 F. ·378 C. 30 B. 17. THINNINGS: N. 165 B.A. 11. Glamorgan. 450′. S.S.E. Fully shelt. Clay. Coal Measures. Nil.

JAPANESE LARCH

Permanent Sample Plots

Quality Class II—25-ft.

P. 73.—MAIN CROP: A. 16 H. 27 G. 2⅞ N. 1475 B.A. 83 V. 630 F. ·283 B. 18. THINNINGS: N. 310 B.A. 11 V. 50. Northumberland. 500′. N.W. Mod. exp. Sandy loam. Carboniferous Limestone. *Calluna, Galium, Grasses.* (Scanty.)

P. 47.—MAIN CROP: A. 16 H. 30½ G. 3½ N. 805 B.A. 68 V. 720 F. ·348 C. 52 B. 18. THINNINGS: N. 505 B.A. 26 V. 193. Perth. 500′. N. Fully shelt. Sandy loam. Old Red Sandstone. *Agrostis, Galium, Mosses.* (Scanty.)

P. 54.—MAIN CROP: A. 16 H. 28 G. 3¼ N. 1140 B.A. 83 V. 778 F. ·333 C. 60 B. 19. THINNINGS: N. 525 B.A. 35 V. 13. Argyll. 200′. N. Mod. shelt. Loam. Porphyrite. *Oxalis, Circœa alpina, Scilla, Pteris, Mosses.*

P. 55.—MAIN CROP: A. 16 H. 27 G. 2⅞ N. 800 B.A. 45 V. 361 F. ·299 C. 60 B. 19. THINNINGS: N. 1455 B.A. 34 V. 165. Argyll. 200′. N. Mod. shelt. Loam. Porphyrite. *Oxalis, Circœa alpina, Scilla, Pteris, Mosses.*

P. 17.—MAIN CROP: A. 23 H. 32½ G. 3¼ N. 1345 B.A. 99 V. 1020 F. ·318 C. 43 B. 21. THINNINGS: N. 310 B.A. 10 V. 45. Kincardine. 700′. S.E. Mod. shelt. Granitic sand. Granite. Nil.

„ —MAIN CROP: A. 28 H. 40½ G. 4 N. 992 B.A. 109 V. 1575 F. ·357 C. 38 B. 17. THINNINGS: N. 350 B.A. 19 V. 195.

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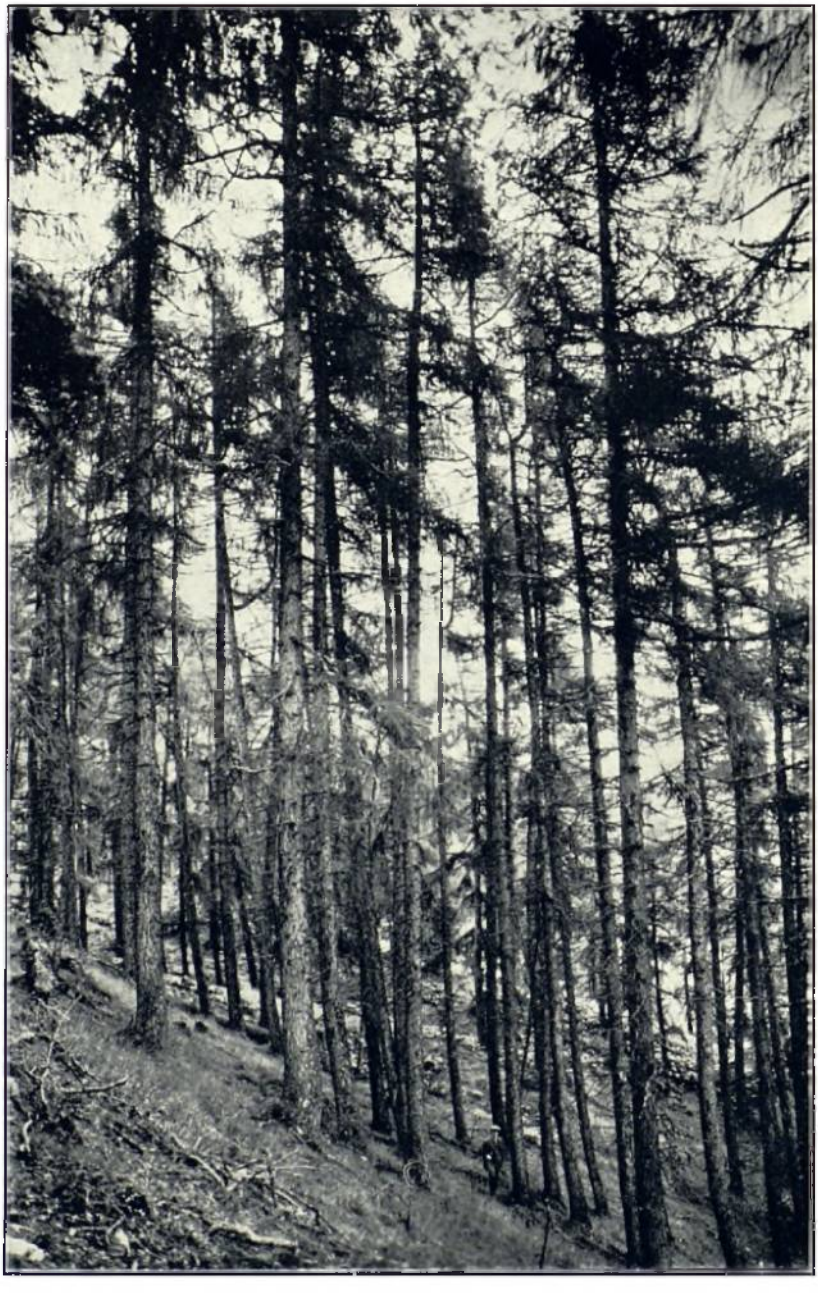
PLATE I.

Scots pine : Langlee ; age 124 years.

Plot No. 140 (p. 118).



European larch : Drummond Hill ; age 119 years.

Plot No. 46B (p. 153).

PLATE III.

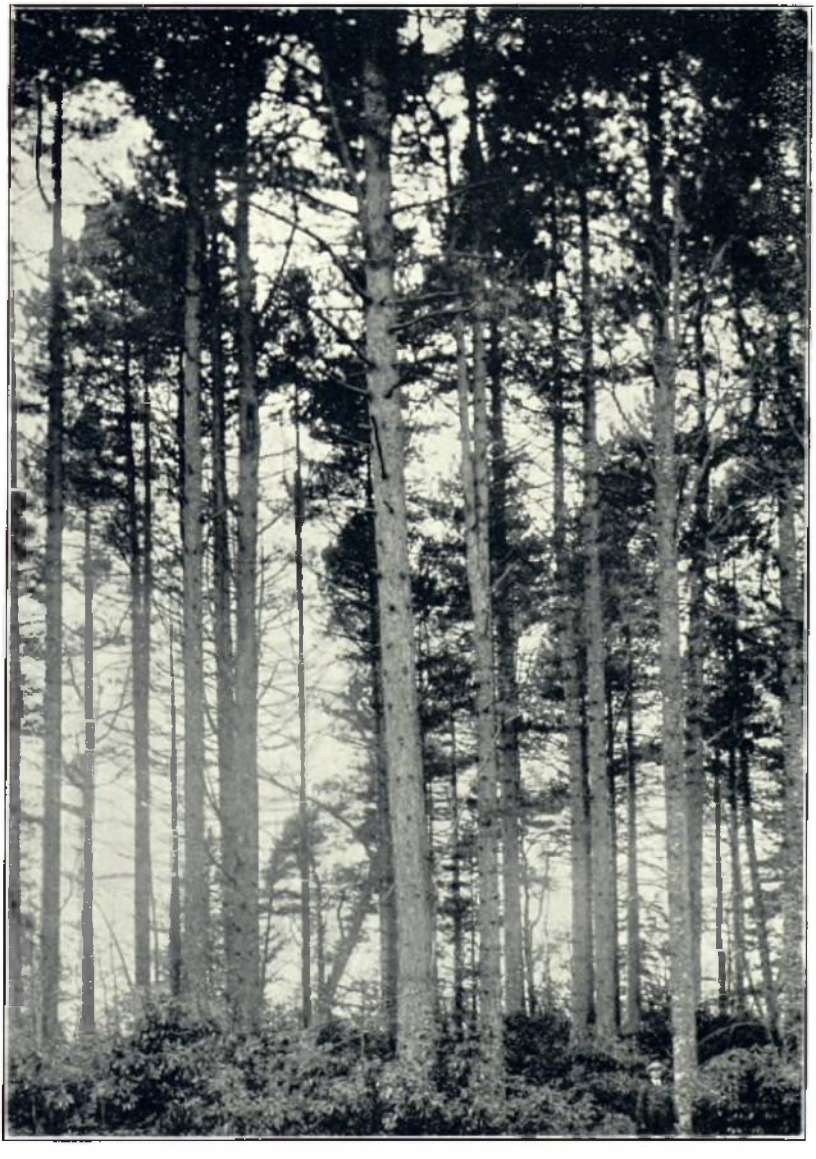
Norway spruce: Glengarry; age 45 years.

Plot No. 66 (p. 161).

PLATE IV.

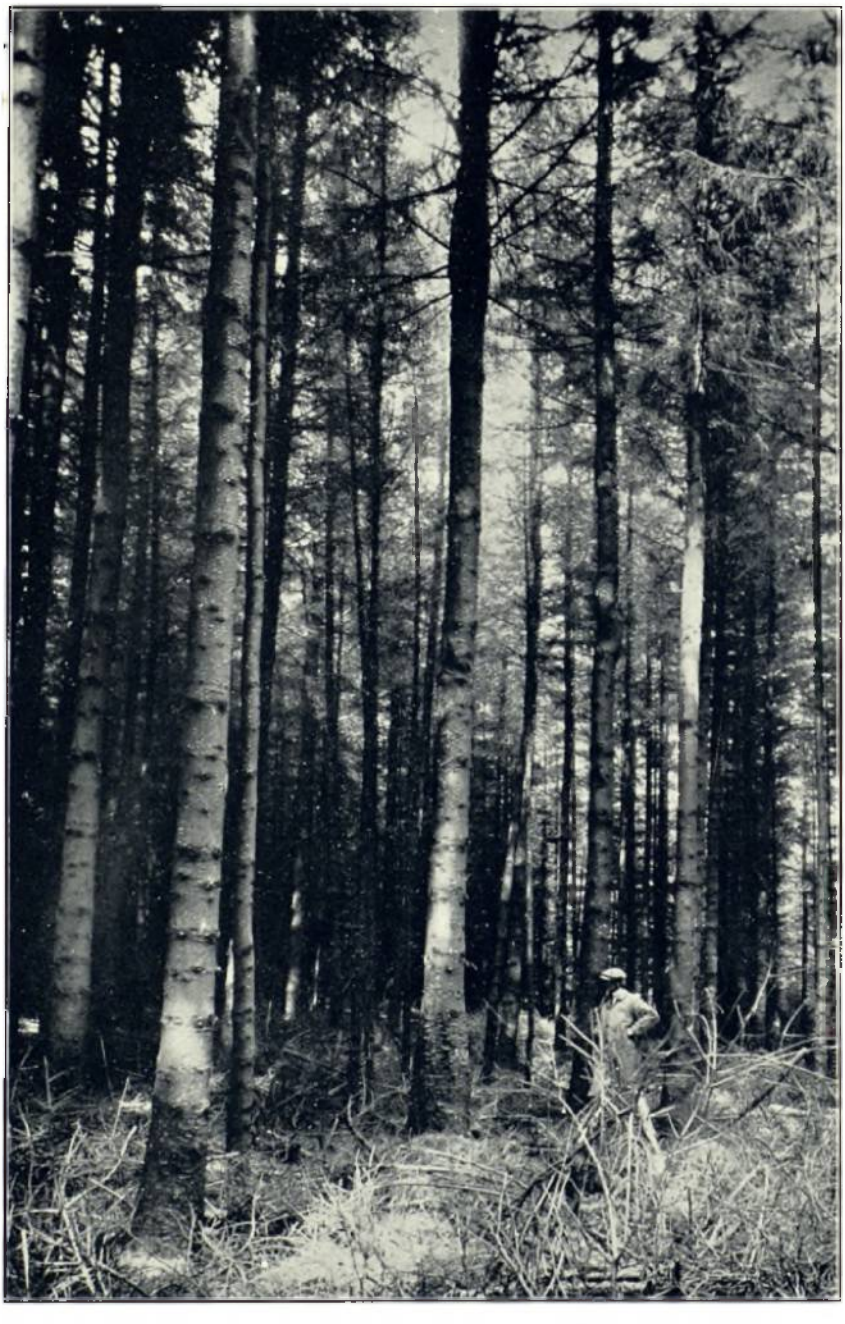
Douglas fir: Gairloch; age 54 years.
Plot No. 414 (p. 178).

PLATE V.



Corsican pine: Highclere; age 80 years.
Sub-plot No. Y24 (p. 179).

PLATE VI.



Sitka spruce: Durris; age 40 years.
Plot No. 146 (p. 182).

PLATE VII.

Japanese larch : Highclere ; age 31 years.
Plot No. 65 (p. 185).

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