

FORESTRY COMMISSION

Eighteenth
Annual Report of the
Forestry Commissioners
for the Year ending
September 30th
1937

Ordered by The House of Commons to be printed
17th May, 1938

LONDON

PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

To be purchased directly from H.M. STATIONERY OFFICE at the following addresses.

Adastral House, Kingsway, London, W.C.2 ; 120 George Street, Edinburgh 2 ;

26 York Street, Manchester 1 ; 1 St. Andrew's Crescent, Cardiff ;

80 Chichester Street, Belfast ;

or through any bookseller

1938

Price 1s. 0d. net

CONTENTS.

	PAGE
Forest Policy	4
The Special Areas	4
<i>Acquisition of Land</i>	4
<i>Supply of Plants...</i>	5
<i>Forest Workers' Holdings...</i>	5
<i>Afforestation</i>	6
Finance	6
Commissioners' Estates	7
Land Acquisition	8
Planting Programme	9
<i>State Forests</i>	9
<i>Assistance to Local Authorities and Private Owners</i>	9
Utilisation of Home-grown Timber	10
Amenity	11
<i>New Forest</i>	11
<i>General</i>	12
Private Woodlands	13
National Forest Parks	15
<i>Argyll National Forest Park</i>	15
<i>Snowdonia</i>	15
<i>Forest of Dean</i>	15
<i>General</i>	15
Census of Woodlands	17
Unemployment Training Camps	17
Coronation Planting	17
Enquiry into Damage by Rabbits	18
Gifts to the Commission	18
Operations—Forest Year 1936–1937	19
The Forestry Fund	19
General Organisation	22
Forestry Operations	22
<i>Supervision</i>	22
<i>Acquisition of Land, Buildings and Standing Timber</i>	22
<i>Maps showing Acquisition of Land</i>	26 facing
<i>Cultural Operations</i>	29
<i>Plantations</i>	29
<i>Cost of Planting</i>	38
<i>Nurseries</i>	38
<i>Seed Supply</i>	39
<i>Forest Fires</i>	39
Advances for Afforestation Purposes	40
Education	41
<i>Apprentices' Schools</i>	41
<i>Grants to Universities, Colleges, etc.</i>	42
<i>Imperial Forestry Institute</i>	42
Research and Experiment	42
Agency and Advisory Services	44
Special Services... ..	44
<i>Publications</i>	45
<i>Exhibits at Agricultural Shows</i>	45
<i>International Union of Forest Research Organisations</i>	45
<i>Consultative Committees</i>	45
Forest Workers' Holdings	45
Income	47
Employment in the Commission's Forests	48
Appendix—Imports of Timber, Wood Manufactures and Pulp of Wood	49

EIGHTEENTH ANNUAL REPORT
of the
FORESTRY COMMISSIONERS
for the
Year ending September 30th, 1937.

Forest Policy.

THE SPECIAL AREAS.

Acquisition of Land.

In the last Annual Report covering the year ended 30th September, 1936, reference was made to the initiation of a scheme of afforestation and forest workers' holdings in the Special Areas of England and Wales. It was pointed out that the examination and acquisition of suitable land and the expansion of supplies of small trees for planting would necessarily take time so that no additional afforestation was anticipated during the year now under review.

The scheme comprised the acquisition of 100,000 acres of plantable land, afforestation operations and the formation of 500 forest workers' holdings in three years. If successful it was to be regarded as an experimental instalment of a larger scheme covering 200,000 acres and 1,000 holdings spread over 10 years.

The administrative and technical organisation for the work was developed during the year and surveys of land and negotiations for acquisitions have proceeded actively. From February, 1936, when authority to proceed was received, until 30th September, 1937 (the close of the year under review), 568,000 acres were examined in or within a 15-mile radius of the Special Areas, namely, 225,000 in the Northern Area (Durham, Tyneside, Haltwhistle and West Cumberland) and 343,000 in the South Wales Area. Of the whole some 152,000 acres (72,000 acres in the North and 80,000 acres in South Wales) were found to be subject to rights of common and not available for afforestation purposes.

Approximately two out of every three owners of the freehold land examined have been favourably inclined towards the scheme. Reckoned on an acreage basis, some 27 per cent. readily agreed to negotiate. Others, about 40 per cent., expressed themselves as "willing to consider" a sale or lease. The remainder did not wish to part with their land.

By the end of the year under review the Commissioners had sanctioned the acquisition of 42,900 plantable acres, of which 22,200 acres were in the North of England and 20,700 acres in South Wales, and a further 5,000 acres were under negotiation. The legal formalities had been completed in respect of 21,500 plantable acres (17,200 acres in the North and 4,300 acres

in South Wales). Acquisition has progressed slowly in parts of South Wales owing to complications due to mining leases. Further, the average size of individual acquisitions is much smaller in South Wales than in the Northern Areas. In the former 37 acquisitions sanctioned during the year under report had an average area of 480 acres, whereas 10 acquisitions in the Northern Areas averaged 1,640 acres.

Supply of Plants.

In order to increase the supply of planting stock for the Special Areas 14 million seedlings were lined-out, either in new or existing nurseries, and 2,000 lb. of seed was sown.

A large new nursery has been established at Tair Onen in the neighbourhood of Cardiff, and is now in good working order. The present area under cultivation, which is 51 acres, may be extended if found necessary to 60 acres. At this nursery 17 forest workers' holdings have also been established.

An existing nursery at Widehaugh, near Hexham, has been extended. Its present area under cultivation is 55 acres. It has, unfortunately, proved impossible to secure suitable holdings land in the immediate neighbourhood of this nursery.

Forest Workers' Holdings.

For reasons which are stated below, this work has not proceeded as expeditiously as the Commissioners desired. The total number of holdings approved in the Special Areas to the end of the year under report was 185 distributed as follows:—

	<i>New Holdings.</i>	<i>Adaptations.</i>	<i>Total.</i>
Northern Areas	83	54	137
South Wales	40	8	48
	<hr/>	<hr/>	<hr/>
	123	62	185
	<hr/>	<hr/>	<hr/>

Owing to the somewhat remote situation of some of the sites and the preoccupation of building contractors with defence and other work, it has been difficult to secure tenders. Of 279 contractors invited to tender, only 35 in fact submitted estimates. In certain cases also the estimates were too high, and it was decided meanwhile not to proceed with the work.

At the end of the year 11 holdings had been completed and occupied, 11 holdings were completed and awaiting occupation, and 66 were in course of construction.

The new houses have been designed with a view to providing elevations which harmonise with traditional buildings in the respective districts, and to utilising local materials and labour so far as practicable. It has been possible to provide each house with a bathroom, hot and cold water systems, indoor water sanitation and, in some cases, four bedrooms; tenants already in occupation have remarked upon the convenience of the accommodation. In those cases where electricity is available the houses have been wired.

Satisfactory arrangements have been made with the Ministry of Labour for the interview and selection of tenants for the holdings, and the men and their wives are finally given an opportunity to inspect the holdings before acceptance.

The expenses in connection with the interviews, medical examination of the applicants and inspection of the holdings are paid by the Ministry of Labour. Removal expenses are also borne by the Ministry and, in addition, each tenant receives by instalments a free grant of £15 for stocking and equipment of the holding. If necessary he may also obtain a loan up to a maximum of £30, to be repaid by fortnightly instalments.

Afforestation.

As was anticipated it was found impossible to carry out any additional planting work during the season 1936-37, shortage of plants being the main reason. That difficulty persisted during the season 1937-38, when the projected programme of 3,350 acres had to be reduced to 3,000 acres.

Except for any ill-effects due to the prolonged drought of the spring of 1938, plant supply should not in future be a limiting factor.

FINANCE.

The balance in the Forestry Fund at the commencement of the forest year was £428,941. Receipts from Parliamentary Votes (£800,000) and Forestry Operations (£228,079) amounted to £1,028,079. Payments amounted to £911,946, so that the balance in the Fund at 30th September, 1937, was £545,074. The progress of payments and receipts is indicated in the table below.

Forestry Fund: Payments and Receipts.

Year ending 30th September.	Payments.			Receipts.			Net Payments.		
	Proposed.	Actual.	Excess (+) Deficit (-)	Proposed.	Actual.	Excess (+) Deficit (-)	Proposed.	Actual.	Excess (+) Deficit (-)
First decade :	£	£	£	£	£	£	£	£	£
1920-29 (10½ financial years)	—	4,502,018	—	—	851,484	—	3,892,000	3,650,534	- 241,466
Second decade :									
1930... ..	958,000	808,237	- 149,763	145,000	148,337	+ 3,337	813,000	659,900	- 153,100
1931... ..	1,019,000	842,490	- 176,510	158,000	171,556	+ 13,556	861,000	670,934	- 190,066
1932... ..	798,000	761,220	- 36,780	159,000	151,466	- 7,534	639,000	609,754	- 29,246
1933... ..	602,000	582,259	- 19,741	153,000	146,629	- 6,371	449,000	435,630	- 13,370
1934... ..	600,000	618,852	+ 18,852	150,000	172,953	+ 22,953	450,000	445,899	- 4,101
1935... ..	611,000	620,818	+ 9,818	156,000	178,339	+ 22,339	455,000	442,479	- 12,521
1936... ..	754,000	718,869	- 35,131	174,000	186,140	+ 12,140	580,000	532,729	- 47,271
1937... ..	981,000	911,946	- 69,054	202,000	228,079	+ 26,079	779,000	683,867	- 95,133
Total ...	—	8,131,726	—	—	—	—	—	—	—

COMMISSIONERS' ESTATES.

The following statement presents a general view of the properties under the charge of the Commissioners at 30th September, 1937, and a summary of the main silvicultural operations which have been undertaken.

In the course of the year an interesting landmark, the million acres, was passed, the total area acquired to the end of the year being 1,005,500 acres. Another interesting feature is the area of plantations which were thinned, namely, 4,186 acres, as against 3,580 in the preceding year. These thinnings were conducted for the most part in plantations formed before they came into the Commissioners' possession, for example in the former Crown Forests, but plantations made by the Commissioners since 1919 are gradually reaching the thinning stage. The next few years should witness a substantial increase in the area so treated.

The items in the table grouped under the heading "Other Tenancies" all show a substantial increase on the previous year commensurate with the increase in the extent of the whole undertaking.

	<i>England and Wales.</i>	<i>Scotland.</i>	<i>Total Great Britain.</i>
<i>Number of Forests :</i>			
At beginning of year	109	88	197
At end of year ...	118	97	21
<i>Utilisation of Ground (Acres) :</i>			
Forest Land :			
Acquired Plantations ...	58,000	10,000	68,000
Planted by Forestry Commission ...	193,000	116,000	309,000*
To be planted ...	138,000	103,000	241,000
	<hr/> 389,000	<hr/> 229,000	<hr/> 618,000
Nurseries ...	600	400	1,000
Agricultural ...	21,500	10,300	31,800
Forest Workers' Holdings (including outrun) ...	11,500	3,000	14,500
Unplanted and Miscellaneous ...	111,300	228,900	340,200
	<hr/> 533,900	<hr/> 471,600	<hr/> 1,005,500
<i>Silvicultural Operations during Year (Acres) :</i>			
Planted and Sown ...	12,010	8,086	20,096
Naturally Regenerated ...	63	—	63
Underplanted ...	346	7	353
Thinned ...	3,536	650	4,186
Felled ...	539	94	633

* The total area planted, including replacements, was 316,548 acres. See page 9.

	<i>England and Wales.</i>	<i>Scotland.</i>	<i>Total Great Britain.</i>
<i>Holdings and Estate Management :</i>			
Number of Forest Workers' Holdings established :			
At beginning of year ...	934	334	1,268
During year	27	4	31
At end of year	961	338	1,299
Other Tenancies :			
Agricultural Holdings :			
Under £20 per annum...	496	303	799
Over £20 per annum ...	298	165	463
Foresters' Houses ...	112	61	173
Cottages	295	211	506
Residential and Sporting Easements, Permissions, Minerals, etc. ...	1,929	159	2,088
Site Rents and Feus ...	—	222	222
	3,434	1,319	4,753

LAND ACQUISITION.

Acquisitions during the year amounted to 50,952 acres net, of which 42,295 acres were classified as plantable.

Acquisition of Plantable Land.

Year ending 30th September.	By Lease or Feu.	By Purchase.	Total.		
			Actual.	Acland Proposals.	Excess (+) Deficit (-)
First decade :	Acres.	Acres.	Acres.	Acres.	Acres.
1920-29 ...	156,759	153,471	310,230	402,000	- 91,770
Second decade :					
1930	8,409	25,951	34,360	34,300	+ 60
1931	4,851	44,007	48,858	34,300	+ 14,558
1932	4,970	41,467	46,437	34,300	+ 12,137
1933	2,885	12,450	15,335	34,300	- 18,965
1934	11,581	17,305	28,886	34,300	- 5,414
1935	268	13,772	14,040	34,300	- 20,260
1936	603	17,641	18,244	34,300	- 16,056
1937	1,805	40,490	42,295	34,300	+ 7,995
Total ...	192,131	366,554	558,685	676,400	- 117,715

PLANTING PROGRAMME.

State Forests.

The area planted during the year was 20,096 acres.

Area Planted.

Year ending 30th September.	Proposed to be Planted.	Actually Planted.			Excess (+) Deficit (-) on Decade or Annual Programme.
		New Planting.	Replace- ments.	Total.	
	Acres.	Acres.	Acres.	Acres.	Acres.
First decade :					
1920-29 :					
Conifers	150,000	126,444	4,316	130,760	- 19,240
Hardwoods	unspecified	6,365	1,146	7,511	
				138,271	
Second decade :					
1930 ...	25,000	21,404	3,698	25,102	+ 102
1931 ...	25,000	24,234	1,396	25,630	+ 630
1932 ...	20,000*	21,959	704	22,663	+ 2,663
1933 ...	20,000*	20,394	657	21,051	+ 1,051
1934 ...	20,000*	20,365	1,302	21,667	+ 1,667
1935 ...	20,000*	20,773	719	21,492	+ 1,492
1936 ...	20,000*	19,495	1,081	20,576	+ 576
1937 ...	20,000*	19,286	810	20,096	+ 96
Total	—	300,719	15,829	316,548	—

* Minimum area.

The total area planted by the Commission to 30th September, 1937, was 316,548 acres, of which 294,102 acres consisted of conifers and 22,446 acres of hardwoods. New planting accounted for 300,719 acres and replacements, which included 5,553 acres replanted after damage by fire, for 15,829 acres. Details are given below.

	<i>Conifers.</i>	<i>Hardwoods.</i>	<i>Total.</i>
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
New planting	281,690	19,029	300,719
Replacements	12,412	3,417	15,829
Total	294,102	22,446	316,548

Assistance to Local Authorities and Private Owners.

The Commissioners have continued to assist planting by local authorities and private owners by means of grants and a proceeds-sharing scheme. The total area planted amounts to 115,424 acres, of which 4,390 acres were planted during the year. Particulars of the grants are given on page 40.

	<i>Acres.</i>
First decade:	
1920-29 ...	72,856
Second decade:	
1930 ...	6,472
1931	5,795
1932	5,039
1933	4,472
1934	5,562
1935	5,485
1936	5,353
1937	4,390
	<hr/>
Total	115,424
	<hr/>

Utilisation of Home-grown Timber.

The better utilisation of home-grown timber has continued to engage the Commissioners' attention, from the point of view of sales both from State forests and private woodlands. The high prices of pit-props and to a lesser extent the increased demand for timber generally have helped the movement, but have also given rise to some fellings which are not in the national interest, namely, the felling of immature plantations in private ownership. It is desired to emphasise the point made in the last Annual Report that the increase in the prices of pit-props affords an excellent opportunity to overtake arrears of thinnings in coniferous plantations. The clear felling of immature woods which by careful thinning might otherwise be expected to show improved growth and to contribute towards the national stocks of growing timber is greatly to be deplored.

The Commissioners have continued to market peeled props from State forests wherever suitable thinnings are available, and are gradually establishing an assured trade. Care is taken to adhere to specifications, and no complaints have been received as to the quality of the props. It has in fact become clear that home-grown props are just as good as those imported, provided they are properly prepared and seasoned. The general conclusion at which the Commissioners are arriving as the result of their own experience is that much material which is normally allowed to go to waste in the woods might be put to profitable use if woodland owners would devote more attention to the subject.

Mention should again be made of the National Home Grown Timber Council, whose formation was recorded in the Sixteenth Annual Report. The Council, which is largely financed by the Commissioners, has the active support of the various organisations interested in home-grown timber. The Council publishes its own reports. During the year the Council completed and

published the results of an investigation into the production of pit-props on a commercial basis.* The investigation was carried out in co-operation with the Forestry Commission and extended to five forests in Scotland. The report includes a record of costs of preparing the material at the various stages, and contains information of much value to woodland owners and colliery proprietors.

The results of an enquiry into timber used in ship-building and in dock and harbour maintenance, undertaken on the recommendation of the Inter-Departmental Home-Grown Timber Committee, have just been published.†

The Commissioners were glad to welcome members of the Federated Home Grown Timber Merchants in the Forest of Dean during September, 1937. In the course of a two-day inspection the opportunity was afforded of discussing on the ground various silvicultural and utilisation questions from the points of view both of the timber merchant and the forester. Such meetings cannot fail to be of mutual value, and the Commissioners hope they will be repeated.

Amenity.

The Joint Informal Committee of the Commissioners and the Council for the Preservation of Rural England has met from time to time with the addition of representatives of the Council for the Preservation of Rural Wales when Welsh questions were under consideration. Agreement has been reached as to the general treatment of Breckland and Snowdonia.

The Commissioners regret to report Professor Patrick Abercrombie's resignation from the Committee on taking up a new appointment. His place has been taken by Mr. Langley-Taylor representing the Council for the Preservation of Rural England.

NEW FOREST.

The Commissioners gave consideration during the year to problems arising in the New Forest. A detailed survey had previously been made as to the position in respect of a number of subjects, such as rides, bridges and drains and the spread of seedling pines, about which complaint had been made. They received in May, 1937, a valuable report from the New Forest Advisory Committee as to the essentials (as regards amenity), which should be kept in view in the management of (a) The Inclosures, and (b) The Open Forest.

In July the Commissioners convened a conference at Lyndhurst at which were represented the Ministry of Transport, the Hampshire County Council, the Verderers, and other bodies

* *Scottish Pitprops*. The National Home Grown Timber Council, 11, Victoria St., S.W.1. Price 1s.

† *Report on the Demand for Timber in Ship-Building and in Docks and Harbours*. H.M. Stationery Office, 1938. Price 1s. 3d.

interested in the management of the New Forest. Agreement was reached on all the points under discussion including, as it appeared at the time, the question of enlarging the Lyndhurst-Christchurch Road. The subject of "through traffic" in the New Forest is still under consideration, but it has to be settled in the face of two conflicting requirements, namely, the maintenance of the character of the Forest and the provision of essential transport facilities.

Meanwhile, the Commissioners desire to repeat the declaration of policy which was given to the Conference; they recognise that the New Forest is a special place with claims for special treatment, and for that reason they do not expect to make a profit out of it. But they feel that it may reasonably be expected to pay its way. They propose to manage the inclosures silviculturally in such a way as to build up a reserve of big timber against any national emergency. They propose also to preserve and develop the amenities with the advice and help of the Verderers and the New Forest Advisory Committee. On the other hand the Commissioners are not prepared to plant in the inclosures trees which have little prospect of growing to economic sizes.

GENERAL.

In general it may be stated that on grounds of amenity the Commissioners' operations continue, in England and Wales, to attract a fair share of criticism. This may be considered inevitable in a small country in which almost every acre has in somebody's eyes an economic or sentimental value. Changes in familiar surroundings are rarely welcome. Arguments against changing by afforestation the aspect of a stretch of countryside are usually reinforced by arguments of an economic or quasi-economic character, such as "the local rural industry is being ruined with a consequent displacement of men from the land, trees will not grow on the area, if trees will grow they will never pay to extract, in any event it is quite unnecessary to ensure that there shall be a reserve of standing timber at home". So far as such arguments refer to individual areas they must be judged by local facts and figures, but it can be stated in general terms that no rural industry has ever been ruined by the Commissioners' operations, that afforestation and subsequent works have always resulted in a marked increase of employment, that apart from a few areas taken up experimentally, with a view to testing wider areas, the land is carefully assessed for timber production before it is acquired, and that the problems of extracting timber when grown are taken into account.

On what is really the main issue—it is the reason for the Forestry Commission's existence—namely, ensuring an adequate supply of standing timber, the Commissioners must remind their critics of the part which home-grown timber played

in the last War, and the part which it may play in another. During 1914-18 timber in great quantities from the home woods met many essential demands, conserving shipping for the transport of food and munitions and also conserving credit abroad. There is consequently an obligation on the present generation, even at some sacrifice of amenity, to make provision for the future. The Joint Committee, to which reference is made above, is intended to provide a safeguard that the claims of amenity receive due consideration. It is a practical means of applying to the Commissioners' problems the special knowledge and experience which the Council for the Preservation of Rural England possesses.

Private Woodlands.

Interest in the better management of private woodlands has shown signs of increasing, fostered perhaps by the better prices obtainable for small material such as pit timber. There is no doubt that of recent years woodland owners as a whole have become despondent, and but little inclined to give their woods the serious consideration which they require. There are still derelict large areas which were felled during and after the War, and there are accumulated arrears of essential operations such as thinning and planting in woods which are only partially productive.

The maintenance in a productive state of private woodlands is a major issue in Forest Policy, because nine-tenths of the woodland area and an even greater proportion of the standing timber of Great Britain are in private ownership.

For such reasons the Commissioners in co-operation with the Royal English and Royal Scottish Forestry Societies are making an effort to stimulate the interest and activities of woodland owners. The initial lines of advance became clear only towards the close of the year under review, but a brief account of what has been done may be permitted. As it appeared that woodland owners were finding difficulty in securing the services of foremen foresters for supervising operations provision was made for the establishment of five special courses of instruction, each of three months' duration. With the assistance of the Forestry Societies, arrangements were made in England for training at Raby Castle, Dartington Hall and Weasenham, and in Scotland at Bowhill and Darnaway. The courses consisted of practical work, lectures and discussions under qualified instructors selected by the Forestry Societies, and were attended by 54 woodmen from private estates. In addition to training in woodland operations, instruction was given in such matters as the preparation and marketing of forest produce, the transport of timber, wood preservation and sawmill work. The thanks of the Commissioners are due to the owners of estates where the courses were held for the facilities offered for the training and housing of the men.

In February, 1938, the Commissioners held an important Conference* on Private Forestry with representatives of all the interests concerned with woodlands. The Conference reviewed in considerable detail the existing position, the causes leading up to it, and possible measures for securing improvement. The Conference was unanimous in the view that the present position was unsatisfactory. The reasons are complex, arising as they do out of such factors as post-war taxation and economic difficulties, the personal idiosyncrasies of owners and the difficulties inherent in a long-term undertaking such as forestry.

While not excluding the possibility that in the national interest it might at some time be necessary to exercise some form of control over private woodlands, the Conference agreed that the first step towards improvement was the enlightenment of the woodland owner and of the public on the whole question of forestry and timber production. It was considered that an advisory service on an experimental basis should be instituted in England and Wales. It was also agreed that it would be helpful if an authoritative account could be compiled of the ways in which other countries have dealt with the problem of private woodlands. The short courses for foremen foresters were approved, and it was agreed that if they were successful they should be extended.

The Commissioners have accepted the views of the Conference, and are taking steps to put them into effect.

* The Conference was constituted as follows :—

Forestry Commissioners (Chairman, Sir Roy Robinson) and Assistant Commissioners.

Col. H. C. Elwes	...	Central Landowners' Association.
Mr. C. F. Stone	...	Chartered Surveyors' Institution.
Earl Crawford	...	Council for the Preservation of Rural England.
Mr. C. E. Legat	...	Empire Forestry Association.
Mr. Herbert Newsum	...	Federated Home Grown Timber Merchants' Associations.
Mr. W. A. Robertson	...	Forest Products Research Laboratory.
Col. W. St. Warde-Aldam	...	Home-Grown Timber Marketing Association.
Mr. John T. Smith	...	Home Timber Merchants' Association of Scotland.
Mr. C. J. T. Sherston	...	Land Agents' Society.
Duke of Buccleuch	...	Landowners' Co-operative Forestry Society Limited.
Sir Edward Grigg	...	National Home Grown Timber Council.
Hon. N. A. Orde-Powlett	...	Royal English Forestry Society.
Capt. George I. Campbell	...	Royal Scottish Forestry Society.
Hon. Ian M. Campbell	...	Scottish Land & Property Federation.
Mr. Leslie Wood	...	English Forestry Consultative Committee.
Earl of Powis	...	Welsh Forestry Consultative Committee.
Sir John Milne Home	...	Scottish Forestry Consultative Committee.

National Forest Parks.

ARGYLL NATIONAL FOREST PARK.

The public camping ground at Ardgartan at the head of Loch Long was formally opened by the Chairman of the Commission on 1st May, 1937. Since the acquisition of Ardgartan House and grounds in the previous year full advantage has been taken by the numerous organisations interested in camping and outdoor recreation. The number of persons using camping sites at the Forestry Commission's camps at Succoth and Ardgartan increased from 6,000 in 1936 to 9,600 in 1937 and at the Scottish Youth Hostels, in the same period, the increase was from 6,800 to 10,200. In addition, members of the Camping Club of Great Britain and of the Juvenile Organisation Camps have been accommodated. Altogether over 20,000 "night accommodations" were provided in 1937—an increase of more than 7,000 on the previous year. A spacious parking place for cars has been provided at Ardgartan and work is in progress for the extension of the camping grounds.

Paths to the mountains through the plantations have been marked and the position of these paths is indicated in the newly published "Argyll National Forest Park Guide"* prepared with the co-operation of the Scottish Advisory Committee. The Committee has expressed its satisfaction with the working of the Forest Park scheme and has recommended that, where applicable, similar provision for recreational use should be made of other areas belonging to the Forestry Commission in Scotland.

SNOWDONIA.

A Committee under the chairmanship of Lt.-Col. J. C. Wynne Finch reported† on the possibility of utilising the Commission's areas in Snowdonia as a National Forest Park. The general recommendations of the Committee have been accepted by the Commissioners.

FOREST OF DEAN.

Lt.-Col. J. C. Wynne Finch has also been good enough to act as Chairman of a similar Committee which is now considering the suitability of the Forest of Dean as a National Forest Park.‡

GENERAL.

The experiment in forming National Forest Parks, which began with the Argyll area, is gradually taking more definite

* *Argyll National Forest Park Guide*. H.M. Forestry Commission, 1938. Price 6d.

† *Report of the National Forest Park Committee (Snowdonia)*, 1937. H.M. Stationery Office. Price 6d.

‡ The Forest of Dean Committee is constituted as follows:—Lt.-Col. J. C. Wynne Finch (Chairman), Rt. Rev. The Lord Bishop of Gloucester, Sir Lawrence Chubb, Sir Henry Pelham, Captain Kenneth Shennan, Mr. R. E. Westaway, Col. L. Ropner, Sir John Sutherland, Mr. W. L. Taylor. Joint Secretaries: Mr. Frank H. Harris and Mr. E. S. J. Hinds.

form. The Commissioners have received many indications that the facilities which the schemes provide for outdoor recreation are appreciated. There is admittedly a risk to plantations from fire, which becomes fully apparent in an exceptionally dry season such as the present (1938) spring, but the Commissioners look to those who use the parks not only to abstain from doing anything which may endanger plantations, but also to take an active part in protecting them and, if necessary, in assisting in actual fire-fighting operations.

There is in fact great need for education of the public in correct behaviour when woodlands and heaths are in an inflammable condition, and the Commissioners hope that the organised outdoor societies by example and precept will take their part in inculcating a code of conduct.

The procedure with regard to the formation of a National Forest Park is now established. There is first a small committee of enquiry to investigate an area which potentially appears to be suitable. Their recommendations are then considered by the Commissioners, and on approval are referred to a General Advisory Committee on which are represented the organised bodies which are likely to make use of the park. There is one Advisory Committee for Scotland† and one for England and Wales‡. A small Executive Committee to super-

The existing Committees are constituted as follows :—

† *Advisory Committee for Scotland* : Sir John Sutherland (Forestry Commission, Chairman), Mr. W. Besant (Parks Department, Corporation of Glasgow), Mr. J. M. Murray (Forestry Commission), Sir Henry Alexander, Professor F. G. Baily (Association for the Preservation of Rural Scotland), Mr. G. D. Cheyne (Scottish Youth Hostels' Association), Sir Lawrence Chubb (National Playing Fields Association), Mr. T. S. Hall (The Wayfaring Association of Great Britain), Mr. G. Erskine Jackson (The Scottish Land & Property Association), Captain E. E. McIntyre (The Boy Scouts' Association), Mr. H. M. McLeod (Camping Club of Great Britain and Ireland), Captain A. Macpherson (Scottish Central Council of Juvenile Organisations), Mr. A. J. F. Mitchell (Cyclists' Touring Club), Mr. J. L. Snedden (Scottish Ramblers' Federation), Captain E. D. Stevenson (Advisory Council for Physical Training and Recreation for Scotland), Mr. E. M. Dawson (Scottish Committee of National Playing Fields Association), Professor John Walton, Mr. J. W. Younger, Miss K. M. Wilson (Girl Guides' Association) and Mr. F. C. Handford (Secretary).

‡ *Advisory Committee for England and Wales* : Col. L. Ropner (Forestry Commission, Chairman), Mr. E. Fryer (Automobile Association), Col. C. Watson (Boy Scouts' Association), Mr. J. A. C. Champion (Camping Club of Great Britain and Ireland), Lt.-Col. E. N. Buxton (Commons, Open Spaces and Footpaths Preservation Society), Mr. J. Dower (Council for the Preservation of Rural England), Mr. Clough Williams Ellis (Council for the Preservation of Rural Wales), Mr. W. M. Robinson (Cyclists' Touring Club), Mr. W. L. Taylor (Forestry Commission), Miss M. de M. Leathes (Girl Guides' Association), Sir Henry Pelham (National Advisory Council for Physical Training), Mr. W. W. Wakefield (National Advisory Council for Physical Training), Sir Lawrence Chubb (National Playing Fields Association), Mr. N. B. Kinnear (National Trust), Mr. A. McIntosh (Ramblers' Association), Mr. H. G. Maurice (Society for the Preservation of the Fauna of the Empire), Dr. G. F. H. Smith (Society for the Promotion of Nature Reserves), Mr. H. E. C. Gatcliff (Youth Hostels' Association) and Mr. B. R. Davies (Secretary).

wise the work at each National Forest Park is appointed. This procedure has worked well with the Argyll National Forest Park. The Advisory Committees being large bodies only meet periodically, but the Executive Committees in the initial stages at least have to devote a considerable amount of time to their work.

Census of Woodlands.

The last census of woodlands was taken in 1924 and was due to be repeated in 1934, but for various reasons, including the allocation of finance, it was then postponed.

It was represented to the Commissioners, however, by the National Home Grown Timber Council that the data furnished by a census were essential for their purposes, and the Council's view was supported by the Royal Forestry Societies.

It is also important at this time that the quantities and distribution of standing timber of various kinds should be more accurately known. An organised census was accordingly commenced in January, 1938, by officers appointed by the Commissioners for the purpose. As in the 1924 census the woodlands will be classified by area into types and age classes but, in addition, the new census will take account of the volumes and kinds of standing timber. Further information is being gathered as to the silvicultural treatment or lack of treatment of the woodlands. In this way it is hoped that a sufficiently complete account of the woodlands will be secured to serve the purposes of the National Home Grown Timber Council, to indicate the country's resources in standing timber and to form the basis of future Forest Policy.

Unemployment Training Camps.

The Commissioners have continued to co-operate with the Ministry of Labour in providing sites for training camps and work for the men. The work includes fire protection, clearing and road-making. During the year under review eight new centres were opened, two were closed permanently (Mortimer and Rockingham) and one was closed temporarily (Glenbranter). At the end of the year there were 20 permanent camps (including one non-residential) and nine summer camps with a total accommodation for 5,320 men; these are situated in or near the following forests: (England and Wales) Allerston, Ampleforth, Bourne, Brechfa, Coed-y-Brenin, Dovey, Gwydyr, Hamsterley, Haldon, Kershope, Kielder, The King's Forest, Langdale, Redesdale, Rendlesham, Rheola, Thetford; (Scotland) Glenbranter, Glenfinart, Glentress, Knapdale.

Coronation Planting.

The Commissioners were represented on the Central Committee of the Coronation Planting Committee. One compartment in each of the State forest areas throughout Great Britain

where planting was in progress in 1937 was planted to commemorate the Coronation. The compartments are being identified by bronze plaques with an inscription recording the fact. In addition at various centres the Commission undertook certain amenity schemes, such as planting trees on vantage points either in clumps or to form the letters " G.R." or " G.R. VI " or " G.R. 1937 ", school children in some cases assisting in the planting.

Enquiry into Damage by Rabbits.

A Select Committee of the House of Lords was appointed towards the end of 1936 to investigate the rabbit problem, and issued its report* in February, 1937. The Chairman of the Forestry Commission gave evidence, he drew attention to the expenditure incurred in protecting the Commission's plantations, and to the enormous loss entailed by private owners of woodlands.

Gifts to the Commission.

The Commissioners wish to express their appreciation of the gift of two blocks of plantable land in Wiltshire, Stonedown Wood and Vernditch Chase, and in addition a well-equipped forester's house by Mr. H. Balfour Gardiner, of Fontmell Hill, Iwerne Minster, Dorset.

* " *Report from the Select Committee of the House of Lords on Agriculture (Damage by Rabbits).*" H.M. Stationery Office. Price 1d.

OPERATIONS—FOREST YEAR 1936-37.

The Forestry Fund.

The position of the Forestry Fund at 30th September, 1937, and at the same date in previous years is shown in Table I.

Table I.—Forestry Fund Account.

Year ending 30th September.	Balance from preceding Year.	Receipts.			Payments (Table II, Heads A to L).	Balance in Forestry Fund, 30th September.
		Parliamentary Votes.	From Forestry Operations, etc. (Table II Head Z).	Total.		
	(1)	(2)	(3)	(4)	(5)	(6)
First decade : 1920-29 ...	£ —	£ 4,000,000	£ 851,484	£ 4,851,484	£ 4,502,018	£ —
Second decade:						
1930 ...	349,466	937,800	148,337	1,086,137	808,237	627,366
1931 ...	627,366	490,000	171,556	661,556	842,490	446,432
1932 ...	446,432	399,000	151,466	550,466	761,220	235,678
1933 ...	235,678	450,000	146,629	596,629	582,259	250,048
1934 ...	250,048	450,000	172,953	622,953	618,852	254,149
1935 ...	254,149	450,000	178,339	628,339	620,818	261,670
1936 ...	261,670	700,000	186,140	886,140	718,869	428,941
1937 ...	428,941	800,000	228,079	1,028,079	911,946	545,074
Total ...	—	8,676,800	2,234,983	10,911,783	10,366,709	—

Balances remaining in the Fund at 30th September include provision for the succeeding six months of the financial year.

An analysis of payments and receipts by Heads of Account is given in Table II. Compared with the previous year, total payments rose from £718,869 to £911,946, an increase of £193,077, mainly under the heads of forestry operations and forest workers' holdings. Receipts were greater by £41,939, and net payments were therefore £151,138 more than in 1936. It may be noted that Heads of Account differ in some respects from those under which estimates are presented to Parliament.

Table II is limited to sums actually expended or received, recorded by the heads of account under which they occurred. In subsequent tables, which are based on commercial practice, outstanding receipts and payments are brought to account, salaries and overhead charges (Heads A to D) are allocated to appropriate objects of expenditure, and adjustments are made between various heads of account in respect of produce used for forest purposes and transfers of land and buildings between the forests and forest workers' holdings.

Expenditure and income adjusted on the basis stated above are shown in Table IIa.

Table II.—Payments and Receipts by Heads of Account.

Year ending 30th September.	PAYMENTS.											RECEIPTS. Z. (13)	NET PAYMENTS. (14)	
	A. Salaries, Wages and Allow- ances. (1)	B. Head- quarters Charges. (2)	C. Assistant Commis- sioners' Charges. (3)	D. Divisional Officers' Charges. (4)	E. Forestry Operations. (5)	F. Advances for Affresta- tion Purposes. (6)	G. Education. (7)	H. Research and Experi- ment. (8)	J. Agency and Advisory Services. (9)	K. Special Services. (10)	L. Forest Workers' Holdings. (11)			Total. (12)
	£	£	£	£	£	£	£	£	£	£	£	£	£	£
First decade :														
1920-29 ...	494,157	22,676	30,586	74,434	3,118,837	207,824	76,004	36,927	91,776	23,342	325,455	4,502,018	851,484	3,650,534
Second decade :														
1930 ...	63,202	2,571	7,658	9,418	598,119	14,102	9,355	6,901	—	493	96,418	808,237	148,337	659,900
1931 ...	65,347	5,267	4,704	9,787	629,461	14,067	9,628	7,577	—	337	96,315	842,490	171,556	670,934
1932 ...	63,313	5,851	3,414	10,007	603,735	13,649	6,925	6,653	—	674	46,999	761,220	151,466	609,754
1933 ...	62,119	4,219	3,416	9,401	465,637	12,103	6,002	7,291	—	568	11,503	582,259	146,629	435,630
1934 ...	63,069	4,119	2,960	9,449	498,053	14,121	5,292	6,286	—	860	14,643	618,852	172,953	445,899
1935 ...	67,385	4,343	3,090	10,340	491,506	13,968	5,999	8,479	—	1,066	14,642	620,818	178,339	442,479
1936 ...	72,997	4,178	4,262	10,944	573,593	13,116	6,183	9,057	—	3,284	21,255	718,869	186,140	532,729
1937 ...	79,583	4,811	5,803	11,547	719,951	9,884	7,111	10,253	—	2,301	60,612	911,946	228,079	683,867
Total ...	1,031,172	58,035	65,983	155,327	7,698,862	312,834	132,499	99,424	91,776	32,925	687,842	10,366,709	2,234,983	8,131,726

Table IIa.—Expenditure and Income.

Year ending 30th September.	EXPENDITURE (including Allocation of Column 1).										INCOME.				NET EXPENDITURE. (14)
	A to D. Superior and Overhead Charges. (1)	E. Forestry Operations. (2)	F. Advances for Afforestation Purposes. (3)	G. Education. (4)	H. Research and Experiment. (5)	J. Agency and Advisory Services. (6)	K. Special Services. (7)	L. Forest Workers' Holdings. (8)	Total. (9)	Zi. Forestry Operations. (10)	Z5. Forest Workers' Holdings. (11)	Miscellaneous. (12)	Total. (13)		
First decade : 1920-29 ...	£ 582,178	£ 3,522,577	£ 241,694	£ 101,313	£ 79,650	£ 99,233	£ 61,299	£ 389,883	£ 4,485,649	£ 882,108	£ 27,515	£ 6,936	£ 916,559	£ 3,569,090	
Second decade :															
1930 ...	83,414	675,631	16,944	10,208	12,338	1,177	2,097	108,575	826,970	147,994	12,206	406	160,606	666,364	
1931 ...	85,863	701,434	16,573	11,411	12,598	1,167	1,891	109,020	854,094	165,068	13,583	386	179,037	675,057	
1932 ...	80,972	661,180	16,341	8,864	12,356	1,135	2,357	56,357	758,580	144,216	16,811	77	161,104	597,476	
1933 ...	79,182	572,218	14,353	8,226	12,162	944	2,099	19,437	584,459	137,941	17,228	170	155,339	429,120	
1934 ...	79,600	576,853	16,450	8,058	11,301	997	2,453	21,417	637,529	163,132	17,372	518	181,022	445,507	
1935 ...	85,263	566,454	16,639	8,013	13,739	1,201	5,012	21,685	632,743	169,202	17,551	270	187,023	445,720	
1936 ...	92,579	655,041	15,872	9,074	14,132	1,180	5,971	30,073	731,343	183,030	18,064	507	201,601	529,742	
1937 ...	102,197	833,339	12,075	10,295	16,289	1,318	4,770	70,176	948,262	225,966	18,652	674	245,292	702,970	
Total ...	1,271,188	8,709,727	366,941	175,482	184,555	108,352	87,049	826,623	10,459,629	2,218,637	158,982	9,944	2,387,583	8,072,046	
Percentage	83.3	83.3	3.5	1.7	1.8	1.0	0.8	7.9	100	92.9	6.7	0.4	100		

Note.—The above and subsequent tables do not include the amount of the valuation (£1,738,075) placed on the Crown properties transferred to the Commission under the Forestry (Transfer of Woods) Orders in Council dated 21st March, 1924 and 1st June, 1926.

Subheads A to D—General Organisation. Expenditure, £102,197.

Compared with 1936, expenditure rose by £9,618, due to normal increments, and salaries, travelling and office expenses of additional staff required for work in connection with the Special Areas. The number of Divisional Officers remained at 16 and one Estate Officer. During the year the number of District Officers was increased from 49 to 54.

Subhead E—Forestry Operations. Expenditure, £833,339; Income, £225,966.

Details of expenditure and income are given in Table E. Gross expenditure was £178,298 more than in 1936. The chief increases were £94,145 on acquisition of land, £45,277 on cultural operations and £13,732 on preparation and sale of produce. Income from forestry operations rose by £42,936.

Overhead Charges, £36,771; Superior Supervision, £39,814, and Local Supervision, £56,536.—Overhead charges are in respect of salaries, allowances and other expenses in the offices of the Commissioners and Assistant Commissioners. Superior supervision represents similar expenditure in respect of the Deputy Surveyors, Divisional Officers and District Officers; and local supervision includes the salaries, housing allowances and miscellaneous expenses of Foresters and Foremen. The numbers at 30th September, 1937, were:—Foresters 193 (Head, 7; Grade I, 42; Grade II, 144) and Foremen 129.

Acquisition of Land, Buildings and Standing Timber.—Expenditure amounted to £209,557, of which £184,189 was in respect of purchases of land including standing timber and buildings, and £25,368 in respect of land held on long lease or feu. (This expenditure is not directly applicable to the areas acquired during the year, particulars of which follow.)

The total area of land acquired during the forest year 1936-37 amounted to 51,175 acres, of which 42,488 acres were classified as plantable. On the other hand disposals and adjustments amounted to 223 acres (193 acres plantable).

The average rent or feu duty for land acquired for forestry operations during the year by lease or feu was approximately 2s. 6d. per acre and the average price for such land purchased, approximately £3.1s. 4d. per acre. If the whole outlay in respect of land, buildings, timber, etc., were charged against plantable land the figures would be 2s. 8d. and £4 4s. 4d. respectively. Land and buildings for forest workers' holdings are excluded.

The net total area in Great Britain in respect of which the legal formalities of acquisition by the Department had been completed by 30th September, 1937, was 882,712 acres, the corresponding figures in the two previous Annual Reports being 831,760 and 806,424 acres. In addition to these completed acquisitions, entry had been secured to other property. Details are given in the table below, which also shows the area of "plantable" land and "other" land, i.e., land which is either too poor to plant or is required for other purposes.

*Land acquired by Lease, Feu and Purchase from
29th November, 1919, to 30th September, 1937.*

	By Lease and Feu.			By Purchase.			Total Acquired.
	Plant- able (includ- ing planted).	Other Land.	Total.	Plant- able (includ- ing planted).	Other Land.	Total.	
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
<i>England and Wales :—</i>							
Finally com- pleted ...	111,788	25,223	137,011	219,967	67,829	287,796	424,807
Entry secured	2,632	107	2,739	—	—	—	2,739
Total ...	114,420	25,330	139,750	219,967	67,829	287,796	427,546
<i>Scotland :—</i>							
Finally com- pleted ...	77,711	78,925	156,636	146,587	154,682	301,269	457,905
Entry secured	—	—	—	—	—	—	—
Total ...	77,711	78,925	156,636	146,587	154,682	301,269	457,905
<i>Great Britain</i>	192,131	104,255	296,386	366,554	222,511	589,065	885,451

Of the net total area acquired by lease, feu and purchase in Great Britain to 30th September, 1937, 558,685 acres were classified at the time of acquisition as plantable and of this area 334,387 acres (60 per cent.) were in England and Wales and 224,298 acres (40 per cent.) in Scotland.

In addition to the above-mentioned areas, Crown woodlands extending to about 120,000 acres (of which some 60,000 acres are plantable) have been transferred to the Forestry Commissioners.

The total area of land in the Commissioners' control thus exceeds 1,000,000 acres. In round figures the utilisation as at 30th September, 1937, was as shown in the table on page 7.

Table E.—Forestry Operations.

Year ending 30th September.	EXPENDITURE (Table IIa, Column 2).								INCOME (Table IIa, Column 10).					NET EXPENDITURE. (£)	
	Over-head Charges. (1)	Superior Supervision. (2)	Local Supervision. (3)	Acquisition of Land, etc. (4)	Cultural Operations. (5)	Preparation and Sale of Produce. (6)	Roads and Buildings. (7)	Stores and Miscellaneous. (8)	Total. (9)	Sales of Land and Buildings. (10)	Rents and Royalties. (11)	Forest Produce. (12)	Other. (13)		Total. (14)
First decade : 1920-29 ...	192,997	201,122	174,130	787,509	1,510,801	118,833	115,488	411,677	3,512,577	78,784	274,091	406,594	122,639	882,108	2,630,469
Second decade : 1930 ...	29,413	29,957	36,674	186,640	280,356	22,871	26,566	63,154	675,631	2,642	65,184	63,949	16,219	147,994	527,637
1931 ...	31,974	30,929	39,413	193,444	285,558	20,972	27,483	71,661	701,434	15,568	71,930	56,768	20,802	165,068	536,366
1932 ...	29,352	30,004	40,633	200,552	252,556	20,345	24,376	63,362	661,780	7,869	70,249	49,477	16,621	144,216	516,964
1933 ...	29,609	29,752	43,467	76,394	254,363	26,766	18,301	48,566	527,218	4,463	75,127	47,321	11,030	137,941	389,277
1934 ...	27,898	31,856	46,034	95,215	265,071	30,966	18,629	61,184	576,853	12,248	78,120	55,893	16,861	163,132	413,721
1935 ...	27,985	35,127	48,364	70,042	281,488	34,489	18,129	50,830	566,454	6,394	81,622	63,112	18,074	169,202	397,252
1936 ...	31,906	37,308	52,257	115,412	300,807	36,123	18,021	63,207	655,041	5,708	83,027	73,111	21,184	183,030	472,011
1937 ...	36,771	39,814	56,536	209,557	346,084	49,855	28,133	66,589	833,339	2,407	84,753	89,814	48,992	225,966	607,373
Total ...	437,905	465,869	537,508	1,934,765	3,777,084	361,240	295,126	900,230	8,709,727	136,093	884,103	906,039	294,422	2,218,657	6,491,070
Percentage	5.0	5.3	6.2	22.2	43.4	4.2	3.4	10.3	100	6.1	39.9	40.8	13.2	100	

Forestry Commission Units.

ENGLAND AND WALES.

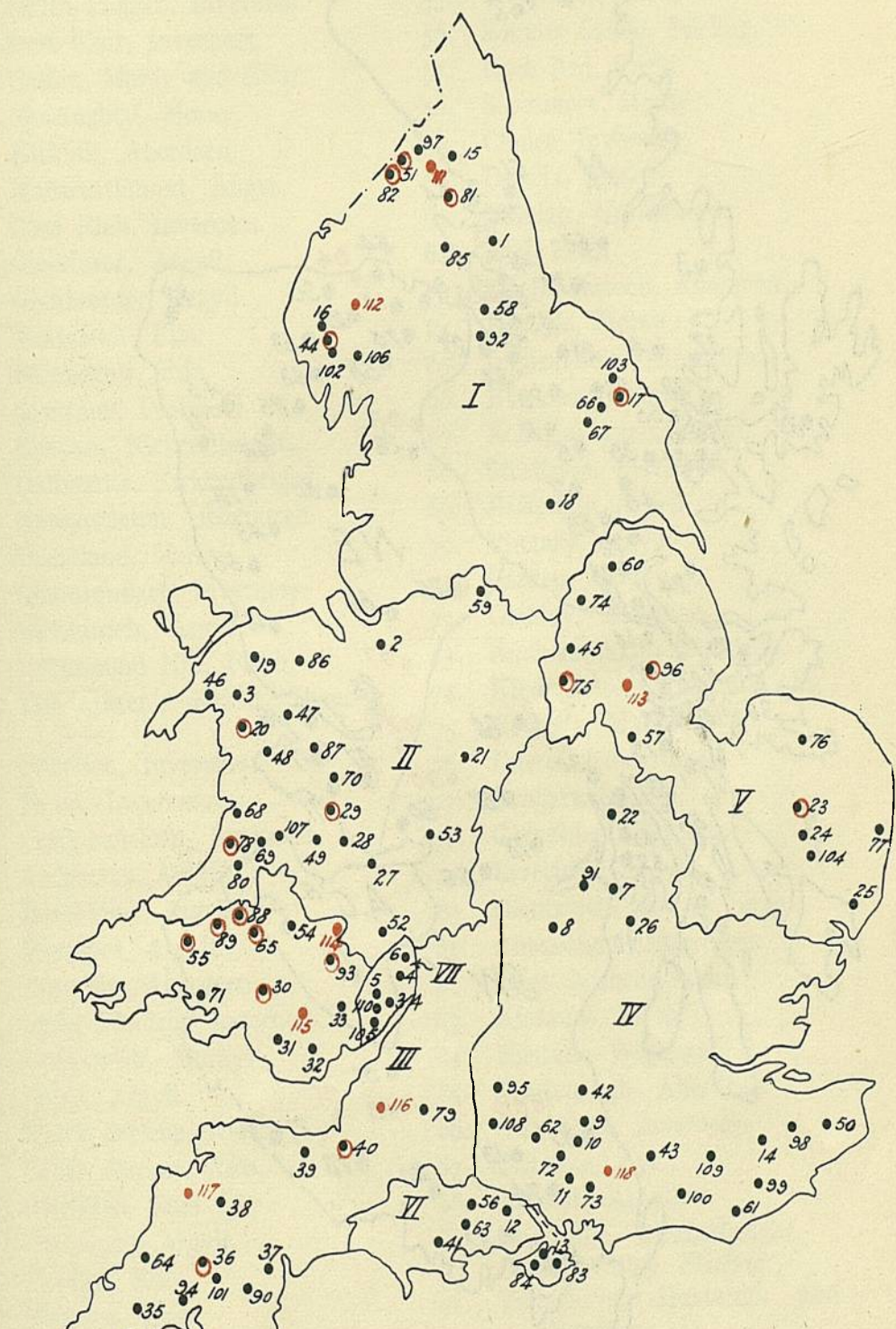
- | | |
|---|--|
| 1. Chopwell, Durham.* | 34. Chepstow, Monmouth. |
| 2. Delamere, Cheshire.* | 35. Bodmin, Cornwall. |
| 3. Hafod Fawr, Merioneth.* | 36. Halwill, Devon. |
| 4. Dean Forest, Glos., Hereford
and Monmouth.* | 37. Haldon, Devon. |
| 5. Tintern, Monmouth.* | 38. Eggesford, Devon. |
| 6. Dymock, Glos. and
Hereford.* | 39. Brendon, Somerset. |
| 7. Salcey, Bucks. and
Northants.* | 40. Quantocks, Somerset. |
| 8. Hazelborough, Bucks. and
Northants.* | 41. Wareham, Dorset. |
| 9. Alice Holt, Hants.* | 42. Bramshill, Berks. and
Hants. |
| 10. Woolmer, Hants.* | 43. Chiddingfold, Surrey and
Sussex. |
| 11. Bere, Hants.* | 44. Ennerdale, Cumberland. |
| 12. New Forest, Hants.* | 45. Clipstone, Derby and Notts. |
| 13. Parkhurst, Isle of Wight.* | 46. Beddgelert, Caernarvon. |
| 14. Bedgebury, Kent and
Sussex.* | 47. Cynwyd, Merioneth. |
| 15. Rothbury, Northumberland. | 48. Dovey, Merioneth and
Montgomery. |
| 16. Thornthwaite, Cumberland. | 49. Radnor, Radnor. |
| 17. Allerston, Yorks. | 50. Lyminge, Kent. |
| 18. Selby, Yorks. | 51. Kielder, Northumberland. |
| 19. Gwydyr, Caernarvon and
Denbigh. | 52. Haugh, Hereford. |
| 20. Coed-y-Brenin, Merioneth. | 53. Wyre, Worcester. |
| 21. Cannock Chase, Stafford. | 54. Brecon, Brecknock. |
| 22. Rockingham, Northants. | 55. Brechfa, Carmarthen. |
| 23. Swaffham, Norfolk. | 56. Ringwood, Dorset and
Hants. |
| 24. Thetford Chase, Norfolk
and Suffolk. | 57. Bourne, Lincoln and
Rutland. |
| 25. Rendlesham, Suffolk. | 58. Hamsterley, Durham. |
| 26. Ampthill, Bedford. | 59. Hope, Derby. |
| 27. Mortimer, Hereford, Radnor
and Salop. | 60. Loughton, Lincoln. |
| 28. Walcot, Salop. | 61. Friston, Sussex. |
| 29. Kerry, Montgomery and
Salop. | 62. Micheldever, Hants. |
| 30. Rheola, Glamorgan. | 63. Ferndown, Dorset. |
| 31. Margam, Glamorgan. | 64. Wilsey Down, Cornwall. |
| 32. Llantrisant, Glamorgan. | 65. Glasfynydd, Brecknock. |
| 33. Llanover, Monmouth. | 66. Rosedale, Yorks. |
| | 67. Ampleforth, Yorks. |
| | 68. Cwmeinion, Cardigan. |
| | 69. Tarenig, Cardigan and
Montgomery. |

* Former Crown woods.

- | | |
|--|--|
| 70. Mathrafal, Montgomery. | 93. Mynydd Ddu, Brecknock
and Monmouth. |
| 71. Pembrey, Carmarthen. | 94. Herodsfoot, Cornwall. |
| 72. Westbury, Hants. | 95. West Woods, Wilts. |
| 73. Buriton, Hants. and Sussex. | 96. Bardney Woods, Lincoln. |
| 74. Bawtry, Notts. | 97. Redesdale, Northumberland. |
| 75. Sherwood, Notts. | 98. Challock, Kent. |
| 76. Swanton, Norfolk. | 99. Vinehall, Sussex. |
| 77. Dunwich, Suffolk. | 100. Goodwood, Sussex. |
| 78. Brynmawr, Cardigan. | 101. Lydford, Devon. |
| 79. Bruton, Somerset and
Wilts. | 102. Hardknott, Cumberland. |
| 80. Myherin, Cardigan. | 103. Langdale, Yorks. |
| 81. Harwood, Northumberland. | 104. The King's Forest, Suffolk. |
| 82. Kershope, Cumberland. | 105. Itton, Monmouth. |
| 83. Combley, Isle of Wight. | 106. Hawkshead, Lancs. |
| 84. Brighstone, Isle of Wight. | 107. Hafren, Montgomery. |
| 85. Slaley, Northumberland. | 108. Collingbourne, Wilts. |
| 86. Clocaenog, Denbigh and
Merioneth. | 109. Gravetye, Sussex. |
| 87. Dyfnant, Montgomery. | 110. Sedbury, Gloucester.* |
| 88. Crychan, Carmarthen. | 111. Warke, Northumberland. |
| 89. Caio, Brecon and Car-
marthen. | 112. Greystoke, Cumberland. |
| 90. Dartmoor, Devon. | 113. Wigsley, Lincoln and Notts. |
| 91. Yardley Chase, Bedford
and Northants. | 114. Hay, Hereford. |
| 92. Arkengarthdale, Yorks. | 115. St. Gwynno, Glamorgan. |
| | 116. Mendip, Somerset. |
| | 117. Hartland, Devon. |
| | 118. Marden, Sussex. |

* Formerly included under Chepstow.

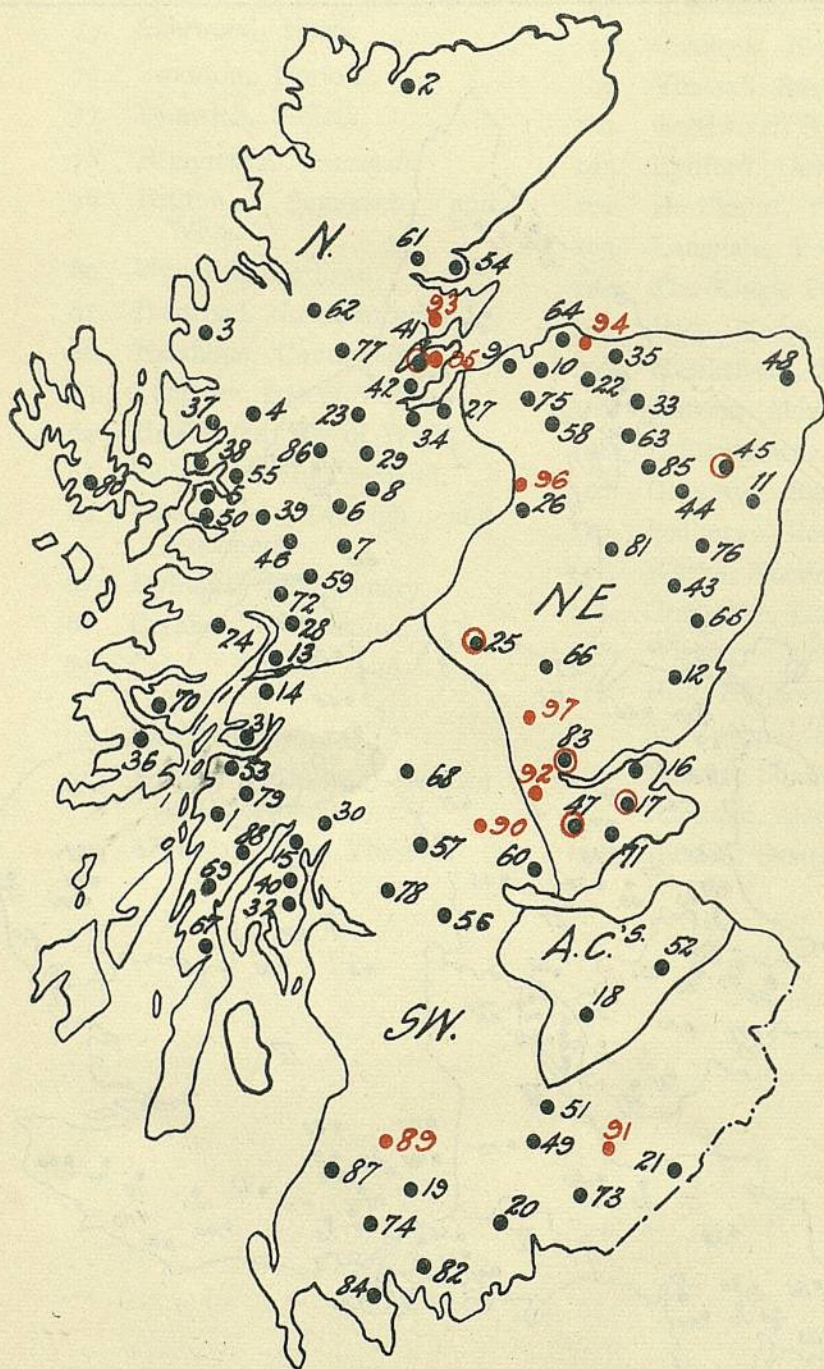
Sketch map showing the location of Units and the boundaries of the Divisions in England & Wales.



Land acquired before 30th September 1936 - ●
 Land acquired in the Forest Year 1937 - ●●

Scale of Miles.
 10 20 30 40 50 60

Sketch map showing the location of units and the boundaries of the Divisions in Scotland.



Land acquired before 30th September 1936 - ●
 Land acquired in the Forest Year 1937 - ●●

Scale of Miles.
 10 50 10 20 30 40 50 60

SCOTLAND.

- | | |
|------------------------------------|--|
| 1. Inverliever, Argyll.* | 49. Forest of Ae, Dumfries. |
| 2. Borgie, Sutherland. | 50. Eilanreach, Inverness. |
| 3. Slattadale, Ross. | 51. Greskine, Dumfries. |
| 4. Achnashellach, Ross. | 52. Edgarhope, Berwick. |
| 5. Ratagan, Inverness and Ross. | 53. Fearnoch, Argyll. |
| 6. Inchnacardoch, Inverness. | 54. Dornoch, Sutherland. |
| 7. South Laggan, Inverness. | 55. Inverinate, Ross. |
| 8. Port Clair, Inverness. | 56. Lennox Castle, Stirling. |
| 9. Culbin, Moray and Nairn. | 57. Loch Ard, Perth. |
| 10. Monaughty, Moray. | 58. Scootmore, Moray. |
| 11. Kirkhill, Aberdeen. | 59. Clunes, Inverness. |
| 12. Montreatmont, Angus. | 60. Devilla, Fife. |
| 13. Glen Righ, Inverness. | 61. Balblair, Sutherland. |
| 14. Glenduror, Argyll. | 62. Lael, Ross. |
| 15. Glenbranter, Argyll. | 63. Clashindarroch, Aberdeen. |
| 16. Tentsmuir, Fife. | 64. Roseisle, Moray. |
| 17. Edensmuir, Fife. | 65. Inglismaldie, Kincardine. |
| 18. Glentress, Peebles. | 66. Blackcraig, Perth. |
| 19. Bennan, Kirkcudbright. | 67. Achaglachgach, Argyll. |
| 20. Dalbeattie, Kirkcudbright. | 68. Strathyre, Perth. |
| 21. Newcastleton, Roxburgh. | 69. Knapdale, Argyll. |
| 22. Teindland, Moray. | 70. Fiunary, Argyll. |
| 23. Glenurquhart, Inverness. | 71. Carden, Fife. |
| 24. Glenhurich, Argyll. | 72. Glenloy, Inverness. |
| 25. Drummond Hill, Perth. | 73. Auchenroddan, Dumfries. |
| 26. The Queen's Forest, Inverness. | 74. Kirroughtree, Kirkcudbright. |
| 27. Culloden, Inverness. | 75. Newtyle, Moray. |
| 28. Nevis, Inverness. | 76. Durris, Kincardine. |
| 29. Craig-nan-Eun, Inverness. | 77. Longart, Ross. |
| 30. Ardgartan, Argyll. | 78. Garadhban, Stirling. |
| 31. Barcaldine, Argyll. | 79. Inverinan, Argyll. |
| 32. Benmore, Argyll. | 80. Glenbrittle, Isle of Skye. |
| 33. The Bin, Aberdeen. | 81. Alltcaileach, Aberdeen. |
| 34. Craig Phadrig, Inverness. | 82. Fleet, Kirkcudbright. |
| 35. Ordiequish, Moray. | 83. Kinfauns, Perth. |
| 36. Salen, Argyll. | 84. Kilsture, Wigtown. |
| 37. North Strome, Ross. | 85. Whitehaugh, Aberdeen. |
| 38. South Strome, Ross. | 86. Guisachan, Inverness. |
| 39. Glenshiel, Ross. | 87. Changue, Ayr. |
| 40. Glenfinart, Argyll. | 88. Asknish, Argyll. |
| 41. Findon, Ross. | 89. Dundough, Kirkcudbright. |
| 42. Kessock, Ross. | 90. Carron Valley, Stirling. |
| 43. Drumtochty, Kincardine. | 91. Tinnisburn, Roxburgh and Dumfries. |
| 44. Midmar, Aberdeen. | 92. Glen Devon, Perth. |
| 45. Kennay, Aberdeen. | 93. Ardross, Ross. |
| 46. Glengarry, Inverness. | 94. Lossie, Moray. |
| 47. Blairadam, Fife and Kinross. | 95. Millbuie, Ross. |
| 48. Deer, Aberdeen. | 96. Inshriach, Inverness. |
| | 97. Craigvinean, Perth. |

* Former Crown wood.

Table E5.—Cultural Operations (Table E, Column 5).

Year ending 30th September.	PLANTATIONS.								NURSER- IES.	GRAND TOTAL.
	Prepara- tion of Ground. (1)	Drain- age. (2)	Fencing. (3)	Plant- ing. (4)	Weed- ing and Clean- ing. (5)	Beating- up. (6)	Forest Pro- tection. (7)	Total. (8)		
	£	£	£	£	£	£	£	£	£	£
First decade :										
1920-29	151,950	81,147	204,523	243,213	183,499	69,372	95,824	1,029,528	481,273	1,510,801
Second decade :										
1930	19,541	25,042	34,554	43,364	36,070	22,047	26,169	206,787	73,569	280,356
1931	17,522	29,463	38,449	43,096	35,803	19,040	27,134	210,507	75,051	285,558
1932	13,241	37,228	31,425	34,078	39,439	16,032	26,139	197,582	54,974	252,556
1933	10,307	36,563	29,748	29,105	44,113	18,729	32,187	200,752	53,611	254,363
1934	9,716	36,806	29,203	30,804	43,073	20,913	35,617	206,132	58,939	265,071
1935	8,124	41,604	29,537	31,974	46,695	21,532	35,233	214,719	66,769	281,488
1936	10,120	40,014	31,205	30,512	52,787	20,748	37,662	223,048	77,759	300,807
1937	10,022	43,817	34,368	31,737	73,009	25,020	44,593	262,476	83,608	346,084
Total	250,543	371,684	463,012	517,883	554,488	233,433	360,488	2,751,531	1,025,553	3,777,084
Percentage	6.6	9.9	12.2	13.7	14.7	6.2	9.5	72.8	27.2	100

Cultural Operations.—Expenditure amounted to £346,084, details of which are given in Table E5. Plantations accounted for £262,476 and nurseries £83,608.

Plantations.—The total area planted or sown during the year was 20,096 acres, of which 18,025 acres were placed under conifers and 2,071 acres under broadleaved species. Included in the above are 471 acres re-afforested in the former Crown woods and 339 acres replanted after damage by fire.

The total addition to the woodland area of Great Britain as a result of the Commission's operations was 16,345 acres. In forming plantations and beating-up previous years' plantations 49,475,000 trees were used, of which 39 per cent. were Norway and Sitka spruces; 32 per cent. Scots and Corsican pines; 11 per cent. European and Japanese larches; 2 per cent. Douglas fir, and 13 per cent. broadleaved species.

An area of 353 acres of existing woods was underplanted, necessitating the use of 344,000 plants.

The quantities of work done in the plantations during the year are shown in the table below.

Silvicultural Operations.

Division.	Planted and Sown.	Naturally Regenerated.	Underplanted.	Thinned.	Felled.
	Acres.	Acres.	Acres.	Acres.	Acres.
I	3,510	—	3	258	41
II	2,569	—	25	288	73
III	1,951	4	4	76	10
IV	830	—	—	119	83
V	2,084	47	—	186	69
VI	601	—	247	1,508	31
VII	465	12	67	1,101	232
England and Wales	12,010	63	346	3,536	539
N.	1,727	—	6	225	21
N.E.... ..	1,954	—	1	163	45
S.W.... ..	4,105	—	—	169	27
A.C.	300	—	—	93	1
Scotland ...	8,086	—	7	650	94
Total	20,096	63	353	4,186	633

Forest.	Area planted (acres).					
	Afforested.		Re-afforested.		Total.	
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.
Alice Holt, Hants*	—	—	35	15	35	15
Allerston, Yorks	98	1	—	—	98	1
Ampleforth, Yorks	50	16	14	10	64	26
Amphill, Bedford	—	—	—	—	—	—
Arkengarthdale, Yorks	108	—	—	—	108	—
Bardney Woods, Lincoln	—	—	—	62	—	62
Bawtry, Notts	—	—	—	—	—	—
Beddelert, Caernarvon	54	—	—	—	54	—
Bedgebury, Kent and Sussex*	—	—	27	19	27	19
Bere, Hants*	—	—	—	2	—	2
Bodmin, Cornwall	—	—	30	3	30	3
Bourne, Lincoln and Rutland	—	20	—	82	—	102
Bramshill, Berks and Hants	—	—	—	—	—	—
Brechfa, Carmarthen	328	56	—	—	328	56
Brecon, Brecknock	101	—	—	—	101	—
Brendon, Somerset†	29	3	1	—	30	3
Brightstone, Isle of Wight	—	47	—	—	—	47
Bruton, Somerset and Wilts	—	—	14	12	14	12
Brynmaur, Cardigan	51	—	—	—	51	—
Buriton, Hants and Sussex	—	—	2	33	2	33
Caio, Brecon and Carmarthen	—	—	—	—	—	—
Cannock Chase, Stafford	99	—	—	—	99	—
Challock, Kent	—	—	—	51	—	51
Chiddingfold, Surrey and Sussex	—	—	5	21	5	21
Chopwell, Durham*	—	—	—	—	—	—
Clipstone, Derby and Notts	123	32	9	71	132	103
Clocaenog, Denbigh and Merioneth	319	—	37	—	356	—
Coed-y-Brenin, Merioneth	273	—	63	—	336	—
Collingbourne, Wilts	—	—	—	39	—	39
Combley, Isle of Wight	—	—	17	68	17	68
Crychan, Carmarthen	176	4	—	—	176	4
Cwmeinion, Cardigan	39	—	—	—	39	—
Cynwyd, Merioneth	—	—	2	—	2	—
Dartmoor, Devon	133	—	—	—	133	—
Dean Forest, Glos., Hereford and Monmouth.*	2	9	102	170	104	179
Delamere, Cheshire*	—	—	—	—	—	—
Dovey, Merioneth and Montgomery	242	—	27	—	269	—
Dunwich, Suffolk	—	—	—	—	—	—
Dynant, Montgomery	44	—	—	—	44	—
Dymock, Gloucester and Hereford.*	15	—	—	—	15	—
Eggesford, Devon	—	—	12	—	12	—
Ennerdale, Cumberland	135	11	—	—	135	11
Ferndown, Dorset	9	—	—	—	9	—
Friston, Sussex	—	65	—	—	—	65
Glasfynydd, Brecknock	—	—	—	—	—	—
Goodwood, Sussex	—	—	—	59	—	59
Gwydyr, Caernarvon and Denbigh	285	1	45	—	330	1
Hafod Fawr, Merioneth*	—	—	—	—	—	—

* Former Crown woods.

September, 1937—England and Wales.

Species planted, including beating-up (thousands).									Forest.
Scots and Corsican Pines.	Eur. and Jap. Larches.	Douglas Fir.	Norway and Sitka Spruces.	Oak.	Ash.	Beech.	Others	Total.	
39	18	—	11	46	—	—	—	114	Alice Holt.*
908	111	—	23	—	2	27	50	1,121	Allerston.
63	56	—	16	7	10	2	4	158	Ampleforth.
21	—	—	—	29	—	7	—	57	Ampthill.
1	—	—	184	—	—	—	—	185	Arkengarthdale.
—	—	—	—	75	—	—	2	77	Bardney Woods.
21	—	—	3	—	—	—	7	31	Bawtry.
—	—	—	132	—	—	—	—	132	Beddelert.
121	5	—	5	5	4	23	13	176	Bedgebury.*
—	11	—	—	35	—	—	—	46	Bere.*
12	12	21	5	—	—	8	3	61	Bodmin.
—	—	—	—	5	123	—	14	142	Bourne.
74	—	—	9	—	—	—	—	83	Bramshill.
57	158	46	326	—	—	69	36	692	Brechfa.
15	39	1	139	—	—	6	32	232	Brecon.
105	6	11	24	—	—	6	25	177	Brendon.
49	—	—	—	—	10	144	47	250	Brighstone.
—	6	9	5	5	19	1	—	45	Bruton.
22	4	—	73	—	—	—	—	99	Brynmaur.
—	—	—	3	—	3	74	23	103	Buriton.
11	11	—	40	—	—	13	3	78	Caio.
424	—	—	15	—	—	45	74	558	Cannock Chase.
—	—	—	—	—	—	76	—	76	Challock.
1	9	—	25	41	18	—	—	94	Chiddingfold.
1	6	—	1	—	—	—	—	8	Chopwell.*
825	—	—	—	1	70	15	172	1,083	Clipstone.
54	147	—	590	—	—	12	12	815	Cloacaenog.
75	59	52	614	—	6	1	88	895	Coed-y-Bren- [in.]
—	—	—	—	—	—	112	—	112	Collingbourne.
—	34	—	—	84	33	—	6	157	Combley.
94	104	10	197	—	6	5	17	433	Crychan.
—	—	—	66	—	—	—	10	76	Cwmeinion.
7	4	5	7	—	—	—	11	34	Cynwyd.
3	—	—	224	—	—	—	19	246	Dartmoor.
43	100	—	114	93	6	132	23	511	Dean Forest.
10	2	—	7	—	—	—	—	19	Delamere.*
69	131	14	411	—	—	7	36	668	Dovey.
4	—	—	—	4	—	1	13	22	Dunwich.
—	1	—	100	—	—	—	5	106	Dyfnant.
10	14	—	2	3	—	4	3	36	Dymock.*
—	1	14	—	—	—	4	1	20	Eggesford.
—	117	—	135	—	—	2	15	269	Ennerdale.
109	—	—	2	—	—	—	—	111	Ferndown.
20	—	—	—	—	—	260	34	314	Friston.
—	—	—	35	—	—	—	—	35	Glasfynydd.
—	—	—	—	—	—	146	—	146	Goodwood.
115	188	114	720	1	—	6	61	1,205	Gwydyr.
—	17	—	62	—	—	—	3	82	Hafod Fawr.*

Forest.	Area planted (acres).					
	Afforested.		Re-afforested.		Total.	
	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.
Hafren, Montgomery	164	—	—	—	164	—
Haldon, Devon	5	—	29	I	34	I
Halwill, Devon	183	4	—	—	183	4
Hamsterley, Durham	60	—	—	—	60	—
Hardknott, Cumberland	77	14	—	—	77	14
Harwood, Northumberland	100	—	—	—	100	—
Haugh, Hereford	—	—	—	10	—	10
Hawkshead, Lancs.	50	—	—	—	50	—
Hazelborough, Bucks and Northants.*	—	—	10	17	10	17
Herodsfoot, Cornwall	—	—	9	I	9	I
Hope, Derby	—	—	—	—	—	—
Itton, Monmouth	—	84	—	—	—	84
Kerry, Montgomery and Salop... ..	27	—	—	—	27	—
Kershope, Cumberland	470	—	—	—	470	—
Kielder, Northumberland	I,542	17	—	—	I,542	17
King's Forest (The), Suffolk	572	42	—	11	572	53
Langdale, Yorks.	41	—	—	—	41	—
Laughton, Lincoln	—	—	—	—	—	—
Llanover, Monmouth	49	I	—	—	49	I
Llantrisant, Glamorgan	—	7	—	—	—	7
Lydford, Devon... ..	54	3	—	—	54	3
Lyminge, Kent	—	4	6	54	6	58
Margam, Glamorgan	—	—	—	—	—	—
Mathrafal, Montgomery	—	—	17	—	17	—
Micheldever, Hants	—	—	I	49	I	49
Mortimer, Hereford, Radnor and Salop.	151	2	23	—	174	2
Myherin, Cardigan	302	—	5	—	307	—
Mynydd Ddu, Brecknock and Monmouth.	192	—	—	—	192	—
New Forest, Hants*	—	—	10	2	10	2
Parkhurst, Isle of Wight*	—	—	—	8	—	8
Pembrey, Carmarthen	106	4	—	—	106	4
Quantocks, Somerset	—	—	—	4	—	4
Radnor, Radnor	64	—	—	—	64	—
Redesdale, Northumberland	432	—	—	—	432	—
Rendlesham, Suffolk	39	18	—	2	39	20
Rheola, Glamorgan	222	3	40	—	262	3
Ringwood, Dorset and Hants	265	—	—	—	265	—
Rockingham, Northants	—	—	—	—	—	—
Rosedale, Yorks	62	6	—	—	62	6
Rothbury, Northumberland	—	—	—	—	—	—
Salcey, Bucks and Northants*	—	—	—	22	—	22
Sedbury, Gloucester†	—	—	5	4	5	4
Selby, Yorks	—	—	—	—	—	—
Sherwood, Notts	—	—	—	—	—	—
Slaley, Northumberland	147	—	—	—	147	—
Swaffham, Norfolk	122	30	27	7	149	37
Swanton, Norfolk	47	—	—	65	47	65
Tarenig, Cardigan and Montgomery.	39	—	—	—	39	—
Thetford Chase, Norfolk and Suffolk.	527	5	93	78	620	83
Thornthwaite, Cumberland	24	2	—	—	24	2
Tintern, Monmouth*	19	6	33	16	52	22
Vinehall, Sussex	7	—	27	23	34	23
Walcot, Salop	—	—	—	—	—	—
Wareham, Dorset	175	—	—	—	175	—
Westbury, Hants	—	—	—	12	—	12
West Woods, Wilts	—	5	—	51	—	56

* Former Crown woods.

September, 1937—England and Wales—contd.

Species planted, including beating-up (thousands).									Forest.
Scots and Corsican Pines.	Eur. and Jap. Larches.	Douglas Fir.	Norway and Sitka Spruces.	Oak.	Ash.	Beech.	Others	Total.	
—	1	—	233	—	—	—	30	264	Hafren.
33	12	39	18	—	—	4	1	107	Haldon.
6	12	—	248	—	—	5	24	295	Halwill.
33	38	—	95	—	—	—	1	167	Hamsterley.
19	70	—	27	—	—	18	1	135	Hardknott.
—	—	—	166	—	—	—	2	168	Harwood.
—	1	—	—	14	4	7	1	27	Haugh.
25	47	—	13	—	—	—	—	85	Hawkshead.
74	20	—	4	82	5	1	—	186	Hazelborough.*
—	—	11	1	—	—	1	—	13	Herodsfoot.
—	—	—	11	—	—	—	11	22	Hope.
—	19	—	—	—	14	59	—	92	Itton.
1	4	3	61	—	—	3	5	77	Kerry.
—	—	—	875	—	—	—	—	875	Kershope.
62	51	8	2,357	—	—	—	35	2,513	Kielder.
1,279	4	—	—	5	—	71	42	1,401	King's Forest (The).
64	—	—	—	—	—	—	—	64	Langdale.
72	—	—	—	—	—	—	39	111	Laughton.
67	63	—	10	—	—	32	6	178	Llanover.
11	11	—	16	—	—	3	17	58	Llantrisant.
92	18	—	4	—	—	4	—	118	Lydford.
76	13	—	17	—	7	140	9	262	Lyminge.
84	47	—	11	—	—	7	11	160	Margam.
1	1	16	2	—	—	—	—	20	Mathrafal.
2	—	—	32	—	4	255	32	325	Micheldever.
198	136	21	4	—	4	8	10	381	Mortimer.
301	63	3	349	—	—	4	39	759	Myherin.
75	154	5	55	—	—	3	28	320	Mynydd Ddu.
158	7	3	66	59	—	12	3	308	New Forest.*
5	—	—	—	3	—	—	6	14	Parkhurst.*
345	—	—	2	—	—	—	32	379	Pembrey.
14	4	7	4	—	—	10	—	39	Quantocks.
1	89	—	36	—	—	—	1	127	Radnor.
88	232	1	399	—	—	—	—	720	Redesdale.
161	3	—	—	12	3	10	14	203	Rendlesham.
98	149	4	310	—	—	9	14	584	Rheola.
644	—	—	23	—	—	—	22	689	Ringwood.
56	33	—	35	345	29	5	8	511	Rockingham.
210	3	—	34	—	7	1	2	257	Rosedale.
61	1	—	—	—	—	—	—	62	Rothbury.
—	—	—	—	122	3	5	—	130	Salcey.*
2	8	—	—	—	—	8	—	18	Sedbury.†
20	—	—	—	—	—	—	1	21	Selby.
32	—	—	—	—	—	—	10	42	Sherwood.
234	—	—	3	—	—	—	16	253	Slaley.
368	—	15	—	32	—	—	26	441	Swaffham.
174	15	2	1	168	11	5	21	397	Swanton.
10	—	—	101	—	—	—	21	132	Tarenig.
2,766	18	209	—	105	—	128	39	3,265	Thetford Chase.
5	24	—	16	—	6	7	7	65	Thorntwaite.
50	31	1	18	16	7	27	9	159	Tintern.*
37	15	—	—	—	4	42	3	101	Vinehall.
—	6	4	—	—	—	4	—	14	Walcot.
444	—	—	65	—	—	—	2	511	Wareham.
—	10	—	—	5	—	127	8	150	Westbury.
—	—	—	—	—	—	115	24	139	West Woods.

† Previously included under Chepstow.

Plantations. Year ended 30th

Forest.	Area planted (acres).					
	Afforested.		Re-afforested.		Total.	
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.
Wilsey Down, Cornwall ...	56	—	—	—	56	—
Wyre, Worcester ...	—	—	—	55	—	55
Yardley Chase, Bedford and Northants.	10	10	38	111	48	121
Total ...	9,115	532	815	1,320	9,930	1,852
By direct sowing (included above)	20	9	—	96	20	105

Plantations. Year ended

Achaglachgach, Argyll ...	107	5	—	—	107	5
Achnashellach, Ross ...	—	—	—	—	—	—
Ae, Forest of, Dumfries ...	198	—	—	—	198	—
Alltcaileach, Aberdeen... ..	79	—	—	—	79	—
Ardgartan, Argyll ...	258	—	—	—	258	—
Asknish, Argyll ...	120	5	—	—	120	5
Auchenroddan, Dumfries ...	5	—	—	—	5	—
Balblair, Sutherland ...	—	—	40	—	40	—
Barcaldine, Argyll ...	149	2	—	—	149	2
Benmore, Argyll ...	160	—	—	—	160	—
Bennan, Kirkcudbright ...	22	—	—	—	22	—
Bin (The), Aberdeen ...	7	—	193	—	200	—
Blackcraig, Perth ...	100	—	—	—	100	—
Blairadam, Fife and Kinross ...	—	—	41	12	41	12
Borgie, Sutherland ...	—	—	—	—	—	—
Carden, Fife ...	—	—	47	1	47	1
Carron Valley, Stirling... ..	92	—	—	—	92	—
Changee, Ayr ...	100	—	—	—	100	—
Clashindarroch, Aberdeen ...	286	3	27	—	313	3
Clunes, Inverness ...	41	—	—	—	41	—
Craig-nan-Eun, Inverness ...	—	—	—	—	—	—
Craig Phadrig, Inverness ...	—	—	—	—	—	—
Culbin, Moray and Nairn ...	19	—	48	—	67	—
Culloden, Inverness ...	—	—	—	—	—	—
Dalbeattie, Kirkcudbright ...	148	6	—	—	148	6
Deer, Aberdeen ...	—	—	60	—	60	—
Devilla, Fife ...	—	—	52	—	52	—
Drummond Hill, Perth ...	22	—	68	3	90	3
Drumtochty, Kincardine ...	67	—	—	—	67	—
Dundeugh, Kirkcudbright ...	74	—	—	—	74	—
Durris, Kincardine ...	—	—	104	—	104	—
Edensmuir, Fife ...	8	—	—	6	8	6
Edgarhope, Berwick ...	65	3	25	4	90	7
Eilanreach, Inverness ...	—	—	—	—	—	—
Fearnoch, Argyll ...	80	—	—	—	80	—
Findon, Ross ...	76	—	—	—	76	—
Fiunary, Argyll ...	253	—	—	—	253	—
Fleet, Kirkcudbright ...	31	58	44	17	75	75
Garadhban, Stirling ...	—	—	88	—	88	—
Glenbranter, Argyll ...	97	3	—	—	97	3
Glenbrittle, Isle of Skye ...	104	5	—	—	104	5
Glenduror, Argyll ...	25	—	—	—	25	—
Glenfinart, Argyll ...	125	1	—	—	125	1
Glenarry, Inverness ...	160	—	—	—	160	—
Glenhurich, Argyll ...	98	3	—	—	98	3
Glenloy, Inverness ...	165	1	—	—	165	1

September, 1937—England and Wales—contd.

Species planted, including beating-up (thousands).									Forest.
Scots and Corsican Pines.	Eur. and Jap. Larches.	Douglas Fir.	Norway and Sitka Spruces.	Oak.	Ash.	Beech.	Others	Total.	
—	—	—	99	—	—	—	31	130	Wilsley Down.
1	12	—	1	—	2	63	8	87	Wyre.
55	89	—	2	314	—	23	11	494	Yardley Chase.
11,997	2,905	649	10,149	1,716	420	2,434	1,545	31,815	Total.

30th September, 1937—Scotland.

5	2	42	139	—	8	—	—	196	Achaglachgach.
1	1	—	12	—	—	—	5	19	Achnashellach.
14	19	—	353	—	—	—	35	421	Ae, Forest of.
90	19	—	55	—	—	—	1	165	Alltcaileach.
114	16	6	284	—	—	—	54	474	Ardgartan.
4	29	26	124	—	—	4	7	194	Asknish.
5	3	—	22	—	—	2	—	32	Auchenroddan.
47	20	—	14	—	—	—	11	92	Balblair.
78	5	2	162	—	—	—	52	299	Barcaldine.
47	94	—	202	—	—	5	53	401	Benmore.
15	—	—	74	—	—	—	—	89	Bennan.
37	49	—	263	—	—	2	2	353	Bin (The).
—	60	—	128	—	—	—	55	243	Blackcraig.
17	—	—	55	—	—	29	3	104	Blairadam.
1	5	—	14	—	—	—	10	30	Borgie.
1	1	—	81	—	—	—	3	86	Carden.
9	21	—	119	—	—	—	—	149	Carron Valley.
30	2	—	122	—	—	—	—	154	Changue.
67	48	—	432	—	—	5	33	585	Clashindarroch.
38	4	1	63	—	—	1	1	108	Clunes.
2	—	—	12	—	—	—	2	16	Craig-nan-Eun.
—	1	—	—	—	—	—	—	1	Craig Phadrig.
208	—	1	19	—	—	—	5	233	Culbin.
4	8	1	4	—	—	—	—	17	Culloden.
63	74	—	142	—	12	3	—	294	Dalbeattie.
7	—	—	145	—	—	—	6	158	Deer.
113	13	—	15	—	—	—	—	141	Devilla.
62	86	—	51	—	—	3	—	202	Drummond Hill.
—	9	—	79	—	—	—	35	123	Drumtochty.
5	72	—	31	—	—	—	—	108	Dundeugh.
1	6	—	170	—	—	2	11	190	Durris.
2	3	—	7	—	—	16	4	32	Edensmuir.
92	39	—	73	8	—	7	2	221	Edgarhope.
—	—	—	21	—	—	—	2	23	Eilanreach.
20	1	3	104	—	—	—	20	148	Fearnoch.
98	43	—	—	—	—	—	13	154	Findon.
10	61	—	456	—	—	4	40	571	Fiunary.
6	112	16	—	322	41	10	4	511	Fleet.
29	45	—	73	—	—	1	3	151	Garadhban.
9	3	27	170	—	—	2	9	220	Glenbranter.
5	43	—	148	—	—	4	21	221	Glenbrittle.
—	6	—	61	—	—	—	—	67	Glenduror.
17	19	1	159	—	—	—	4	200	Glenfinart.
47	5	3	304	—	—	—	14	373	Glengarry.
58	8	—	153	—	—	—	8	227	Glenhurich.
37	38	—	265	—	—	2	18	360	Glenloy.

Plantations. Year ended

Forest.	Area planted (acres).					
	Afforested.		Re-afforested.		Total.	
	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.
Glen Righ, Inverness	10	—	—	—	10	—
Glenshiel, Ross	—	—	—	—	—	—
Glentress, Peebles	179	—	24	—	203	—
Glenurquhart, Inverness	—	—	—	—	—	—
Greskine, Dumfries	78	—	—	—	78	—
Guisachan, Inverness	62	—	—	—	62	—
Inchnacardoch, Inverness	18	—	—	—	18	—
Inglismaldie, Kincardine	—	—	51	—	51	—
Inverinan, Argyll	179	1	—	—	179	1
Inverinate, Ross	—	—	—	—	—	—
Inverliever, Argyll*	198	2	—	—	198	2
Kemnay, Aberdeen	—	—	26	—	26	—
Kessock, Ross	—	—	—	—	—	—
Kilsture, Wigtown	—	—	17	34	17	34
Kinfauns, Perth... ..	16	4	—	—	16	4
Kirkhill, Aberdeen	—	—	—	—	—	—
Kirroughtree, Kirkcudbright	216	—	—	11	216	11
Knapdale, Argyll	299	1	—	—	299	1
Lael, Ross	110	—	—	—	110	—
Lennox Castle, Stirling... ..	17	3	—	—	17	3
Loch Ard, Perth	453	8	—	—	453	8
Longart, Ross	64	—	—	—	64	—
Midmar, Aberdeen	—	—	—	—	—	—
Monaghty, Moray	—	—	—	—	—	—
Montreatmont, Angus	10	—	40	—	50	—
Nevis, Inverness	183	10	—	—	183	10
Newcastleton, Roxburgh	174	—	—	—	174	—
Newtyle, Moray	—	—	—	—	—	—
North Strome, Ross	—	—	40	—	40	—
Ordiequish, Moray	—	—	—	—	—	—
Port Clair, Inverness	30	—	—	—	30	—
Ratagan, Inverness and Ross	—	—	—	—	—	—
Roseisle, Moray	200	—	—	—	200	—
Salen, Argyll	155	—	—	—	155	—
Scotmore, Moray	92	—	61	—	153	—
Slattadale, Ross... ..	—	—	—	—	—	—
South Laggan, Inverness	5	—	73	—	78	—
South Strome, Ross	20	1	—	—	20	1
Strathyre, Perth	306	6	—	—	306	6
Teindland, Moray	—	—	20	—	20	—
Tentsmuir, Fife	—	—	—	—	—	—
Whitehaugh, Aberdeen... ..	152	—	—	—	152	—
Total	6,567	131	1,189	88	7,756	219
By direct sowing (included above)	1	4	—	—	1	4

Plantations. Year ended

England and Wales	9,115	532	815	1,320	9,930	1,852
Scotland	6,567	131	1,189	88	7,756	219
Total	15,682	663	2,004	1,408	17,686	2,071

* Former Crown wood.

30th September, 1937—Scotland—contd.

Species planted, including beating-up (thousands).									Forest.
Scots and Corsican Pines.	Eur. and Jap. Larches.	Douglas Fir.	Norway and Sitka Spruces.	Oak.	Ash.	Beech.	Others	Total.	
7	2	—	30	—	—	—	2	41	Glen Righ.
3	1	—	25	—	—	—	12	41	Glenshiel.
273	200	3	22	—	—	5	10	513	Glentress.
5	10	—	30	—	—	—	17	62	Glenurquhart.
16	—	—	110	—	—	6	1	133	Greskine.
—	10	—	86	—	—	—	17	113	Guisachan
41	28	—	10	—	—	—	4	83	Inchnacardoch.
71	2	—	37	—	—	—	14	124	Inglismaldie.
42	37	—	208	—	—	1	11	299	Inverinan.
4	11	—	12	—	—	—	8	35	Inverinate.
20	90	9	216	—	—	3	1	339	Inverliever.*
68	—	—	6	—	—	5	1	80	Kemnay.
2	—	—	2	—	—	—	—	4	Kessock.
2	31	—	2	115	18	6	—	174	Kilsture.
—	4	—	47	—	—	16	—	67	Kinfauns.
5	—	—	1	—	—	—	2	8	Kirkhill.
148	174	4	179	—	24	4	—	533	Kirrougthtree.
41	21	23	371	—	2	3	31	492	Knapdale.
78	122	—	35	—	—	—	21	256	Lael.
—	—	—	42	—	—	—	12	54	Lennox Castle.
264	259	32	443	—	—	3	82	1,083	Loch Ard.
27	19	—	63	—	—	—	17	126	Longart.
—	—	—	5	—	—	—	—	5	Midmar.
12	2	—	1	—	—	—	13	28	Monaughty.
132	2	—	12	—	—	2	5	153	Montreathmont.
33	29	—	367	—	—	5	20	454	Nevis.
20	1	3	402	—	—	—	49	475	Newcastleton.
10	2	—	—	—	—	—	9	21	Newtyle.
—	—	—	75	—	—	—	—	75	North Strome.
—	1	—	2	—	—	—	4	7	Ordiequish.
10	6	—	51	—	—	1	19	87	Port Clair.
—	—	—	24	—	—	—	14	38	Ratagan.
442	—	—	—	—	—	—	14	456	Roseisle.
—	28	—	340	—	—	—	24	392	Salen.
110	83	—	126	—	—	2	29	350	Scotmore.
—	4	—	29	—	—	—	2	35	Slattadale.
7	10	—	137	—	—	5	10	169	South Laggan.
—	3	—	46	—	—	—	1	50	South Strome.
296	69	—	163	—	—	—	46	574	Strathyre.
—	—	—	5	—	—	—	41	46	Teindland.
170	—	—	—	—	—	—	5	175	Tentsmuir.
26	188	—	24	—	—	—	16	254	Whitehaugh.
3,900	2,542	203	9,166	445	105	169	1,130	17,660	Total.

30th September, 1937—Summary.

11,997	2,905	649	10,149	1,716	420	2,434	1,545	31,815	England & Wales.
3,900	2,542	203	9,166	445	105	169	1,130	17,660	Scotland.
15,897	5,447	852	19,315	2,161	525	2,603	2,675	49,475	Total.

Cost of Planting.—The outlay per acre on labour and material on the areas planted between 1919 and 1937 was as follows:—

	£	s.	d.
England and Wales	9	16	4
Scotland	9	18	6
Great Britain	9	17	1

These figures cover the cost of preparation of ground, drainage, fencing, plants, planting, replacement of failures and weeding, but do not include expenditure on forest protection, supervision and overhead charges.

Nurseries.—The total area under nurseries at 30th September, 1937, was 985 acres stocked with 324 million seedlings and 89 million transplants. Comparative figures for the three years 1935-37 are given in the following table:—

Nurseries.

Year ending 30th Sept.	Country.	Seed Sown (lb.).			Stock of Plants at 30th September (thousands).						Area (Acres).
		Coniferous.	Broad-leaved.	Total.	Transplants.			Seedlings.			
					Coniferous.	Broad-leaved.	Total.	Coniferous.	Broad-leaved.	Total.	
1937 ...	England and Wales.	6,818	100,917	107,735	45,188	10,639	55,827	197,422	16,903	214,325	615
	Scotland ...	4,337	11,347	15,684	31,929	946	32,875	108,298	1,807	110,105	370
	Total ...	11,155	112,264	123,419	77,117	11,585	88,702	305,720	18,710	324,430	985
1936 ...	England and Wales.	5,892	65,943	71,835	40,557	8,170	48,727	121,661	17,714	139,375	600
	Scotland ...	4,732	8,457	13,189	25,692	789	26,481	74,929	1,791	76,720	346
	Total ...	10,624	74,400	85,024	66,249	8,959	75,208	196,590	19,505	216,095	946
1935 ...	England and Wales.	4,414	54,046	58,460	42,400	7,026	49,426	66,660	11,021	77,681	559
	Scotland ...	3,653	3,436	7,089	23,726	831	24,557	65,061	1,554	66,615	338
	Total ...	8,067	57,482	65,549	66,126	7,857	73,983	131,721	12,575	144,296	897

Details showing by Divisions the utilisation of nursery area are as follows:—

Utilisation of Nursery Area.

Division.	Seedbeds.	Lines.	Fallow and Green Crops.	Other.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.
I	44·9	59·1	13	19·5	136·5
II	33·4	26·9	10·2	11·9	82·4
III	20	44·5	31·5	21·8	117·8
IV	13·8	30·1	6	6·5	56·4
V	37·9	46·5	36·9	23·8	145·1
VI	20·1	11	3·1	2·7	36·9
VII	12·4	12·1	10	5·2	39·7
England and Wales	182·5	230·2	110·7	91·4	614·8
N.	19·4	28·1	21·2	15·5	84·2
N.E.... ..	30·7	43·6	15·1	24	113·4
S.W.... ..	54·1	45·5	57·1	16	172·7
Scotland	104·2	117·2	93·4	55·5	370·3
Total	286·7	347·4	204·1	146·9	985·1

Seed Supply.—No difficulty was experienced in obtaining sufficient seed of the more important West American conifers. The 1936 crop of Douglas fir was good both in the United States of America and Canada. Plentiful supplies of Sitka spruce were available in America but there was only a moderate crop in Canada. In Japan the Japanese larch crop yielded a minimum quantity of poor seed. On the Continent, there were abundant supplies of Norway spruce and European larch but the Corsican pine crop was poor. Oak was understood to be plentiful but beech was scarce.

As regards home-collected seed, in England and Wales the Scots pine crop was practically a complete failure; sufficient seed of oak, ash, chestnut and sycamore was forthcoming to meet requirements but there was a shortage of beech. In Scotland, Scots pine seed was scarce but collections of European larch, oak and beech were adequate.

The quantity of seed sold during the year was 440 lb.

The Commissioners have to express their thanks for gifts of seed from the Forest Authorities of Canada, Finland and France.

Forest Fires.—There was a slight increase in the number of fires, which amounted to 438 compared with 407 in 1936; with a few exceptions, however, the fires were confined to very

small areas and the damage caused was only £2,140 as against £20,170 in 1936. Comparative figures for the five years 1933 to 1937 are given below.

	1933.	1934.	1935.	1936.	1937.
Number of fires ...	621	500	487	407	438
Area burnt (acres)...	1,297	741	270	1,563	126
Damage valued at...	£19,040	£12,166	£4,090	£20,170	£2,140

In addition four fires caused damage to buildings amounting to £14.

Claims aggregating £275 have been lodged by the Commissioners in respect of the damage done during the year.

The following table gives the causes of fires in 1937 and it will be seen that 210 (48 per cent.) originated in sparks from railway engines and 60 (14 per cent.) were caused by the general public mainly as the result of carelessness.

<i>Origin.</i>	<i>Number of fires.</i>	<i>Percentage of total number.</i>
Railways ...	210	48
General public:		
From public roads, etc.	39	9
Other ...	21	5
Adjoining land	41	9
Road engines	4	1
Incendiarism ...	4	1
Commission's employees...	6	1
Other ...	5	1
Unknown ...	108	25
Totals	<hr/> 438 <hr/>	<hr/> 100 <hr/>

Subhead F—Advances for Afforestation Purposes.

Expenditure, £12,075.

Grants to private individuals and local authorities for planting amounted to £8,377, advances in respect of a proceeds-sharing scheme to £541 and overhead and supervisory charges to £3,157.

The grants were as follows:—

(1) *Conifers*.—Up to £2 per acre planted and thereafter maintained as a forest crop.

(2) *Hardwoods*.—For every acre planted with approved species and thereafter maintained as an area for the production of hardwoods:—up to £4 per acre for oak or ash; £3 per acre for beech, sycamore or chestnut, and £2 per acre for other approved species.

The number of schemes in respect of which grants were paid during the year and the areas dealt with are stated below:—

—	England and Wales.	Scotland.	Total.
Number of Schemes ...	217	84	301
	Acres.	Acres.	Acres.
Planting conifers ...	1,838	1,549	3,387
Planting hardwoods ...	936	60	996

The area planted under the proceeds-sharing scheme was seven acres.

Subhead G—Education. Expenditure £10,295.

Details of expenditure are given in Table G.

Table G.—Education.

Year ending 30th September.	EXPENDITURE (Table IIa, Column 4).							INCOME.	NET EXPENDITURE.
	Superior Supervision and Over-head Charges.	Apprentices' Schools.				Grants to Institutions.	Total.		
		Salaries and Expenses of Instructors.	Purchase and Rent of Land and Buildings.	Allowances to Apprentices.	Stores, Fuel, Light, etc.				
£	£	£	£	£	£	£	£	£	
First decade :									
1920-29 ...	13,125	15,401	6,195	21,709	14,192	30,691	101,313	2,427	98,886
Second decade :									
1930 ...	900	820	838	2,203	1,215	4,232	10,208	263	9,945
1931 ...	880	759	1,949	2,143	1,450	4,230	11,411	64	11,347
1932 ...	789	882	259	1,982	968	4,004	8,884	5	8,879
1933 ...	1,010	980	188	1,473	719	3,856	8,226	38	8,188
1934 ...	1,148	1,072	270	1,163	623	3,782	8,058	34	8,024
1935 ...	976	1,142	205	1,177	634	3,679	8,013	38	7,975
1936 ...	1,407	1,220	374	1,383	760	3,930	9,074	—	9,074
1937 ...	1,603	1,265	523	1,948	1,025	3,931	10,295	1	10,294
Total ...	21,838	23,541	10,801	35,181	21,586	62,535	175,482	2,870	172,612
Percentage ...	12.5	13.4	6.1	20.1	12.3	35.6	100		

Apprentices' Schools: Expenditure, £4,761.—Sixty-two forest apprentices underwent courses of instruction at Parkend (Forest of Dean) and Benmore (Argyllshire). Of those who completed the two years' course 20 were granted certificates of proficiency.

Grants to Universities, Colleges, etc.: Expenditure, £1,931.—Grants were made during the year to the following:—Oxford University; Cambridge University; University College of North Wales, Bangor; King's College, Newcastle-on-Tyne; Aberdeen University; Edinburgh and East of Scotland College of Agriculture; Royal Scottish Forestry Society.

The number of students studying forestry at the Universities was 61; 14 forestry degrees were granted, and two candidates obtained diplomas.

Imperial Forestry Institute: Expenditure, £2,000.—The annual grant to the Imperial Forestry Institute from the Forestry Fund was continued. Nineteen students attended for the whole or part of the year, comprising 5 post-graduate probationers from the Colonial Services, 13 forest officers on leave (India 2, Dominion Service 1, Colonial Services 10) and 1 private student.

Subhead H—Research and Experiment.

Expenditure: Gross, £16,289; Net, £15,917.

Details of expenditure are given in Table H.

Table H.—Research and Experiment.

Year ending 30th September.	EXPENDITURE (Table IIa, Column 5).					INCOME.	NET EXPENDI- TURE.
	Superior Super- vision and Overhead Charges.	Salaries and Expenses.	Labour, Stores, etc.	Grants to Insti- tutions.	Total.		
	£	£	£	£	£	£	£
First decade :							
1920-29	13,699	38,458	20,230	7,263	79,650	1,058	78,592
Second decade :							
1930	1,316	5,079	4,529	1,414	12,338	105	12,233
1931	1,292	5,323	4,588	1,395	12,598	278	12,320
1932	1,149	5,329	4,452	1,396	12,326	42	12,284
1933	1,233	5,294	4,009	1,646	12,182	78	12,104
1934	1,181	4,911	3,804	1,405	11,301	420	10,881
1935	1,297	5,012	4,265	3,165	13,739	143	13,596
1936	1,444	5,416	4,123	3,149	14,132	404	13,728
1937	1,792	5,705	5,168	3,624	16,289	372	15,917
Total	24,403	80,527	55,168	24,457	184,555	2,900	181,655
Percentage	13·2	43·6	29·9	13·3	100		

Production.—Fifty-six sample plots were remeasured during the year. After allowing for seven plots destroyed by gales and five new plots which were established, the total number in being at 30th September, 1937, was 219 plots.

Nursery and Plantation Experiments.—A trial of stratification of stored seed of *Pinus contorta* gave satisfactory results; this species resembles Douglas fir in that it germinates better after a short period of stratification in damp sand previous to sowing.

The work on the use of coarse sand or fine gravel for covering beds sown with small-seeded species such as Sitka spruce has led to certain conclusions as to the feasibility of early sowing. If the best type of covering material is used it is not necessary to wait for suitable conditions of tilth and early sowing thus often becomes practicable.

Work on the raising of poplars has shown the great importance of the right type of nursery soil for the purpose. Whereas the clayey loams have given in the main disappointing results in spite of heavy manuring, nurseries recently established on fen soil in the eastern counties of England have grown poplar plants of exceptionally fine quality.

Progress has been made with the establishment of a poplar garden in Yardley Forest, Northants, where about 15 different species or hybrids have been planted in small plots, the common black Italian poplar, *Populus serotina*, being used as the standard, or control type. It is hoped that some of the varieties tried may combine the canker-resistant properties and good form of the black Italian poplar with the rapid growth in early youth of some of the newer hybrids.

A survey has been made of those experiments on upland heaths in which mixtures of pines and spruces have been formed. In some cases the pines have failed to develop owing to damage by blackgame or other causes, but where the pine have reached a height of not less than three feet there is evidence of a definite improvement in the rate of growth of the interplanted spruce.

Entomology and Mycology.—The pine beetle investigation was still in progress at the end of the year under review. Much information has been obtained from a survey carried out by Mr. H. S. Hanson of the Imperial Bureau of Entomology. Chafers were also the subject of a survey which covered all the Commission's nurseries in which recent damage had been reported. This will be followed by intensive work in selected nurseries.

Sitka spruce plantations attacked by the gall-producing stage of *Adelges (Chermes) cooleyi* have been kept under observation in Scotland. It appears that very few of the insects survive the winter and that the number of galls produced is insignificant.

Elm disease is still spreading slowly in most districts, and some severe local outbreaks were recorded during the summer. The search for immune forms of elm continues both here and on the Continent.

Botany and Soils.—Dr. M. C. Rayner of Bedford College, London, continued her investigations on the mycorrhiza of forest trees. Field experimental work was carried out in the New, Wareham and Allerston Forests.

Research on forest soils is centred at the Macaulay Institute near Aberdeen. Progress has been made with the survey of two forest areas in Aberdeenshire and the Commissioners have received advice on the manorial treatment of forest nurseries.

Voles.—The Bureau of Animal Population, Oxford University is investigating fluctuations in the population of voles. A tubercular disease has been discovered but the part which this plays in vole mortality is still uncertain.

Advisory Committee on Forest Research.—The Committee held its tenth meeting in the New Forest. Experiments there and in Wareham Forest, Dorset, were inspected.

Utilisation.—The Commissioners continue to keep in close touch with the work of the Forest Products Research Laboratory.

**Subhead J—Agency and Advisory Services. Expenditure:
Gross, £1,318; Net, £1,017.**

No direct expenditure was incurred under this head. The sum of £1,318 is an apportionment of overhead and supervisory charges in respect of the time of various officers of the Commission who have been engaged in answering enquiries and advising woodland owners as to the treatment of their woods.

Subhead K—Special Services. Expenditure, £4,770.

Details of expenditure are given in Table K.

Table K.—Special Services.

Year ending 30th September.	EXPENDITURE (Table IIa, Column 7).						IN- COME.	NET EXPEN- DITURE.
	Superior Supervision and Overhead Charges.	Consulta- tive Com- mittees' Expenses.	Publi- cations.	Special Enquiries.	Relief of Un- employ- ment.	Total.		
	£	£	£	£	£	£	£	£
First decade : 1920-29 ...	26,585	523	1,995	12,368	19,828	61,299	347	60,952
Second decade :								
1930... ..	1,822	60	68	147	—	2,097	—	2,097
1931... ..	1,478	32	126	255	—	1,891	8	1,883
1932... ..	1,684	25	87	561	—	2,357	2	2,355
1933... ..	1,598	7	28	466	—	2,099	—	2,099
1934... ..	1,591	1	116	745	—	2,453	6	2,447
1935... ..	3,750	10	196	1,056	—	5,012	4	5,008
1936... ..	2,859	7	4	3,091	—	5,971	—	5,971
1937... ..	2,403	3	74	2,290	—	4,770	—	4,770
Total ...	43,780	668	2,694	20,979	19,828	87,949	367	87,582
Percentage	49·8	0·8	3·1	23·8	22·5	100		

Publications.—The following publications were issued during the year:—Bulletin No. 18 (*Spring Frosts*); *Seventeenth Annual Report of the Forestry Commissioners* (being the report for the year ending 30th September, 1936); *Report of the National Forest Park Committee (Snowdonia) 1937*; *Report on the Demand for Timber in Ship-Building and in Docks and Harbour* (Utilisation Series No. 4); Leaflet No. 22 (*Pruning in young Plantations*), and Special Leaflet No. 1 (*Pit-Props*). In addition, Bulletin No. 14 (*Forestry Practice*); *Report on the Demand for Timber in Wood-Turning in Great Britain* (Utilisation Series No. 3); Leaflets Nos. 8 (*Douglas Fir Seed Fly*), 9 (*Forest Fires*) and 19 (*Elm Disease*) were revised and reprinted.

Exhibits at Agricultural Shows.—Forestry exhibits were sent by the Commissioners to the Shows of the Royal Agricultural Society at Wolverhampton and the Royal Welsh Agricultural Society at Monmouth.

International Union of Forest Research Organisations.—The tenth Congress of the International Union was held in Germany in August, 1937, when a representative of the Forestry Commission attended.

Consultative Committees.—The Commissioners regret to report the deaths of two members of the Scottish Committee, Professor A. W. Borthwick and Mr. Robert Galloway.

Subhead L—Forest Workers' Holdings. Expenditure, £70,176; Income, £18,652.

Total expenditure was £40,103 greater than in 1936, due to the purchase of land and erection of buildings in connection with holdings' schemes in or near the Special Areas. Details are given in Table L.

During the year further holdings were completed, raising the number from 1,268 to 1,299. The average cost of establishing holdings is £491, of which land accounts for £70, and cost of buildings, drainage, water supply, etc., £421.

Table L.—Forest Workers' Holdings.

Year ending 30th September.	EXPENDITURE (Table IIa, Column 8).										INCOME (Table IIa, Column II).			NET EXPEN- DITURE. (12) £
	Superior Super- vision and Overhead Charges. (1) £	Purchase and Rent of Land and Buildings. (2) £	Buildings.			Fencing, Drainage, etc. (6) £	Miscel- laneous. (7) £	Total. (8) £	Rents. (9) £	Other. (10) £	Total. (11) £			
			New. (3) £	Adapta- tions. (4) £	Repairs. (5) £									
First decade :														
1920-29	35,894	103,940	192,184	32,302	3,882	17,561	4,120	389,883	26,261	1,254	27,515	£	362,368	
Second decade :														
1930	11,196	34,410	43,126	10,932	2,536	5,902	473	108,575	12,119	87	12,206	£	96,369	
1931	11,054	17,437	54,095	15,435	3,528	6,713	758	109,020	13,568	15	13,583	£	95,437	
1932	9,157	3,974	26,635	4,352	6,096	4,511	1,032	56,357	16,781	30	16,811	£	39,546	
1933	7,632	(cr.) 1,101*	4,375	3,166	3,424	1,004	937	19,437	17,145	83	17,228	£	2,209	
1934	7,480	4,546	2,064	2,285	2,926	1,238	878	21,417	17,278	94	17,372	£	4,045	
1935	6,937	4,060	2,617	2,502	4,110	874	585	21,685	17,497	54	17,551	£	4,134	
1936	8,382	10,374	4,352	1,145	4,163	582	1,075	30,073	18,018	46	18,064	£	12,009	
1937	10,296	19,673	31,561	933	5,354	1,284	1,075	70,176	18,217	435	18,652	£	51,524	
Total	108,028	197,313	361,009	73,032	36,619	39,669	10,933	826,623	156,884	2,098	158,982	£	667,641	
Percentage	13.1	23.9	43.7	8.8	4.4	4.8	1.3	100	98.7	1.3	100			

* Credit entry due to transfer to forestry operations of land and buildings not required for holdings.

The information contained in the following statement indicates the way in which the holdings have been utilised and shows the estimated value of live stock, etc.

Number of forest workers resident on the holdings	1,234
Total number of residents on the holdings ...	4,906
Average annual rent of house, outbuildings and land	£14
Average area (including outrun)	11 acres.
Head of live stock:—	
Horses	450
Cows	1,081
Other cattle (including calves)	1,200
Sheep ...	5,327
Pigs ...	1,969
Poultry	58,208
Miscellaneous (including goats) ...	1,132
Estimated value of live stock ...	£51,857

Subhead Z—Income, £245,292.

Total income was £43,691 greater than in 1936. Rents and royalties increased by £1,726, sales of forest produce by £16,703 and other receipts by £27,808. Details are given in Table Z.

Table Z.—Income.

Year ending 30th September.	Forestry Operations.					Forest Workers' Holdings (Rents, etc.).	Miscel- laneous.	Grand Total.
	Sales of Land and Buildings.	Rents and Royalties.	Forest Produce.	Other.	Total.			
	£	£	£	£	£	£	£	£
First decade :								
1920-29	78,784	274,091	406,594	122,639	882,108	27,515	6,936	916,559
Second decade :								
1930	2,642	65,184	63,949	16,219	147,994	12,206	406	160,606
1931	15,568	71,930	56,768	20,802	165,068	13,583	386	179,037
1932	7,869	70,249	49,477	16,621	144,216	16,811	77	161,104
1933	4,463	75,127	47,321	11,030	137,941	17,228	170	155,339
1934	12,258	78,120	55,893	16,861	163,132	17,372	518	181,022
1935	6,394	81,622	63,112	18,074	169,202	17,551	270	187,023
1936	5,708	83,027	73,111	21,184	183,030	18,064	507	201,601
1937	2,407	84,753	89,814	48,992	225,966	18,652	674	245,292
Total	136,093	884,103	906,039	292,422	2,218,657	158,982	9,944	2,387,583
Percentage ...	5·7	37·0	37·9	12·3	92·9	6·7	0·4	100

Rents and royalties include £18,579 from the Forest of Dean mines; "other" income includes sales of live stock £7,910, miscellaneous estate, farm and forest receipts £7,790, and repayment of loan for mining purposes £31,500.

Employment in the Commission's Forests.

The number of forest workers employed in the Commission's forests is stated in the table below:—

Summer (Minimum).				Winter (Maximum).			
1920	...	...	210	1920-21...	...	...	935
1921	...	...	495	1921-22...	...	...	1,780
1922	...	...	525	1922-23...	...	...	1,775
1923	...	...	880	1923-24...	...	...	2,220
1924	...	...	1,620	1924-25...	...	...	2,650
1925	...	...	1,980	1925-26...	...	...	2,960
1926	...	...	2,335	1926-27...	...	...	3,185
1927	...	...	2,735	1927-28...	...	...	3,495
1928	...	...	2,740	1928-29...	...	...	3,565
1929	...	...	2,640	1929-30...	...	...	3,835
1930	...	...	3,130	1930-31...	...	...	3,850
1931	...	...	2,830	1931-32...	...	...	3,505
1932	...	...	2,720	1932-33...	...	...	3,985
1933	...	...	2,845	1933-34...	...	...	3,735
1934	...	...	3,015	1934-35...	...	...	4,020
1935	...	...	3,280	1935-36...	...	...	4,155
1936	...	...	3,720	1936-37...	...	...	4,565
1937	...	...	4,065	1937-38...	...	...	5,110

(Signed) R. L. ROBINSON (*Chairman*).
 F. D. ACLAND.
 G. L. COURTHOPE.
 D. R. GRENFELL.
 A. RODGER.
 L. ROPNER.
 W. R. SMITH.
 S. STRANG STEEL.
 JOHN SUTHERLAND.

A. G. HERBERT,
Secretary,
 9, Savile Row,
 London, W.1.

APPENDIX.

Imports of Timber, Wood Manufactures and Pulp of Wood.

Statistics relating to these imports are given in the following table, the figures in each case being for the calendar year.

The quantity of unmanufactured timber imported during 1937 was 12,693,000 loads, compared with 11,772,000 loads in 1936, an increase of 921,000 loads (8 per cent.). The value (£61,825,000) was, however, £18,307,000 or 42 per cent. greater than in the previous year, and this increase is reflected in practically all kinds of timber imported. Sawn hardwoods rose by 151,000 loads (19 per cent.) from 783,000 loads to 934,000 loads, with an increase in value of £1,978,000 (29 per cent.) from £6,733,000 to £8,611,000, but although the volume of sawn softwoods remained almost stationary at 6,810,000 loads the value increased by £8,384,000 (37 per cent.) from £22,537,000 to £30,921,000. There was a slight decrease in the quantity (1,177,000 loads) of planed and dressed timber imported but the value rose by £1,244,000 (24 per cent.) from £5,209,000 to £6,453,000. Pit-props showed an increase of 501,000 loads (24 per cent.) and amounted to 2,509,000 loads while the value at £7,531,000 was £3,972,000 (112 per cent.) more than in the previous year. Imports of sleepers also rose considerably, the increase in quantity and value being 188,000 loads (66 per cent.) and £1,317,000 (145 per cent.).

The value of wood manufactures was £8,390,000, an increase of £933,000 (13 per cent.) over 1936. Plywood rose by £846,000 (21 per cent.) to £4,970,000 but there was a decline of £88,000 (6 per cent.) in builders' woodwork.

Imports of pulp of wood were greater than in the previous year, both the quantity (3,280,000 tons) and value (£13,711,000) representing an increase of over 35 per cent.

Imports of Timber, Wood Manufactures and Pulp of Wood.

Description.	Quantities (thousands).				Value (thousands).			
	Average 1909-13.	Average 1914-18.	1936.	1937.	Average 1909-13.	Average 1914-18.	1936.	1937.
TIMBER.								
Hewn-hard—	Loads.*	Loads.*	Loads.*	Loads.*	£	£	£	£
Mahogany ...	—	—	31	37	—	—	275	340
Oak ...	—	—	5	4	—	—	37	39
Walnut ...	—	—	1	—	—	—	16	—
Teak ...	—	—	2	44	—	—	27	413
Other sorts ...	—	—	41	—	—	—	357	—
Hewn-soft (fir, pine, spruce, etc.).	542	129	247	297	1,353	583	585	836
Sawn-hard—								
Mahogany ...	—	—	22	22	—	—	329	327
Oak ...	—	—	258	301	—	—	2,298	3,043
Walnut ...	—	—	8	7	—	—	146	138
Teak ...	—	—	55	58	—	—	1,048	1,248
Other sorts ...	—	—	440	546	—	—	2,912	3,855
Sawn-soft, other than planed or dressed.	—	—	6,662	6,810	—	—	22,537	30,921
Planed or dressed—								
Hard ...	—	—	81	94	—	—	575	761
Soft ...	—	—	1,163	1,083	—	—	4,634	5,692
Other descriptions—								
Pitprops ...	2,944	1,673	2,008	2,509	3,510	4,425	3,559	7,531
Staves ...	161	71	63	66	795	648	492	744
Sleepers ...	—	130	285	473	—	602	908	2,225
Veneers and panel wood.*	—	—	13	15	—	—	851	974
Boxboards ...	—	—	295	327	—	—	1,372	1,951
Telegraph poles	—	—	79	—	—	—	290	—
Not elsewhere specified.	6,557†	3,550†	13	—	21,903†	24,362†	270	787
Total unmanu- factured timber.	10,204	5,553	11,772	12,693	27,561	30,620	43,518	61,825
WOOD MANUFACTURES.								
Furniture and cabinet ware.	—	—	—	—	416	115	464	490
Builders' wood- work (window frames, doors, etc.).	—	—	—	—	180	62	1,427	1,339
Plywood ...	—	—	—	—	—	—	4,124	4,970
Domestic wood- work (bread platters, trays, etc.).	—	—	—	—	—	—	190	214
Tool handles ...	—	—	—	—	—	—	128	—
Not elsewhere specified.	—	—	—	—	2,099	1,821	1,124	1,377
Total manu- factured timber.	—	—	—	—	2,695	1,998	7,457	8,390
PULP OF WOOD.								
Pulp of wood ...	Tons. 859	Tons. 682	Tons. 2,383	Tons. 3,280	4,058	7,915	10,100	13,711

* Load=50 cu. ft.

† These figures apply mainly to sawn softwoods. It is not possible to differentiate according to the various categories enumerated above owing to a change in the Board of Trade classification from 1920 onwards.