

FORESTRY COMMISSION

TWELFTH ANNUAL REPORT OF THE
Forestry Commissioners
FOR THE
YEAR ENDING SEPTEMBER 30th, 1931

(Presented pursuant to Act 9 & 10 Geo. V., c. 58, s. 8 (4).)

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of the
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for the
Year ending September 30th, 1931.

FOREST POLICY.

During the year ended 30th September, 1931, decisions were taken which will modify the scale and character of the Commission's work. It was the second year of the Commission's second decade and, as explained in the 10th Annual Report, the main objectives of State forestry during that period were to plant 353,000 acres and to establish 3,000 forest workers' holdings. The planting programme was to be on an expanding scale beginning with 25,000 acres in 1929 and rising to 44,000 acres in 1938, while the holdings programme was to be at the rate of 350 holdings yearly for the first five years, and 250 holdings yearly for the second five years. In order to carry out these programmes it would be necessary to acquire each year 60,000 acres of plantable land and 2,500 acres of agricultural land. It was estimated that the gross cost of the main scheme and ancillary operations such as assistance to private forestry, education, research, etc., would amount to £11,275,000 for the decade; working receipts were estimated at £2,160,000 and the net contribution from the Exchequer was consequently expected to be £9,115,000.

As there was some delay in receiving final sanction for the proposals it was not possible in the year 1929-30 to carry out the full programme for that year, but during the first half of the second year (that now under review) operations were speeded up in accordance with the approved programme. During the second half there came the crisis in national finance and, although it was not until the end of the year that its influence on State forestry became fully operative, an account of the effects may conveniently be given in this Report.

In May, 1931, the Commissioners gave evidence before the Committee on National Expenditure and, at the request of the Committee, subsequently submitted a number of schemes graded as to expenditure and ranging from the then approved programme for the current decade to a "care and maintenance" programme for the areas already acquired.

The Committee on National Expenditure, after reviewing and commenting on the evidence of the Commissioners, reported on the work of the Commission in the following terms:—

"After weighing up all these considerations we recommend that no fresh acquisitions of land be made for the present and

that no more forest workers' holdings be created, but that afforestation proceed at the rate of 20,000 acres per annum for five years on the land already acquired. This course is estimated to save £478,000 next year and £560,000 per annum in subsequent years as compared with the present policy."

The Minority Report of the Committee on the other hand recommended—

"That afforestation and the necessary acquisition of plantable land should continue as at present, but that the provision of holdings should be restricted to not more than twenty-five per annum. This it is estimated will effect a saving of £182,000 next year, or, over the period 1932-36, a reduction of net expenditure by 18 per cent. as compared with the present programme."

In the subsequent discussions with the Government the Commissioners took up the general attitude that, while they were in fact desirous of co-operating in any measures of economy which might be necessary in the national emergency, they could not concur in the suggestion that the provision being made for the supply of timber in Great Britain was excessive or even adequate. They submitted that whatever economies might be necessary it was desirable to maintain the main elements of Forest Policy which were, briefly, the continuance of planting and of the acquisition of plantable land, and the provision of sufficient houses and holdings to work the forests economically. They did not, however, regard the large-scale formation of forest workers' holdings as an essential part of Forest Policy, although it had proved a useful method of land settlement. They requested that they should be allowed to complete acquisitions to which they were either morally or contractually committed.

In November, 1931, the Chancellor of the Exchequer reviewed the whole position with the Chairman of the Commission and undertook that the Government would provide annually for the next five years the sum of £450,000 which, with working receipts, would permit the Commissioners to spend rather less than £600,000 per annum on forestry operations. It was agreed also that within the limited expenditure set by the Government the Commissioners should be free to spend their money as they thought best in the interests of forest development. At the same time the Commissioners undertook to reduce their expenditure immediately and to save the sum of approximately £150,000 on the estimates for the year 1931-32.

The Chancellor also agreed to the completion of the acquisition of certain specific areas to which the Commissioners felt they were committed.

The Commissioners desire to express satisfaction that they have been enabled by the action of the Government to maintain the essential elements of Forest Policy even though the scale is smaller

than they would desire on purely technical grounds. This procedure will at least enable the work to be resumed on an adequate scale when times become more propitious.

Programme for the next five Years.—With the funds now to be placed at their disposal the Commissioners anticipate that they will be able to carry out the following work :—

(1) Maintain a planting programme of upwards of 20,000 acres per annum.

(2) Acquire sufficient plantable land to keep intact the reserve of land which is required for maintaining the planting programme.

(3) Provide sufficient forest workers' holdings (numbering perhaps 15 to 20 per annum) for working the forests efficiently, and also repair and maintain such holdings as are necessary for the utilisation of the non-plantable land.

(4) Provide grants for planting on the same scale as during the last three years.

(5) Maintain intact their research activities and make suitable provision for forestry education and other ancillary activities.

Forestry on private Estates.—Arising out of the modification of Forest Policy owing to financial reasons, the Commissioners have taken steps to secure independent advice as to what is happening to the woodlands of the country and whether the necessity for direct State action is as great as they have always maintained it to be. They accordingly submitted a reference to the Consultative Committees of England, Scotland and Wales respectively, enquiring what further effective action the Commissioners might take to promote production of timber by private owners. After the three Committees had considered the subject separately, their Chairmen presented a joint report, the substance of which is given below.

The report states that private forestry is not receiving the same attention as in pre-war days in spite of the spread of technical knowledge and State encouragement. Since 1909 a series of steps has been taken by the State to promote private forestry. These include favourable changes in respect of death duties, preferential assessment in respect of taxation, provision of grants for planting and finally the derating, in England and Wales, of woodlands. Scottish woodlands were already lightly treated in this respect. These concessions and encouragements are substantial, though there is some difference of opinion as to whether as a whole they compensate for the increase in post-war costs. The decline in private forestry is ascribed to the general depression, to taxation and to the break-up of estates. Want of confidence in the future prevents proprietors from sinking capital in plantations, an investment which makes early realisation impossible. Increased pressure of taxation has made it more difficult to devote money to new planting and even to replanting land recently cleared of remunerative crops of

timber, while, owing to the higher level of wages, estate staffs have in general been reduced to a minimum required for ordinary maintenance and the performance of the owners' obligations to their successors and tenants.

The subdivision of many large estates where hitherto a planting policy had been adopted has often placed land in the hands of small proprietors who are not generally enthusiastic regarding afforestation, and partly in the hands of speculators and others who have been interested solely in the exploitation of the timber.

The joint report, in the face of the urgent need for national economy, was unable to suggest any practical solution of the general forestry problem. It was feared that, in view of the curtailment of the Commissioners' funds, no useful purpose would be served by recapitulating previous proposals involving additional expenditure, such as increased grants for planting and scrub-clearing, advisory work (including education) necessitating additional staff and organised marketing to facilitate the sale of thinnings. Such measures of encouragement as the exemption of well-managed woodlands from income tax, the provision of loans on easy terms for planting, the modification in the terms for scrub-clearing grants and the publication of a booklet, now in course of preparation, on planting, while likely to prove helpful, might not be fully effective.

In the long run, therefore, the State might have to relieve the private owner of his responsibility in maintaining the woodlands of Great Britain and to take such work in hand before the woodland conditions have been dissipated, thus avoiding irreparable devastation. It would be in the national interest for the Commissioners to take over woodland areas on fair terms in cases where, after every possible encouragement and State co-operation had been offered, the owner was unable to replant.

PERSONNEL OF THE COMMISSION.

On 25th March, 1932, Sir John Stirling-Maxwell, Bt., K.T. ceased to be Chairman and also resigned his membership of the Commission. Though this event did not fall within the year under review, record should here be made of the debt which all interested in forestry owe him. He had been distinguished for many years before the war for his advocacy of a national policy of systematic afforestation, he was an active member of the Acland Committee whose report led to the passing of the Forestry Act of 1919, and the setting up of the Commission of which he was an original member. As Chairman he displayed the gifts of application, insight and sympathy which underlie good administration, and his intimate knowledge of forestry greatly helped in concentrating the work of the Commission and its staff upon essentials. He has been largely responsible for maintaining and developing close connections and friendly relationships with other bodies, and

the Commissioners are fortunate in being able to rely upon the continuance of this work in spite of his retirement.

Mr. J. H. Alpass resigned from the Commission owing to pressure of business on 16th March 1932, and Major S. Strang Steel and Sir Alexander Rodger were appointed on 26th March and 25th May respectively.

FINANCE.

The balance in the Forestry Fund at the commencement of the forest year was £627,366. Receipts from Parliamentary votes and operations amounted to £661,556, payments to £842,490 and the balance at the end of the year was consequently £446,432 (see Table I, p. 12). Balances remaining in the Fund at 30th September are large because they include provision for the succeeding six months of the financial year.

In making a forecast of expenditure over the second decade the Commissioners estimated the payments and receipts year by year: on this basis payments during the year under review were £176,510 less and receipts from operations £13,556 greater than was anticipated at the time the 10-year estimate was compiled. Details are given 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 ...	—	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	156,000	171,556	+13,556	861,000	670,934	-190,066	
							Total	5,566,000	4,981,368	-584,632

In order to avoid confusion it should be borne in mind that the first decade covered 10½ financial years.

LAND ACQUISITION.

Acquisitions during the year amounted to 87,487 acres, of which 49,091 acres were classified as plantable. Disposals amounted to 1,045 acres (233 acres plantable), thus reducing the net acquisition of plantable land to 48,858 acres. Net acquisitions to the end of the forest year 1931 are compared in the table below with the Commissioners' programme. The total area of plantable land acquired to the 30th September, 1931, amounted to 393,448 acres, or 108,552 acres less than the proposed area.

Acquisition of Plantable Land.

Year ending 30th September.	By Lease or Feu.			By Purchase.			Total.		
	Proposed.	Actual.	Excess(+) Deficit(-)	Proposed.	Actual.	Excess(+) Deficit(-)	Proposed.	Actual.	Excess(+) Deficit(-)
First decade, 1920-29 ...	Acres. 160,000	Acres. 156,759	Acres. - 3,241	Acres. 222,000	Acres. 153,471	Acres. - 68,529	Acres. 382,000	Acres. 310,230	Acres. - 71,770
Second decade: 1930... ..	10,000	8,409	- 1,591	50,000	25,951	- 24,049	60,000	34,360	- 25,640
1931... ..	10,000	4,851	- 5,149	50,000	44,007	- 5,993	60,000	48,858	- 11,142
Total ...	180,000	170,019	- 9,981	322,000	223,429	- 98,571	502,000	393,448	- 108,552

Note.—In addition, 4,866 acres were acquired in Ireland to 31st March, 1922.

PLANTING PROGRAMME.

State Forests.

The area planted during the year was 25,630 acres, or 630 acres more than the Commissioners' programme, as shown in the following table :—

Area Planted.

Year ending 30th September.	Proposed to be Planted.	Actually Planted.			Excess (+) Deficit (-)
		New Planting.	Replace- ments.	Total.	
First decade, 1920-29 :	Acres.	Acres.	Acres.	Acres.	Acres.
Conifers	150,000	125,799	4,969	130,768	- 19,232
Hardwoods	Un- specified	5,774	1,737	7,511	
				138,279	
Second decade :					
1930	25,000	21,499	3,577*	25,076	+ 76
1931	25,000	24,248	1,382	25,630	+ 630
Total	—	177,320	11,665	188,985	—

* Revised owing to re-survey.

Note.—In addition, 1,697 acres were planted in Ireland to 31st March, 1922.

The total area planted to 30th September, 1931, was 188,985 acres, of which 177,456 acres consisted of conifers and 11,529 acres of hardwoods. New planting accounted for 177,320 acres and replacements 11,665 acres. Details are given below.

	Conifers.	Hardwoods.	Total.
	Acres.	Acres.	Acres.
New planting ...	168,515	8,805	177,320
Replacements ...	8,941	2,724	11,665
Total ...	177,456	11,529	188,985

Assistance to Local Authorities and Private Owners.

Under the Commissioners' programme financial provision has been made for State assistance to local authorities and private owners for the planting of approximately 6,000 acres per annum. The area planted during the year was 5,932 acres, details of which are given on page 33.

The total area planted to date is as follows :—

First decade :	<i>Acres.</i>
1920-29 (<i>revised figure</i>)	72,752
Second decade :	
1930	6,702
1931	5,932
Total	<u>85,386</u>

EDUCATION AND RESEARCH.

The Irvine Committee, referred to in the 11th Annual Report as having been appointed to enquire into the training of candidates for Government Forest Services, issued their Report* in July, 1931. They summarise their conclusions and recommendations as follows :—

“(1) When the requirements of the Services are taken into consideration the courses of instruction in forestry now given in the Universities are not satisfactory, particularly in respect of field work.

(2) A forest officer cannot be adequately trained in a course restricted to three years.

(3) The cost of extending the forestry courses to four years in all the Universities concerned and of bringing each course up to the required standard would be prohibitive.

(4) The Services offer the main opportunities for the employment of graduates in forestry but each year only 20 to 25 probationers are required. This demand is unlikely to be exceeded in the near future.

(5) For the requirements of the Services it is unnecessary to have as many as five Schools of Forestry, and the provision of additional State aid in support of these Schools cannot be justified under existing conditions.

(6) The standard attained by the candidates who present themselves for appointment to the Services affords evidence that recruitment is on too narrow a basis.

(7) We recommend that in future the course of training should extend over four years, of which the first three only

* *The Training of Candidates and Probationers for Appointment as Forest Officers in the Government Service.* H.M. Stationery Office (Colonial No. 61). July, 1931.

should be taken at one of the University Schools of Forestry, the final year being spent at the Imperial Forestry Institute.

(8) The University degree courses should be remodelled so as to concentrate the training on the fundamental aspects of forestry, as exemplified by European practice, omitting the more highly specialized branches of the subject.

(9) The Imperial Forestry Institute should be made responsible for instruction in the specialized subjects named in our Report, and should become a permanent and essential feature of the pre-Service training of forest officers.

(10) Provision should be made to facilitate the recruitment of candidates who have read for Honours in Arts or Science. This can best be secured by the institution of a scholarship scheme, the conditions of which should be kept as elastic as possible.

(11) We recommend that any University which desires to present candidates for the Forest Services should be required to maintain its instruction at a satisfactory level of efficiency, and we suggest the means by which this can be secured."

FOREST WORKERS' HOLDINGS.

The number of holdings completed during the year was 264 against 350 proposed for each of the first five years of the second decade.

TRANSFERRED CROWN PROPERTIES.

The Inland Revenue Department have now completed their valuation of the Crown properties acquired by the Forestry Commissioners under the Forestry (Transfer of Woods) Orders in Council dated 21st March, 1924, and 1st June, 1926. The value of land, buildings and standing timber transferred from the Commissioners of Crown Lands is assessed at £1,679,000, and standing timber at Bedgebury transferred from the Board of Trade at £40,225, to which must be added £18,850 in respect of sundry debtors and creditors and estimated value of stores at the time of transfer, making a total of £1,738,075. The amounts comprised in the valuation have been omitted from the financial tables in this Report, which include, however, expenditure and income in respect of the management of the transferred properties from 1st April, 1924.

It may be noted that of the total valuation, £1,227,495 is in respect of the New Forest and the Forest of Dean. These two areas are subject to many statutory limitations in management, to which have been added certain undertakings to pay unusual regard to amenities, and they cannot therefore be regarded as propositions which the Commissioner's are completely free to work on a commercial basis.

OPERATIONS—FOREST YEAR 1930-1931.

The Forestry Fund.

The position of the Forestry Fund at 30th September, 1931, and at the same date in previous years is shown in Table I.

Table I.—Forestry Fund Account.

Year ending 30th September.	Balance from pre- ceding Year.	Receipts.			Payments. (Table II, Heads A to L).	Balance in Forestry Fund, 30th Sept- ember.
		Parlia- mentary Votes.	From Forestry Opera- tions, etc. (Table II, Head Z).	Total.		
	(1)	(2)	(3)	(4)	(5)	(6)
First decade: Five years, 1920-24	£ —	£ 1,734,000	£ 192,600	£ 1,926,600	£ 1,428,420	£ 498,180
1925	498,180	300,000	121,933	421,933	517,452	402,661
1926	402,661	335,000	122,341	457,341	608,066	251,936
1927	251,936	645,400	127,764	773,164	618,997	406,103
1928	406,103	485,600	141,492	627,092	648,936	384,259
1929	384,259	500,000	145,354	645,354	680,147	349,466
Total, 1925-29	—	2,266,000	658,884	2,924,884	3,073,598	—
Total, First decade	—	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
Grand Total	—	5,427,800	1,171,377	6,599,177	6,152,745	—

An analysis of payments and receipts by Parliamentary Heads of Accounts is given in Table II. Compared with the previous year total payments rose from £808,237 to £842,490, an increase of £34,253, mainly under the head of forestry operations. Receipts rose by £23,219 and net payments were therefore only £11,034 greater than in 1930.

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

Year ending 30th September.	PAYMENTS.											RECEIPTS. Z.	NET PAYMENTS. (14)	
	A. Salaries, Wages and Allowances. (1)	B. Head-quarters Charges. (2)	C. Assistant Commissioners' Charges. (3)	D. Divisional Officers' Charges. (4)	E. Forestry Operations. (5)	F. Advances for Afforestation Purposes. (6)	G. Education. (7)	H. Research and Experiment. (8)	J. Agency and Advisory Services. (9)	K. Special Services. (10)	L. Forest Workers' Holdings. (11)			Total. (12)
	£	£	£	£	£	£	£	£	£	£	£	£	£	£
First decade: Five years, 1920-24...	224,275	10,271	14,898	32,059	857,722	127,439	37,702	12,682	91,776	13,900	5,036	1,428,420	192,600	1,235,820
1925 ...	49,191	2,315	2,770	7,643	369,231	31,166	7,460	2,001	—	2,850	42,175	517,452	121,933	395,519
1926 ...	51,769	2,097	2,864	8,685	451,124	12,012	8,192	3,981	—	3,403	63,939	608,066	122,341	485,725
1927 ...	53,836	2,934	3,108	8,455	450,854	14,024	7,525	4,424	—	483	73,354	618,997	127,764	491,233
1928 ...	56,190	2,256	3,500	8,107	488,639	10,776	7,594	5,872	—	1,276	64,726	648,936	141,492	507,444
1929 ...	58,596	2,803	3,440	8,885	501,217	12,407	7,531	7,367	—	1,370	76,225	680,147	145,354	534,793
Total, 1925-29	269,882	12,405	15,688	41,775	2,261,115	80,385	38,302	24,245	—	9,382	320,419	3,073,598	659,884	2,414,714
Total, First decade	494,157	22,676	30,586	74,434	3,118,837	207,884	76,004	36,927	91,776	23,842	325,455	4,502,018	851,484	3,650,534
Second decade: 1930 ...	63,202	2,571	7,668	9,418	598,119	14,102	9,365	6,901	—	493	96,418	808,237	146,337	659,900
1931 ...	65,347	5,267	4,704	9,787	629,461	14,067	9,028	7,577	—	337	96,315	842,490	171,556	670,934
Grand Total	622,706	30,514	42,948	93,639	4,346,417	235,993	94,987	51,405	91,776	24,172	518,188	6,152,745	1,171,377	4,981,368

Table II is limited to sums actually expended or received, recorded by the Parliamentary 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 of land and buildings transferred from the forests to forest workers' holdings. In addition, payments and receipts in respect of forestry operations conducted by the Commissioners in Ireland during the period 1919 to 1923, which are necessarily included in Tables I and II, are omitted from the succeeding tables. (Expenditure in Ireland amounted to £90,514 and income to £26,041.)

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

Table IIa.—Expenditure and Income.

Year ending 30th September.	EXPENDITURE (including Allocation of Column 1).										INCOME.				NET EXPENDITURE. (14)
	A to D. Superior Overhead Charges.	E.	F.	G.	H.	J.	K.	L.	TOTAL.	Z1.	Z5.	Mis-cellaneous.	TOTAL.		
	£	£	£	£	£	£	£	£	£	£	£	£	£		
First decade: Five years, 1920-24...	245,830	994,583	146,698	52,510	34,482	90,763	36,142	5,906	1,361,034	192,641	8	4,601	197,250	1,163,784	
1925	60,205	405,972	34,387	9,915	6,404	1,954	8,178	56,522	523,832	134,244	1,257	850	136,351	386,981	
1926	65,091	493,464	14,960	10,600	7,437	2,007	4,409	75,837	608,714	122,184	3,374	727	126,285	482,429	
1927	67,776	503,918	16,822	9,470	8,337	1,538	3,151	82,524	625,760	135,386	6,074	379	141,839	483,921	
1928	70,606	586,854	13,491	9,426	10,769	1,043	5,758	95,880	673,821	153,721	8,216	185	162,122	511,699	
1929	72,570	577,836	15,336	9,392	12,221	1,328	3,661	73,214	692,988	143,982	8,580	194	152,712	540,276	
Total, 1925-29	336,246	2,518,044	94,996	48,803	45,168	8,470	25,157	383,977	3,124,615	689,467	27,507	2,335	719,309	2,405,306	
Total, First decade	682,178	3,512,577	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	85,803	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	
Grand Total	751,395	4,889,642	275,211	122,932	104,686	101,577	65,287	607,478	6,166,713	1,195,170	53,304	7,728	1,256,202	4,910,511	
Percentage		79.3	4.5	2	1.7	1.6	1.1	9.8	100	95.1	4.3	0.6	100		

Note.—The following amounts comprising the valuation of transferred Crown properties have been omitted from the above and subsequent tables:—Heads A to D £645; E £1,735,985; G £1,445.

**Subheads A to D—General Organisation. Expenditure,
£85,803.**

Compared with 1930, expenditure increased by £2,389, mainly accounted for by the transfer of Headquarters' Offices from 22, Grosvenor Gardens, to 9, Savile Row. No change occurred in the numbers of Divisional and District Officers during the year.

**Subhead E—Forestry Operations. Expenditure, £701,434;
Income, £165,068.**

Details of expenditure and income are given in Table E. Gross expenditure was £25,803 greater than in 1930, mainly due to increases of £6,804 on acquisition of land, £5,202 on cultural operations and £8,507 on miscellaneous items. Income from forestry operations rose by £17,074.

Overhead Charges, £31,974; Superior Supervision, £30,929 and Local Supervision, £39,413.—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, the salaries, housing allowances and miscellaneous expenses of foresters and foremen. During the year the number of foresters and foremen was increased by seven from 241 to 248.

Table V.—Forestry Operations.

Year ending 30th September.	EXPENDITURE (Table Ia, Column 2).							INCOME (Table Ia, Column 10).					NET EXPENDITURE. (15) £		
	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, Buildings, etc. (10) £	Rents. (11) £	Forest Produce. (12) £		Other. (13) £	Total. (14) £
First decade: Five years, 1920-24	84,224	76,249	41,049	220,573	431,378	19,459	26,604	94,997	994,533	12,579	42,902	96,753	40,407	192,641	301,892
1925 ...	18,702	23,943	18,433	101,471	164,125	15,084	18,485	45,129	405,972	23,626	39,367	54,862	16,389	134,244	271,728
1926 ...	20,841	24,522	24,224	118,607	200,889	16,570	17,954	69,851	493,464	16,395	42,086	44,005	19,698	122,184	371,280
1927 ...	22,970	24,041	27,430	99,867	230,543	23,543	20,813	54,711	503,918	3,417	45,483	72,111	14,375	135,356	368,632
1928 ...	22,595	24,519	29,407	97,210	247,231	22,649	14,817	78,426	536,854	15,551	49,116	72,552	16,502	153,721	383,133
1929 ...	23,065	27,848	33,587	149,781	236,635	20,942	16,815	68,563	577,836	7,216	55,137	66,311	15,268	143,932	433,904
Total, 1925-29	108,773	124,873	133,081	566,936	1,079,423	99,394	88,884	316,630	2,518,044	66,205	231,189	309,841	82,232	639,467	1,823,577
Total, First decade	192,997	201,122	174,130	787,509	1,510,801	118,853	115,488	411,677	3,512,577	78,784	274,091	406,594	122,639	882,108	2,030,469
Second decade: 1930 ...	29,413	29,957	36,674	186,640	280,356	22,871	26,566	63,154	675,031	2,042	65,184	63,949	16,219	147,994	527,037
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	536,306
Grand Total	254,364	262,008	250,217	1,167,593	2,076,715	162,696	169,537	546,492	4,889,642	96,994	411,205	527,311	159,660	1,195,170	3,094,472
Percentage	5.2	5.3	5.1	23.9	42.5	3.3	3.5	11.2	100	8.1	34.4	44.1	13.4	100	100

Acquisition of Land, Buildings and Standing Timber.—Expenditure amounted to £193,444, of which £169,724 was in respect of purchases of land, including the standing timber and buildings thereon, and £23,720 was in respect of land held on long lease or feu.

The average rent or feu duty for land acquired for forestry operations during the year by lease or feu was approximately 2s. 5d. per acre and the average price for such land purchased, approximately £2 8s. 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. respectively. Land and buildings for forest workers' holdings are excluded.

The total area of land acquired during the forest year 1930-31 amounted to 87,487 acres, of which 49,091 acres were classified as plantable. On the other hand disposals amounted to 1,045 acres (233 acres plantable).

The area in Great Britain in respect of which the legal formalities of acquisition by the Department had been completed by 30th September, 1931, was 603,224 acres, the corresponding figures in the two previous annual reports being 516,866 and 472,384 acres. In addition to these completed acquisitions, entry has been secured to a number of other properties. Details are given in the table below, which also shows the area of "plantable" and "other land," i.e., land which is either too poor to plant or is required for other purposes.

Land acquired from 29th November, 1919, to 30th September, 1931.

	By Lease and Feu.			By Purchase.			Total by Lease, Feu and Purchase.
	Plantable (including planted).	Other Land.	Total.	Plantable (including planted).	Other Land.	Total.	
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
<i>England and Wales—</i>							
Finally completed ...	99,833	13,929	113,762	126,790	25,127	151,917	265,679
Entry secured ...	—	—	—	—	—	—	—
Total ...	99,833	13,929	113,762	126,790	25,127	151,917	265,679
<i>Scotland—</i>							
Finally completed ...	68,386	61,810	130,196	90,342	117,007	207,349	337,545
Entry secured ...	1,800	6,040	7,840	6,297	9,714	16,011	23,851
Total ...	70,186	67,850	138,036	96,639	126,721	223,360	361,396
Great Britain ...	170,019	81,779	251,798	223,429	151,848	375,277	627,075

Note.—In addition to the above-mentioned areas, 120,696 acres of Crown woodlands have been transferred to the Forestry Commissioners. Of this area, 62,554 acres carry timber or are under forestal treatment.

The net total area acquired in Great Britain to 30th September, 1931, was 627,075 acres, of which 393,448 acres were classified at the time of acquisition as plantable. Of the plantable area 226,623 acres (58 per cent.) are situated in England and Wales and 166,825 acres (42 per cent.) in Scotland.

Cultural Operations.—Expenditure amounted to £285,558, details of which are given in Table E.5. Plantations accounted for £210,507 and nurseries £75,051.

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

Year ending 30th September.	PLANTATIONS.							NURSERIES.				GRAND TOTAL.	
	Prepara- tion of Ground.	Drain- age.	Fencing.	Plant- ing.	Weed- ing and Clean- ing.	Beating- up.	Forest Pro- tection.	Total.	New Works.	Upkeep.			Total.
										Seed.	Labour and Other.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
£	£	£	£	£	£	£	£	£	£	£	£	£	
First decade :													
Five years, 1920-24 ...	56,251	15,415	53,085	81,531	27,147	12,464	15,113	261,006	10,718	23,081	136,573	170,372	431,378
1925 ...	16,920	10,515	20,311	22,615	22,620	9,526	9,152	111,659	2,955	3,173	46,338	52,466	164,125
1926 ...	18,052	9,125	26,684	28,621	28,262	13,071	13,527	137,342	4,309	6,170	53,068	63,547	200,889
1927 ...	19,522	12,496	36,354	35,928	34,528	9,310	17,744	165,882	3,598	7,367	53,696	64,661	230,543
1928 ...	20,854	15,033	35,403	38,442	37,935	13,867	16,934	178,478	2,535	4,253	61,965	68,753	247,231
1929 ...	20,341	18,563	32,686	36,076	33,007	11,134	23,354	175,161	1,189	4,062	56,223	61,474	236,635
Total, 1925-29 ...	95,699	65,732	151,438	161,682	156,352	56,908	80,711	768,322	14,586	25,025	271,290	310,901	1,079,423
Total, First decade ...	151,950	81,147	204,523	243,213	183,499	69,372	95,824	1,029,528	25,304	48,106	407,863	481,273	1,510,801
Second decade :													
1930 ...	19,541	25,042	34,554	43,364	36,070	22,047	26,169	206,787	3,264	6,767	63,538	73,569	280,356
1931 ...	17,522	29,463	38,449	43,096	35,803	19,040	27,134	210,507	3,428	5,685	65,938	75,051	285,558
Grand Total ...	189,013	135,652	277,526	329,673	255,372	110,459	149,127	1,446,822	31,996	60,558	537,339	629,893	2,076,715
Percentage ...	9.1	6.5	13.4	15.9	12.3	5.3	7.2	69.7	1.5	2.9	25.9	30.3	100

Plantations.—The total area planted during the year was 25,630 acres, of which 23,683 acres were placed under conifers and 1,947 acres under broadleaved species. Included in the above are 910 acres reafforested in the former Crown woodlands and 472 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 17,683 acres. In forming plantations and beating-up previous years' plantations 62,573,000 trees were used, of which 37 per cent. were Scots and Corsican pines, 32 per cent. Norway and Sitka spruces, 13 per cent. European and Japanese larches and 3 per cent. Douglas fir.

An area of 322 acres of existing woods was underplanted, necessitating the use of 385,000 plants.

ENGLAND AND WALES.

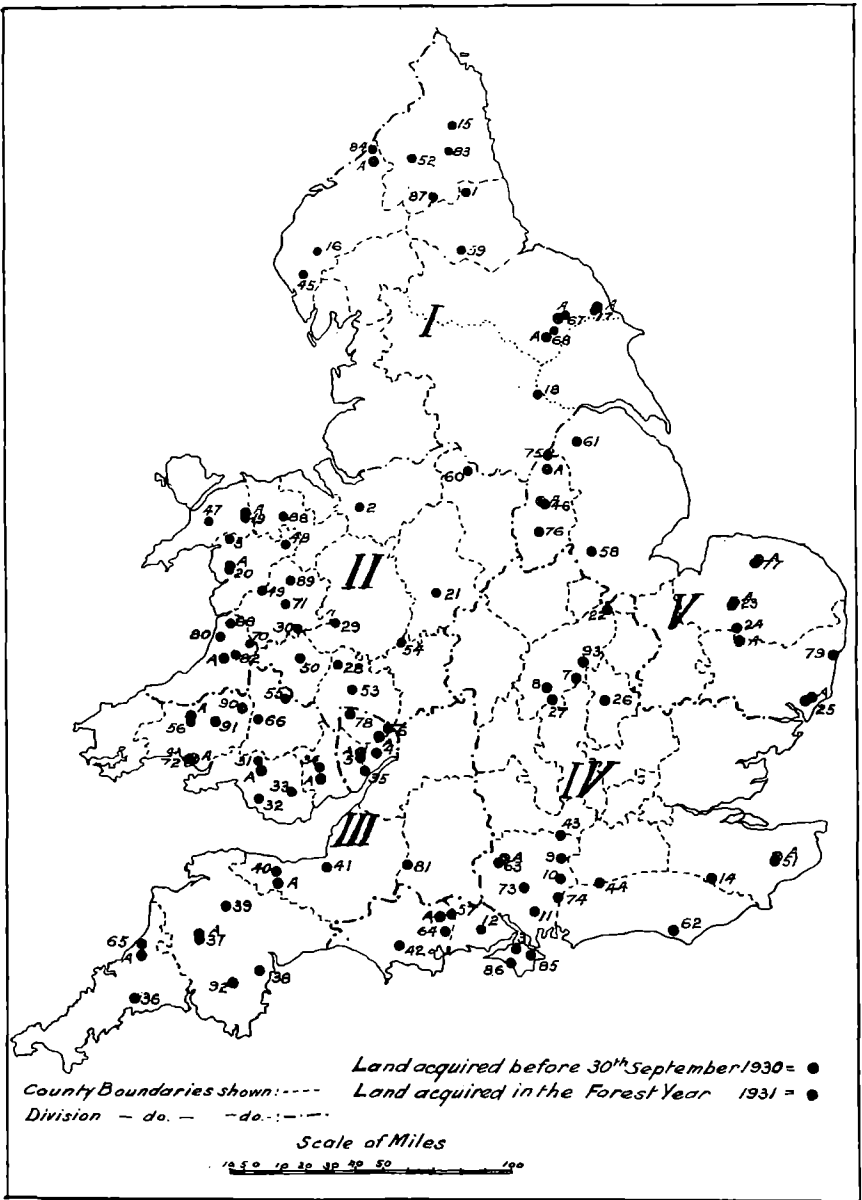
FORESTRY COMMISSION AREAS.

1. Chopwell.*	32. Margam.	64. Ferndown.
2. Delamere.*	33. Llantrisant.	65. Wilsey Down.
3. Hafod Fawr.*	34. Llanover.	65A. Do. (addition to).
4. Dean Forest.*	34A. Do. (addition to).	66. Glasfynydd.
5. Tintern.*	35. Chepstow.	67. Rosedale.
5A. Do. (addition to).	36. Bodmin.	67A. Do. (addition to).
6. Dymock.*	37. Halwill.	68. Ampleforth.
6A. Do. (addition to).	37A. Do. (addition to).	68A. Do. (addition to).
7. Salcey.*	38. Haldon.	69. Cwmeinion.
8. Hazelborough.*	39. Eggesford.	70. Tarenig.
9. Alice Holt.*	40. Exmoor.	71. Mathrafal.
10. Woolmer.	40A. Do. (addition to).	72. Pembrey.
11. Bere.*	41. Quantocks.	72A. Do. (addition to).
12. New Forest.*	42. Wareham.	73. Westbury.
13. Parkhurst.*	43. Bramshill.	74. Buriton.
14. Bedgebury.*	44. Chiddingfold.	75. Bawtry.
15. Rothbury.	45. Ennerdale.	75A. Do. (addition to).
16. Thornthwaite.	46. Clipstone.	76. Sherwood.
17. Allerston.	46A. Do. (addition to).	77. Swanton.
17A. Do. (addition to).	47. Beddgelert.	77A. Do. (addition to).
18. Selby.	48. Cynwyd.	78. Chase.
19. Gwydyr.	49. Dovey.†	79. Dunwich.
19A. Do. (addition to).	50. Radnor.	80. Brynmawr.
20. Vaughan.	51. Lyminge.	81. Bruton.
20A. Do. (addition to).	51A. Do. (addition to).	82. Myherin.
21. Cannock Chase.	52. North Tyne Valley.	82A. Do. (addition to).
22. Rockingham.	53. Haugh.	83. Harwood.
23. Swaffham.	54. Wyre.	84. Kershope.
23A. Do. (addition to).	55. Brecon.	84A. Do. (addition to).
24. Thetford.	56. Brechfa.‡	85. Combley.
24A. Do. (addition to).	56A. Do. (addition to).	86. Brighstone.
25. Rendlesham.	57. Ringwood.	87. Slaley.
25A. Do. (addition to).	57A. Do. (addition to).	88. Clocaenog.
26. Ampthill.	58. Bourne.	89. Dyfnant.
27. Brackley.	59. Hamsterley.	90. Crychan.
28. Mortimer.	60. Hope.	91. Caio.
29. Walcot.	61. Laughton.	92. Dartmoor.
30. Kerry.	62. Friston.	93. Yardley Chase.
31. Rheola.	63. Micheldever.	
31A. Do. (addition to).	63A. Do. (addition to).	

* Former Crown Woods.

† Now includes the area previously known as Corris Valley.

‡ Formerly known as Glangwili.



SCOTLAND.

FORESTRY COMMISSION AREAS.

- | | | |
|-------------------------|-------------------------|-------------------------|
| 1. Inverliever.* | 29. Craig-nan-Eun. | 55. Dornoch. |
| 2. Borgie. | 30. Altonside. | 56. Inverinate. |
| 3. Slattadale. | 31. Ardgartan. | 57. Lennox Castle. |
| 4. Achnashellach. | 32. Barcaldine. | 58. Loch Ard. |
| 5. Ratagan. | 33. Benmore. | 59. Scootmore. |
| 6. Inchnacardoch. | 34. The Bin. | 59A. Do. (addition to). |
| 7. South Laggan. | 34A. Do. (addition to). | 60. Clunes. |
| 8. Port Clair. | 35. Craig Phadrig. | 61. Devilla. |
| 9. Culbin. | 36. Ordiequeish. | 61A. Do. (addition to). |
| 10. Monaughty. | 37. Salen. | 62. Balblair. |
| 11. Kirkhill. | 37A. Do. (addition to). | 63. Lael. |
| 12. Montreathmont. | 38. North Strome. | 64. Clashindarroch. |
| 13. Glen Righ. | 39. South Strome. | 65. Roseisle. |
| 14. Glenduror. | 40. Glenshiel. | 65A. Do. (addition to). |
| 15. Glenbranter. | 41. Glenfinart. | 66. Inglismaldie. |
| 16. Tentsmuir. | 42. Findon. | 66A. Do. (addition to). |
| 17. Edensmuir. | 42A. Do. (addition to). | 67. Blackcraig. |
| 17A. Do. (addition to). | 43. Kessock. | 68. Achaglachgach. |
| 18. Glentress. | 44. Drumtochty. | 69. Tulloch. |
| 19. Bannan. | 45. Midmar. | 70. Knapdale. |
| 20. Dalbeattie. | 46. Kemnay. | 71. Fiunary and Morven. |
| 20A. Do. (addition to). | 47. Glengarry. | 71A. Do. (addition to). |
| 21. Newcastleton. | 48. Blairadam. | 72. Carden. |
| 21A. Do. (addition to). | 48A. Do. (addition to). | 72A. Do. (addition to). |
| 22. Teindland. | 49. Deer. | 73. Glenloy. |
| 23. Glenurquhart. | 50. Closeburn. | 74. Auchenroddan. |
| 24. Glenhurich. | 51. Eilanreach. | 75. Tulliallan. |
| 25. Drummond Hill. | 52. Greskine. | 76. Kirroughtree. |
| 26. Glenmore. | 53. Edgarhope. | 77. Newtyle. |
| 27. Culloden. | 53A. Do. (addition to). | 78. Newton. |
| 28. Nevis. | 54. Fearnoch. | 79. Durris. |

* Former Crown Wood.

Plantations. Year ended 30th

Forest.	Area planted (acres).					
	Afforested.		Re-afforested.		Total.	
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.
Alice Holt, Hants*	—	—	34	31	34	31
Allerston, Yorks	513	—	—	—	513	—
Ampleforth, Yorks	105	6	—	—	105	6
Amphill, Bedford	5	—	—	—	5	—
Bawtry, Notts	79	3	—	—	79	3
Beddgelert, Carnarvon	40	—	—	—	40	—
Bedgebury, Kent and Sussex*... ..	—	—	80	7	80	7
Bere, Hants*	—	—	5	18	5	18
Bodmin, Cornwall	71	—	31	—	102	—
Bourne, Lincoln	—	—	54	44	54	44
Brackley, Bucks and Northants.	—	—	6	41	6	41
Bramshill, Berks and Hants... ..	69	—	—	—	69	—
Brechfa, Carmarthen‡	215	—	92	16	307	16
Brecon, Brecknock	155	3	—	—	155	3
Brightstone, Isle of Wight	45	12	—	—	45	12
Bruton, Somerset and Wilts	16	—	49	3	65	3
Buriton, Hants	—	73	—	53	—	126
Caio, Carmarthen	13	—	133	—	146	—
Cannock Chase, Stafford	268	—	85	—	353	—
Chase, Hereford	21	20	—	—	21	20
Chepstow, Glos. and Mon- mouth.	1	—	—	—	1	—
Chiddingfold, Surrey	—	—	7	68	7	68
Chopwell, Durham*	—	—	20	2	20	2
Clipstone, Derby and Notts	200	110	81	47	281	157
Clocaenog, Denbigh and Meri- oneth.	559	—	83	—	642	—
Combley, Isle of Wight	20	36	—	—	20	36
Cwmeinion, Cardigan	44	—	—	—	44	—
Cynwyd, Merioneth	107	—	2	—	109	—
Dartmoor, Devon	147	—	—	—	147	—
Dean Forest, Glos., Here- ford, and Monmouth.*	—	—	178	162	178	162
Delamere, Cheshire*	—	—	52	—	52	—
Dovey, Merioneth and Mont- gomery.†	634	8	117	—	751	8
Dunwich, Suffolk	137	9	—	—	137	9
Dyfnant, Montgomery	26	—	26	—	52	—
Dymock, Gloucester and Hereford.°	76	49	11	—	87	49
Eggesford, Devon	—	—	29	—	29	—
Ennerdale, Cumberland	152	—	—	—	152	—
Exmoor, Somerset	80	—	27	—	107	—
Ferndown, Dorset	105	—	—	—	105	—

* Former Crown Woods.

† Includes forest previously known as Corris Valley, Merioneth.

‡ Formerly known as Glangwili, Carmarthen.

September, 1931—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.	
34	47	10	17	104	—	39	10	261	Alice Holt.*
417	378	—	252	—	—	24	114	1,185	Allerston.
54	87	—	77	—	—	14	11	243	Ampleforth.
65	—	—	—	—	—	—	—	65	Ampthill.
233	15	—	25	8	1	—	—	272	Bawtry.
—	—	—	174	—	—	—	—	174	Beddgelert.
75	8	86	54	24	—	4	5	256	Bedgebury.*
2	16	—	1	44	—	16	—	79	Bere.*
154	18	17	21	—	—	—	3	213	Bodmin.
—	84	17	8	—	78	—	2	189	Bourne.
—	7	—	23	164	—	—	7	201	Brackley.
547	—	16	285	—	—	—	1	849	Bramshill.
10	168	54	297	53	—	32	3	617	Brechfa.‡
67	104	55	136	—	—	2	14	378	Brecon.
108	16	—	—	—	15	36	—	175	Brightstone.
—	26	22	26	7	—	—	4	85	Bruton.
18	297	—	—	—	47	460	1	823	Buriton.
31	29	72	27	—	—	—	—	159	Caio.
427	241	—	129	—	—	37	116	950	Cannock Chase.
10	19	—	—	119	—	12	3	163	Chase.
11	16	5	10	—	1	19	—	62	Chepstow.
2	9	2	26	235	30	—	4	308	Chiddingfold.
11	—	1	48	—	—	—	2	62	Chopwell.*
716	132	—	—	—	12	—	310	1,170	Clipstone.
20	204	—	876	—	—	4	1	1,105	Clocaenog.
—	11	—	17	59	20	7	5	119	Combley.
—	—	—	103	—	—	—	—	103	Cwmeinon.
30	8	3	244	—	—	22	5	312	Cynwyd.
2	13	14	235	—	—	12	5	281	Dartmoor.
66	179	9	131	78	14	106	202	785	Dean Forest.*
78	40	1	4	—	—	—	18	141	Delamere.*
6	380	349	625	—	—	10	21	1,391	Dovey.†
410	—	—	—	9	—	1	2	422	Dunwich.
—	36	—	52	—	—	—	11	99	Dyfnant.
—	142	—	—	195	—	29	8	374	Dymock.*
—	20	29	1	—	—	—	—	50	Eggesford.
7	26	25	196	—	—	7	—	261	Ennerdale.
179	16	39	6	—	—	10	65	315	Exmoor.
237	1	—	3	—	—	—	—	241	Ferndown.

Plantations. Year ended 30th

Forest.	Area planted (acres).					
	Afforested.		Re-afforested.		Total.	
	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.
Friston, Sussex	17	63	—	—	17	63
Glasfynydd, Brecknock	57	—	—	—	57	—
Gwydyr, Carnarvon	404	—	84	11	488	11
Hafod Fawr, Merioneth*	18	—	3	—	21	—
Haldon, Devon	128	—	50	—	178	—
Halwill, Devon	54	—	5	—	59	—
Hamsterley, Durham	303	—	—	—	303	—
Harwood, Northumberland	151	—	—	—	151	—
Haugh, Hereford	—	—	38	17	38	17
Hazelborough, Northants*	—	—	—	10	—	10
Hope, Derby	66	—	—	—	66	—
Kerry, Montgomery	—	—	—	—	—	—
Kershope, Cumberland	388	—	—	—	388	—
Laughton, Lincoln	260	16	—	—	260	16
Llanover, Monmouth	11	—	93	—	104	—
Llantrisant, Glamorgan	96	—	—	—	96	—
Lyminge, Kent	—	—	77	13	77	13
Margam, Glamorgan	—	—	—	—	—	—
Mathrafal, Montgomery	—	—	54	2	54	2
Micheldever, Hants	—	65	—	54	—	119
Mortimer, Hereford, Radnor and Salop.	—	—	521	2	521	2
Myherin, Cardigan	—	—	92	2	92	2
New Forest, Hants*	—	—	81	115	81	115
North Tyne Valley, Northumberland.	99	—	—	—	99	—
Parkhurst, Isle of Wight*	—	—	7	16	7	16
Pembrey, Carmarthen	155	3	—	—	155	3
Quantocks, Somerset	—	—	22	—	22	—
Radnor, Radnor	126	—	2	—	128	—
Rendlesham, Suffolk	426	78	—	—	426	78
Rheola, Glamorgan	205	—	107	—	312	—
Ringwood, Hants	103	—	—	—	103	—
Rockingham, Northants	18	156	125	117	143	273
Rosedale, Yorks	240	13	—	—	240	13
Rothbury, Northumberland	—	—	—	—	—	—
Salcey, Bucks and Northants*	—	—	—	18	—	18
Selby, Yorks	—	—	—	—	—	—
Sherwood, Notts	—	—	218	12	218	12
Slaley, Northumberland	124	—	—	—	124	—
Swaffham, Norfolk	25	2	32	—	57	2
Swanton, Norfolk	28	3	38	18	66	21
Tarenig, Cardigan and Montgomery.	390	—	—	—	390	—
Thetford Chase, Norfolk and Suffolk.	1835	117	515	19	2,350	136
Thorntwaite, Cumberland	102	7	52	3	154	10

* Former Crown Woods.

September, 1931—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.	
66	26	1	—	—	—	123	52	268	Friston.
—	2	—	121	—	—	—	—	123	Glasfynydd.
115	316	40	484	34	6	40	39	1,074	Gwydyr.
1	—	—	57	—	—	—	—	58	Hafod Fawr.*
371	8	103	—	—	—	—	—	482	Haldon.
20	10	26	192	—	—	6	—	254	Halwill.
87	119	—	312	—	—	43	38	599	Hamsterley.
100	—	—	252	—	—	—	1	353	Harwood.
—	61	—	2	25	6	—	—	94	Haugh.
—	—	—	—	30	—	1	—	31	Hazel- borough.*
—	31	—	88	—	—	—	45	164	Hope.
4	—	12	74	—	—	—	1	91	Kerry.
2	1	—	658	—	—	3	63	727	Kershope.
371	6	—	228	—	4	—	43	652	Laughton.
22	153	—	85	—	—	—	—	260	Llanover.
20	74	—	109	—	—	—	—	203	Llantrisant.
7	123	23	—	—	—	—	1	154	Lyminge.
58	24	—	319	—	—	—	—	401	Margam.
—	67	1	25	—	3	1	7	104	Mathrafal.
—	230	—	6	39	—	260	—	535	Micheldever.
43	635	16	7	—	4	14	4	723	Mortimer.
51	—	60	54	—	—	4	18	187	Myherin.
163	75	10	84	189	—	262	5	788	New Forest.*
25	—	—	211	—	—	—	—	236	North Tyne Valley.
19	7	—	3	12	2	8	10	61	Parkhurst.*
440	—	—	3	—	—	—	71	514	Pembrey.
49	20	19	29	—	—	—	—	117	Quantocks.
25	71	12	199	—	—	11	8	326	Radnor.
1,102	—	—	—	219	—	2	49	1,372	Rendlesham.
20	124	—	537	—	—	—	1	682	Rheola.
246	3	9	1	—	—	—	—	259	Ringwood.
101	25	19	492	581	88	—	23	1,329	Rockingham.
182	—	13	338	—	—	11	16	560	Rosedale.
70	—	—	—	—	—	—	—	70	Rothbury.
—	—	—	—	66	—	—	—	66	Salcey.*
64	—	2	—	—	—	—	—	66	Selby.
553	—	—	4	—	—	—	23	580	Sherwood.
164	9	—	44	—	—	3	20	240	Slaley.
548	—	—	—	—	—	—	—	548	Swaffham.
20	29	41	6	2	27	—	5	130	Swanton.
—	11	—	780	—	—	—	2	793	Tarenig.
7,388	4	270	13	1,498	—	9	74	9,256	Thetford Chase.
20	61	49	210	—	—	22	19	381	Thornthwaite.

Plantations. Year ended 30th

Forest.	Area planted (acres).					
	Afforested.		Re-afforested.		Total.	
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.
Tintern, Monmouth* ...	35	34	41	17	76	51
Vaughan, Merioneth ...	375	—	29	—	404	—
Walcot, Salop ...	—	—	—	—	—	—
Wareham, Dorset ...	122	—	—	—	122	—
Westbury, Hants ...	—	33	—	42	—	75
Wilsey Down, Cornwall ...	45	—	—	—	45	—
Wyre, Worcester ...	—	—	79	3	79	3
Yardley Chase, Northants ...	—	—	60	—	60	—
Total ...	10,309	919	3,627	983	13,936	1,902

Plantations. Year ended

Achaglachgach, Argyll ...	81	—	—	—	81	—
Achnashellach, Ross ...	—	—	—	—	—	—
Ardgartan, Argyll ...	301	4	—	—	301	4
Auchenroddan, Dumfries ...	101	—	—	—	101	—
Balblair, Sutherland ...	—	—	144	—	144	—
Barcaldine, Argyll ...	172	—	32	3	204	3
Benmore, Argyll ...	26	2	214	—	240	2
Bennan, Kirkcudbright ...	16	—	—	—	16	—
Bin (The), Aberdeen ...	—	—	251	—	251	—
Blackcraig, Perth ...	155	—	11	—	166	—
Blairadam, Fife and Kinross ...	70	1	—	—	70	1
Borgie, Sutherland ...	10	—	—	—	10	—
Carden, Fife ...	50	—	—	—	50	—
Clashindarroch, Aberdeen ...	350	—	—	—	350	—
Closeburn, Dumfries ...	175	—	—	—	175	—
Clunes, Inverness ...	104	—	—	—	104	—
Craig-nan-Eun, Inverness ...	160	—	—	—	160	—
Craig Phadrig, Inverness ...	—	—	—	—	—	—
Culbin, Moray ...	54	—	230	—	284	—
Culloden, Inverness ...	—	—	—	—	—	—
Dalbeattie, Kirkcudbright ...	106	—	19	11	125	11
Deer, Aberdeen... ...	62	—	111	—	173	—
Devilla, Fife ...	57	1	—	—	57	1
Dornoch, Sutherland ...	—	—	100	—	100	—
Drummond Hill, Perth ...	174	8	—	—	174	8
Drumtochty, Kincardine ...	217	—	55	2	272	2
Edensmuir, Fife ...	39	3	—	—	39	3
Edgarhope, Berwick ...	—	—	51	—	51	—
Eilanreach, Inverness ...	103	—	—	—	103	—
Fearnoch, Argyll ...	94	—	—	—	94	—
Findon, Ross ...	—	—	103	—	103	—
Fiunary and Morven, Argyll ...	152	—	—	—	152	—
Glenbranter, Argyll ...	272	—	—	—	272	—
Glenduror Argyll ...	100	—	—	—	100	—

* Former Crown Wood.

September, 1931—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.	
64	103	26	18	318	11	15	30	585	Tintern.*
75	187	6	388	—	—	14	11	681	Vaughan.
—	20	5	6	—	—	6	—	37	Walcot.
455	5	32	—	—	—	—	3	495	Wareham.
14	36	—	—	—	17	136	—	203	Westbury.
—	18	—	78	—	—	3	14	113	Wilsey Down.
12	101	7	5	—	4	1	—	130	Wyre.
—	—	—	126	—	—	—	—	126	Yardley Chase.
17,174	5,588	1,628	10,777	4,112	390	1,901	1,649	43,219	Total.

30th September, 1931—Scotland.

14	9	—	100	—	—	—	9	132	Achaglachgach.
74	24	2	62	—	—	3	68	233	Achnashellach.
67	29	—	505	—	—	6	42	649	Ardgartan.
—	72	—	95	—	—	6	—	173	Auchenroddan.
134	57	9	34	—	—	6	33	273	Balblair.
10	41	14	254	—	—	10	50	379	Barcaldine.
38	36	25	278	—	—	—	44	421	Benmore.
20	9	—	35	—	—	1	—	65	Bennan.
217	119	—	424	—	—	8	—	768	Bin (The).
1	127	6	91	—	—	2	17	244	Blackcraig.
—	—	—	111	4	2	3	2	122	Blairadam.
13	—	—	17	—	—	—	49	79	Borgie.
65	—	—	36	—	—	—	—	101	Carden.
149	191	2	229	—	—	16	70	657	Clashindarroch.
22	26	—	283	—	—	—	—	331	Closeburn.
—	—	—	166	—	—	—	14	180	Clunes.
80	8	81	116	—	—	1	11	297	Craig-nan-Eun.
2	1	3	—	—	—	—	—	6	Craig Phadrig.
563	—	—	—	—	—	—	60	623	Culbin.
5	—	5	—	—	—	—	1	11	Culloden.
32	72	2	113	—	12	6	—	237	Dalbeattie.
54	13	—	223	—	1	11	16	318	Deer.
149	5	—	6	—	—	—	—	160	Devilla.
123	9	1	32	—	—	2	39	206	Dornoch.
234	89	—	11	—	3	3	3	343	Drummond Hill.
24	255	—	126	3	—	9	46	463	Drumtochty.
63	—	—	26	—	—	6	3	98	Edensmuir.
71	26	—	28	—	—	1	—	126	Edgarhope.
24	18	—	128	—	—	—	—	170	Eilanreach.
18	4	—	157	—	—	—	5	184	Fearnoch.
232	10	3	30	—	—	15	32	322	Findon.
6	65	—	169	—	—	—	—	240	Fiunary.
28	74	18	364	—	—	2	22	508	Glenbranter.
8	1	—	196	—	—	—	33	238	Glenduror.

Plantations. Year ended

Forest.	Area planted (acres).					
	Afforested.		Re-afforested.		Total.	
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.
Glenfinart, Argyll	149	1	—	—	149	1
Glenгарry, Inverness	—	—	125	—	125	—
Glenhurich, Argyll	228	—	—	—	228	—
Glenloy, Inverness	124	—	—	—	124	—
Glenmore, Inverness	—	—	250	—	250	—
Glen Rìgh, Inverness	84	—	—	—	84	—
Glenshiel, Ross	61	—	—	—	61	—
Glentress, Peebles	2	—	—	—	2	—
Glenurquhart, Inverness	135	—	—	—	135	—
Greskine, Dumfries	54	3	—	—	54	3
Inchnacardoch, Inverness	97	—	—	—	97	—
Inglismaldie, Kincardine	11	—	55	—	66	—
Inverinate, Ross	182	—	—	—	182	—
Inverliever, Argyll*	13	—	2	—	15	—
Kennay, Aberdeen	—	—	56	—	56	—
Kessock, Ross	—	—	85	—	85	—
Kirkhill, Aberdeen	—	—	—	—	—	—
Kirroughtree, Kirkcudbright... ..	101	—	—	—	101	—
Knapdale, Argyll	—	—	175	—	175	—
Lael, Ross	115	—	160	—	275	—
Lennox Castle, Stirling	32	1	42	—	74	1
Loch Ard, Perth	142	5	—	—	142	5
Midmar, Aberdeen	—	—	128	—	128	—
Monaghty, Moray	—	—	108	—	108	—
Montreathmont, Angus	—	—	79	—	79	—
Nevis, Inverness	127	—	—	—	127	—
Newcastleton, Roxburgh	160	—	—	—	160	—
North Strome, Ross	84	—	—	—	84	—
Ordiequeish, Moray	—	—	50	—	50	—
Port Clair, Inverness	188	—	—	—	188	—
Ratagan, Inverness and Ross... ..	190	—	—	—	190	—
Roseisle, Moray	99	—	20	—	119	—
Salen, Argyll	188	—	—	—	188	—
Scootmore, Moray	53	—	81	—	134	—
Slattadale, Ross	36	—	—	—	36	—
South Laggan, Inverness	70	—	—	—	70	—
South Strome, Ross	224	—	—	—	224	—
Teindland, Moray	—	—	112	—	112	—
Tentsmuir, Fife	156	—	—	—	156	—
Tulloch, Perth	120	—	—	—	120	—
Total	6,426	29	2,849	16	9,275	45

Plantations. Year ended

England and Wales	10,309	919	3,627	983	13,936	1,902
Scotland... ..	6,426	29	2,849	16	9,275	45
Total	16,735	948	6,476	999	23,211	1,947

* Former Crown Wood.

30th September, 1931—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.	
66	53	—	208	—	—	2	42	371	Glenfinart.
11	15	8	175	—	—	2	15	226	Glengary.
10	—	—	343	—	—	3	7	363	Glenhurich.
9	11	—	171	—	—	2	8	201	Glenloy.
343	5	—	134	—	—	2	22	506	Glenmore.
15	12	1	115	—	—	3	16	162	Glen Righ.
35	—	—	89	—	—	—	21	145	Glenshiel.
36	11	—	15	—	—	—	—	62	Glentress.
28	12	65	122	—	—	4	24	255	Glenurquhart.
—	2	—	109	—	—	—	10	121	Greskine.
179	22	10	57	—	—	4	50	322	Inchnacardoch.
134	—	—	—	1	—	5	—	140	Inglismaldie.
65	101	16	151	—	—	5	20	358	Inverinate.
—	—	3	13	—	—	—	23	39	Inverliever.*
70	6	3	64	—	—	7	1	151	Kemnay.
147	16	13	8	—	—	—	6	190	Kessock.
64	2	—	44	—	—	1	9	120	Kirkhill.
67	39	—	80	—	—	3	—	189	Kirroughtree.
—	42	—	228	—	—	2	36	308	Knapdale.
96	218	12	81	—	—	—	30	437	Lael.
14	21	—	93	—	—	—	2	130	Lennox Castle.
43	20	12	203	—	—	10	4	292	Loch Ard.
139	23	7	159	—	—	4	9	341	Midmar.
412	—	6	82	—	—	1	25	526	Monaghty.
159	10	—	33	—	—	6	16	224	Montreathtmont.
12	16	—	175	—	—	2	26	231	Nevis.
6	—	—	330	—	—	—	—	336	Newcastleton.
44	17	8	66	—	—	3	36	174	North Strome.
49	19	—	13	—	—	1	20	102	Ordiequeish.
110	7	63	109	—	—	2	6	297	Port Clair.
12	100	2	161	—	—	10	52	337	Ratagan.
252	—	—	—	—	—	2	14	268	Roseisle.
57	—	—	240	—	—	—	23	320	Salen.
72	63	—	160	—	—	3	4	302	Scootmore.
17	1	8	70	—	—	—	7	103	Slattadale.
—	7	—	107	—	—	1	17	132	South Laggan.
58	70	19	179	—	—	10	23	359	South Strome.
179	15	5	17	—	—	—	92	308	Teindland.
331	—	—	27	—	—	5	2	365	Tentsmuir.
10	56	—	118	—	—	—	—	184	Tulloch.
5,891	2,402	432	8,994	8	18	222	1,387	19,354	Total.

30th September, 1931—Summary.

17,174	5,588	1,628	10,777	4,112	390	1,901	1,649	43,219	England & Wales.
5,891	2,402	432	8,994	8	18	222	1,387	19,354	Scotland.
23,065	7,990	2,060	19,771	4,120	408	2,123	3,036	62,573	Total.

Cost of Planting.—The outlay per acre on labour and material on the areas planted between 1919 and 1931 was as follows:—

	£	s.	d.
England and Wales	9	0	10
Scotland	9	15	2
Great Britain	9	5	8

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, overhead charges and supervision.

Forest Fires.—Fires were more numerous than in 1930 but caused very little more damage. Comparative figures for the three years 1929-31 are as follows:—

	1929.	1930.	1931.
Number of fires	409	165	213
Area burnt (acres)	4,574	258	171
Damage caused	£45,961	£2,080	£2,143

Claims amounting to £342 have been lodged by the Commissioners in respect of fires occurring in 1931.

The fires were principally caused by sparks from railway engines (46 per cent. of the total number), carelessness on the part of the general public (19 per cent.) and sparks from road engines (8 per cent.).

Nurseries.—The total area under nurseries at 30th September, 1931, was 954 acres stocked with 298 million seedlings and 98 million transplants. Comparative figures for the three years 1929-31 are given in the following table:—

Nurseries.

Year ending 30th Sept.	Country.	Seed Sown (lb.).			Stock of Plants at 30th September (thousands).					
					Transplants.			Seedlings.		
		Coniferous.	Broad-leaved.	Total.	Coniferous.	Broad-leaved.	Total.	Coniferous.	Broad-leaved.	Total.
1931...	England and Wales.	8,366	14,844	23,210	48,609	7,039	55,648	189,833	4,365	194,198
	Scotland ...	3,086	1,812	4,898	42,125	529	42,654	100,934	2,451	103,385
	Total ...	11,452	16,656	28,108	90,734	7,568	98,302	290,767	6,816	297,583
1930...	England and Wales.	7,556	130,169	137,725	55,827	6,338	62,165	142,832	14,396	157,228
	Scotland ...	3,814	944	4,758	36,797	595	37,392	96,262	534	96,796
	Total ...	11,370	131,113	142,483	92,624	6,933	99,557	239,094	14,930	254,024
1929...	England and Wales.	3,778	90,366	94,144	70,411	4,294	74,705	82,286	11,010	93,296
	Scotland ...	2,092	432	2,524	34,878	764	35,142	64,955	764	65,719
	Total ...	5,870	90,798	96,668	104,789	5,058	109,847	147,241	11,774	159,015

Seed Supply.—Douglas fir seed was not abundant in Canada in 1930 and only a limited supply was obtainable from the United States of America. Canadian Sitka spruce seed was scarce but for the first time since 1925 there was a good crop of Japanese larch seed.

On the Continent, Norway spruce and European larch failed entirely and only moderate supplies of Corsican pine seed of poor quality were forthcoming.

As regards Great Britain, Scots pine was again plentiful in England but the seeds of hardwoods were difficult to obtain; beech failed entirely and the crops of oak, ash and chestnut were poor. In Scotland, sufficient Scots pine was collected to meet requirements but in the case of European larch there was a marked scarcity of cones; the year was an exceptionally good one for the yield of beech mast.

The quantity of seed sold during the year amounted to 372 lb.

The Commissioners have to express their gratitude for gifts of seed from the forest authorities of Chile, China, France, Japan, Portugal, Russia and the United States of America.

Subhead F—Advances for Afforestation Purposes.

Expenditure £16,573.

Grants to private individuals and local authorities for planting and scrub clearing amounted to £12,299, advances in respect of a proceeds-sharing scheme to £1,675 and overhead and supervisory charges to £2,599. The demand for grants has been steadily maintained, the average annual expenditure for the five years 1927-31 having been £11,400 and the annual area planted 6,400 acres.

The basis on which grants are made is as follows:—

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

(2) *Hardwoods.*—Up to £4 per acre planted with approved species and thereafter maintained as an area for the production of hardwoods.

(3) *Clearance of Scrub, &c.*—Up to £1 per acre (in exceptional cases up to £2 per acre) cleared. Limited to selected schemes involving not less than 20 acres.

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

—	England & Wales.	Scotland.	Total.
No. of Schemes	203	127	330
	Acres.	Acres.	Acres.
Planting conifers	2,252	2,798	5,050
Planting hardwoods	597	59	656
Scrub clearing	126	110	236

The area planted under the proceeds-sharing scheme was 226 acres.

**Subhead G—Education. Expenditure: Gross £11,411;
Net £11,347.**

Details of expenditure are given in Table G.

Table G.—Education.

Year ending 30th September.	EXPENDITURE (Table IIa, Column 4).							INCOME.	NET EXPEN- DITURE.
	Superior Super- vision and Over- head Charges.	Apprentices' Schools.				Grants to Insti- tutions.	Total.		
		Salaries and Expenses of In- structors.	Purchase and Rent of Land and Build- ings.	Allow- ances to Appren- tices.	Stores, Fuel, Light, etc.				
	£	£	£	£	£	£	£	£	
First decade :									
Five years, 1920-24	7,238	10,690	5,371	11,144	8,910	9,157	52,510	1,889	50,621
1925	1,240	1,150	166	1,685	931	4,743	9,915	435	9,480
1926	1,361	1,138	235	2,347	1,230	4,239	10,600	17	10,583
1927	1,231	769	185	2,028	1,122	4,135	9,470	68	9,402
1928	1,005	803	109	2,303	971	4,235	9,426	9	9,417
1929	1,050	851	129	2,202	978	4,182	9,392	9	9,383
Total, 1925-29	5,887	4,711	824	10,565	5,232	21,534	48,803	538	48,265
Total, First decade	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
Grand Total ...	14,905	16,980	8,982	26,055	16,857	39,153	122,932	2,754	120,178
Percentage ...	12·1	13·8	7·3	21·2	13·7	31·9	100		

Apprentices' Schools: Expenditure, £6,301.—Increased expenditure on land and buildings was due to the completion of additions to the school at Parkend (Forest of Dean). During the year, 59 forest apprentices underwent courses of instruction at Parkend and Benmore (Argyllshire). At the final examinations, 25 men who had completed the two years' course were granted certificates of proficiency.

Grants to Universities and Colleges: Expenditure, £2,230.—The following Universities and Colleges received grants during the year:—Oxford University; Cambridge University; University College of North Wales, Bangor; Armstrong College, Newcastle-on-Tyne; Aberdeen University; Edinburgh and East of Scotland College of Agriculture.

The number of students studying forestry during the year was 199; 39 forestry degrees were granted and 9 candidates obtained diplomas.

Imperial Forestry Institute: Expenditure, £2,000.—The annual grant to the Imperial Forestry Institute from the Forestry Fund was continued. Thirty-seven students attended for the whole or part of the academic year 1930-31, these including 13 post-graduate probationers from the Colonial Services and 24 forest officers on leave (India 5, Dominion Services 3, Colonial Services 12, private students 4).

Subhead H—Research and Experiment.

Expenditure: Gross £12,598; Net £12,320.

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 Institu- tions.	Total.		
	£	£	£	£	£	£	£
First decade : Five years, 1920–24	6,450	20,486	4,453	3,093	34,482	586	33,896
1925	1,662	3,030	1,112	600	6,404	43	6,361
1926	1,492	3,336	1,946	663	7,437	110	7,327
1927	1,376	3,492	2,712	757	8,337	93	8,244
1928	1,584	3,682	4,758	745	10,769	93	10,676
1929	1,135	4,432	5,249	1,405	12,221	133	12,088
Total, 1925–29 ...	7,249	17,972	15,777	4,170	45,168	472	44,696
Total, First decade ...	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	4,583	1,395	12,598	278	12,320
Grand Total	16,307	48,860	29,347	10,072	104,586	1,441	103,145
Percentage	15·6	46·7	28·1	9·6	100		

Production.—Eight new sample plots were established during the year, 3 in England and Wales and 5 in Scotland. Twenty-eight plots were remeasured of which 16 were in England and Wales and 12 in Scotland. At 30th September, 1931, there were 186 plots, 108 being in England and Wales and 78 in Scotland.

Nursery and Plantation.—In the nurseries, work on the improvement of the germination of Sitka spruce seed was continued. Owing to very favourable weather conditions high yields were obtained in the controls as well as in the treated plots, but in general the results confirmed those of previous seasons, namely, that the use of coarse sand for covering improves germination and also leads to the production of larger seedlings. Manuring experiments on birch and alder again indicated the effect of ammonium phosphate in stimulating the growth during the first growing season, but even better results were obtained by watering the seedbeds daily after sowing. A large-scale grading experiment was started in six nurseries, the object being to determine the survival value of different sizes of seedlings when lined out. Arrangements have been made for the extension of the experiment into the forest, three grades of four species to be planted annually over a period of five years.

A number of new plantation experiments were established for the most part on the same soil types as in previous years. Breaking up the soil by means of ploughing was tried in several areas

of peaty, heather-clad soil with promising results, and comparative plots of seedlings and transplants of various species have been established in the ploughed ground. The present indications are that seedlings can be used successfully provided they are sturdy and are handled with sufficient care. The application of a small quantity of basic slag has improved the growth of all species on ploughed land of low quality, but it is too soon to judge its economic value. Progress on the poorer types of peat is slow; there are indications that the Oregon alder, *Alnus oregona*, may prove a useful species. Plots have been established at Clashindarroch Forest near Huntly to determine the effect of burning-off the heather before planting.

The previous year's experiments on the grassy heaths of East Anglia and on the chalk downs have been repeated while further plots have been laid down in the Forest of Dean to determine the optimum density and season for sowing oak. A number of experiments were started to throw light on the factors affecting the establishment of ash; the effect of hoeing, method of planting, and size of plant were among the treatments investigated.

The work of raising and planting different geographical strains of our principal conifers has been actively continued and many new plots of European larch of various origins were planted.

Entomology and Mycology.—The study of the life history of the pine shoot moth has led to an attempt to control the damage by partially disbudding the leaders of attacked pines in the autumn. The experiment was not wholly successful and more data are required before the method can be generally recommended. Work on the conditions affecting oak defoliation is being continued.

The fourth survey in connection with the Dutch elm disease was carried out in September, 1931. The disease was found to be causing serious damage locally in some of the eastern counties of England, but elsewhere, although a general spread of infection was recorded, the proportion of trees severely attacked was relatively small.

An extensive investigation into the incidence and rate of spread of the heart-rot of oak caused by *Stereum spadiceum* was started in the Forest of Dean. The data so far obtained indicate that the disease is most serious in the poorer stands. Work on the relation between frost damage and disease is continuing at Oxford. Typical forms of frost damage have been reproduced under controlled conditions in the laboratory and the effect on the plant tissues studied in detail.

Botany.—Research work at Aberdeen on the conditions suitable for the development of mycorrhiza on tree roots in peat indicates that the factors are very complex.

Advisory Committee on Forest Research.—The Committee met in April, 1931, when the progress of the Commission's research work and the current programme of investigations were considered.

Utilisation.—The Commissioners have kept closely in touch with the work of the Forest Products Research Laboratory at Princes Risborough where a number of important investigations relating to home-grown timbers are being carried out.

Subhead J—Agency and Advisory Services. Expenditure:
Gross, £1,167; Net, £1,131.

No direct expenditure was incurred under this head. The sum of £1,167 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 owners of woodlands as to the treatment of their woods.

Subhead K—Special Services. Expenditure: Gross, £1,891;
Net, £1,883.

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 Enquir- ies.	Relief of Un- employ- ment.	Total.		
First decade :	£	£	£	£	£	£	£	£
Five years, 1920-24	10,760	349	1,634	3,571	19,828	36,142	278	35,864
1925	3,226	50	78	4,824	—	8,178	36	8,142
1926	3,052	32	74	1,251	—	4,409	—	4,409
1927	2,740	13	43	355	—	3,151	—	3,151
1928	4,503	33	45	1,177	—	5,758	19	5,739
1929	2,304	46	121	1,190	—	3,661	14	3,647
Total, 1925-29	15,825	174	361	8,797	—	25,157	69	25,088
Total, First decade	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
Grand Total ...	29,885	615	2,189	12,770	19,828	65,287	355	64,932
Percentage ...	45.8	0.9	3.4	19.5	30.4	100		

Publications.—During the year under review the Commissioners issued the following publications :—

Bulletin No. 12.—*Forest Gardens.*

Eleventh Annual Report of the Forestry Commissioners,
being the report for the year ending 30th September 1930.

In addition, leaflets Nos. 9 (*Forest Fires*), 14 (*The Phomopsis Disease of Conifers*), 15 (*The Felted Beech Coccus*) and 16 (*Larch Canker*) were revised and reprinted.

Exhibits at Agricultural Shows.—Forestry exhibits were sent by the Commissioners to the Shows of the Royal Agricultural Society at Warwick, the Bath and West Society at Bristol and the Royal Welsh Agricultural Society at Llanelly. In connection with the Highland and Agricultural Society's centenary meeting at Edinburgh special arrangements were made to demonstrate the use of up-to-date woodworking machinery and the manufacture of articles from home-grown timber.

Census of Production.—During the year statistics for a census of production of home-grown timber relating to 1930 were compiled. It is intended to issue a report giving in some detail the results of this compilation along with figures comparing the data with those collected for a similar census in 1924. The Commissioners have pleasure in acknowledging the assistance given them by woodland owners, land agents and others who supplied the necessary information. Subject to final revision the following estimate based on figures obtained from representative estates shows the total home production of conifers and hardwoods in 1924 and 1930 respectively.

COUNTRY.	CONIFERS.				HARDWOODS.			
	Volume.		Value.		Volume.		Value.	
	1924.	1930.	1924.	1930.	1924.	1930.	1924.	1930.
	cu. ft.	cu. ft.	£	£	cu. ft.	cu. ft.	£	£
England... ..	9,364,000	10,140,000	374,200	304,400	20,694,000	16,299,000	955,400	679,700
Wales	1,791,000	2,237,000	79,800	62,700	2,008,000	2,943,000	64,100	93,700
Scotland... ..	19,735,000	14,028,000	476,600	343,500	2,392,000	2,410,000	86,000	61,400
Great Britain ...	30,890,000	26,405,000	930,600	710,600	25,094,000	21,652,000	1,105,500	834,800

International Union of Forest Research Organisations.—The Commissioners were glad to welcome the Permanent Committee of this Organisation in September, 1931. The Committee were given the opportunity of visiting various forests and examining the research work and forestry operations of the Commission.

Consultative Committees.—The English Consultative Committee held three meetings during the year and the Scottish and Welsh Committees each met once.

The Commissioners desire to record their appreciation of a joint report (referred to on page 6) by the Chairmen of the Committees on the question of the improvement of forestry on private estates. The Committees also had under consideration Dutch elm disease and fire insurance of woodlands.

The Commissioners regret to report the deaths during the year of Mr. Hugh Morrison of the English Committee; Brigadier-General Archibald Stirling, Vice-Chairman of the Scottish Committee, and Mr. J. Roberts of the Welsh Committee.

During the year Major S. Strang Steel resigned from the English Committee on appointment to the Scottish Committee of which he was subsequently appointed Vice-Chairman. Captain George Campbell and Mr. Reginald F. J. Fairlie were appointed members of the Scottish Committee. Mr. C. J. Trevor resigned from the Welsh Committee.

**Subhead L—Forest Workers' Holdings. Expenditure,
£109,020; Income, £13,583.**

Details of expenditure and income are given in Table L. The bulk of the expenditure is in respect of new buildings and adaptation of existing buildings, which together account for £69,530. Income from rents increased by £1,449 to £13,568.

With the completion of 264 holdings during the year the total number at 30th September amounted to 1,041. The average cost of establishing holdings is £537, of which land accounts for £70, and cost of buildings, drainage, water supply, etc., £467.

The further information contained in the following statement may be of interest as showing the way in which the holdings have been utilised, the estimated value of live stock, etc. The figures for the years 1930 and 1931 are not strictly comparable but the position at the end of the forest year 1931 is shown below.

	1930.	1931.
Number of forest workers resident on the holdings	953	1,042
Total number of residents on the holdings	3,513	4,241
Average annual rent of house, out-buildings and land	£14 7s.	£14 8s.
Average area	10 acres	11 acres
Head of live stock :—		
Horses	331	343
Cows	477	676
Other cattle (including calves)	489	703
Sheep	1,800	3,053
Pigs	1,316	1,974
Poultry	42,516	40,719
Miscellaneous (including goats)	498	625
Estimated value of the live stock ...	£31,333	£36,000

Table L.—Forest Workers' Holdings.

Year ending 30th September.	EXPENDITURE (Table Ia, Column 8).						INCOME (Table Ia, Column 11).				NET EXPENDITURE. (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: Five years, 1920-24	£ 831	£ 5,000	£ —	£ 75	£ —	£ —	£ —	£ 5,906	£ —	£ 8	£ 5,898	
1925 ...	3,668	27,356	16,069	7,415	23	620	1,371	56,522	876	381	1,257	
1926 ...	5,372	23,353	37,519	7,130	441	2,136	-114	75,837	3,266	108	3,374	
1927 ...	8,221	9,058	54,632	4,959	744	3,942	968	82,524	5,889	185	6,074	
1928 ...	8,779	31,394	41,188	7,480	1,167	4,571	1,301	95,880	7,716	500	8,216	
1929 ...	9,023	7,779	42,776	5,243	1,507	6,292	594	73,214	8,514	72	8,586	
Total, 1925-29 ...	35,063	93,940	192,184	32,227	3,882	17,561	4,120	383,977	26,261	1,246	27,507	
Total, First decade	35,894	103,940	192,184	32,302	3,882	17,561	4,120	389,883	26,261	1,254	27,515	
Second decade:	11,196	34,410	43,126	10,932	2,536	5,902	473	108,375	19,119	87	12,206	
1930 ...	11,054	17,437	54,095	16,435	3,528	6,713	758	109,020	13,568	15	13,583	
Grand Total ...	58,144	155,787	289,405	58,669	9,946	30,176	5,851	607,478	51,948	1,856	53,804	
Percentage ...	9.6	25.6	47.6	9.7	1.6	5	0.9	100				

Subhead Z—Income £179,037.

Total income shows an increase of £18,431 compared with the previous year. Owing to the prevailing trade depression sales of forest produce realised £7,181 less than in 1930 but sales of land and buildings increased by £12,926, rents and royalties by £6,746 and "other" income from forestry operations by £4,583. 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, Buildings, etc.	Rents and Royalties.	Forest Produce.	Other.	Total.			
	£	£	£	£	£	£	£	£
First decade :								
Five years, 1920-24	12,579	42,902	96,753	40,407	192,641	8	4,601	197,250
1925	23,626	39,367	54,862	16,389	134,244	1,257	850	136,351
1926	16,395	42,086	44,005	19,698	122,184	3,374	727	126,285
1927	3,417	45,483	72,111	14,375	135,386	6,074	379	141,839
1928	15,551	49,116	72,552	16,502	153,721	8,216	185	162,122
1929	7,216	55,137	66,311	15,268	143,932	8,586	194	152,712
Total, 1925-29	66,205	231,189	309,841	82,232	689,467	27,507	2,335	719,309
Total, First decade	78,784	274,091	406,594	122,639	832,108	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
Grand Total	96,994	411,205	527,311	159,660	1,195,170	53,304	7,728	1,256,202
Percentage	7.7	32.7	42	12.7	95.1	4.3	0.6	100

Under the head of forestry operations, rents and royalties include £18,574 from the Forest of Dean mines; "other" income comprises sales of live stock £9,290, sand and gravel £3,648, rabbits, stores, etc., £7,864.

Employment in the Commission's Forests.

The number of persons (excluding Divisional and District Officers and office staffs) 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

(Signed) R. L. ROBINSON (*Chairman*).
 F. D. ACLAND.
 G. L. COURTHOPE.
 D. R. GRENFELL.
 HUGH MURRAY.
 A. RODGER.
 W. R. SMITH.
 S. STRANG STEEL.
 W. STEUART-FOTHRINGHAM.

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

APPENDIX.

Imports of Timber, Wood Manufactures and Pulp of Wood.

Statistics relating to these imports are given in the table below, the figures in all cases being for the year ended 31st December.

Imports of unmanufactured timber in 1931 amounted to 8,131,000 loads valued at £29,144,000, a decrease of 2,009,000 loads (19·8 per cent.) and £13,631,000 (31·9 per cent.) as compared with 1930. There was a falling off in quantities imported in all categories but principally in sleepers, pitprops and hewn hardwoods while, further, there was a general decline in prices. The value of imports of wood manufactures fell from £8,739,000 to £7,537,000 (13·8 per cent.). The quantity of pulp of wood imported was slightly less in 1931 being 1,470,000 tons as compared with 1,532,000 tons in 1930, and there was a decrease of 16·2 per cent. in value; the price per ton in 1931 was £5 16s. as compared with £6 12s. in 1930.

Description.	Quantities (thousands).				Value (thousands).			
	Average 1909-13.	Average 1914-18.	1930.	1931.	Average 1909-13.	Average 1914-18.	1930.	1931.
TIMBER.								
Hewn-Hard—	Loads.*	Loads.*	Loads.*	Loads.*	£	£	£	£
Mahogany ...	—	—	31	17	—	—	354	177
Walnut ...	—	—	4	} 50	—	—	50	} 469
Oak ...	—	—	20		—	—	198	
Teak ...	—	—	6		—	—	151	
Other sorts ...	—	—	50		—	—	459	
Hewn-Soft (fir, pine, spruce, etc.).	542	129	496	393	1,353	583	1,423	1,092
Sawn-Hard—								
Mahogany ...	—	—	24	15	—	—	397	231
Walnut ...	—	—	8	} 517	—	—	202	} 5,033
Oak ...	—	—	261		—	—	2,982	
Teak ...	—	—	39		—	—	1,063	
Other sorts ...	—	—	317		—	—	2,941	
Sawn-Soft—								
Deal and planks	—	—	2,896	} 4,267	—	—	12,386	} 14,692
Boards ...	—	—	1,272		—	—	5,396	
Other sorts ...	—	—	681		—	—	2,881	
Planed or Dressed—								
Floorings ...	—	—	426	} 589	—	—	2,225	} 2,668
Matchings ...	—	—	83		—	—	440	
Other sorts ...	—	—	114		—	—	640	
Other								
Descriptions—								
Pitprops ...	2,944	1,673	2,783	1,896	3,510	4,425	5,193	3,061
Staves ...	161	71	91	46	795	648	657	369
Sleepers ...	—	130	533	335	—	602	2,406	1,044
Veneers and panel wood.	—	—	5	6	—	—	331	308
Not elsewhere specified.	6,557†	3,550	—	—	21,903†	24,362†	—	—
Total unmanu- factured timber.	10,204	5,553	10,140	8,131	27,561	30,620	42,775	29,144
WOOD MANUFACTURES.								
Furniture and cabinet ware.	—	—	—	—	416	115	916	756
Builders' wood- work (window frames, doors, etc.).	—	—	—	—	180	62	1,216	1,211
Plywood ...	—	—	—	—	—	—	2,490	2,021
Chip boxes ...	—	—	—	—	—	—	4	} 3,549
Tool handles ...	—	—	—	—	—	—	188	
Domestic wood- work (bread platters, trays, etc.).	—	—	—	—	—	—	327	
Wooden heels ...	—	—	—	—	—	—	80	
Not elsewhere specified.	—	—	—	—	2,099	1,821	3,518	—
Total manufac- tured timber.	—	—	—	—	2,695	1,998	8,739	7,537
PULP OF WOOD.								
Pulp of wood ...	Tons. 859	Tons. 682	Tons. 1,532	Tons. 1,470	4,058	7,915	10,108	8,467

* 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.

