

THIRD ANNUAL REPORT  
OF THE  
FORESTRY COMMISSIONERS.

Year ending September 30th, 1922.

---

---

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

---

---

*Ordered by The House of Commons, to be printed,  
9th April, 1923.*

---

---

LONDON:

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

To be purchased through any Bookseller or directly from  
H.M. STATIONERY OFFICE at the following addresses:  
IMPERIAL HOUSE, KINGSWAY, LONDON, W.C.2, and 28, ABINGDON STREET, LONDON, S.W.1,  
YORK STREET, MANCHESTER; 1, ST. ANDREW'S CRESCENT, CARDIFF;  
or 120, GEORGE STREET, EDINBURGH.

1923.

*Price One Shilling Net.*

# CONTENTS.

	PAGE
<b>Forest Policy</b> ... ..	3
Finance ... ..	5
Land Acquisition ... ..	5
Planting Programme ... ..	6
Assistance to Local Authorities and Private Owners ... ..	7
Education and Research ... ..	8
Imperial Forestry Bureau ... ..	8
Census of Woodlands ... ..	8
Ireland... ..	8
<b>Operations, Forest Year 1921-22</b> ... ..	10
The Forestry Fund ... ..	10
General Organisation ... ..	12
Forestry Operations ... ..	13
<i>Supervision</i> ... ..	13
<i>Acquisition of Land, Buildings and Standing Timber</i> ... ..	13
<i>Cultural Operations</i> ... ..	14
<i>Plantations</i> ... ..	15
<i>Nurseries</i> ... ..	20
<i>Supply of Seed</i> ... ..	21
Advances for Afforestation Purposes ... ..	22
Education ... ..	22
<i>Apprentices' Schools</i> ... ..	22
<i>Grants to Universities and Colleges</i> ... ..	23
Research and Experiment ... ..	23
<i>Production</i> ... ..	23
<i>Nursery and Plantation Work</i> ... ..	24
<i>Research</i> ... .. *	25
Agency and Advisory Services ... ..	26
Special Services ... ..	26
<i>Publications</i> ... ..	26
<i>Census of Woodlands</i> ... ..	27
<i>Forestry Exhibits at Agricultural Shows</i> ... ..	27
<i>Consultative Committees</i> ... ..	27
<i>Enquiry into Softwood Resources</i> ... ..	28
Receipts ... ..	28
<b>Unemployment</b> ... ..	29
<b>Forestry and Rural Employment</b> ... ..	31
<b>Imports of Timber, Wood Manufactures and Pulp of Wood</b> ... ..	38
<b>Map, showing Acquisition of Land</b> ... ..	Facing 14

# THIRD ANNUAL REPORT

OF THE

## FORESTRY COMMISSIONERS.

Year ending September 30th, 1922.

---

### FOREST POLICY.

GENERAL.—The Commissioners explained in their First Annual Report the nature and history of the Forest Policy to which they are giving effect. In their Second Annual Report the progress made up to date was recorded in a form which it is intended to follow year by year. In this their Third Annual Report they unfortunately have to deal with changes in the policy due to the unfavourable financial position with which the Government was and still is confronted.

The Committee on National Expenditure, in reporting on the work of the Forestry Commission, recommended that the afforestation policy adopted by Parliament after the war should be completely scrapped. On account of the immense field they had to cover the Committee were unable to undertake more than a very cursory examination of this subject, and it is not surprising that their report was superficial and full of misapprehensions. It ignored the four fundamental considerations on which the forest policy was based :—

- (1) The depletion of the home woods in which practically all the reserves of mature coniferous timber have been felled, while most owners are unable to face the cost of replanting.
- (2) The depletion of the world's virgin forests which is already causing grave concern to countries far better supplied with timber than the United Kingdom.
- (3) The provision of the reserves of standing timber shown to be essential for national defence.
- (4) Afforestation is the only effective means of developing some four million acres of waste land in the United Kingdom capable of growing excellent timber but of limited utility for any other purpose.

It would appear that the Committee's very drastic recommendations were largely based on the fact that the operations of the Timber Supply Department during the war showed a heavy loss. The Committee had failed to grasp the history of that department or its significance. Hurriedly extemporised in 1915 as the Home-grown Timber Committee, when the demand for timber for war purposes was daily increasing, and tonnage becoming daily scarcer, transferred in turn from the Board of Agriculture to the War Office, and then to the Board of

Trade, working without any trained staff or survey of standing timber, dependent to a large extent on C.3 military labour and aliens imported from Portugal and Finland, often required at a moment's notice to double the amount or transform the character of its output, the failure of this department on its financial side provides, in fact, the strongest possible argument for an organised forest service. The timber required to carry on the war had to be obtained at any cost, and considerations of profit and loss were not allowed to interfere with output. The Committee stated that the loss would be "approximately £5,800,000, which is attributable to large payments for damage to roads (not entirely due to home-grown timber); also to additional expenditure involved in conducting timber felling and sawing operations, and to trade depression, which had an adverse effect on the prices realised." It was anticipated by the Committee that the imported timber department as well would ultimately show a loss.

But the loss incurred by the Timber Supply Department under the circumstances stated above are small compared with the national losses due to our dependence on imported timber. The Acland Committee\* showed that imports in 1915 and 1916 alone cost £37,000,000 more than their pre-war value. In 1920 the nation paid £82,145,000 for 7,320,000 loads of unmanufactured timber against £27,561,000 for 10,204,000 loads on the average of the five pre-war years. The Committee on National Expenditure either ignored or failed to grasp the significance of these figures.

The Cabinet Committee to whom the report was referred recommended that the suggestions of the Committee on National Expenditure be rejected and this was confirmed by the Cabinet, as the adoption of these suggestions would have entailed the waste of much useful work of reconstruction already done and would have prolonged indefinitely the period during which the country was left quite unprepared for war needs or for a rapidly approaching timber famine. The Forestry Act therefore still stands. Under one of its provisions £3,500,000 was allotted to the work of the first ten years, including education and research, a sum which does not appear extravagant in view of the figures quoted above. The late Cabinet decided that the provision for the next two years should be on a reduced scale, entailing a temporary departure from the expanding programme, though still admitting of the afforestation of 10,000 acres each year. The Commissioners, while regretting any delay in the provision of the timber considered after full enquiry necessary for national security, recognised the urgent need for economy, and made arrangements for carrying out the reduced programme at the least possible cost consistent with efficiency. It was estimated that in this way the saving as compared with the normal programme would be for the year under review £200,000 and for 1922-23 also £200,000. In an undertaking which requires at least three years' preparatory work it is impossible to effect a sudden change of policy without some financial loss and much injustice to the staff. The Commissioners have done their best to minimise these evils.

---

\* Cd. 8881, p. 4.

Quite apart from the question of the provision of timber for war purposes it is evident from the measures adopted in other countries that there exists widespread apprehension of a timber famine at no distant date. The results of such a famine would be more disastrous to the United Kingdom than to any other country. The demand for timber is constantly increasing and the virgin forests are being worked out far more rapidly than was expected. The Commissioners are taking steps to ascertain what reserves of coniferous timber are available for import and how long they are likely to last. But there can be little doubt that the Government will in the near future have to choose between the resumption of the full planting programme adopted by Parliament and taking a risk which no other country is prepared to take. In its arrangements with regard to education and research and the sowing of seed and raising of plants the Commission is keeping in view the possibility of an early resumption of the full programme.

The policy of the reduction has in the event worked out in a grotesque way. At the time the Commissioners were being asked on the one side to reduce their programme in the interests of economy they were being pressed on the other side to provide as much work as possible for the unemployed. Thus the total net expenditure on their normal programme amounted to £289,619 for the year ended 30th September, 1921. By careful economies it was reduced to £219,870 for 1922, but additional expenditure on unemployment relief works increased the total expenditure for 1922 to £373,887. The Commissioners have undergone a somewhat similar experience in 1923. In the first year of unemployment schemes the decision to undertake relief operations was not communicated to them until November and in the second owing to the change of Government not until December, *i.e.*, not until the current planting season was well under way. In conclusion the Commissioners would again urge the necessity for a broader view being taken of their operations. The reasons which render it necessary to have a forest policy at all are not evanescent but arise from a world-wide movement; the root causes of rural unemployment are not likely to disappear in a single season. On the other hand, successful forestry demands steadiness in policy, and it was one of the principal objects of the Forestry Act of 1919 to secure that continuity. The subject of Forestry in relation to rural employment is discussed at length on pp. 31-34 of this Report.

**FINANCE.**—Although the Parliamentary Vote to the Forestry Fund amounted to only £20,000, the carry over from the previous year (£293,752), the sums transferred to the Fund from the General Vote for Unemployment (£250,000) and receipts (£24,544) brought the total amount up to £588,296. For the reasons referred to above this sum was more than sufficient for the requirements of the Commissioners, and £189,865 was carried forward to the next year.

**LAND ACQUISITION.**—After a break of eight months in the continuity of acquisitions, Treasury sanction was obtained in November, 1921, to acquire 25,000 acres of plantable land in connection

with Unemployment schemes. The area actually acquired during the year under review was 23,937 acres. The acquisitions to the end of the Forest Year, 1922, are compared in the table below with the proposals of the Acland Report.

*Acquisition of Plantable Land.*

Year ended 30th September.	By Leasing or Feuing.			By Purchase.			Total.		
	Proposed (Acland Report).	Actual.	Excess (-) Deficit (-).	Proposed (Acland Report).	Actual.	Excess (+) Deficit (-).	Proposed (Acland Report).	Actual.	Excess (+) Deficit (-).
1920 ..	8,800	20,944	+18,144	22,000	6,684	-16,316	30,800	33,628	+2,828
1921 ..	9,200	10,893	+10,693	22,000	14,968	-7,032	31,200	34,801	+3,601
1922 ..	8,800	22,703	+13,903	22,000	1,234	-20,766	30,800	23,937	-6,863
Total	26,800	64,540	+42,740	66,000	22,886	-43,114	92,800	92,420	-374

The total area of plantable land which has been acquired corresponds very closely with the proposals of the Acland Committee at approximately 92,500, but the area leased is 42,740 acres more and the area purchased 43,114 acres less. These differences are of importance from two points of view. In the first place there is a saving in immediate outlay. In the second place, as was explained in the Commissioners' Second Annual Report, leased land cannot in practice be planted up so quickly as was estimated by the Committee, and consequently more of it must be held at a given time in order to achieve a given planting programme. In estimating their requirements, on the basis of a 10,000 acre planting programme for the next few years, the Commissioners came to the conclusion that it would be necessary to acquire approximately 30,000 acres in the year ending 30th September, 1923, 17,500 acres and 12,500 acres in the two succeeding years, and thereafter 10,000 acres per annum so long as the 10,000 acre planting programme was maintained.

## PLANTING PROGRAMME.

### (A) STATE FORESTS.

*Conifers.*—The programme recommended by the Acland Committee, the way in which the Commissioners proposed to modify that figure in order best to achieve the same total of 150,000 acres in ten years and the area planted to the end of the year under report are shown in the table below.

At the present time, as explained above under General Policy, the Commissioners are working to a uniform planting programme of 10,000 acres per annum for 1922-23 and 1923-24.

Year.	Acland Committee's Programme.	Commission's revised Programme.	Actually planted.	Surplus (+) or Deficit (-) on	
				Acland Committee's Programme.	Commission's Revised Programme.
	Acres.	Acres.	Acres.	Acres.	Acres.
1st yr. 1919-20 ...	Nil	1,600	1,296	+1,296	- 304
2nd „ 1920-21 ...	3,300	5,700	6,105	+2,805	+ 405
3rd „ 1921-22 ...	6,700	8,100	10,517	+3,817	+2,417
4th „ 1922-23 ...	10,000	11,500			
5th „ 1923-24 ...	13,300	14,800	17,918	+7,918	+2,518
6th „ 1924-25 ...	16,700	18,100			
7th „ 1925-26 ...	20,000	21,000			
8th „ 1926-27 ...	23,300	23,000			
9th „ 1927-28 ...	26,700	23,000			
10th „ 1928-29 ...	30,000	23,200			
Total ...	150,000	150,000			

*Broad-leaved Species.*—The Commissioners had laid down no definite programme at the time the necessity for effecting economies arose. The areas planted with hardwoods are :—

	Acres.
1919-20 .. .. .	121
1920-21 .. .. .	272
1921-22 .. .. .	176
Total .. .. .	569

*Total.*—The total area planted or sown during the year under report was 10,693 acres.

#### (B) ASSISTANCE TO LOCAL AUTHORITIES AND PRIVATE OWNERS.

The area proposed to be afforested or replanted by Local Authorities and private owners for the ten-year period was 110,000 acres, or an average of 11,000 acres per annum. In the first two years the Commissioners did not succeed in making any progress with this work, and the only operations proceeding with State Aid were two initiated by the Development Commissioners, viz., a scheme for afforesting 4,000 acres in 20 years by the Liverpool Corporation at Lake Vyrnwy and another for planting some 390 acres on the private estate of Craigmyle in Aberdeenshire. The reasons for non-success which were detailed in the Commissioners' Second Annual Report were broadly that the statutory restrictions as to the terms on which the Commissioners could make grants were too severe. With the object of encouraging landowners to plant and thereby provide work for the relief of unemployment, these restrictions were temporarily removed by the

Forestry Act, 1921. As a result the Commissioners were able to secure, by means of grants, the planting of 10,192 acres, the preparation of 9,127 acres with an undertaking that the area thus prepared would be planted subsequently and the clearance of 3,322 acres of scrub which will also come in for planting. This work is dealt with more fully in the section of this Report which treats of unemployment.

### **Education and Research.**

The Commissioners have reconsidered their policy with regard to Education and Research in the light of their reduced planting programme, and have decided that it would be unwise to modify either at this stage. Forestry education is conditioned by wider interests than the immediate demands of the State Service of Great Britain for forest officers and foresters: India, the Colonies and, to a lesser extent, the Dominions all participate in the advantages derived by the maintenance of Forestry Schools in this country. The Commissioners feel that while this state of affairs continues they are justified in not attempting to adjust their financial assistance to the schools too closely to their own requirements in trained men.

With regard to research and experimental work the Commissioners are of opinion that there is so much to be done that they would not be justified in diminishing the modest programme now in hand. The results of the work should be of great value both to the owners of the existing woodlands of the country and to the State in the event of the resumption of full-scale operations.

**IMPERIAL FORESTRY BUREAU.**—The responses of the different units of the Empire to the invitation to join in constituting this Bureau were somewhat varied in character, and the Commissioners resolved to remit the question for final decision to the second Imperial Forestry Conference which is to be held in Canada in the summer of 1923. In the meantime they have arranged with the Empire Forestry Association to make a commencement with such of the work of the Bureau as the Association is in a position to deal with.

**CENSUS OF WOODLANDS.**—This work has been proceeding steadily; in Scotland through the Commission's own staff and local correspondents, and in England and Wales with the assistance of the Inland Revenue Department and the Consultative Committees.

### **Ireland.**

Following the Government of Ireland Act, 1920, the care of Irish Forestry passed on 1st April, 1922, to the Provisional Government of what is now the Irish Free State and the Government of Northern Ireland. The following is a brief account of the policy to which the Commissioners attempted to give effect:—

Under Section 3 (2) of the Forestry Act, 1919, which came into operation on the 1st September, 1919, the powers and duties of the Department of Agriculture and Technical Instruction for Ireland in relation to forestry were transferred to the Commissioners, who were



appointed on the 29th November, 1919. The Department of Agriculture and Technical Instruction, which came into existence in 1900, under the Agriculture and Technical Instruction Act, 1899, commenced forestry operations in 1904, in which year the Avondale Estate in Co. Wicklow was purchased with the object of setting up a school for working foresters. This estate was laid out in demonstration plots in 1906 by Mr. A. C. Forbes, who entered the service of the Department as Forestry Inspector in that year and has continued to act throughout as the chief executive forest officer in Ireland. At the Avondale School working foresters were trained for service under the Department and for employment on private estates.

Following the report of the Departmental Committee on Irish Forestry the Department of Agriculture and Technical Instruction began in 1908 to purchase and preserve the woods on estates which were being sold to tenant purchasers under the Land Act. For that purpose a sum of £6,000 was annually voted by Parliament.

In 1910 a further advance was made when the Development Commissioners agreed to finance schemes for the acquisition and afforestation of waste land. These schemes were arrested by the war before they had reached full development. When, therefore, the Commissioners took over from the Department the total area was 14,415 acres, consisting of young woods, depleted old woods and bare ground. The staff, which consisted of a chief forestry inspector, two inspectors and ten foresters with five clerks and one shorthand typist, was also transferred to the Commissioners.

In order to maintain continuity in administration the Commissioners arranged that the Department of Agriculture and Technical Instruction should act as their agents in Ireland, the Commission's staff being seconded to the Department for carrying on the executive work. It was agreed also that the existing arrangements with regard to education should continue. The Professor of Forestry in the Royal College of Science, Dublin, who had been engaged primarily in connection with forestry education and research in Ireland, and attached to the Forestry Section of the Department of Agriculture and Technical Instruction in an advisory capacity, was consequently transferred to the Commission.

In planning the work for the large programmes which they had in view, the Commissioners adopted the same procedure as in Great Britain. For general advisory purposes a representative Consultative Committee was appointed under Order in Council. For executive purposes an Assistant Commissioner with two Divisional Officers and six District Officers were appointed, while the clerical staff was correspondingly strengthened.

The Commissioners estimated that of the 1,770,000 acres which the Acland Committee recommended should be afforested in 80 years, Ireland's share would be between 150,000 and 200,000 acres. As regards the planting programme in immediate view, it was hoped

gradually to work Ireland's quota up to between 2,000 and 3,000 acres per annum by the tenth year. Up to March 31st, 1922, the Commissioners had secured in Ireland by purchase 3,374 acres and on long lease 2,819 acres, a total of 6,193 acres, while negotiations for a further 4,400 acres were in an advanced stage. As regards afforestation, 202 acres were planted in 1919-20, 420 acres in 1920-21, and 1,084 acres in 1921-22, *i.e.*, 1,706 acres in all.

The financial and other arrangements entailed by the fission of Ireland which were not completed in the year under review will be detailed in the next Annual Report.

The personal inspections conducted by the Commissioners in Ireland were sufficient to convince them that while there is great need for systematic forestry in Ireland, the natural conditions in many parts are admirably suited to timber production. They venture, therefore, to express the hope that the work which they carried on for a short space of time will be adequately developed. At the same time, they desire to place on record their appreciation of the help and goodwill which was extended to them on all sides.

## OPERATIONS—FOREST YEAR 1921-22.

### The Forestry Fund.

The position of the Forestry Fund at the 30th September, 1922, 1921 and 1920 is shown in Table I:—

*Table I.—Forestry Fund Account.*

Year ending 30th September.	Balance from Preceding Year.	Receipts.				Expenditure (Table II, Heads A to K.)			Balance remaining in the Fund, 30th September.
		For Forestry Fund Proper.		For Relief of Unemployment	Total.	On Objects of Forestry Fund Proper.	On Schemes for the Relief of Unemployment.	Total.	
		Parliamentary Votes.	Other (Table II Head Z)						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1920 ..	£ Nil	£ 478,000	£ 12,220	£ —	£ 490,220	£ 106,858	£ —	£ 106,858	£ 383,371
1921 ..	383,371	200,000	20,140	—	229,140	318,768	—	318,768	293,752
1922 ..	203,752	20,000	24,544	250,000	204,544	244,414	154,017	398,431	189,805
Totals		698,000	65,922	250,000	1,013,922	670,040	154,017	824,057	

The carry over in the Forestry Fund from 1920-21 was £293,752. The Parliamentary Vote for the normal purposes of the Fund was £20,000, and "Other receipts" amounted to £24,544, making a total of £338,296. In addition, there was transferred to the Forestry Fund from the general Vote for the Relief of Unemployment the sum of £250,000 to be expended on relief works. The expenditure on normal operations

amounted to £244,414, and on relief works to £154,017, making a total of £398,431. There remained consequently in the Fund at the 30th September, 1922, the sum of £189,865, of which £95,983 represented the unexpended balance of £250,000 provided for relief works and £93,882 the carry over from normal operations.

*Expenditure.*—On normal operations, £244,414 ; on relief works, £154,017.

In the following tables, expenditure from the grant of £250,000 for the relief of unemployment is shown in italics to distinguish it from normal expenditure.

Table II. gives the expenditure by sub-heads under which estimates are presented to Parliament. The largest items are : Salaries, Wages and Allowances, £51,449, a reduction of £20,476 over 1921 ; Forestry Operations, £154,457 (a reduction of £54,173) but including relief works, £201,139 ; Advances for Afforestation, £51,050, represents an increase of £50,698, of which practically the whole was in respect of relief works ; normal Agency and Advisory services cost £1,945 less at £7,612, owing to the fact that the charges in Ireland, where the bulk of the expenditure was previously incurred, were this year in respect of six months only, the relief expenditure of £55,783 under this head was incurred in the Crown Woods and Forests.

Table II.—*Expenditure and Receipts by Parliamentary Heads of Accounts.*

Year ending 30th September.	A. Salaries, Wages and Allowances.	B. Headquarter Charges.	C. Asst. Commissioners' Charges.	D. Divisional Officers' Charges.	E. Forestry Operations.	F. Advances for Afforestation Pur- poses.	G. Education.	H. Research and Experiment.	J. Agency and Advisory Services.	K. Special Services.	Total.	Z. Receipts.	Net Expenditure.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1920..	£ 25,156	£ 577	£ 1,825	£ 4,829	£ 66,550	£ —	£ 4,547	£ 1,538	£ 1,577	£ 259	£ 106,858	£ 12,220	£ 94,629
1921..	71,025	1,256	3,880	10,207	208,030	352	9,222	3,340	0,557	390	318,768	20,149	289,619
1922..	51,449 <i>10</i>	4,454 <i>—</i>	5,242 <i>—</i>	8,728 <i>886</i>	154,457 <i>46,682</i>	492 <i>50,558</i>	10,386 <i>—</i>	2,588 <i>98</i>	7,012 <i>55,783</i>	1,006 <i>—</i>	244,414 <i>154,017</i>	24,544 <i>—</i>	219,870 <i>154,017</i>
Total	148,530 <i>10</i>	6,287 <i>—</i>	10,947 <i>—</i>	21,704 <i>886</i>	429,037 <i>46,682</i>	844 <i>50,558</i>	24,155 <i>—</i>	7,460 <i>98</i>	18,746 <i>55,783</i>	1,064 <i>—</i>	670,040 <i>154,017</i>	65,922 <i>—</i>	604,118 <i>154,017</i>

NOTE.—The figures in italics are in respect of Relief Works and are separately totalled.

In Table II.a the sub-heads A, B, C and D, which cover salaries, headquarter and similar charges are allocated to the effective sub-heads so that a clearer view of expenditure by objects is obtained.

Table IIa.—Expenditure re-classified by Objects.

Year ending September 30th.	Expenditure Sub-heads A. to D.				E. Forestry Operations.	F. Ad- vances for A Forest- ation Purposes	G. Educa- tion.	H. Research and Expert- ment.	J. Agency and Advisory Services.	K. Special Services.	Totals. Columns (3) to (9) In- clusive.
	Sub-head.	Total.	Allo- cated to Sub- heads E. to K.	Unal- located.							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
1020..	A. B. C. and D.	£ 32,387	£ 18,387	£ 14,000	£ 76,641	—	£ 6,359	£ 3,407	£ 4,686	£ 1,075	£ 106,858
1021..	Do. . .	87,268	43,020	44,248	230,255	704	13,748	7,737	18,226	3,850	318,768
1022..	A. . .	61,449 <i>10</i>	25,556 <i>10</i>	25,893 —	10,443 <i>7</i>	106 <i>3</i>	2,712 —	3,419 —	1,305 —	1,571 —	51,449 <i>10</i>
	B. . .	4,454	56	4,398	—	—	19	—	—	37	4,454
	C. . .	5,242	201	4,951	243	—	5	21	11	11	5,242
	D. . .	0,728 <i>886</i>	0,728 <i>886</i>	—	5,822 <i>633</i>	40 <i>253</i>	17 —	—	477	372	0,728 <i>886</i>
	Direct Expend- iture.	—	—	—	154,457 <i>46,682</i>	402 <i>50,558</i>	10,386 —	2,588 <i>98</i>	7,612 <i>55,783</i>	1,006	176,541 <i>153,121</i>
Total 1022 . .		07,873 <i>896</i>	32,031 <i>896</i>	35,242 —	176,965 <i>47,322</i>	638 <i>50,814</i>	13,130	6,028 <i>98</i>	9,405 <i>55,783</i>	2,997 —	244,414 <i>154,017</i>
Grand Total 1920-1922. .		187,528 <i>896</i>	94,038 <i>896</i>	93,400 —	483,661 <i>47,322</i>	1,342 <i>50,814</i>	33,246 —	17,302 <i>98</i>	32,317 <i>55,783</i>	8,522 —	670,040 <i>154,017</i>

NOTE.—The figures in italics are in respect of Relief Works and are separately totalled.

**Sub-heads A to D, General Organisation: Normal Expenditure,  
£67,873; on relief works, £896.**

Normal expenditure was reduced by £19,395, as against the year ending 30th September, 1921. This was partly due to the fall in the cost of living and consequently in the bonus on salaries, partly to the fact that a full year's services for Ireland is not included, and partly to the reorganisation described below, the full effect of which will not be felt until the year subsequent to that now under report. In the re-arrangement of the distribution of work described on pp. 32-33 of the Commissioners' First Annual Report, the offices of Chief Technical Assistant to the Assistant Commissioner, Land Acquisition Officer and Works Officer (Scotland) have been left vacant, while the number of divisions has been reduced from nine to eight. One English Divisional Officer, by arrangement with one of the agricultural colleges, now spends the greater part of his time on educational work, thus relieving the expenditure under sub-head G (Education). Generally speaking, the number of district officers has been reduced from two to one per division.

Education, Research and Publication work has been placed under one officer instead of two, and the position of Co-ordination Officer has been vacated. Mr. Hugh Murray, Assistant Commissioner for England and Wales, has served without salary since 1st April, 1922.

Corresponding reductions have been made in the clerical staff.

Apart from the transfer to Ireland as from 1st April, 1922, of the Commission's entire staff in that country, the total reductions effected to 30th September, 1922, under the re-organisation were: technical officers 48 to 38; other staff 86 to 49; total 134 to 87.

The Commissioners desire to express their thanks to the staff for their loyal and effective services over the year under report. The normal programme actually carried out was that decided on before any reduction in staff was contemplated, and, in addition, the unemployment relief works had to be carried through. It will be observed that out of an expenditure of £154,017 on the latter, only £896 was due to costs of administration.

**Sub-head E, Forestry Operations : Normal expenditure, £176,965 ; on Relief Works, £47,322.**

The total direct expenditure on normal operations was £154,457, and on relief works, £46,682, to which must be allocated from sub-heads A to D £22,508 and £640 respectively, giving the totals shown above. The main items of expenditure are shown in Table E, which also gives comparative figures for previous years :—

*Table E.—Analysis of Forestry Operations (Table IIa, Column E).*

Year.	Superior Supervision Charges.	*Local Supervision.	Acquisition of land, etc.	Roads and Buildings.	Cultural Operations.	Preparation and Sale of Produce.	†Transport.	Stores and Miscellaneous Payments.	Gross Total.	Receipts.	Net Total.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1920..	£ 10,001	£ 1,385	£ 40,486	£ 1,472	£ 19,151	£ 337	£ 2,011	£ 1,708	£ 76,641	£ 9,771	£ 66,870
1921..	21,625	5,282	92,877	8,020	90,533	1,670	610	9,638	230,255	10,890	213,365
1922..	22,508 <i>640</i>	8,567 <i>942</i>	13,042 <i>4</i>	3,461 <i>1,335</i>	99,664 <i>40,302</i>	2,446 <i>1,473</i>	—	27,277 <i>2,626</i>	176,965 <i>47,322</i>	20,800 —	158,165 <i>47,322</i>
Total	54,224 <i>640</i>	15,234 <i>942</i>	146,405 <i>4</i>	12,953 <i>1,335</i>	209,348 <i>40,302</i>	4,453 <i>1,473</i>	2,621 —	38,023 <i>2,626</i>	483,961 <i>47,322</i>	47,461 —	436,400 <i>47,322</i>

\* In First and Second Annual Reports the expenditure was shown separately under "Local Supervision" and "Surveys and Working Plans."

† In First and Second Annual Reports, Transport expenditure was shown separately; in the present Report it has been allocated among the objects in connection with which it was incurred.

NOTE.—The figures in italics are in respect of Relief Works and are separately totalled.

Receipts amounted to £20,800, of which £8,975 represented sales of forest produce, £5,251 rents of land, etc.

*Supervision: Superior and Local: Normal Expenditure*, £31,075; *on Relief Works*, £1,582.—As regards normal operations, there is an increase of £4,168 over the previous year, three-fourths of which is due to the increased numbers of foresters and foremen required to supervise the more numerous estates (61 against 38) on which planting operations were carried out.

*Acquisition of Land, Buildings and Standing Timber: Expenditure*, £13,046.—During the year £7,277 was paid in respect of the purchase of land, including the standing timber and buildings thereon, and £5,769 in respect of land held on long lease or feu.

The average rent paid for leased land is approximately 2s. per acre and the average price for purchased land £1 10s. per acre, or, if the whole be charged against plantable land only, 2s. 10d. and £3 respectively.

The actual area which the Commissioners had completely acquired, that is to say, for which the deeds had been executed and purchase money

paid by 30th September, 1922, was 102,094 acres, the corresponding figures in the two previous Reports being 61,171 acres and 11,454 acres.

In addition to the completed acquisitions, entry had been secured on a number of other properties. Details for the different parts of the United Kingdom 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. The table omits land previously acquired in Ireland by the Department of Agriculture and Technical Instruction.

*Land acquired from 29th November, 1919, to 30th September, 1922.*

Country.	By Lease or Feu.			By Purchase.			Total by Lease or 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 .. ..	20,914	87	21,001	0,144	631	9,775	30,776
Entry secured .. ..	14,181	980	15,161	600	—	600	15,761
Total .. ..	35,095	1,067	36,162	9,744	631	10,375	46,537
<i>Scotland—</i>							
Finally completed .. ..	18,770	17,508	36,278	9,563	10,284	28,847	65,125
Entry secured .. ..	13,388	8,778	22,166	1,000	—	1,000	23,166
Total .. ..	32,158	26,286	58,444	10,563	19,284	29,847	88,291
<i>Ireland (to 31st March, 1922)—</i>							
Finally completed .. ..	2,287	532	2,819	2,579	795	3,374	6,193
Entry secured .. ..	—	—	—	—	—	—	—
Total .. ..	2,287	532	2,819	2,579	795	3,374	6,193
Grand Total (United Kingdom) ..	60,540	27,885	97,425	22,886	20,710	43,596	141,021

The total area acquired, as shown in the above table, is 141,021 acres, of which 92,426 acres were classified at the time of acquisition as plantable. Of the plantable area 44,839 acres (48·5 per cent.) are situated in England and Wales, 42,721 acres (46 per cent.) in Scotland and 4,866 acres (5·5 per cent.) in Ireland.

*Cultural Operations: Normal Expenditure*, £99,664; *on Relief Works*, £40,302.—Expenditure under this head is on plantations and nurseries, the amount spent on each, both in respect of normal and relief works, being shown in Table E.5. The sum of £7,710 spent at headquarters was in respect of seed.

*Table E.5.—Cultural Operations: Expenditure (Table E. Col. 5).*

Year ended 30th September, 1922.	Head-quarters.	Great Britain.	Ireland.	Total.
	£	£	£	£
Plantations ...	—	40,924 36,090	753 —	41,677 36,090
Nurseries ...	7,710	50,211 4,212	66 —	57,987 4,212
Total ...	7,710	91,135 40,302	819 —	99,664 40,302

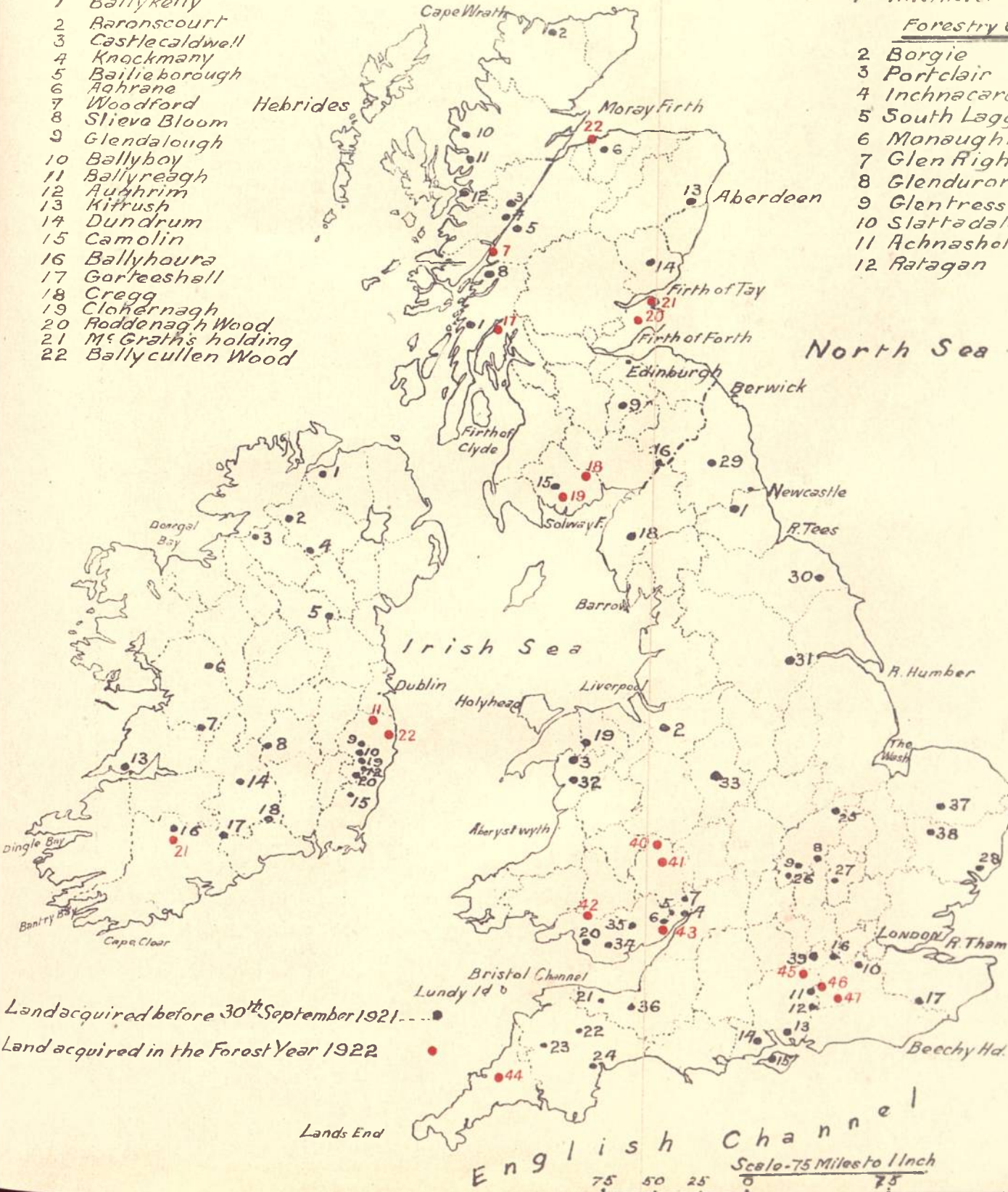
NOTE.—The figures in italics are in respect of Relief Works and are separately totalled.



IRELAND

- 1 Ballykelly
- 2 Baronscourt
- 3 Castle Caldwell
- 4 Knockmany
- 5 Bailieborough
- 6 Aghrane
- 7 Woodford
- 8 Slieva Bloom
- 9 Glendalough
- 10 Ballyboy
- 11 Ballyreagh
- 12 Aghrim
- 13 Kitrush
- 14 Dundrum
- 15 Camolin
- 16 Ballyhoura
- 17 Gorteshall
- 18 Cregg
- 19 Clohernagh
- 20 Roddenagh Wood
- 21 McGrath's holding
- 22 Ballycullen Wood

Hebrides



Land acquired before 30<sup>th</sup> September 1921 - ●

Land acquired in the Forest Year 1922 - ●

Lands End

Scale - 75 Miles to 1 Inch

SCOTLAND  
Crown Woods

- 1 Inverliever
- 2 Borgia
- 3 Portclair
- 4 Inchnacardach
- 5 South Laggan
- 6 Monaghty
- 7 Glen Righ
- 8 Glenduror
- 9 Glentress
- 10 Slattadale
- 11 Achnashellach
- 12 Ratagan
- 13 Kirkhill
- 14 Montreathmont
- 15 New Galloway
- 16 Newcastleton
- 17 Glenbrantar
- 18 Aucheninnas
- 19 Scree Hill
- 20 Edens Muir
- 21 Tentsmuir
- 22 Culbin

Forestry Commission Areas

ENGLAND AND WALES  
Crown Woods

- |                     |                     |
|---------------------|---------------------|
| 1 Chopwell Woods    | 10 Esher Woods      |
| 2 Dalamere Forest   | 11 Alico Holt Woods |
| 3 Harod Fawr        | 12 Woolmer Forest   |
| 4 Daan Forest       | 13 Bere Woods       |
| 5 Highmoadnw Woods  | 14 New Forest       |
| 6 Tintern Woods     | 15 Parkhurst Wood   |
| 7 Dymock Woods      | 16 Windsor Forest   |
| 8 Salcey Forest     | 17 Bedgebury        |
| 9 Hazelborough Wood |                     |

Forestry Commission Areas

- |                 |                  |
|-----------------|------------------|
| 18 Thornthwaite | 33 Cannock Chase |
| 19 Gwydyr       | 34 Llantrisant   |
| 20 Margam       | 35 Llanover      |
| 21 Exmoor       | 36 Quantocks     |
| 22 Eggesford    | 37 Swaffham      |
| 23 Halwill      | 38 Elveden       |
| 24 Haldon       | 39 Wokingham     |
| 25 Apethorpe    | 40 Wigmore       |
| 26 Brackley     | 41 Shobden       |
| 27 Amphill      | 42 Rheola        |
| 28 Rendlesham   | 43 Chepstow      |
| 29 Rothbury     | 44 Bodmin        |
| 30 Allerston    | 45 Bramshill     |
| 31 Selby        | 46 Churt         |
| 32 Vaughan      | 47 Chiddingfold  |

*Plantations: Normal Expenditure, £41,677; on Relief Works, £36,090.*  
—Of the normal expenditure £37,253 and of the relief expenditure £35,481 was in respect of first plantings; £4,424 and £609 respectively on weeding and beating up previous years' work. Details are given in Table E.5 (a).

Table E.5 (a).—*Plantations: Expenditure.*

Year ended 30th September	First Plantings.							Second and Subsequent Years.			Grand Totals.
	Prepar- ation of Ground.	Drain- age.	Fenc- ing.	Plant- ing.	Weed- ing.	Other.	Total.	Weed- ing.	Beating up.	Total.	
1920. United Kingdom	£ 3,185	£ 793	£ 3,090	£ 3,361	£ 665	£ 173	£ 11,276	£ —	£ —	£ —	£ 11,276
1921. United Kingdom	11,391	2,035	13,241	28,508	1,076	2,445	58,786	861	692	1,553	60,339
1922. England and Wales	2,621 <i>13,132</i>	161 <i>511</i>	2,891 <i>7,017</i>	16,805 <i>1,547</i>	1,222 <i>5</i>	1,660 <i>279</i>	25,369 <i>22,541</i>	812 <i>—</i>	2,889 <i>470</i>	3,701 <i>470</i>	29,070 <i>23,011</i>
Scotland	1,379 <i>5,073</i>	1,211 <i>3,448</i>	2,510 <i>2,048</i>	4,547 <i>2,073</i>	648 <i>94</i>	830 <i>204</i>	11,131 <i>12,940</i>	287 <i>32</i>	430 <i>107</i>	723 <i>139</i>	11,854 <i>13,079</i>
Ireland	7	10	283	437	—	16	763	—	—	—	763
Totals	4,007 <i>18,255</i>	1,382 <i>3,959</i>	5,684 <i>9,065</i>	21,789 <i>3,620</i>	1,870 <i>99</i>	2,521 <i>483</i>	37,253 <i>35,481</i>	1,099 <i>32</i>	3,325 <i>577</i>	4,424 <i>609</i>	41,677 <i>36,090</i>
Totals 1920-1922	18,583 <i>18,255</i>	4,210 <i>3,959</i>	22,024 <i>9,065</i>	53,748 <i>3,620</i>	3,011 <i>99</i>	5,130 <i>483</i>	107,315 <i>35,481</i>	1,960 <i>32</i>	4,017 <i>577</i>	5,977 <i>609</i>	118,292 <i>36,090</i>

NOTE.—The figures in italics are in respect of Relief Works and are separately totalled.

The total area planted in the Forest Year, 1922, was 10,775 acres, of which 10,599 acres (including 82 acres at Craigmyle) were placed under coniferous and 176 acres under broadleaved species.

The total addition to the woodland area of the United Kingdom was 8,361 acres, the remaining plantations being on the site of felled woodlands. The number of plants used in making these plantations and in beating up the previous years' plantations was 20,465,000, of which 43 per cent. were Scots and Corsican pines, 30 per cent. Norway and Sitka spruces, 16 per cent. European and Japanese larches, and 9 per cent. Douglas fir.





## Plantations. Year ended 30th September, 1922—Scotland.

Forest.	Area planted (acres).				Species planted, including beating up (thousands).											
	Afforested.		Re-afforested.		Total.		Scots and Corsican Pine.	Eur. and Jap. Larch.	Douglas Fir.	Norway and Sitka Spruce.	Oak.	Ash.	Beech.	Others.	Total.	
	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.										
Borgie ...	219	—	—	—	219	—	215	—	1	—	—	—	—	—	—	376
Slatfadale ...	100	—	—	—	100	—	—	—	75	—	—	—	—	—	—	154
Achnashellach ...	317	10	—	—	317	10	58	—	224	36	—	—	—	7	—	522
Port Clair ...	194	—	—	—	194	—	—	—	30	5	—	—	—	—	—	329
Inchnacardoch ...	445	—	—	—	445	—	1	—	6	—	—	—	—	—	—	741
South Laggan ...	108	—	—	—	108	—	—	—	85	—	—	—	—	—	—	228
Glen Righ ...	224	—	—	—	224	—	—	—	5	9	—	—	—	—	—	385
Kirkhill ...	104	6	—	—	104	6	—	—	95	20	—	—	9	—	—	156
Monaughty ...	593	15	—	—	593	15	23	—	518	30	—	4	22	—	—	944
Culbin Sands ...	74	—	—	—	74	—	103	—	4	3	—	—	—	4	—	117
Craigmyle ...	82	—	—	—	82	—	29	—	110	—	—	—	—	—	—	166
Montreathmont ...	213	15	—	—	213	15	369	—	22	—	—	—	10	—	—	435
Glen Duror ...	124	3	—	—	124	3	—	—	19	3	—	—	—	—	—	238
Glenbranter ...	454	4	—	—	454	4	—	—	—	—	—	—	—	—	—	635
Glentress ...	239	—	—	—	239	—	152	—	306	77	—	—	—	—	—	562
Newcastleton ...	143	—	—	—	143	—	63	—	24	7	—	—	—	—	—	218
New Galloway ...	200	11	—	—	200	11	107	—	59	61	—	—	7	—	—	294
Tentsmuir ...	292	—	—	—	292	—	585	—	—	—	—	—	—	3	—	598
Totals—	4,099	64	—	—	4,099	64	—	—	—	—	—	—	—	—	—	—
Planted ...	26	—	—	—	26	—	—	—	—	—	—	—	—	—	—	—
Direct Sowings ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Grand Total	4,125	64	—	—	4,125	64	1,705	—	1,582	252	—	4	48	15	—	7,098

*Plantations. Period 1st October, 1921, to 31st March, 1922—Ireland.*

Forest.	Area planted (acres).				Species planted, including beating up (thousands).									
	Afforested.		Re-afforested.		Total.	Scots and Corsican Pine.	Eur. and Jap. Larch.	Douglas Fir.	Norway and Sitka Spruce.	Oak.	Ash.	Beech.	Others.	Total.
	Conifers.	Broad-leaved.	Conifers.	Broad-leaved.										
Aghrane ...	—	—	—	—	—	—	—	—	4	—	—	—	—	4
Aughrim ...	172	—	—	172	—	55	115	68	18	—	—	7	—	263
Baillieboro' ...	3	—	21	24	—	7	15	10	30	—	—	—	1	263
Ballykelly ...	—	—	20	20	—	—	8	17	—	—	—	—	8	33
Castledowel ...	—	—	40	40	1	22	21	—	15	—	—	—	1	59
Knockmany ...	11	—	12	23	—	11	9	8	8	—	—	—	3	39
Ballyhours ...	113	—	—	113	—	264	—	—	—	—	—	—	22	286
Camolin ...	—	—	19	19	—	11	5	19	5	—	—	—	1	41
Dundrum ...	—	—	52	52	—	7	2	7	82	—	—	—	—	98
Glendalough ...	135	—	—	135	—	122	59	29	12	—	—	—	—	222
Glenmalure ...	54	—	—	54	—	48	20	12	40	—	—	—	—	120
Kilrush ...	—	—	2	2	—	—	—	—	31	—	4	—	4	39
Slieve Bloom ...	75	—	—	75	—	11	10	29	57	—	—	—	—	107
Suir Valley ...	61	—	—	61	—	166	—	—	—	—	—	—	—	166
(Russellstown)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Woodford ...	62	—	231	293	—	26	70	43	326	—	—	—	6	471
Baronscourt ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	686	—	397	1,083	1	750	334	242	628	—	4	7	46	2,011

**Summary.**

England and Wales	3,482	4	1,909	107	5,391	111	6,281	1,268	1,332	2,094	20	89	146	126	11,356
Scotland ...	4,125	64	—	—	4,125	64	1,705	1,582	252	3,492	—	4	48	15	7,098
Ireland ...	686	—	397	1	1,083	1	750	334	242	628	—	4	7	46	2,011
Total United Kingdom	8,293	68	2,306	108	10,599	176	8,736	3,184	1,826	6,214	20	97	201	187	20,465

*Plantations. Crown Woods under the Technical Supervision of the Forestry Commissioners. Year ended 30th September, 1922.*

Forest.	Area planted (acres).				Species planted, including beating up (thousands).									
	Afforested.		Re-afforested.		Total.		Scots. and Cor- sican Pine.	Eur. Douglas and Jap Fir.	Norway and Sitka Spruce.	Oak.	Ash.	Beech.	Others.	Total.
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.								
New Forest ...	—	—	—	—	—	—	118	115	214	79	—	—	—	531
Bere ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parkhurst ...	—	—	1	—	1	—	12	—	3	1	—	—	—	16
Dean Forest and Hope Wood	64	—	157	5	221	5	99	43	80	174	6	59	41	503
High Meadow and Abbotswood	—	—	33	7	33	7	18	7	28	6	1	9	15	94
Alice Holt ...	—	—	—	30	—	30	3	3	1	—	66	1	—	98
Woolmer ...	—	—	60	—	60	—	—	—	—	—	—	—	—	—
Esher ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Salcey ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hazelborough ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tintern ...	98	13	25	1	123	14	95	47	56	11	—	16	1	226
Dynock ...	—	—	8	—	8	—	—	7	7	17	—	—	—	31
Delamere ...	—	—	56	—	56	—	120	22	—	18	—	—	—	142
Hafod Fawr ...	4	—	—	—	4	—	—	—	—	18	—	—	—	18
Chopwell ...	9	—	—	—	9	—	28	2	—	7	—	—	3	40
Inverliever ...	123	—	—	—	123	—	6	9	9	206	—	—	10	240
Totals—	298	13	280	38	578	51	—	—	—	—	—	—	—	—
Planted ...	—	—	60	5	60	5	—	—	—	—	—	—	—	—
Direct Sowing ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Grand Total ...	298	13	340	43	638	56	499	255	398	519	73	85	75	1,939

The figures relative to areas and species stated in the tables on pp. 16-18 are exclusive of 694 acres planted in the Crown Woods which come under the technical supervision of the Commissioners and are shown separately on p. 19, but they include 82 acres planted at Craigmyle under a proceeds-sharing scheme and 676 acres planted in Ireland on certain Irish properties which are accounted for under Sub-head J (Agency Services).

*Nurseries: Normal Expenditure, £57,987; on Relief Works, £4,212.*—Expenditure in connection with nurseries is shown in Table E.5 (b) below. It will be noted that expenditure on plants amounted to £22,899, a sum nearly £20,000 in excess of the 1921 expenditure. This is accounted for by the fact that the Commissioners took over all the Crown nurseries and their stocks and the liabilities which the Office of Woods had incurred in connection with emergency nursery operations started originally by the Development Commissioners. This expenditure is consequently not properly attributable to the year under review.

Table E.5 (b).—Nursery Operations.

Year ending 30th September.	Expenditure.						Receipts.			
	Seed.	Plants.	Labour.	Materials	Other.	Total.	Seed.	Plants.	Other.	Total.
	£	£	£	£	£	£	£	£	£	£
1920 (United Kingdom) ..	1,157	50	5,418	504	746	7,875	—	—	—	—
1921 (United Kingdom) ..	5,507	3,056	18,874	2,144	613	30,194	775	37	129	941
1922 Headquarters ..	7,710	—	—	—	—	7,710	1,475	—	—	1,475
England and Wales ..	1,507	22,480	12,132	318	1,315	37,842	—	40	235	284
	—	—	1,265	60	49	1,374	—	—	—	—
Scotland ..	501	410	10,254	300	715	12,360	—	35	148	183
	13	116	2,643	19	47	2,838	—	—	—	—
Ireland .. ..	34	—	13	—	19	66	—	—	—	—
Total .. ..	0,932	22,899	22,309	708	2,048	57,987	1,475	84	383	1,942
	13	116	3,908	79	96	4,212	—	—	—	—
Totals 1920 1922 ..	10,506	26,005	46,001	3,356	3,408	96,056	2,250	121	512	2,883
	13	116	3,908	79	96	4,212	—	—	—	—

NOTE.—The figures in italics are in respect of Relief Works, and are separately totalled.

The total area under nurseries at 30th September, 1922, was 345 acres, stocked with 138 million seedlings and 45 million transplants. Comparative figures for the three years 1920-1922 are given in the following table :—

## Nurseries.

Year ending 30th September.	Country.	Seed Sown (lbs.).			Stock of Plants at 30th September (thousands).						Area (Acres).
		Coniferous.	Broad-leaved.	Total.	Transplants.			Seedlings.			
					Coniferous.	Broad-leaved.	Total.	Coniferous.	Broad-leaved.	Total.	
1922..	England and Wales ..	4,553	33,669	38,222	21,012	2,412	23,424	62,455	3,361	65,846	126
	Scotland ..	3,269	19	3,288	19,150	199	19,349	65,607	224	65,831	181
	Ireland ..	—	—	—	2,381	7	2,388	6,090	25	6,115	38
	(to 31st March, 1922) Total, United Kingdom ..	7,822	33,688	41,510	42,543	2,618	45,161	134,152	3,640	137,792	345
1921..	England and Wales ..	3,984	3,776	7,760	13,751	2,630	16,381	36,382	2,732	39,114	324
	Scotland ..	3,048	1,675	4,723	13,065	—	13,065	52,415	1,520	53,935	248
	Ireland ..	606	2	608	3,738	20	3,758	17,580	316	17,896	35
	Total, United Kingdom ..	7,638	5,453	13,091	30,554	2,650	33,204	106,377	4,568	110,945	607
1920..	England and Wales ..	4,802	6,320	11,212	17,172	2,827	19,999	62,438	1,332	63,770	232
	Scotland ..	3,593	—	3,593	4,365	1	4,366	76,610	—	76,610	90
	Ireland ..	1,433	203	1,636	2,516	35	2,551	28,550	323	28,873	21
	Total, United Kingdom ..	9,918	6,523	16,441	24,053	2,863	26,916	107,598	1,655	169,253	343

*Supply of Seed.*—The 1921 harvests yielded abundant crops of European larch, Norway spruce, Corsican pine, Scots pine, Douglas fir and Sitka spruce, the quality in all cases being excellent. Supplies of Japanese larch appeared to be plentiful in Japan, but no purchases were made owing to the excessive prices demanded. The Beech crop in this country was almost a complete failure, but ample supplies of other broad-leaved species were obtained.

The Commissioners were able to secure small quantities of European larch seed from Silesia and Poland (Chelm Mountains) where unusually fine strains of this species occur. Very large supplies of Douglas fir and Sitka spruce seed were obtained from the Canadian Dominion Forestry Branch, the seed having been collected in localities where these two species attain their best development.

In view of the unusually good harvest considerable quantities of seed of the most important species were stored in hermetically sealed glass carboys for sowing in the spring of 1923.

During the year under review 4,700 lbs. of seed were sold to nurserymen and private individuals in this country and to various Dominion Governments.

The Commissioners desire to place on record their hearty thanks for a gift of 476 lbs. of Douglas fir seed from Mr. Charles Lathrop Pack, President of the American Forestry Association, and for a gift of 2 lbs. of European larch seed from the Polish Government.

**Sub-head F.—Advances for Afforestation Purposes : Normal Expenditure £638, on Relief Works £50,814.**

The direct normal expenditure amounting to £492 was incurred in respect of the Craigmyle Scheme ; the remaining expenditure represents the time and expenses of the Commission's officers engaged in supervising that scheme and the Liverpool Corporation Scheme at Lake Vyrnwy and in investigating new proposals.

The expenditure on relief works is dealt with fully in the section dealing with unemployment, pp. 29-30.

**Sub-head G.—Education : Expenditure £13,139.**

Details of expenditure are given in Table G below. The item £773 for salaries and expenses of the Commission's officers represents part time of the Headquarters' and Divisional officers and also six months' salary and expenses of the Professor of Forestry in the Royal College of Science, Dublin.

*Table G.—Education : Expenditure (Table II (a), Col. G).*

Year ending 30th September.	Salaries and Expenses of Officers (Allocated).	Apprentices' Schools.						Grants to Institutions.	Total.
		Salaries and Expenses of Lecturers.	Purchase and Rent of Land and Buildings.	*Allowances to Apprentices.	Stores and Equipment.	Fuel, Light and Sundry Expenses	Total.		
1920 .. ..	£ 775	£ 1,017	£ 2,033	£ 1,456	£ 425	£ 653	£ 5,584	—	£ 9,359
1921 .. ..	1,760	3,033	2,247	2,514	953	1,903	10,740	1,242	13,748
1922 .. ..	773	2,244	224	4,300	836	2,550	10,160	2,200	13,130
Total ..	3,314	6,294	4,504	8,270	2,214	5,202	26,484	3,448	33,246

\* The figures for 1920 and 1921 are " Net Allowances to Apprentices," i.e., gross allowances less receipts for work done (See Table Z, Col. 0).

*Apprentices' Schools : Expenditure, £10,160.*—The apprentices' schools have been reduced from four in number to three, situated at Parkend (Forest of Dean), Chopwell (County Durham) and Beaully (Inverness-shire). Sixty-two men received training at these schools during the year. The school at Burley (New Forest) was closed in November, 1921. The special courses provided for disabled soldiers at Birnam terminated in November, 1921, and preparations were made to close similar courses at Brockenhurst (New Forest) in November, 1922. These courses were provided at the request of the Ministry of Labour.

In June, 1922, the Assistant Commissioner for Scotland organised a tour, which was attended by ten landowners. Several private estates and areas belonging to the Commissioners were visited, and in the course of ten days a good general idea was obtained of the various phases of forestry in Scotland.

### Grants to Universities and Colleges : Expenditure, £2,206.

The following universities and colleges received grants during the year : Oxford University, Cambridge University, University College of North Wales, Bangor, Armstrong College, University of Durham, North of Scotland College of Agriculture, West of Scotland Agricultural College.

The various universities and colleges provide degree and diploma courses in forestry. Forestry courses are also available in allied subjects, such as agriculture and estate management.

The number of students studying for the forestry degree at Oxford, Cambridge, Bangor and Aberdeen during 1921-22 was 94, while those studying for the diploma numbered 29. In the forestry courses associated with agriculture and estate management there were 140 students.

The number of forestry degrees granted during the year was 24, while 36 candidates gained a forestry diploma.

### Sub-head H. Research and Experiment : Expenditure, £6,126.

Details of expenditure are stated in Table H below:—

*Table H.—Research and Experiment ; Expenditure (Table IIa. Col. H).*

Year ended 30th September	Salaries and Expenses.		Instru- ments, Stores, etc.	Labour, Seed and Sundry Expenses.	Grants to Institu- tions.	Total.
	Direct Payments	Allocated Charge.				
	£	£	£	£	£	£
1920 ... ..	3,329	—	30	138	—	3,497
1921 ... ..	5,322	442	244	985	744	7,737
1922 ... ..	4,490	115	74	780	569	6,028
	—	—	—	98	—	98
Total ... ..	13,141	557	348	1,903	1,313	17,262
	—	—	—	98	—	98

NOTE.—The figures in italics are in respect of Relief Works, and are separately totalled.

During the year the experimental and research work carried out directly by the Commissioner's staff has been reorganised in consequence of staff reductions. The number of field parties has been reduced from two to one, which works alternately in England and Scotland. Except in point of speed, it has been found feasible to adhere to the original plan of operations.

*Production.*—During the year, 41 new permanent plots were established, 21 being in England and 20 in Scotland. The total number of such plots is now 120, details being as follows:—



Species.	No. of Plots.
European larch . . . .	32
Japanese larch . . . .	14
Scots pine . . . .	12
Corsican pine . . . .	10
Norway spruce . . . .	10
Sitka spruce . . . .	5
Douglas fir . . . .	27
Thuja gigantea . . . .	1
Abies grandis . . . .	1
Tsuga heterophylla . . . .	1
Weymouth pine . . . .	1
Broadleaved . . . .	6
	—
Total . . . .	120
	—

Private landowners have continued to co-operate very heartily with the Commissioners in this work, which will ultimately provide data of the utmost value.

*Nursery and Plantation Work.*—Systematic experiments have been continued with a view to ascertaining by what methods economies can be effected or efficiency increased in nursery practice and silviculture.

The harvesting and storage of tree seeds have received considerable attention. The annual yield of seed is not uniform, and in the case of some species the crop may fail entirely in certain years. It is therefore necessary to store considerable quantities of seed against possible lean years. The storage of seed in airtight glass carboys has been found to give the best results with due regard to economy, and has been particularly successful in the case of Douglas fir, which keeps very badly with ordinary methods of storage. It has also been found that the autumn or early spring sowing of Douglas fir seed which has been stored gives far better results than late spring sowing.

The methods of sowing in drills, in bands and broadcast are being tested as regards the efficiency of each in plant production. The tools and the mechanical devices used in sowing and weeding vary in each method, and tests are in progress to determine the best means of reducing labour costs. Another matter of importance is the relative cost and efficiency of the different kinds of protection which may be adopted against frost and drought under different methods of sowing. The use of green crops for soil cleaning and improvement, especially when used in conjunction with artificial manures, promises to yield useful results.

The plantation series of experiments is being continued. It has already become apparent that for certain species the planting season may be prolonged, thus relieving pressure of work at the busiest forestry season in spring.

The age and type of plant best adapted for planting in different soils and exposures, and under varying conditions of the natural

herbaceous or shrub growth in different localities, is also being tested by comparative experimental methods. Large areas of land above the recognised planting limit occur in many parts of the country. The soil, moisture and temperature conditions may be all quite suitable for tree growth, but one factor, namely, exposure to wind, has hitherto excluded them from being planted. It is believed that a large proportion of such land might be brought into silvicultural use by the selection of the right type of tree in combination with hardy wind-resisting species as nurses. Experiments along these lines are being laid down, but some time must elapse before definite conclusions can be drawn.

*Research.*—Co-ordinated with the experimental work of the Commissioners' officers, research work is being carried out at various centres. Mr. W. E. Hiley is working at Oxford at the botanical problems which arise from the field experimental work. In this connection, the need for fundamental research work on the root action of nursery stock and forest trees has already been felt. The problem has been placed before the Department of Scientific and Industrial Research, in the ambit of which it falls, and it is understood that arrangements are being made to deal with it. The Commissioners have also received the co-operation of that Department in investigating the problems connected with the genus *Chermes* in relation to forest trees. Mr. N. Chrystal has thereby been enabled to continue his investigations into *Chermes Cooleyi* and allied species.

Mr. E. V. Laing has continued his investigations into tree growth on peat areas on the west of Scotland, at both Corrou and Inverliever, and at Borgie on the Pentland Firth. The problem involves a detailed study of mycorrhiza development and tree growth in peat. In all cases it has been found that good mycorrhiza development is correlated with good tree growth, and a considerable amount of new light has been thrown upon the behaviour of the mycorrhiza typical of the pines, larches, spruces and other conifers, especially when growing in peaty soils, and the conditions which inhibit or encourage their development.

Dr. Malcolm Wilson has been engaged in a further study of the life history of *Phomopsis Douglasii* and its distribution in nurseries and plantations. The disease, which may be caused by this recently discovered pest, is not entirely confined to the Douglas fir, but has been found on other species of first-class economic importance. A full report of its effect on Douglas fir will be published in due course.

Mr. J. L. S. Smith has begun a botanical research into the conditions under which hybridisation may be brought about between the European and the Japanese larch. The excellent qualities of the Dunkeld hybrid larch make it highly desirable that some means should be found of obtaining seed in larger quantities.

The Commissioners have decided to undertake a preliminary investigation into the Oak Roller Moth (*Tortrix viridana*) which annually defoliates the oak in one or other part of England. The work will be in charge of the Commissioners' Entomologist, Dr. J. W. Munro, who in addition to routine work has been engaged during the year on a revision of the British Bark Beetles.

It is also proposed to extend the field of research, during the summer of 1923, by the addition of studies in the ecology of waste land and woodlands. Preliminary observations have indicated that useful results are likely to be obtained.

**Sub-head J.—Agency and Advisory Services : Normal Expenditure, £9,405 ; on Relief Works, £55,783.**

The normal expenditure was in respect of areas acquired by the Department of Agriculture and Technical Instruction for Ireland either by Parliamentary Votes or through the Development Fund, and to a small extent expenditure represented by the time and travelling expenses of the Commissioners' officers engaged in giving technical advice to forest owners.

The expenditure of £55,783 on relief of unemployment schemes relates to the Crown Forests and Woodlands and is referred to in greater detail in the section dealing with Unemployment (p. 29).

**Subhead K.—Special Services : Expenditure, £2,997.**

Under this head is included the cost of publications, census of woodlands, the Consultative Committees, exhibits at Agricultural Shows and similar items. Details of expenditure are given in Table K below :—

*Table K.—Analysis of Special Services (Table II (a), Col. K).*

Year ending 30th September.	Consultative Committees' Expenses.	Publications.	Special Enquiries.	Allocated Charges.	Total.
1920 ... ..	£ 42	£ 319	£ 218	£ 1,096	£ 1,675
1921 ... ..	267	660	132	2,791	3,850
1922 ... ..	109	302	595	1,991	2,997
<b>Total ...</b>	<b>418</b>	<b>1,281</b>	<b>945</b>	<b>5,878</b>	<b>8,522</b>

**Publications.**

The publications issued by the Commissioners during the year ended 30th September, 1922, were as follows :—

Leaflet No. 8—*Douglas Fir Seed Fly*. The grubs of this insect destroy the seed of the Douglas fir.

Leaflet No. 9—*Forest Fires*. Recommendations are made with a view to the prevention of forest fires.

Bulletin No. 4—*The Douglas Fir Chermes (Chermes Cooleyi)*. A report of an investigation into the life-history of this insect.

*Second Annual Report of the Forestry Commissioners*.—Being the report for the year ending 30th September, 1921.

The Commissioners again desire to acknowledge the assistance rendered by the Arboricultural Societies in the distribution of leaflets.

### **Census of Woodlands.**

Considerable progress has been made with this work. In Scotland, through the agency of the Commission's staff and local correspondents some 509 parishes out of 816 parishes which contain woodland have been investigated. In England and Wales the work has proceeded on an experimental scale through the agency of the Consultative Committees and private gentlemen whom the Committees have interested in the subject. Two counties in England, viz., Hertford and Suffolk have been completed under the supervision of Col. Abel Smith and Brigadier-General H. G. Joly de Lotbinière to whom the Commissioners tender their best thanks. Two counties are also being investigated in Wales but are not yet completed. The Valuation Office of the Inland Revenue Department have been good enough to co-operate with the Commission in the map work which is involved in the Census.

### **Forestry Exhibits at Agricultural Shows.**

Under the auspices of the Commission forestry exhibits were staged at the Agricultural Shows of the Royal English Agricultural Society at Cambridge, the Bath and West of England Society at Plymouth and the Welsh National at Wrexham.

### **Consultative Committees.**

The Consultative Committee for England held two meetings during the year, the Committees for Scotland and for Wales each met three times and the Committee for Ireland once.

The Chairman and certain officers have from time to time attended meetings of the Committees.

During the year the following matters have been referred to the Committees in Great Britain for their advice and assistance :—

- (1) Procedure in connection with grants for afforestation schemes in relief of unemployment.
- (2) Subjects for investigation regarding home-grown timber.
- (3) Selection and laboratory testing of specimens of the newer exotic conifers.

The following subjects were considered by some of the Committees and suggestions thereon forwarded to the Commission :—

Protection of woodlands from fire.

Utilisation of home-grown timber.

Waste land.

Report on the Forestry Commission by The Committee on National Expenditure.

Progress of census of woodlands.

Ordnance Survey classification of woodlands.

The Commissioners regret to report the death during the year of Capt. Sir Beville Stanier, Bart., M.P., a member of the English Committee, Mr. George Fraser, a member of the Scottish Committee, and Colonel W. Forrest, D.S.O., a member of the Welsh Committee.

The following members resigned (a) from the English Committee: Colonel M. J. Wilson, M.P. (Vice-Chairman), Mr. W. Peacock, C.V.O., and Mr. Charles Stewart; (b) from the Scottish Committee, Sir Isaac Bayley Balfour, K.B.E., and Capt. Sydney J. Gammell; and (c) from the Welsh Committee, Mr. Vernon Hartshorn, M.P., and Mr. H. C. Vincent. The Earl of Chichester was appointed Vice-Chairman of the English Committee as from the 23rd December, 1921.

The following additional members were appointed during the year:—

Name.	Date of appointment.	Committee.
J. W. Watt, Esq. ... ..	2nd February, 1922 ... ..	England.
Prof. W. Wright Smith ... ..	10th November, 1921 ... ..	Scotland.
Sir John Gladstone, Bt. ... ..	4th April, 1922 ... ..	Scotland.
Rt. Hon. Thomas Richards ... ..	8th February, 1922 ... ..	Wales.
C. D. Thompson, Esq., J.P. ... ..	10th February, 1922 ... ..	Wales.
J. M. Naylor, Esq.... ..	11th February, 1922 ... ..	Wales.

### Enquiry into Softwood Resources.

The Commissioners have commenced during the year an enquiry into the softwood (coniferous) resources of the world from the point of view of British supplies. They felt that owing to the uncertainty of the position and its direct and important bearing on our forest policy, it was their duty to place themselves in a position to speak from first hand knowledge. Mr. Fraser Story who was formerly in charge of Publications work is to carry out the enquiry.

### Sub-head Z : Receipts, £24,544

Details of receipts are stated in Table Z below:—

Table Z : Receipts (Table II, Col. Z).

Year ending 30th September.	Forestry Operations.				Forestry Education.		Agency and Advisory Services.	Miscellaneous.		Total.
	Sales of Land, Buildings, etc.	Rents.	Forest Produce.	Other.	*Labour of Apprentices.	Other.		Interest on Investments.	Other.	
1920..	£ 315	£ 118	£ 8,693	£ 542	£ —	£ 103	£ —	£ 2,458	£ —	£ 12,220
1921..	—	3,801	10,262	2,640	—	97	1,511	10,748	—	20,140
1922..	246	5,251	8,975	5,861	505	388	1,408	1,753	67	24,544
Total	561	9,260	27,930	9,043	505	588	3,009	14,959	67	65,922

\* In 1920 and 1921 Receipts from this source were applied in reduction of the Expenditure on "Allowances to Apprentices" (See Table G, Col. 5).

## Unemployment.

The Commissioners were asked at the end of September, 1921, to put forward to the Cabinet Committee on Unemployment proposals for relief work during the winter of 1921-22, and schemes were accordingly prepared and approved in general terms. The Cabinet Committee allocated to forestry the sum of £250,000 from the Vote for the Relief of Unemployment, the money to be expended by the Forestry Commissioners under the general supervision of a sub-committee presided over by the Minister of Agriculture. Authority to begin operations was not received by the Commissioners until November, 1921.

The Commissioners' proposals embraced the following operations :—

- (1) *On the Commissioners' Properties*: Acceleration of planting and nursery operations, extension of fencing, draining and scrub clearing in preparation for planting operations in subsequent years.
- (2) *In the Crown Woods*: the construction of roads in mature and semi-mature woods, and preparation of ground for planting and similar work.
- (3) *On properties belonging to corporate bodies and private individuals*: Grants in respect of planting, preparing ground for planting and scrub clearing.

The total expenditure under all three heads amounted to £154,017. Of this sum, £896 was expended by the Commissioners on extra staff (£10), and on travelling and subsistence allowances (£886).

### (1) *Operations on the Commissioners' Properties.*

The total expenditure amounted to £47,322, of which £46,682 was spent on forestry operations. Work was carried out at 55 different centres, and employment equivalent to 30,000 man-weeks was given in addition to the work provided by the normal programme for the year. The planting programme was advanced from 8,100 acres to 10,500, and a considerable amount of work was carried out, such as draining, fencing, scrub clearing and formation of roads, which will all be of use in the next and subsequent years' planting operations.

### (2) *Operations in the Crown Woods.*

The total expenditure amounted to £55,783, which was spent in nine forests. By far the greatest expenditure incurred was in Dean Forest, where the depression in the coal-mining industry was very acute. The forest was badly supplied with roads for extracting timber, and 34,065 yards were constructed at a total cost (to November, 1922) of £46,783. The work was commenced in December, 1921, and employment was provided for approximately 500 men over the months of January to April, 1922. In consequence of the long continued local depression, special sanction was obtained to continue the work over the summer, and it was not finally completed until November, 1922.

The next largest scheme was in the Tintern Woods, which are situated in a district (Chepstow) where unemployment was also acute. Some £5,550 was expended on the construction of new roads and the improvement of existing roads. The total length taken in hand was 13,024 yards.

In the New Forest, £3,500 was expended on roads and drains. The remaining operations were small individually, and consisted in scrub clearing, drainage and fencing.

(3) *On Properties belonging to Corporate Bodies and Private Individuals.*

The total expenditure incurred amounted to £50,558, which took the form of grants for planting (£4 10s. per acre to corporate bodies and £3 per acre to private individuals), preparation of ground to be planted subsequently (not exceeding £3 per acre in each case), and scrub clearing in preparation for planting (£2 per acre, or one-third the net cost with a limit of £4 per acre to corporate bodies, and not exceeding £2 per acre to private individuals). The regulations governing grants to corporate bodies and private individuals were the same and are given, together with the form of application, on pp. 36-37.

The following table shows the area brought under treatment as a result of the grants :—

—	England and Wales.	Scotland.	Total.
No. of Schemes.	294	207	501
Planting ... ..	4,270 acres.	5,922 acres.	10,192 acres.
Preparation of Ground ... ..	1,899 „	7,228 „	9,127 „
Scrub clearing ... ..	772 „	2,550 „	3,322 „

NOTE.—This table includes certain areas for which grants had not been paid by 30th September, 1922.

It is estimated that this work provided employment to the extent of approximately 45,000 man-weeks. In addition, a certain number of schemes were started by persons (for example, Members of Parliament) who were found, on statutory grounds, to be ineligible for grants.

### Summary.

The returns as to the number of men employed on relief works show that, beginning with 1,160 on the 10th December, 1921, a fortnight or so after the work was begun the numbers rose steadily until the 18th March, 1922, when they reached 4,550. Thereafter they declined steadily to 3,500 at the end of April, and to 1,600 at the end of June.

Little complaint was received as to the quality of the labour which was almost completely country bred.

It is believed that the work accomplished is of a productive character and that its efficiency (*i.e.*, the proportion of the Government grant actually expended in wages) is higher than in any other form of relief work.

### Forestry and Rural Employment.

From time to time the amount of labour which afforestation absorbs and the effect of forests on rural economics has attracted a good deal of attention. As one of the advantages of a forest policy employment has a definite standing, but it has to be borne in mind that in itself it does not constitute the complete justification.

Starting with bare land the history of a forest is roughly as follows :— In the first year a proportion of the area is fenced, and where necessary, drained and cleared and planted. This area will require attention in the second and possibly in the third and subsequent years, the procedure being to replace plants which have died and to cut back vegetation which is overgrowing the young plants. Thereafter the area will require little attention except as regards protection against fire, ground game, insects, fungi, etc., until the time for thinning arrives. In the meantime similar areas will have been taken in hand year by year and planted up.

The time when thinnings first begin and the quantity of timber realized vary very greatly according to local conditions. Some species require treatment as soon as the 15th year, and others not until the 30th. With the advent of thinnings problems of transport begin to arise, and it becomes necessary to build roads, etc. Thinnings are repeated in any one area at intervals of 5 to 10 years until the time for making clear fellings arrives, which, with conifers, may be from the 30th year in the case of a pitwood rotation, to the 80th year in the case of slow-grown Scots pine. When clear fellings are begun replanting becomes necessary and the forest is gradually worked into a condition where it provides a steady output in timber.

As regards the first stage—afforestation—the increase in the amount of labour depends in the first place on the use to which the land is being put, and in the second place at the rate at which the area is planted up. In the case of hill farms like those at Inverliever (Argyll), where the rate of planting was comparatively slow (about one-twentieth per annum) to begin with the immediate increase was between 60 per cent. and 70 per cent. In this case the afforestation stage will overlap the second or thinning stage considerably, and there will be a steady increase in the number of men employed. In the case of Rendlesham in East Anglia, which the Commissioners are planting up at a rate which will complete the area in about seven years, there were at the beginning only 8 men employed on the estate, 4 out of 10 cottages and a farmhouse being unoccupied. At the present time there are resident on the estate 13 men (the 10 cottages and farmhouse being now occupied), while the average number of men employed on the work of afforestation has been as follows :—

					Winter.	Summer.
1919-20	...	...	...	...	25	25
1920-21	..	...	...	...	75	25
1921-22	...	...	...	...	115	20

On this estate, considered as a unit, the afforestation stage will not overlap the thinning stage, but there is a very large area of similar



land in the district, and no difficulty is anticipated in keeping employed the men who now look to forestry for their livelihood. As regards the third stage—that of the forest in steady working order—data are necessarily incomplete for this county. An inquiry into the Tintern Woods (3,320 acres), which have now been under systematic management for 20 years, shows that the amount spent annually in wages on silvicultural work (including timber felling) is equivalent to the full time employment of 30 men and 5 youths or, say, 1 man per 100 acres. In addition the transport of timber, etc., to rail employs full-time 13 men and 18 horses. The area is not by any means fully developed, and it is estimated that when it is in full productive order full-time employment will be provided in silvicultural work, transport and sawing of timber 1 man per 40 or 50 acres.

As regards forests under systematic management, fairly full data are available for certain of the German State forests. The table below, which has been compiled from official sources,\* shows that the number of days' work (apparently of 10 hours) provided per 100 acres varied from 151 to 265. The operations include silvicultural work and timber utilisation to the point of felling.

	Pro- ductive Forest.	Indi- viduals employed.	Days' Labour provided.	Days' Labour per 100 Acres.	Annual Pro- duction of Timber cb. ft. per Acre.
	Acres.				
Prussia ... ..	6,748,000	174,300	10,230,000	151	60
Bavaria ... ..	2,005,300	—	4,723,200	235	79
Wurtemberg ... ..	475,100	20,214	1,258,800	265	81

The Bavarian Government conducted in 1908 a comprehensive enquiry into labour conditions in the State forests†, and the results are interesting from the present point of view. The total number of individuals employed was 74,656 and the number of days' labour provided was 4,535,900, or 187,300 less than shown in the table above for 1912. The average number of days worked per person was 61. Of the total number 58 per cent. were men, 23 per cent. women, and 19 per cent. boys and girls. Women and juveniles were employed to a considerable extent on planting, nursery work etc., which would be done by men in this country. Analysis of the men's occupations showed that only 22 per cent. worked in the forest as their main occupation, 47 per cent. were small holders, 16 per cent. were seasonally industrial workers, 13 per cent. casual labour. These figures vary very greatly for the different forest districts. The proportion of

\* Amtliche Mitt. aus der Abt. für Forsten, Prussia 1912; Mitt aus der Staatsforstverwaltung Bayerns, Bavaria 1912; Forststatische Mitt. aus Wurtemberg, Wurtemberg 1910.

† Mitt. aus der Staatsforstverwaltung, Bayerns, Bavaria 1910.

“ main occupation ” men is greatest in the large forest masses and least in the open country, but did not exceed 60 per cent. in any case.

It appears generally, therefore, that under the rural conditions appertaining to Southern Germany forestry is an industry which works in very well with agriculture and other industries, resulting in a much larger rural population than could be the case if there were no forests.

It is a complicated task to attempt to estimate the amount of labour expended on timber after it is felled in the forest, but it would appear that up to the stage where it is sawn into planks, etc., 100 acres of forest will provide work for roughly one man. To the extent that timber is sawn abroad and worked up into more or less completed articles, *e.g.*, door and window frames, it is obvious that there is a loss to British labour on imported as compared with home grown material. The tendency annually is for imported wooden goods to be taken to a higher degree of finish in their countries of origin.

*The Efficiency of Relief Work.*—The efficiency of the work which can be done in forestry depends, in considerable measure, on the time available for preparation. As regards the Grants Schemes, landowners require notice before the planting season in order that they may make arrangements for supply of plants, etc. With sufficient notice they are often prepared to extend their programmes considerably. The grant system is very efficient from the employment point of view since the grant per acre is rarely sufficient to cover the cost of labour alone, and landowners in consequence have to draw as well on their private means. In some cases £100 advanced in grants has entailed a total expenditure on labour of £250.

As regards operations on the Commission's estates and in the Crown woods, ample notice is also necessary for high efficiency. In the first year of a series of unemployment years it will be found that a number of desirable operations can be started. This, for example, was the case in Dean Forest, where the development of the road system had not kept pace with current requirements. In the second and subsequent years these operations have been practically completed and the most efficient work which can be done is an extension of the planting programme. There is, however, an obvious limit to the degree to which a planting programme can be extended. Plants on an average are three years old before they can safely be put out in the forest, and they have consequently to be raised in accordance with a fairly definite programme. Land has to be acquired some time in advance of planting. On the other hand if there is an excess of plants or too much land it is comparatively easy to treat both in such a way that they may both, in a sense, be kept in storage until required. The Commissioners have therefore urged that in view of the present condition of rural employment, which is not likely to undergo rapid amelioration, they should proceed on the assumption that there is to be unemployment for the next season or two. Thus they would begin the financial year on the assumption that their programme is to be considerably in excess of their normal. If as the season advanced it became apparent that there would be no unemployment they would proceed to economise,

“ storing ” their excess plants and land against the normal programme of the next year. Although this procedure has manifest advantages over that adopted hitherto the Commissioners have not yet succeeded in getting their proposals adopted.

(Signed) LOVAT (*Chairman*).  
F. D. ACLAND.  
CLINTON.  
L. FORESTIER-WALKER.  
T. B. PONSONBY.  
R. L. ROBINSON.  
W. STEUART-FOTHRINGHAM.  
J. STIRLING-MAXWELL.

A. G. HERBERT (*Secretary*),  
22, Grosvenor Gardens, S.W.

*April*, 1923.

APPENDIX I.

FORM OF APPLICATION FOR UNEMPLOYMENT GRANT.

FORESTRY COMMISSION UNEMPLOYMENT SCHEME,  
1921-22.

Scheme No.....

County..... Estate.....

Access to woodland area (nearest railway station and distance from)

Name of Proprietor .....

Address .....

Name of Agent or person to whom }  
letters are to be addressed. } .....

Address .....

NAME OF WOOD.	TREATMENT (State whether Planting, Preparation for Planting or Scrub-clearing).	Area to be dealt with. (If available a map or tracing on 6 in. scale should be attached.)

ESTIMATE OF EXPENDITURE.

A. Labour	{ burning slash draining fencing planting lining-out plants transport (personnel) scrub-clearing other labour horse hire other transport tools	} Strike out items which are inapplicable. Total figure only required ...£
B. Materials, etc.	{ supervision plants fencing miscellaneous	} Strike out items which are inapplicable. Total figure only required ...£
TOTAL ..	{ .. .. .	} .. .. . £

Total estimated expenditure on wages to "unemployed" men	}	£.....
Estimated percentage of ex-Service men to be employed		
		..... per cent.
Method of recruiting Unemployed men :—		
Board of Guardians	}	Strike out whichever are inapplicable.
Parish Council		
Labour Exchange		
Privately		
Estimated average wage per week		.....
Local standard rate for agricultural labourers as fixed by Conciliation Committee or otherwise in the district	}	.....
Grant claimed		£.....
Remarks		.....

### PARTICULARS OF FREE GRANTS.\*

1. **Planting**.—£3 per acre for every acre planted between 1st November, 1921, and 30th June, 1922.

2. **Preparation for Planting**.—Not exceeding £3 per acre towards expenditure incurred between 1st November, 1921, and 30th June, 1922, in preparing land for planting, including the necessary nursery operations.

3. **Scrub-clearing**.—Not exceeding £2 per acre for every acre of standing scrub cleared before 30th June, 1922, in preparation for subsequent planting.

NOTE.—Grants Nos. 1 and 3, or Nos. 2 and 3, may be claimed in respect of the same area, but not grants Nos. 1 and 2.

### REGULATIONS.

1. No Scheme will be eligible for any grant until it has been approved in writing by the Forestry Commissioners.

2. All work under the Scheme shall be subject to inspection from time to time by the Forestry Commission.

3. Pay sheets must be kept and be open to inspection at any time by the Forestry Commission.

4. In any Scheme at least an amount equal to the total grant to be received must be expended on wages to men who were unemployed at the date of their engagement.

5. 75 per cent. of the unemployed labour engaged shall consist of ex-Service men, if available.

6. The wages paid to unemployed shall not exceed the standard rates for agricultural labourers as fixed by Conciliation Committees or otherwise in the district.

\* These figures relate to private individuals; for grants to corporate bodies see p. 30.

7. As soon as the Forestry Commission are satisfied by inspection and otherwise that the work to be done under the Scheme has been satisfactorily completed they will certify accordingly. The certificate will state the amount of the grant which will then be due and payable.

8. Any application for grant No. 2 shall be deemed to include an undertaking by the applicant that the area in respect of which such a grant is applied for will be duly planted up within whatever period the Assistant Commissioner may decide.

### APPLICATION FOR GRANT.

I hereby apply for a grant in respect of the above Scheme, which will be carried out in accordance with the regulations.

(*Signature*) .....

(*Date*) .....

The above Scheme is approved by the Forestry Commissioners as eligible for grant.

(*Signature*) .....

*Assistant Commissioner for* .....

(*Date*) .....

## APPENDIX II.

## Imports of Timber, Wood Manufactures and Pulp of Wood.

Details of imports for the averages of the five pre-war years, of the years 1914-18, and for 1921 and 1922 are stated in the table below. Attention was drawn in the last Annual Report to the great decreases in quantities for 1921 as compared with 1920. The 1922 figures show a corresponding recovery, so that the total for unmanufactured timber is some 688,000 loads in excess of 1920, and no less than 3,662,000 loads in excess of 1921. Imports of pulp of wood have taken a somewhat similar course.

Description.	Quantities (thousands).				Value (thousands).			
	Average 1909-13.	Average 1914-18.	1921.	1922.	Average 1909-13.	Average 1914-18.	1921.	1922.
<b>TIMBER.</b>								
	Loads.	Loads.	Loads.	Loads.	£	£	£	£
Hewn-Hard—								
Mahogany .. ..	—	—	38	48	—	—	795	088
Walnut .. ..	—	—	1	—	—	—	30	—
Oak .. ..	—	—	3	—	—	—	61	—
Teak .. ..	—	—	6	—	—	—	200	704
Other sorts .. ..	—	—	26	—	—	—	498	—
Hewn-Soft (Fir, pine, spruce, etc.) ..	542	129	131	152	1,353	583	1,019	824
Sawn-Hard—								
Mahogany .. ..	—	—	6	21	—	—	168	409
Walnut .. ..	—	—	4	—	—	—	110	—
Oak .. ..	—	—	57	—	—	—	1,370	—
Teak .. ..	—	—	11	—	—	—	456	—
Other sorts .. ..	—	—	95	—	—	—	1,744	—
Sawn-Soft—								
Deal and planks ..	—	—	1,404	—	—	—	9,039	—
Boards .. ..	—	—	435	—	—	—	2,973	—
Other sorts .. ..	—	—	219	—	—	—	1,545	—
Planed or Dressed—								
Floorings .. ..	—	—	172	—	—	—	1,480	—
Matchings .. ..	—	—	39	—	—	—	206	—
Other sorts .. ..	—	—	25	—	—	—	269	—
Other Descriptions—								
Pitprops .. ..	2,944	1,073	1,297	2,812	3,510	4,425	3,224	5,488
Staves .. ..	161	71	51	75	795	648	1,411	737
Sleepers .. ..	—	130	323	212	—	602	3,252	1,114
Veneers and panel wood .. ..	—	—	1	1	—	—	60	53
Not elsewhere specified .. ..	6,557*	3,550*	2	1	21,003*	24,362*	24	23
Total manufactured timber .. ..	10,204	5,553	4,346	8,008	27,561	30,620	30,022	37,319
<b>WOOD MANUFACTURES.</b>								
Furniture and cabinet ware .. ..	—	—	—	—	416	115	441	475
Bullders' woodwork (window frames, doors, etc.) ..	—	—	—	—	180	62	405	235
Chip boxes .. ..	—	—	—	—	—	—	5	—
Tool handles .. ..	—	—	—	—	—	—	201	—
Domestic wood-work (bread platters, trays, etc.) ..	—	—	—	—	—	—	135	—
Not elsewhere specified .. ..	—	—	—	—	2,000	1,821	3,735	—
Total manufactured timber .. ..	—	—	—	—	2,695	1,908	4,022	3,807
<b>PULP OF WOOD.</b>								
Pulp of wood .. ..	Tons. 859	Tons. 082	Tons. 500	Tons. 926	4,058	7,915	12,619	8,537

\* 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 for 1920 onwards.

Printed under the authority of HIS MAJESTY'S STATIONERY OFFICE  
By Harrison and Sons, Ltd., 44-47, St. Martin's Lane, W.C.2.