FORESTRY COMMISSION.

# SEVENTH ANNUAL REPORT

OF THE

## FORESTRY COMMISSIONERS.

Year ending September 30th, 1926.

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

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#### FOREST POLICY.

There has been no interruption in policy during the year and the programme has been carried out in its essentials. This report covers the seventh year of the Commissioners' planting operations and the eighth is now approaching completion. Since the Forestry Act, 1919, makes financial provision only for the 10-year period ending March 31st, 1929, new legislation should be passed in the early part of 1928 so that the Commissioners may have at least a year in which to adjust their plans to such alterations in general policy and planting programmes as may be decided on.

It will be recalled that the present policy and programme were drawn up in 1916-17. At that time the heavy war fellings in the home woods were just beginning, and the full effect on the timber resources of the country could not be foretold; there was no organised State forest service and the opportunities for collecting accurate data on which to build a workable scheme were very limited. In spite of these difficulties the original estimates of costs are working out well, and if allowance be made for certain work, such as forest workers' holdings, which is additional to the original programme, the net expenditure over the whole 10-year period should not differ from the estimated figure by more than 5 per cent.

Besides building up an organisation to carry out their expanding planting programme the Commissioners have kept steadily in view the necessity of basing forest policy on ascertained facts and figures. Two main problems are involved. There is first the supply of timber from overseas and secondly the home supply and the possibilities of increasing it. The forest policy of Great Britain, which is at present the largest timber-importing country, cannot rightly be divorced from the world position. Wood and timber, and particularly coniferous timber, in some form or other are essential to industrial progress, and the intensity of British forest policy should conform to the world outlook as regards supply and demand. It is not proposed to enter into a detailed discussion of this subject and it must suffice to say that the outlook is not satisfactory. In those countries where industrial development has been greatest, such as in North America, consumption has increased while resources are being exhausted at an unprecedented rate.

The second problem, the home supply, has been systematically studied. A number of factors are involved. The area and character of the uncultivated land (chiefly rough grazings) of the country and the rate at which trees of different kinds will

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grow on land of different types limit the extent to which supplies may be increased by afforestation. The area and state of the existing woods indicate the probabilities for the more immediate future and also in part the possibilities for increased supply in the more remote future.

Although a great deal of data has been collected and many experiments have been started, many years must elapse before it will be possible to state definitely whether certain kinds of land, including some types of peat, can be economically afforested. On the other hand, results already available show that by suitable planting methods large areas formerly considered unplantable may now be afforested with success. But apart from the difficult land there exist in this country extensive uncultivated areas, aggregating perhaps 3 to 4 million acres, admirably suited for timber production. This land is not waste, but its production is so low that its afforestation would not appreciably affect the national food supplies.

During the year under review the preliminary results have come to hand of a census of woodlands, inaugurated by the Commissioners. The summary figures, which provide for the first time an accurate picture of the woodlands of this country, are stated in the table below. The woodlands are divided into two main categories :

I.—Economic, or potentially productive, that is woods which are now being maintained, or have at some time been maintained, with the object of producing timber for commercial purposes.

II.—Uneconomic, that is woods which are being maintained with some object other than timber production for commercial purposes.

	]								
	1 to 10 years.	11 to 20 years.	21 to 40 years.	41 to 80 years.	Over 80 years.	Total.			
1. Economic or poten- tially productive. Conifers Mixed conifers and	Acres. 105,020	Acres. 98,030	Acres. 153,940	Acres. 244,520	Acres. 70,330	Acres. 671,840			
hardwoods Hardwoods Total	10,720 4,940	15,950 10,470	63,430 39,160	134,410 180,540	77,180 208,230	301,690 443,340 1,416,870			
Total          120,680         124,450         256,530         559,470         355,740         1           Coppice, and coppice-with-standards									
II. Uneconomic (includi	ng amenit	ty woods, s	helter-bel	ts, park tii	mber etc).	204,290			
Total			•••	••• •		2,958,630			

Census of Woodlands, 1924.

Broadly the census figures disclose a much more unsatisfactory state of affairs than was counted on in 1916-17 when the present policy and programme were drawn up. The salient points are as follows :—

(1) Productive and Non-productive Woodlands.—Of the total area of 2,958,630 acres of woodland less than half (1,416,870 acres of high forest) is reasonably productive; of the rest, 808,800 acres of felled woods and scrub are, from the forestry point of view, idle land, 528,670 acres of coppice and coppice-withstandards have a very low average productivity, while 204,290 acres of amenity and similar woodlands are definitely uneconomic in the sense that they are outside the scope of commercial forestry.

(2) Pre-war and Post-war Reserves of Timber.—At the outbreak of war there existed, fortunately, a large excess (compared with a normal distribution of age classes) of old timber, both conifers and oak. At a rough estimate 450,000 to 500,000 acres, mainly conifers, were felled during and immediately after the war.

Conifers.—The immediate outlook is serious. There remain 70,330 acres of conifers and 77,180 acres of indifferent mixed woods over 80 years (equivalent to about 9 months' consumption of saw timber) which so far as it is accessible will probably be felled during the next few years. The coniferous woods (244,520 acres) and the mixed woods (134,410 acres) now 41-80 years old, which would normally replace the pre-war reserve, are being felled for revenue. Behind them again there are only 153,940 acres of conifers and 63,430 acres of mixed woods 21-40 years old.

It is a fair assumption on these figures that the position as regards reserves of standing coniferous timber will steadily grow worse until the post-war plantings begin to become effective.

Hardwoods.—While there is at present a large supply of second and third class hardwoods (chiefly oak) in the country the outlook for a sustained supply of good oak is very bad. Oak planting has now almost ceased and this, combined with failure over the last 40 years to plant on anything approaching an adequate scale, means that ultimately the supply of mature oak on a commercial scale must cease. The existing large area of oak over 80 years (208,230 acres) will gradually be felled for revenue and if regenerated at all will be replanted with conifers.

(3) Rate of Reconstruction.—Private planting has averaged over the last 40 years about 12,000 acres per annum, and at the commencement of the census was still proceeding at approximately that rate. The State is planting 22,500 acres during the current season and aims at working up to 30,000 acres in 1929.

Private planting, at best, will not do more than cope with current fellings. This is an optimistic forecast. It is more probable that with the continued high taxation and the break-up of estates, fellings will greatly exceed replantings. A State programme of 30,000 acres per annum would plant up the existing felled area (478,100 acres), or an equivalent area, in 16 years and the combined felled area and scrub (808,800 acres), or their equivalent area, in 27 years. If only half the coppice and coppice-with-standards were included as well the period would be prolonged to 36 years.

The Forestry Sub-Committee in their calculations of 1916-17 assumed that the 3,000,000 acres of existing woodlands would be maintained in a productive state and proposed to add 1,770,000 acres of new forest. It can be confidently predicted that unless State planting is speeded up to a rate exceeding 30,000 acres per annum there will not be 3,000,000 acres of productive forest in the country before 1955.

In connection with forest policy there is one other important factor which has to be considered, namely, the provision of forest workers' holdings in connection with forestry operations. The extent to which afforestation may be economically employed in relief of temporary unemployment is strictly limited. On the other hand the policy of establishing forest workers in small permanent holdings in or close to the forest has much to commend it.

The policy adopted by the Commissioners is largely a housing scheme for the benefit and accommodation of employees. It differs from the agricultural small holdings policy in that it does not attempt to provide "full time "holdings but treats them as ancillary to employment in the forest. This combination of assured work and occupation of land presents certain definite advantages both to the forest and the worker. For the worker it provides certain employment avoiding an entire dependence on a money wage, it gives the man some opportunity of improving his position by his own independent efforts and, at the same tin e, lessens the risk and the exceptionally hard labour inseparable from the occupation of the full-time holding; 150 days' employment is guaranteed in each year, mainly in the winter months, the pressing time in planting operations, leaving the worker free to work his land in the summer and to take advantage of other employment so often available during hay and corn harvest. The scheme is one of small scale holdings only, the maximum area being 10 acres, but the smaller holdings are in the greater demand; market gardening is the main object in view with poultry and pigs in addition; fruit trees are raised in the forest nurseries for distribution. In the larger holdings accommodation is given for one or two cows and a small dairying business is frequently carried on.

The Commissioners have now had nearly three years' experience of this form of rural settlement and it appears to them that it . possesses very distinctive merits and might be speeded up if so desired.

Summary.—The above are some of the chief considerations which have to be borne in mind in laying down the future forest policy of Great Britain. Briefly, as regards supplies of an essen-

tial raw material Great Britain depends to an undesirable extent on overseas supplies. There is no sort of certainty, but rather the reverse, that these supplies will always be available at reasonable prices. The home woods are in a thoroughly unsatisfactory condition following the war fellings and changes in ownership, and relatively slow progress is being made in reconstructing In particular, the replanting of hardwoods (e.g., oak) them. has almost ceased. If the position is to be put right it must be mainly by State action. On the other hand there are large areas of derelict woodland and unproductive bare land well suited for timber production and the Commissioners now have useful experience in conducting large scale planting operations. In connection with forestry operations a substantial contribution can be made towards land settlement by installing forest workers in holdings.

#### Finance.

The balance remaining in the Forestry Fund at 30th September, 1925, was £402,661. Payments into the Fund amounted to £457,341, and out of the Fund to £608,066. The balance in the Fund at the end of the year was consequently £251,936, a decrease of £150,725 over the corresponding figure for the previous year.

Out of the total amount of  $\pounds 3\frac{1}{2}$  millions due to be paid into the Forestry Fund, under the Forestry Act, 1919, before the 31st March, 1929,  $\pounds 2,369,000$  had been paid to the 30th September, 1926, leaving  $\pounds 1,131,000$  still to be provided. Adding to this some  $\pounds 252,000$  in hand at the 30th September, 1926, and estimating the net receipts from operations at  $\pounds 300,000$  there should be available for gross payments over the  $2\frac{1}{2}$  years to run from 30th September, 1926, to 31st March, 1929, a sum of  $\pounds 1,683,000$ , equivalent to an average gross expenditure of  $\pounds 673,000$  per annum.

It is estimated that if the forest workers' holding programme is to be carried out some £200,000 in excess of the £3½ million will be required, the total expenditure on forest workers' holdings being estimated at £336,500.

It will be observed that the total payments by the Commissioners are steadily growing. This is inevitable with an expanding programme. By the tenth year the gross outlay will be running at the rate of approximately  $\pounds 838,000$  per annum. Against this it is estimated that receipts which are now averaging about  $\pounds 120,000$  per annum will then be about  $\pounds 154,000$  per annum in the tenth year, so that the net outlay will be at the rate of approximately  $\pounds 684,000$  per annum.

#### Land Acquisition.

Acquisitions during the year amounted to 69,274 acres, of which 36,450 acres were classified as plantable. Acquisitions to the end of the forest year 1926 are compared in the table below with the proposals of the Acland Report. The total area of plantable land acquired to the 30th September, 1926, amounted to 214,083 acres, or 30,717 acres less than the proposed area.

The problem of securing sufficient plantable land is a constant preoccupation for the Commissioners. In order to meet the demands of the expanding planting programme and to ensure that there shall be continuity of work for forest workers placed on holdings and also for valid technical reasons, it is essential to hold a much larger area of plantable land than would appear necessary at first sight.

Year	By	Lease or l	Feu.	Ву	7 Purchas	10.		Total.	Total.			
ended 30th Sept.	Proposed (Acland Report).	Actual.	Excess (+) Deficit (-).	Proposed (Acland Report).	Actual.	Excess (+) Deficit (-).	Proposed (Acland Report).	Actual.	Excess (+) Deficit (-).			
1920 1921 1922 1923 1924 1925 1926	Acres. 8,800 9,200 8,800 8,800 17,600 18,000 17,600	Acres. 24,776 19,774 22,703 21,885 8,099 16,194 10,476	$\begin{array}{c} \text{Acres.} \\ +15,976 \\ +10,574 \\ +13,903 \\ +13,085 \\ -9,501 \\ -1,806 \\ -7,124 \end{array}$	Acres. 22,000 22,000 22,000 22,000 24,000 22,000 22,000	Acres. 6,434 13,186 687 6,704 12,356 24,835 25,974	Acres. -15,566 - 8,814 -21,313 -15,296 -11,644 + 2,835 + 3,974	Acres. 30,800 31,200 30,800 30,800 41,600 40,000 39,600	Acres. 31,210 32,960 23,390 28,589 20,455 41,029 36,450	$\begin{array}{c} \textbf{Acres.} \\ + & 410 \\ + & 1,760 \\ - & 7,410 \\ - & 2,211 \\ - & 21,145 \\ + & 1,029 \\ - & 3,150 \end{array}$			
Total, Great Britain.	} 88,800	123,907	+35,107	156,000	90,176	- 65,824	244,800	214,083	-30,717			

Acquisition of Plantable Land	Acquisition	of	Plantable	Land.
-------------------------------	-------------	----	-----------	-------

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

#### Planting Programme.

#### (A) STATE FORESTS.

Conifers.—The progress made in the realisation of the 150,000acre programme is shown in the table below. The area planted during the year was 17,997 acres, compared with 20,000 acres under the Acland Programme and 18,400 acres under the Commissioners' revised programme. The total to the end of the year was 68,193 acres, compared with 70,000 acres for the Acland Programme and 70,300 for the revised programme.

Taking into account the area of land now available for planting and the probable course of acquisition for the next two years, it is estimated that the Commissioners will plant over the whole 10-year period, approximately 135,000 acres of conifers, which will leave them 15,000 acres short of the 150,000acre programme. The check imposed on the Commissioners in the planting seasons 1922-23 and 1923-24, when (in the interest of national economy) the planting programme was not expanded, but kept at approximately 10,000 acres, is responsible, in part, for the shortage. Shortage of acquisitions, as explained above, has also played a part. That is in itself due to the same cause, namely, the artificial check experienced in the fourth and fifth years.

				Acland	Com-		Surplus (+) or Deficit (-) on			
Year.		Com- missioners' A		Actually planted.	Acland Com- mittee's Pro- gramme.	Com- missioners' Revised Pro- gramme.				
				A						
7.4				Acres.	Acres.	Acres.	Acres.	Acres.		
	year, 1			Nil	n i	1,094	+1,094	n – – – – – – – – – – – – – – – – – – –		
2nd		920-21		3 <b>,3</b> 00		5 <b>,6</b> 60	+ 2,360	11		
3rd	,, 19	921-22		6,700	\$ 51,900	9,387	+2,687	- 1,704		
4th	<b>"</b> 19	922-23		10,000	7 51,900	9,758	- 242	- 1,70 <del>1</del>		
5th		923-24		13,300		10,015	-3,285			
6th		924-25		16,700	j	14,282	-2,418	]		
7th	,,	925-26		20,000	18,400	17,997	-2,003	<b>—</b> 403		
8th		926-27		23,300	22,600					
9th	- ″ ī	927-28		26,700	26,800	68,193	-1,807	- 2,107		
10th	11	928-29		30,000	30,300	00,100	1001	2,101		
тоеп	,, 13	520-23			,500			1		
	Total			150,000	150,000					

Planting Programme: Conifers.

Note.—Owing to a re-survey the figures in respect of the area planted in the seasons 1919-25 have been reduced by 250 acres. In addition to the areas indicated above, 1,697 acres were planted in Ireland to

In addition to the areas indicated above, 1,697 acres were planted in Freiand to 31st March, 1922.

Broad-leaved Species.—No definite programme has been laid down for the 10-year period. The areas actually planted in Great Britain are :—

Acres.
116
269
175
656
454
575
<b>378</b>
2,623

It is estimated that the total area which will be planted with hardwoods in the 10-year period will be approximately 4,000 acres. This is additional to the few hundred acres which are in process of regeneration by natural means in the former Crown Woods.

Total.—The total area planted to date is 70,816 acres and this added to the estimate for the remaining three years gives a figure of 139,000 acres for the 10-year period.

(B) ASSISTANCE TO LOCAL AUTHORITIES AND PRIVATE OWNERS.

The area proposed, under the Acland Report, to be afforested or replanted by local authorities and private owners with State assistance during the 10 years was 110,000 acres, or an average of 11,000 acres per annum.

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 $\mathbf{A} = \mathbf{3}$ 

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Of this area, 50,000 acres were to be covered by grants for replanting, 25,000 acres by grants for afforestation, 10,000 acres by loans for planting and replanting and 25,000 acres by proceeds-sharing schemes. No annual programme was laid down.

No progress has been made in promoting afforestation by loan, and proceeds-sharing schemes have been restricted to two examples. On the other hand, considerable progress has been made in securing afforestation and replanting by means of grants, both for unemployment relief and normal work. The table below indicates the amount of work carried out by means of grants.

Year.		Planted.	Prepared for Planting.	Cleared of Scrub.
		Acres.	Acres.	Acres.
1921 - 22	•••	10,192	9,127	3,322
1922 - 23		6,148	6,075	2,015
1923-24		6,530	2,772	1,721
1924-25 ·	•••	7,467	2,597	1,391
1 <b>92</b> 5–26		4,675		267
$\operatorname{Tot}$	al	35,012	20,571	8,716
				<u> </u>

The above table shows the areas in respect of which grants have been paid. Recipients of grants for "preparation for planting" undertook to plant up without payment of a further grant. The area planted will consequently exceed 55,000 acres.

The following planting work has also been done in connection with two proceeds-sharing schemes initiated by the Development Commissioners :---

					Acres.
1919-20			•••		357
1920-21			•••		213
1921-22					257
1922-23			• • •	•••	91
1923-24			•••		320
1924-25				• • • •	316
1925-26					197
	$\mathbf{Total}$	•••			1,751, [

It is estimated that the total area which will be planted by local authorities and private owners in the 10-year period with the assistance, in one form or another, of the Commissioners will be approximately 75,000 acres.

#### TOTAL PLANTING EFFORT, 1919-29.

In view of what has been said previously in this Report with regard to the reconstruction of the woods of the country, it may be interesting to forecast the probable planting effort for the first ten years of the Commission's existence. The figures may be summarised as follows, the most doubtful item being the area planted without State assistance :---

By the Commissioners.	Acres.	Acres.
Conifers	135,000	
Hardwoods	4,000	
Dy Municipal and Drivate Organ		139,000
By Municipal and Private Owners.		
With State assistance	75,000	
Without State assistance (say)	25,000	
		100,000
		239,000

The probable total result, namely, 239,000 acres of conifers and hardwoods, is 8 per cent. less than that which the Acland Committee put forward for conifers only.

#### Education and Research.

There have been no changes in the organisation and course of this work. The experimental and research work which has been carried on steadily since 1920 is gradually yielding results which from time to time are put into practice. Not only has this work, which was necessarily of a preliminary character to begin with, defined more clearly the nature of the problems to be dealt with in large-scale afforestation operations but it has also indicated the solution of some major problems. A case in point is the planting of molinia peats which cover a large area in the North of England and in Scotland.

#### Forest Workers' Holdings.

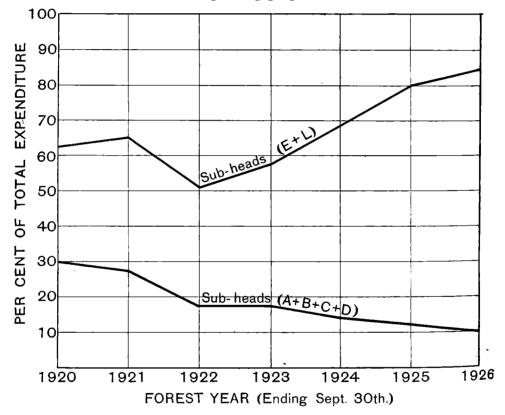
The systematic formation of forest workers' holdings was begun in the summer of 1924, and had therefore been running for rather less than two and a half years at the end of the year under review. Up to September 30th, 1926, 186 had been completed (125 in the year under review), and 174 were in process of formation. It is estimated that 750 holdings will be completed or in process of establishment by the end of the 10th year (1929). This work is capable of considerable development and the number of holdings could be increased to 3,000 or 4,000 in the succeeding 10-year period.

#### Distribution of Expenditure.

It may be of interest to give some indication of the relative amounts of money which are being spent on different objects. Reference to Table II, p. 15, shows that the Commissioners' expenditure is accounted for under 11 separate Sub-heads, lettered A to L. Of these A, B, C and D are in connection with the staff and administration of the Commission, while the remainder are incurred on specific operations.

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When the Commission was first set up charges under Subheads A, B, C and D were necessarily high in proportion to the volume of planting and amounted in 1920 to 30.3 per cent. of the total expenditure. For 1926 the ratio was 10.7 per cent. On the other hand, there has been a corresponding rise in the proportion of expenditure on Sub-heads E and L, that is to say, on forestry operations and forest workers' holdings.\* In 1920 the proportion was 62.3 per cent., and in 1926 84.7 per cent. The course of expenditure under Sub-heads A, B, C and D combined and also E and L combined is shown in the accompanying graph. For 1922 and 1923 the planting programme remained steady at approximately 10,000 acres per annum. In 1924 the expanding programme was resumed.



A clearer view of the objects on which expenditure has been incurred is obtained from Table IIA, since in that table Subheads A, B, C and D have been distributed over E and L, in order to arrive at the total cost of each service under those sub-heads. The following table shows the distribution of expenditure for the first, fourth and seventh years of the Commissioners' term of office and also for the average of the seven years. In 1926, 93.6 per cent. of the expenditure was in respect of Sub-heads E and L.

\* Expenditure on Sub-head L was first incurred in 1924.

Sub-head.	1920.	1923. 1926.		Average of the 7 years.	
EForestry Operations FAdvances for afforestation purposes G. and HEducation, research and experiment JAgency and advisory services KSpecial services LForest workers' holdings	Per cent. 86·4 ·4 9·7 2·1 1·4 —	Per cent. 69·5 14·4 6·5 7·0 2·6 —	Per cent. 81 · 1 2 · 5 2 · 9 · 3 · 7 12 · 5	Per cent. 75.8 7.8 5.0 3.8 2.0 5.6	
Total	100	100	100	100	

Distribution of Expenditure-Based on Table IIA, p. 16.

Some further analysis of the way in which the money has been spent under Sub-head E may also be of interest.

From Table E (Analysis of Forestry Operations, p. 18) it will be observed that for the year 1926 overhead expenditure, superior supervision and local supervision accounted for 14.1 per cent. of the total expenditure, acquisitions 24 per cent., cultural operations 40.7 per cent., preparation of produce 3.4 per cent., roads and buildings 3.6 per cent. and stores and miscellaneous 14.2 per cent.

It may appear at first sight that 14 per cent. is an unduly large proportion to be spent in overhead expenditure, superior supervision and local supervision, but when the nature of the work included under these heads is considered it will be found that such is not the case. Overhead expenditure is a proportion of the total office and administration charges; superior supervision includes the greater part of the time of the Divisional and District Officers who are engaged in a variety of duties, including not only the supervision of planting work, but preparation of planting plans, lay-out of plantations, preparation of working plans, reporting on land for acquisition and so on, a great deal of the work being not in respect of the current but of future years' operations; local supervision includes the wages of foresters and foremen. From a closer analysis of the work it appears that 4 per cent. of the 14 per cent. is overhead administration, 5 per cent. superior supervision and 5 per cent. supervision of labour employed on forestry operations.

As regards income shown in Table E for the year 1926, 13 per cent. was derived from sales of land, 34 per cent. from rents, 37 per cent. from sale of forest produce and 16 per cent. miscellaneous, including such items as sale of sheep, stock, rabbits, gravel, etc.

As regards the next most important Sub-head, L (Forest Workers' Holdings), it appears that in 1926 7.1 per cent. of the 62437 A 5 expenditure went in supervision and overhead charges, 30.8 per cent. in acquisition of land, rents and feus and 59.5 per cent. in buildings.

#### **OPERATIONS—FOREST YEAR** 1925-26.

#### The Forestry Fund.

The position of the Forestry Fund at September 30th, 1926, and at the same date in previous years is shown in Table I.

	Balance from pre- ceding Year.		$\mathbf{Re}$	ceipts.		Payments.		
Year ending 30th Sep- tember.				For Relief of Unem- ployment.	Total.	Table II.	Balance remaining in the Fund 30th Sep-	
		Parlia mentary Votes.	Other (Table II. Head Z.)	Parlia- mentary Votes.	10641.	Heads A. to L.	tember.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	£	£	£	L L	£	£	£	
1920	Nil.	478,000	12,229	— I	490,229	106,858	383,371	
1921	383,371	200,000	29,149	_	229,149	318,768	293,752	
1922	293,752	20,000	24,544	250,000	294,544	398,431	189,865	
1923	189,865	153,000	40,736	100,000	293,736	271,615	211,986	
1924	211,986	453,000	85,942	80,000	618,942	332,748	498,180	
1925	498,180	300,000	121,933	<u> </u>	421,933	517,452	402,661	
1926	402,661	335,000	122,341	—	457,341	608,066	251,936	
Total	_	1,939,000	436,874	430,000	2,805,874	2,553,938		

Table I.—Forestry Fund Account.

Receipts and payments by Parliamentary Heads of Accounts are shown in Table II. As compared with 1925 total payments show an increase of £90,614 from £517,452 to £608,066. Expenditure on Forestry Operations increased from £369,281 to £451,124 and on Forest Workers' Holdings from £42,175 to £63,939. On the other hand, advances for afforestation purposes decreased from £31,166 to £12,012. Receipts were practically unchanged at approximately £122,000. Net payments for 1926 were £90,206 more than in the previous year.

	<b>A</b> .	в.	С.	D.	Е.	F.	G.	н.	J.	К.	L.		Z.	
Year ending 30th September.	Salaries, Wages and Allowances.	Headquarters Charges.	Assistant Commissioners' Charges.	Divisional Officers' Charges.	Forestry Operations.	Advances for Afforestation Purposes.	Education.	Research and Experiment.	Agency and Advisory Services.	Special Services.	Forest Workers' Holdings.	Total Pay- ments.	Re- ceipts.	Net Pay- ments.
]	(1)	(2)	(3)	(4)	( <b>ð</b> )	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1920	£ 25,156	£ 577	£ 1,825	£ 4,829	£ 66,550	£	£ 4,547	£ 1,538	£ 1,577	£ 259	£	£ 106,858	£ 12,229	£ 94,629
1921	71,925	1,256	<b>3,88</b> 0	10,207	208,630	352	9,222	3,340	9,557	399	_	318,768	29,149	289,619
1922	51,459	4,454	5,242	7,614	201,139	51,050	10,386	2,686	63,395	1,006	_	398,431	24,544	373,887
1923	38,050	2,137	2,439	4,722	156,965	30,790	8,717	2,308	15,151	10,336	_	271,615	40,786	230,879
1924	37,685	1,847	1,512	5,287	224,438	45,247	4,830	2,810	2,096	1,960	5,036	332,748	85,942	246,806
1925	49,191	2,315	2,770	7,643	369,281	31,166	7,460	2,601		2,850	42,175	517,452	121,933	395,519
1926	51,769	2,097	2,864	8,685	451,124	12,01 <b>2</b>	8,192	3,981	-	8,403	63,939	608,066	122,341	485,725
Total	325,235	14,683	20, 532	48,987	1,678,127	170,617	53,854	19,264	91,776	20,213	111,150	2,558,938	436,874	2,117,064

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

The working results for 1926 and previous years are shown in Table IIa, in which all salaries, wages, allowances and similar charges which have to be kept separate for Parliamentary purposes are allocated to the appropriate objects of expenditure. Income and expenditure for each year are brought to account irrespective of whether they have been received and paid respectively. Table IIa, which is the basis of the financial tables appearing later in the Report, consequently differs in some respects from Tables I and II, which show cash transactions only.

y Objects.
59
Classified
Income
and
IIaExpenditure
Table

					Ĥ	Expenditure.	ure.								Income.	<b>16.</b>				
	Sub-h i.e. Su	Sub-heads A. to D i.e. Superior Super-	o D uper-	ä	н.	ч.	Ή	J.	К.	ц	(01)	Z.1	Z.2	Z.3	Z.4	Z.5	Z.6	(81)		ه ۵ <b>۱</b> .۱
Year ending		charges.		-8190	tot noi			-Б.А. .еөс	,800i		oð (8	- <b>8</b> 10		-198	~	101		1		іtате 1).[(
30th September.	otale.	llocated to E. to L.	pital (Un-	огееtry Ог tions.	dvances Afforestat Purposes.	.поізязир	Ехрегітег Бхрегітег	gency and	v192 Isio9q	ятоW даөто азпібіоН	) .aloD lato inclusive.	теяtry Ор tions.	.noitsouf	VICes.	Jaearch Brperiment	теяt Work Holdinga.	А Потевtаti Ригро≈ев.	ivrael Servi 	,evieulon	bпэqxH da O ввэI (II)
	τΞ	61	e <sup>Ce</sup>	4 <del>(</del>	<u>ئ</u>	э 9		<b>₩</b> €	s 6	<u>9</u> E	тij	3)	-	14)	n n	<u>୍</u> କୁ ତ	6	-ā	 	R (a)
	લા	વરે	બા	લ્મ	સ	વર	વર	લો	લરે	બ	લર	વર	વા	વર	વા	अ	્ર 			વર
	86,990	85,170	1,820	334,148	1,373	21,544	15,472	7,809	5,401	I	387,567	37,337	199	688		!	- <u>-</u> 	8° 8°	38,224 3	349,343
			1,516	229,644	60,426	12,357	6,646	60,658	13,495	I	384,742		1,396		567	1		252 34.		350,570
1923	_		56	181,099	37,505	11,792	5,125	18,148	6,827	1	260,552	33,607	1,510		10		-			225,288
:	36,634	36,426	208	247,037	47,147	8,243	7,139	3,785	10,253	5,901	329,713		324	13	, 6	8	64	14 91,		238,583
:		_	193	45.222	3.341	1 357	1487	2001	3 049	5 255	61 999		00#	0e1	43 1	1.07		_	36,079 3	386,780
				448,101	11,609	9,251	5,945	2 	1,357	70,465	546,728	122,846	29	009	110 3	374	1   	- <u>1</u> 26, -	969 4	419,769
Totals 1926	61,998	61,805	193	493,323	14,950	10,608	7,432	2,001	4,399	75,820	608,726	608,726 122,846	29	600	110 3	3,374		- 126,959	959 4	181,767
Totals: Great Britain	Britain	900 288	11 11 0		407 10F 000 71 407		10.005			000	100 101 1						<u>.</u>			
Ireland	0.000 0.00 V	000,000	1100	10011	000'001	161(1)	077'OL	. 000'#0	- 100,0±	- acz'oe1	100,203 2,131,000 111,320 3,320	119,920	026'6	510'z	139 4	4,639	1 097	314 462,328 2,032,337	328 2,0	J32,337
1920-23	27,262	26,479	783	18,674	1	2,877	1	57,965	10,215	1	90,514	690	80	25,245				26 26,	26,041	64,473
Grand Totals 367,817 363,487	367,817	363,487	4,330 1,910		081 195,800 77,374	77,374	48,225 ]	152,328	58,782	138,259 5	138,259 2,585,179 450,616		4,006	27,264	739 4	4,639	765 3	340 488,369		2,096,810
N	NoteSalaries of Instructors in	tries of I	astructo	ors in Sch	tools and	l of Res	earch a	nd Expe	sriment	: Officers	Schools and of Research and Experiment Officers are shown under Salaries. Wares. etc. (A.) in Table II.	vn under	r Salar	ies, Wag	res. e	e. (Å.)	in Tab	le II.	-	

alatics, wages, erc. (A.) in Table 11, but under Education (G.) and Research (H.) in the above Table.

#### Sub-heads A to D, General Organisation: Expenditure: £61,998.

There is an increase in expenditure over 1925 of  $\pm 4,791$  due to the expansion of operations. During the year the number of District Officers increased from 23 to 26, while the number of Divisional Officers decreased from 13 to 12 on the resignation of the Entomologist.

#### Sub-head E, Forestry Operations: Expenditure, £493,323; Income, £122,846.

Details of expenditure and income are given in Table E below. Compared with 1925, gross expenditure is increased by £87,167 while receipts are £11,593 less at £122,846. Acquisition of land cost £17,136 more at £118,607; cultural operations £36,764 more at £200,889; stores and miscellaneous £24,722 more at £69,851.

Enlargement of the planting programme accounts for the increase in expenditure, while reduction in receipts is due to the coal stoppage, during which pitwood was unsaleable.

Overhead Charges,  $\pounds 20,778$ ; Superior Supervision,  $\pounds 24,444$ , and Local Supervision,  $\pounds 24,224$ .—Overhead charges is an apportioned sum representing the expenditure on all salaries, allowances and office charges other than those of Divisional Officers, District Officers, Deputy Surveyors and their Assistants (all of which are included under superior supervision), and foresters and foremen (included under local supervision). During the year the number of foresters and foremen was increased by .34 from 116 to 150.

Operations.
f Forestry
.—Analysis of
Table E.

-	Expenditure Vet	(15)	બ		230,811	198,645	147,492	156,339	271,717	370,477	1,441,481	
2).)	Total.	(14)	બ	9,879 )	27,458 }	30,999	33,607	90,698	134,439	122,846	449,926	
(Col. (12).)	Other.	(13)	બ	153	1,955	16,702	9,854	11,743	16,391	19,698	76,496	
Таble Па.	Forest Produce.	(12)	્ય	9,272	20,444	7,283	16,902	42,852	55,055	44,664	196,472	
Income. T	Rents.	(11)	બ	154	5,059	6,474	5,951	25,264	39,367	42,086	124,355	
Inc	Sales of Land, Buildings, etc.	(10)	બ	( 300		540	006	10,839	23,626	16,398	52,603	
	Total.	(6)	બ	01 + 166	554,148	229,644	181,099	247,037	406,156	493,323	1,891,407	
	Бtотев алd Miscellaneous.	(8)	બ	2,432 )	15,766	30,516	19,879	26,404	45,129	69,851	209,977	
Col. (4).)	Rozds 2nd Buildings.	(	ન	1,472	7,986	4,779	5,049	7,318	18,485	17,954	63,043	
	Ртерагаțion алд Sale of Produce.	(9)	વા	357	1,680	3,918	4,287	9,217	15,684	16,576	51,719	
(Table IIa.	Сиltural Орегаtiола.	(5)	લા	19,611	85,638	129,414	82,359	114,356	164,125	200,889	796,392	
oenditure.	Acquisition of Land, etc.	(4)	¢.	40,393	85,803	12,191	27,768	49,418	101,471	118,607	440,651	
Exp	Local Bupervision.	(3)	ct.	( 1,236	5,093	9,816	10,552	14,352	18,433	24,224	83,706	
	Supervior. Bupervision.	(2)	e+	1	28,227	17,639	12,709	16,447	24,046	24,444	123,512	
	Очетћела Срагgев.	Ξ	۹ ۲	1	38,454	16,371	18,496	9,525	18,783	20,778	122,407 123,512	
	Хеят епділg 30th September.			1920)	1921	1922	1923	1924	1925	1926	Total	

Note.--The figures relating to Ireland (during 1920-23) are omitted.

Acquisition of Land, Buildings and Standing Timber: Expenditure, £118,607.—During the year £104,933 was paid in respect of purchases of land, including the standing timber and buildings thereon, and £13,674 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 is approximately 2s. 3d. per acre and the average price for the land purchased approximately £1 17s. per acre, or if the whole be charged against plantable land only, 3s. and £3 18s. respectively. Land and buildings for forest workers' holdings are excluded.

Land acquired from 29th November, 1919, to 30th September, 1926.

	By Le	ease and	Feu.	By	Purchas	3e.	Total by
	Plant- able (in- cluding planted).	Other Land.	Total.	Plant- able (in- cluding planted).	Other Land.	Total.	Lease, Feu and Pur- chase.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
England and Wales— Finally completed Entry secured	50,817 19,565	806 4,116	51,623 23,681	47,925	7,585 —	55,510	107,133 23,681
Total	70,382	4,922	75 <b>,3</b> 04	47,925	7,585	55,510	130,814
Soutland — Finally completed Entry secured	41,253 12,272	37,614 17,808	78,867 30,080	37,251 5,000	55,556 17,904	92,807 22,904	
Total	53,525	55,422	108,947	42,251	73,460	115,711	224,658
Total, Great Britain Ireland (to 31st March, 1922)	123,907 2,287	60,344 532	184,251 2,819	90,176 2,579	81,045 795	171.221 3,374	355,472 6,193
Grand Total	126,194	60,876	187,070	92,755	81,840	174,595	361,665

Note.—The Forestry (Transfer of Woods) Orders 1924 to 1926 transferred to the Forestry Commissioners the bulk of the Crown Woodlands. The area so transferred additional to the 355,472 acres above-mentioned, amounts to approximately 120,000 acres of which some 60,000 acres are carrying timber or are under forestal treatment.

The total area acquired during the forest year 1925-26 amounted to 69,274 acres, of which 36,450 acres were classified as plantable.

The area in Great Britain in respect of which the legal formalities of acquisition by the Department had been completed by the 30th September, 1926, was 278,807 acres, the corresponding figures in the two previous annual reports being 233,297 and 158,902 acres. In addition to these completed acquisitions, entry has been secured to a number of other properties. Details are given in the above table, 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 total area acquired in Great Britain to 30th September, 1926, is 355,472 acres, of which 214,083 acres were classified at the time of acquisition as plantable. Of the plantable area, 118,307 acres (55 per cent.) are situated in England and Wales and 95,776 acres (45 per cent.) in Scotland.

Cultural Operations: Expenditure,  $\pounds 200,889$ .—Expenditure on cultural operations relates to plantations and nurseries, of which the former absorbed  $\pounds 137,342$  and the latter  $\pounds 63,547$ . An analysis of expenditure is given in Table E 5.

Plantations.—Of the total expenditure on plantations,  $\pounds 89,639$  was in respect of first plantings and  $\pounds 47,703$  in respect of weeding, beating-up and protecting existing plantations.

The total area planted or sown during the year was 18,375 acres, of which 17,997 acres were placed under conifers and 378 acres under broad-leaved species.

The total addition to the woodland area of Great Britain was 13,924 acres, the remaining plantations being on the site of felled woodlands. In making these plantations and in beatingup the previous years' plantations 38,835,000 trees were planted, of which 51 per cent. were Scots and Corsican pines, 24 per cent. Norway and Sitka spruces, 10 per cent. European and Japanese larches and 9 per cent. Douglas fir.

										.					
					PLA	Plantatione.	<b>B</b>					Nurs	NURSERIES.		,
Year ending	ing.	Pransma				Weed-	Weed- ing,		to to the second s			Upk	Upkeep.		Grand
JULI Zel		tion of Ground.	Drain- age.	Fencing.	Plant- ing.	ing, 1st year.	2nd and subse- quent years.	2nd and Beating subse- quent years.	Pro- tection.	Total.	New Works.	Seed.	Labour and Other.	Total.	
		(1)	(2)	(3)	(4)	(2)	(9)	(2)	(8)	(6)	(10)	(11)	(12)	(13)	(14)
1920	:	£ 3,375	£ 843	${ m f}_{3,279}$	£ 3,561	£ 705	<b>५२</b>	વ્ય	£ 183	£ 11,946	${\mathfrak L}$ 1,090	£ 1,127	£ 5,448	£ 7,665	${f f}_{19,611}$
1921	:	10,781	1,794	12,550	27,310	1,033	827	665	2,342	57,302	3,731	5,297	19,308	28,336	85,638
1922	:	17,741	4,352	12,231	24,137	1,946	1,124	3,767	2,869	68,167	3,848	8,253	49,146	61,247	129,414
1923	:	11,550	4,065	10,577	12,622	3,227	3,196	2,135	3,385	50,757	1,050	2,739	27,813	31,602	82,359
1924	÷	12,804	4,361	14,448	13,901	4,191	10,898	5,897	6,334	72,834	666	5,665	34,858	41,522	114,356
1925	:	16,920	10,515	20,311	22,615	5,934	16,686	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	7,157	21,105	13,071	13,527	137,342	4,309	6,170	53,068	63,547	200,889
Total	:	91,223	35,055	100,080	132,767	24,193	53,836	35,061	37,792	510,007	17,982	32,424	235,979	286,385	796,392

Note.-The figures relating to Ireland (during 1920-23) are omitted.

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

21

#### ENGLAND AND WALES.

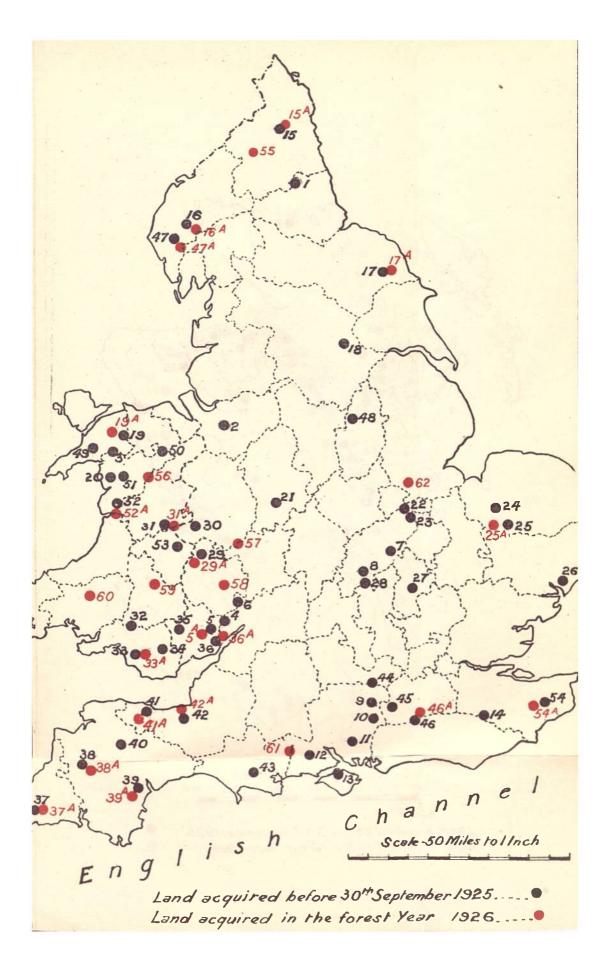
#### FORESTRY COMMISSION AREAS.

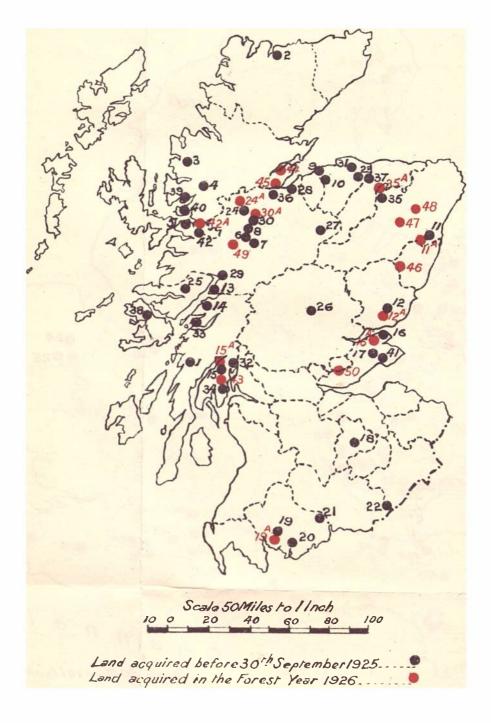
1. Chopwell.\* 2. Delamere.\* Hafod Fawr.\* 3. 4 Dean Forest.\* 5. Tintern.\* 5a. Do. (addition to). Dymock.\* 6. 7. Salcey.\* Hazelborough.\* 8. Alice Holt.\* 9. Woolmer.\* 10. 11. Bere Woods.\* New Forest.\* 12. Parkhurst.\* 13 14. Bedgebury.\* 15. Rothbury. (addition to). Do. 15A. 16. Thornthwaite. 16A. (addition to). Do. 17. Allerston. Do. 17A. (addition to). 18. Selby. 19. Gwydyr. 19A. Do. (addition to). 20. Vaughan. 21. Cannock Chase. 22. Westhay. 23.Rockingham. 24. Swaffham. 25.Thetford Chase. 25A. Do. (addition to). 26. Rendlesham. 27. Ampthill. 28. Brackley Hatch. 29. Mortimer. 29A. Do. (addition to). 30. Walcot. 31. Kerry. 31A. Do. (addition to). 32. Rheola. 33. Margam.

33A. Margam (addition to). 34. Llantrisant. 35. Llanover. 36. Chepstow. 36a. Do. (addition to). 37. Bodmin. 37a. Do (addition to). Halwill. 38. 38a. Do. (addition to). Haldon. 39. (addition to). 39A. Do. 40. Eggesford. 41. Exmoor. 41A. Do. (addition to). 42. Quantocks. 42a. Do. (addition to). 43. Wareham. 44. Bramshill. 45. Churt. 46. Chiddingfold. 46A. Do. (addition to). 47. Ennerdale. 47a. Do. (addition to). **48**. Clipstone. 49. Beddgelert. 50. Cynwyd. 51. Hengwrt. 52. Corris Valley. 52a. Do. (addition to). 53. Radnor. 54. Lyminge. 54A. Do. (addition to). 55. North Tyne Valley. 56. Dovey. 57. Wyre Forest. 58. Haugh Wood. 59. Brecon. **60**. Glangwili.

- 61. Ringwood.
- 62. Bourne.

\* Former Crown Woods.





#### SCOTLAND.

#### FORESTRY COMMISSION AREAS.

- 2. Borgie.
- 3. Slattadale.
- 4. Achnashellach.
- 5. Ratagan.
- 6. Inchnacardoch.
- 7. South Laggan.
- 8. Port Clair.
- 9. Culbin.
- 10. Monaughty.
- 11. Kirkhill.
- 11A. Do. (addition to).
- 12. Montreathmont.
- 12A. Do. (addition to).
- 13. Glen Righ.
- 14. Glenduror.
- 15. Glenbranter.
- 15A. Do. (addition to).
- 16. Tentsmuir.
- 16A. Do. (addition to).
- 17. Edensmuir.
- 18. Glentress.
- 19. New Galloway.
- 19A. Do. (addition to).
- 20. Screel Hill.
- 21. Aucheninnes.
- 22. Newcastleton.
- 23. Teindland.
- 24. Glenurquhart.
- 24A. Do. (addition to.)

- 25. Glenhurich.
- 26. Drummond Hill.
- 27. Glenmore.
- 28. Culloden.
- 29. Nevis.
- 30. Craig-nan-Eun.
- 30A. Do. (addition to).

\*

- 31. Altonside.
- 32. Ardgarten.
- 33. Barcaldine.
- 34. Benmore.
- 35. The Bin.
- 35A. Do. (addition to).
- 36. Craig Phadrig.
- 37. Ordiequish.
- 38. Salen.
- 39. North Strome.
- 40. South Strome.
- 41. Torloisk.
- 42. Glenshiel.
- 42A. Do. (addition to).
- 43. Glenfinart.
- 44. Findon.
- 45. Kessock.
- 46. Drumtochty.
- 47. Midmar.
- 48. Kemnay.
- 49. Glengarry.
- 50. Blairadam.

\* Former Crown Wood.

			'l <b>ant</b> at		eur en	ded 30th
		А	rea plai	nted (acre	es).	
Forest.	Affo	prested.	Re-af	forested.	Т	otal.
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.
Alice Holt, Hants*	_	_	54	-	54	_
Allerston, Yorks	599		51	-	650	
Ampthill, Bedford				_	115	—
Beddgelert, Carnarvon	33	_	82	-3	$\frac{115}{114}$	-3
Bedgebury, Kentand Sussex* Bodmin, Cornwall	70		114 30		100	
Brackley Hatch, Bucks and			61		61	_
Northants		_	01	_	. 01	
Bramshill, Berks and Hants	_		216	_	216	
Cannock Chase, Stafford	407	18		_	407	18
,						
Chepstow, Glos. and Mon- mouth	-		284	12	284	12
Chiddingfold, Surrey and Sussex	—	-	86	17	86	17
Chopwell, Durham*	— I	_	20	2	20	<b>2</b>
Churt, Surrey	163	—		-	163	—
Clipstone, Nottingham	459	- 6	129	-	588	6
Corris Valley, Merioueth	50	_	2	—	52	—
Cynwyd, Merioneth	308		-		308	
Dean Forest, Glos., Here-	. 9	26	139	69	148	95
ford, and Monmouth*			<b>F</b> 0		-	
Delamere, Cheshire*		-	78	-	78	_
Dymock, Gloucester <sup>o</sup>	-	-	20	_	20	
Eggesford, Devon	100		22	-	22 160	
Ennerdale, Cumberland	166	5	_		166	5
Exmoor, Somerset	95 67	_	31	—	95 98	
Gwydyr, Carnarvon   Hafod Fawr, Merioneth*	45		51		45	
Haldon, Devon	214		30		244	
Halwill, Devon	80	5	76		156	5
Haugh, Hereford		_	63		63	_
Hazelborough, Northants*		_	2	3	2	3
,,			-	Ŭ	_	
Hengwrt, Merioneth	83		_	-	83	
Kerry, Montgomery	113		194	-	307	
Llanover, Monmouth	100	-	102		202	
Llantrisant, Glamorgan			—	3		3
Lyminge, Kent		—	130	-	130	_
Margam, Glamorgan	208			—	208	·
Mortimer, Hereford and	202	—	320	—	522	-
Radnor						1.1
New Forest, Hants*	<u> </u>	-	382	14	382	14
North Tyne Valley,	45	—	-		45	-
Northumberland.	100				050	
Quantocks, Somerset	100	-	152	—	252	
Radnor, Radnor		-	70	-	70 230	16
Rendlesham, Suffolk	230	16	110	- 1		10
Rheola, Glamorgan	157	-	110		267 335	
Ringwood, Hunts	335	69	25	_	555 81	69
Rockingham, Northauts   Rothbury, Northumberland	46 166	09	35	_	166	
reconcert, norenumberianu	100	_		_	100	

Plantations. Year ended 30th

	Species	s planted,	including	beatin	g up (t	housan	ds).		
Scots and Corsican Pines.	Eur. and Jap. Larches.	Douglas Fir.	Norway and Sitka Spruces.	Oak.	Ash.	Beech.	Others.	Total.	Forest.
35 874 16	30 128 8	15 380 7	253	<u>11</u>		17 27	46	112 1,668 31	Alice Holt.* Allerston Ampthill.
 79 145 	21 17 4	51 22 11	175 35 11 223				13 3 —	188 190 195 238	Beddgelert. Bedgebury.* Bodmin. Brackley
$\substack{\textbf{1,269}\\642}$	18 102	9	38 17	_	-	<u> </u>	-	1, <b>3</b> 34 904	Hatc Bramshill. Cannock Chas
33	211	126	25	—	18	16	4	433	Chepstow.
-	8	—	229	99	18	-	¦ —	354	Chiddingfold
32 292 1,214  96	10 	9 9 23  56	4 — 20 422 135	  103		$ \begin{bmatrix} 5 \\ -1 \\ -1 \\ -77 \end{bmatrix} $	1 11 10 10 26	61 292 1,235 93 582 654	Chopwell.* Churt. Clipstone. Corris Valley Cynwyd. Dean Forest
295 - 62 182 64 - 454 21 - -	5 4 2 7 159 18 5 17 86 16	 35 6 184 32 71 	$\begin{array}{c} \\ 2 \\ 205 \\ 10 \\ 130 \\ 46 \\ 25 \\ 335 \\ \\ \end{array}$	8		$ \begin{array}{c} 8 \\ -2 \\ 9 \\ 11 \\ 11 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	$ \begin{array}{c c} - \\ 1 \\ 3 \\ - \\ 16 \\ 8 \\ - \\ 9 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	$\begin{array}{c} 308 \\ 24 \\ 50 \\ 276 \\ 216 \\ 564 \\ 72 \\ 516 \\ 453 \\ 86 \\ 24 \end{array}$	Delamere.* Dymock.* Eggesford. Ennerdale. Exmoor. Gwydyr. Hafod Fawr Haldon. Halwill. Haugh. Hazel- borough
$     10 \\     253 \\     30 \\     20 \\     106 \\     2    $	17 79 74 35 169		157 422 12 13 8 262 237			$ \begin{array}{c c} - \\ 11 \\ 8 \\ 3 \\ - \\ 4 \\ 17 \end{array} $	$ \begin{array}{c c} 12 \\ - \\ 25 \\ 2 \\ 2 \\ 1 \\ - \\ \end{array} $	$179 \\ 588 \\ 407 \\ 52 \\ 151 \\ 429 \\ 747$	Hengwrt. Kerry. Llanover. Llantrisant. Lyminge. Margam. Mortimer.
143 13	76 6	220 —	242 62	22 		23	-	727 81	New Forest. <sup>*</sup> North Tyne
39 1,040 131 160  232	87 96 4 95  143 42	167  53 52 28		  38	10  100 	$ \begin{array}{c} 3 \\ 9 \\ 69 \\ 6 \\ -15 \\ 3 \end{array} $		316 105 1,132 468 165 354 343	Valley Quantocks. Radnor. Rendlesham. Rheola. Ringwood. Rockingham Rothbury.

#### September, 1926-England and Wales.

1.4

		A	rea pla	nted (acre	es).	
Forest.	Affo	rested.	Re-aff	orested.	То	otal.
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.•	Broad- leaved.
Salcey, Bucks and Northants*	-		-		-	_
Selby, Yorks	i —		14	2	14	2
Swaffham, Norfolk	1,145	14	24	_	1,169	14
Thetford Chase, Norfolk	2,896	-	212	—	3,108	—
and Suffolk	42		201	1	243	1
Thornthwaite, Cumberland	42					1
Tintern, Monmouth*	151		150	. 45	150 151	45
Vaughan, Merioneth	191		131		131	_
Walcot, Salop	350	_	191	—	350	
Wareham, Dorset	500	_	-	_	300	_
Westhay, Northants			-			
Woolmer, Hants* Wyre, Worcester	_		116		116	_
Total	9,134	159	3,933	171	13,067	330
By direct sowing (included above)	452	15		, 	452	15

Plantations. Year ended 30th

\* Former Crown Woods

		в).	ousand	g up (th	beating	including	planted,	Species	
Forest.	Total.	Others.	Beech.	Ash.	Oak.	Norway and Sitka Spruces	Douglas Fir.	Eur. and Jap. Larches.	Scots and Corsican Pines.
Salcey.*	23	15	_	5	3	_	_	_	-
Selby. Swaffham. Thetford Chase	157 2,599 5,017	16 12 16	— 553	52 	- 		87 133 24	2 207 247	2,241 4,169
Thornthwaite Tintern.* Vaughan. Walcot. Wareham.	474 356 463 249 361	5 9 10 7	4 37 6 2	1 63 —		126 19 310 82 3	136 58 28 52 71	118 97 96 93 3	84 70 13 13 284
Westhay. Woolmer.* Wyre.	18 3 161	15 		3 			3 55	 	 
Total.	27,278	283	1,106	337	287	4,541	2,798	3,047	14,879

September, 1926—England and Wales—contd.

• )	2
2	0
	~

Plantations. Year ended

		A	s).			
Forest.		rested.	Re-aff	orested.	Т	otal.
	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.	Coni- fers.	Broad- leaved.
Achnashellach, Ross	103	-	52	1 -	155	
Ardgarten, Argyll	114	1	_	—	114	1
Aucheninnes, Kirkcudbright	30	<u> </u>		—	30	i —
Barcaldine, Argyll	163	2	-		163	2
Benmore, Argyll	113	. —		-	113	—
Bin (The), Aberdeen	232	-	-		232	—
Borgie, Sutherland	54	-			54	—
Craig-nan-Eun, Inverness			157		157	
Craig Phadrig, Inverness		! <b>−</b> .	40	-	40	
Culbin, Elgin	302	4		i —	302	4
Culloden, Invernoss		-	62	1	62	1
Drummond Hill, Perth	176	9		- 1	176	9
Edensmuir, Fife	18	-	-		18	
Glenbranter, Aıgyll	221	<i>⊢</i>		—	221	—
Glenduror, Argyll	103	4	— ·		103	4
Glenhurich, Argyll	242		-		242	—
Glenmore, Inverness	203	_ 2	-	- 1	203	2
Glen Righ, Inverness	94	1 -		! -	94	—
Glenshiel, Ross	192	—		i —	192	-
Glentress, Peebles	40	1	-		· 40	1
Glenurquhart, Inverness	241		! —	I —	241	—
Inchnacardoch, Inverness	150			-	150	-
Inverliever, Argyll*	56	-	-	-	56	—
Kemnay, Aberdeen	67	1	- 1	i —	67	1
Kirkhill, Aberdeen		−_	-	i —		—
Monaughty, Elgin	195	8		—	195	8
Montreathmont, Forfar	128	5	1 -	-	128	5
Nevis, Inverness	110	1 -	-		110	
Newcastleton, Roxburgh	82	— — ·		·	82	
New Galloway, Kirkcud-	60	1	-		60	1
bright.	1					
North Strome, Ross	58	-	-		58	
Port Clair, Inverness	180	-	-	I —	180	—
Ratagan, Inverness and Ross	113	-			113	-
Salen, Argyll	94	-			94	— <u> </u>
Screel Hill, Kirkcudbright	108	1		—	108	1
Slattadale, Ross	100	-	-		100	—
South Laggan, Inverness	-	-			-	
South Strome, Ross			35	-	35	
Teindland, Elgin	117	7	-	1 -	117	7
Tentsmuir, Fife	235	1	-	-	235	1
Torloisk, Fife	90	-	1 -	-	90	-
Total	4,584	47	346	1	4,930	48
By direct sowing (included above).	17	-	1	-	18	

\* Former Crown Wood.

Plantations. Year ended

England and Wales	•••	9,134	159	3,933	171	13,067	330
Scotland		4,584	47	346	1	4,930	48
Total	• •••	13,718	206	4,279	172	17,997	378

Scots and Corsican Pines.	Eur. and Jap. Larches.	Douglas Fir.	Norway and Sitka Spruces.	Oak.	Asb.	Beech.	Others.	Total.	Forest.
34	60	64	143			<u> </u>		301	Achnashellach.
	82	21	130	-	-	2	4	239	Ardgarten.
61	1	5	68	-	—	4		139	Aucheninnes.
42	34	3	194	-	—	4	25	302	Barcaldine.
015	16	27	116	_	·	-	4	163	Benmore.
215	37	3	135	-		<u> </u>	_	390	Bin (The).
127 145	5	$\frac{-}{25}$	<b>3</b> 9	—		5	5	181	Borgie.
86	_	40	105	_	_	_	—	$\begin{array}{c} 275 \\ 86 \end{array}$	Craig-nan-Eun.
689		_	_		_	4	_	693	Craig Phadrig. Culbin.
126	1	27	20	-	-	4	-	174	Culloden.
210	123	4	35	_	-	$\overline{25}$	12	409	Drummond Hill.
59	125	- 4	2			40	14	405	Edensmuir.
00	5		$50\tilde{4}$				34	538	Glenbranter.
10	5	4	230			4	26	279	Glenduror.
	9	12	305			<u> </u>	20	328	Glenhurich.
348	5	15	56		_	3	-	427	Glenmore.
	_	4	133		_	_	_	137	Glen Righ.
100	_		241	-		_	15	356	Glenshiel.
97	64	20	20		1	1		203	Glentress.
167	23	37	224	_	_	î	58	510	Glenurquhart.
106	4	26	107	_	l <u> </u>		1	244	Inchnacardoch.
2	i		321	_	_		8	331	Inverliever.º
80	22	1	27			1	_	131	Kemnay.
30	9	4	16			1	2	62	Kirkhill.
642	81	46	97		_	15	2	883	Monaughty.
228	6	25	45	_		7	—	311	Montreathmont.
-		20	119	_		—	5	144	Nevis.
- 1		_	268	—		—	23	291	Newcastleton.
15	41	27	172	—	—	4	9	268	New Galloway.
1	1	37	42		l .			80	North Strome.
16	6	108	156			16	1	303	Port Clair.
	65	13.	199			10	8	285	Ratagan.
25	25	10.	102				5	157	Salen.
23	95	32	102			3	12	175	Screel Hill.
1		12	186		_		7	206	Slattadale.
_	8	8	169		_		i	186	South Laggan
	44	4	9	l —		_	_	57	South Strome.
224	13	12	15		i	9	4	277	Teindland.
788		_		—		4	10	802	Tentsmuir.
32	-	—	136		_			168	Torloisk.
4,728	890	646	4,896		1	113	283	11,557	Total.
	000	Į 040 _	<u>+,000</u>		· ·	110	1 400	11,001	- · · · · · · · · · · · · · · · · · · ·

30th September, 1926-Scotland.

30th September, 1926-Summary.

14,879 4,728	<b>3,04</b> 7 890	2,798 646	4,541 4,896	287 —	337 1	1,106 11 <b>3</b>			England & Wales. Scotland.
19,607	3,937	3,444	9,437	287	338	1,219	566	38,835	Total.

Cost of Planting.—It was stated in the last Annual Report that the question of planting costs would be given more detailed treatment in the current Report.

It is necessary to state in the first instance what is meant by "planting." For the purposes of the Commissioners' work planting is taken to mean all operations on a plantation up to the end of the first year and includes preparation of ground, drainage, fencing, cost of plants and their insertion in the ground and weeding for the first year. In any plantation, however, further work is required in subsequent years on weeding, replacement of failures and so on. This whole operation, comprising the first year's work and subsequent attention to the plantation up to the time it is able to shift for itself, is called "establishment."

The cost per acre of labour and material for planting only for the years 1923-26 are as follows :---

	Year.	England and Wales.	Scotland.	Great Britain.		
		 £ s. d.	£ s. d.	£ s. d.		
1923		 589	5 16 7	5 12 0		
1924		 546	651	5 11 8		
1925		 6 10 3	7193	7 1 6		
1926		 5 16 10	7 10 3	677		

It will be observed that the cost of planting has risen in 1925 and 1926 as compared with 1923 and 1924. This is due in the main to more careful methods of planting which in the long run will reduce the cost of establishment.

The cost of establishment is difficult to ascertain for the reason that the process is normally not complete for any considerable area for at least four or five years. Consequently, although the Commissioners have planted to the end of 1926 some 71,000 acres, a small proportion only of this is completely established, the exact amount not being determinable without special and extensive surveys of the plantations. Since the greater part of the 71,000 acres, namely 43,701 acres, has been planted within the last three years, it is clear that any statement as to cost of establishment must be largely a matter of conjecture and it is preferred at this stage not to attempt to state a definite figure.

The actual outlay in labour and material incurred per acre on the area planted between 1919 and 1926 is given below. These figures include all costs of planting and a considerable proportion of establishment costs as well as some advance work on areas not yet planted :---

Country.	A mount.					
England and Wales	$\pm 8 14 5$					
Scotland	£9 3 6					
Great Britain	£8 17 4					

Forest Fires.—During the year 87 fires occurred, affecting 571 acres. The damage done was estimated at  $\pm 1,935$ , the amount recoverable being  $\pm 755$ . Of the total number of fires 29 were caused by sparks from railway engines.

Nurseries.—The total area under nurseries at 30th September, 1926, was 728 acres stocked with 220 million seedlings and 104 million transplants. Comparative figures for the three years 1924-26 are given in the following table :—

Year end-		5	Seed Sow	n	Stock of Plants at 30th September (thousands).							
ing 30th	Country.		(lbs.).		T	ransplan	ts.	:				
Sep- tem- ber.		Conifer- ous.	Broad- leaved.	Total.	Conifer- ous.	Broad- leaved.	Total.	Conifer- ous.	Broad- leaved.	Total.	Area (Acres).	
1926	England and Wales.	7,829	18,797	26,626	55,842	3,285	59,127	129,132	8,455	182,587	468	
	Scotland	1,767	297	2,064	43,945	866	44,811	86,848	737	87,585	260	
	Total	9,596	19,094	28,690	99,787	4,151	103,938	215,980	4,192	220,172	728	
1925	England and Wales.	7,024	17,780	24,804	38,195	2,358	40,553	101,501	2,398	103,899	878	
	Scotland	3,699	445	4,118	33,522	788	34,310	100,550	698	101,248	227	
	Total	10,723	18,225	28,922	71,717	3,146	74,863	202,051	3,096	205,147	605	
1924	England and Wales.	10,310	1,144	11,454	29,788	2,691	32,479	105,023	1,300	106,328	306	
	Scotland	3,453	97	8,550	24,196	242	24,438	71,405	1,313	72,718	176	
	Total	13,763	1,241	15,004	53,984	2,983	66,917	176,428	2,613	179,041	482	
			<u> </u>	i	<u> </u>	-	1				<u> </u>	

Nurseries.

Seed Supply.—The autumn, 1925, crop of Douglas fir seed was a complete failure in Canada and the United States of America, and Sitka spruce yielded only a fair crop in both countries. For the first time for several years there was a good crop of Japanese larch seed.

Norway spruce and European larch failed entirely and only moderate supplies of Corsican pine were obtainable.

As regards native seed, Scots pine was abundant in England but only a moderate quantity could be collected in Scotland. Acorns were plentiful, but beech mast was almost a complete failure and the chestnut crop was very limited.

The quantity of seed sold during the year amounted to 1,937 lbs.

The Commissioners have to express their gratitude for gifts of seed for experimental purposes received from the forest services of Canada, France, Japan, Portugal, Russia, Spain and the United States of America.

#### Sub-Head F.—Advances for Afforestation Purposes: Expenditure, £14,950.

Of the total expenditure,  $\pounds 3,341$  was in respect of overhead and supervisory charges and  $\pounds 1,026$  was in respect of a proceedssharing scheme. The remainder, viz.,  $\pounds 10,583$ , was in respect of grants,  $\pounds 2,594$  covering planting, preparation for planting and scrub-clearing carried out during the previous season, and  $\pounds 7,989$  covering work carried out and inspected during the year under review.

Grants.—The regulations under which grants are made for afforestation schemes were altered for 1925-26 and succeeding years. Previously grants were made for planting (up to £4 10s. per acre to local authorities and up to £3 per acre to private individuals), preparation of ground to be planted subsequently (up to £3 per acre in each case), and scrub clearing in preparation for planting (up to £2 per acre and in special cases onethird of the net cost within a limit of £4 per acre to local authorities, and up to £2 per acre to private individuals). The grant for planting now varies according to whether the scheme is in respect of conifers or hardwoods, and no distinction is made between the amounts payable to local authorities and private individuals. Particulars of the revised grants are as follows :—

(1) Conifers.—Up to  $\pounds 2$  per acre for every 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) for every acre cleared. Limited to selected schemes involving not less than 50 acres.

As regards the payment of the grants for planting, 75 per cent. of the amount due is paid when the planting has been satisfactorily completed, and the balance four years later, provided the Commissioners are satisfied that any necessary beating-up has been carried out and the plantations properly established and maintained. If approval is withheld the amount of the grant is repayable by the recipient with simple interest at 5 per cent. per annum from the date of the grant.

Particulars of the schemes in respect of which grants were paid during the year are given in the table below; areas which had not been inspected prior to 30th September, 1926, are excluded :—

—		Eigland and Wales.	Scotland.	Total.	
No. of Schemes		163	88	251	
Planting Conifers Planting Hardwoods		Acres. 2,076 478	Acres. 2,115 6	Acres. 4,191 484	
Sorub clearing	•••	53	214	267	

#### Sub-head G.-Education: Expenditure: Gross, £10,608; Net, £10,579.

Details of expenditure and income are given in Table G below : Table G.—Analysis of Education.

			Income (Table IIa, Col. (13)).									
ending 30th Sep- tember.	Superior								.			ire.
	Super-	Salaries and Expenses of Instructors.	Purchases and Rent of Land and Buildings.	Allowances to Apprentices.	Stores and Equipment.	Fuel and Light and Sundry Expenses	Grants to Insti- tutions.	Total.	Labour of Apprentices.	Other.	Totals	Net Expenditure.
1920 1921 1922 1923 1924 1925 1926	£ } 3,432 1,092 1,617 983 1,245 1,357	£ { 1,343 3,493 2,793 1,614 1,447 1,150 1,138	£ 2,033 2,479 127 311 421 166 235	£ 1,417 2,468 3,157 4, <b>20</b> 2 1,440 1,718 2,359	£ 425 982 411 163 56 127 267	£ 605 1,625 2,513 1,287 843 804 1,013	£ 1,242 2,264 2,598 3,053 4,743 4,239	£ 21,544 12,357 11,792 8,243 9,953 10,608	$\begin{cases} \frac{\pounds}{-} \\ - \\ 1,259 \\ 282 \\ 33 \\ 12 \\ - \\ - \\ 12 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ $	£ 103 96 1,396 252 42 435 17	£ } 199 1,896 1,510 324 468 29	£ 21,345 10,961 10,282 7,919 9,485 10,579
Total	9,726	12,978	5,772	16,761	2,431	8,690	18,139	74,497	1,585	2,341	3,926	70,571

The figures relating to Ireland (during 1920-23) are omitted.

Apprentices' Schools: Expenditure, Gross, £5,012; Net, £4,983.—During the year 50 forest apprentices were undergoing courses of instruction in the schools at Parkend (Forest of Dean) and at Beaufort (Inverness-shire). At the final qualifying examination 21 men who had successfully completed the two years' course were granted certificates of proficiency. A special one-month course in the Forest of Dean was attended by 15 of the Commission's foresters.

Grants to Universities and Colleges: Expenditure, £2,239.— 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; Aberdeen University; Edinburgh and East of Scotland College of Agriculture.

These centres provide courses of training for forest officers and also forestry courses for those engaged in allied occupations such as estate management and agriculture. The number of students who were studying forestry during the period under review was 118. The number of forestry degrees granted was 39, and 8 candidates were successful in gaining forestry diplomas.

Imperial Forestry Institute: Expenditure,  $\pounds 2,000$ .—The Imperial Forestry Institute is financed from the Forestry Fund to the extent of  $\pounds 2,000$  per annum for a period of five years from October, 1924. The contribution from the Colonial Governments was originally fixed at  $\pounds 3,000$ , but was subsequently increased to provide for special work in which the Colonies are particularly interested.

The number of students who attended the various courses of study for the whole or part of the Academic year 1925-6 was 44. These included post-graduate probationers, India 5; Colonial Services 9; Forest Officers on leave, Colonial Services 14; India 9; research students 5; private students 2.

#### Sub-head H.—Research and Experiment: Expenditure: Gross, £7,432; Net, £7,322.

Details of expenditure are stated in Table H below :--

Table H.—Analysis of Research and Experiment.

			Expenditure (Table IIa, Column (7)).										
Year ending 30 Sept.		Superior Super- vision and Overhead Charges.	Salaries and Ex- penses.	Instru- ments, Stores, etc.	Labour, Seed and Sundry Expenses.	Grants to Insti- tutions.	Total.	Income (Table II <i>a</i> , Col. (15)).	Net Expen- diture.				
		£	£	£	£	£	£	£	£				
1920	••••	} 3,380 {	4,078	30	137		} 15,472	_	15,472				
1921	•••	() (	5,983	169	945	750	)	FOR					
1922	•••	556	4,463	75	983	569	6,646	567	6,079				
1923	•••	625	2,981	168	843	508	5,125	10	5,115				
1924	•••	1,789	2,981	94	1,009	1,266	7,139	9	7,130				
1925		1,669	3,030	93	1,019	600	6,411	43	6,368				
1926	•••	1,487	3,336	68	1,878	663	7,432	110	7,322				
Total		9,506	26,852	697	6,814	4,356	48,225	739	47,486				

Steady progress has been made in research and experimental work during the year.

Production.—Four new permanent sample plots have been established, one in England and three in Scotland, and, in addition, 38 plots have been remeasured. A certain number of plots have been abandoned or lost owing to windfall or fellings, and the present position is that a total of 152 sample plots have been established in Great Britain, of which 80 are in England and 72 in Scotland. Up to the end of September, 1926, 85 plots have been measured once, 47 twice, and 20 three times or more.

The Commissioners have again to express their indebtedness to the various landowners who have afforded facilities for the laying out and maintenance of sample plots in their woods.

Nursery and Plantation.—Experimental work on nursery practice has continued along the same lines as in former years, resulting in many cases in confirmation of earlier results. Conclusions of practical value have now been obtained in several directions. The principal development during the past year, however, has been in the field of plantation experiments, dealing mainly with peat and other difficult soil conditions. Four centres have been established, of which two are in England and Wales and two in Scotland, and a wide range of experiments is in progress from which results of much practical value are anticipated. Methods of planting spruce on peat which have proved successful on a small scale are now being applied more extensively in practice.

Entomological.—Further progress has been made on the lifehistory of forest pests; in particular, valuable work has been done on the cockchafer, three species of which are found to occur commonly. Satisfactory methods of control have been devised for intensive work, but their applicability to large-scale operations has yet to be determined.

Botanical.—Investigations were continued at certain Universities assisted by grants from the Forestry Commission.

Edinburgh (Dr. M. Wilson and Mr. J. S. L. Waldie).—Researches into fungus diseases.

Aberdeen (Messrs. E. V. Laing and G. K. Fraser).—Ecological investigations into tree growth on peat. Chemical and physical properties of peat.

Bangor (Mr. T. Thomson).—Effect of seasonal conditions upon diameter growth of Douglas fir.

Utilisation.—Enquiries and experiments are being carried out in collaboration with the Forest Products Research Laboratory, into the uses of coniferous thinnings as pit props and of inferior oak for various purposes.

# Sub-head J.—Agency and Advisory Services: Expenditure: Gross, £2,001; Net, £1,401.

No direct expenditure was incurred under this head, the item  $\pounds 2,001$  representing 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.

The sum of  $\pounds 554$  was received from the Board of Trade in respect of the Census of Production, 1924, of which the Commissioners are conducting the forestry section.

ng aber.		Income							
Year ending 30th September.	Superior Supervision and Overhead Charges.	Consulta- tive Com- mittees' Expenses.	Publi- cations.	Special Inquir- ies.	Relief of Un- employ- ment.	Total.	(Table II <i>a</i> , Col. (18)).	Net Expen- diture.	
	£	£	£	£	£	£	£	*	
1920	3,766 {	37	319	218	— ì	5,401		5,401	
1921	1 00.100	111	659	291	— · ſ	0,301		0,101	
1922	2,188	92	479	576	10,160	13,495	252	13,243	
1923	1,372	65	122	669	4,599	6,827	12	6,815	
1924	3,268	44	55	1,817	5,069	10,253	14	10,239	
1925	3,240	50	78	4,824	· · · - ·	8,192	36	8,156	
1926	3,042	32	74	1,251	—	4,399	<u> </u>	4,399	
Total	16,876	431	1,786	9,646	19,828	48,567	314	48,253	

# Sub-head K.-Special Services: Expenditure: £4.399.

Table K.—Analysis of Special Services.

The figures relating to Ireland (during 1920-23) are omitted.

Publications.—During the year under review the Com-

Bulletin No. 8.—British Bark-Beetles.

Leaflet No. 14.—The Phomopsis Disease of Convers.

Sixth Annual Report of the Forestry Commissioners, being the report for the year ending 30th September, 1925. In addition leaflets Nos. 2 (Chermes Cooleyi) and 9 (Forest *Fires*) were revised.

Exhibits at Agricultural Shows.—Forestry exhibits were sent by the Commissioners to the shows of the Royal Agricultural Society at Reading, the Bath and West Society at Watford, the Royal Welsh Agricultural Society at Bangor, and the Highland and Agricultural Society at Kelso.

British Association for the Advancement of Science.-The Commissioners again took an active part in the organisation of the Forestry Sub-section of the annual meeting, which was held at Oxford. Many papers covering a wide range of subjects were read and forestry excursions were made to woods in the neighbourhood.

World's Forestry Congress, Rome.-The Commissioners were represented at this Congress, organised by the International Institute of Agriculture, which was held in Rome during May, 1926. The Congress was attended by delegates from about sixty Governments and by representatives from scientific institutions and forestry associations. One of the most important subjects discussed was the collection of statistics regarding the world's timber resources, and a resolution was passed urging the necessity for setting up an international organisation for dealing with this work.

Census of British Woodlands.—Particulars are given below in respect of the counties which were completed during the year, viz., 37 in England and Wales and one in Scotland. This investigation has since been completed and a report embodying the statistics obtained is now in course of preparation.

			Percentage of Total	1100u-						
County.	Coni- fers.	Mixed.	Hard- woods.	Cop- pice.	Scrub.	Felled.	Uneco- nomic.	Total.	Area of Wood- lands felled.	lands as percentage of Total Land Area of County.
England.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	<u> </u>	
Bedford	1,688	1,541	3,906	3,703	46	1,363	893	13,140	10.4	4.4
Berkshire	5,148	8,612	8,060	12,636	1.955	6,891	1,560	39,862	17.3	8.7
Buckingham	3,015	2,470	18,934	3,642	2,164	1,519	2,788	81,582	4.4	7.2
Chester	2,831	6,511	4,503	718	1,906	3,238	2,393	22,100	14.7	3.4
Cornwall	3,081	5,100	5,021	8,113	2,580	2,468	1,621	27,984	8.8	3.2
Cumberland	6,692	5,468	7,142	1,815	2,815	9,883	1,104	34,919	28.3	3.6
Devon	12,958	13,877	18,583	15,562	5,980	11,344	2,306	80,610	14.1	4.8
Dorset	3,950	3,063	6,073	16,693	1,764	3,984	8,673	39,200	10.2	6 <b>•8</b>
Durham	6,477	6,552	8,131	689	1,834	8,397	1,530	32,960	25.5	5.1
Essex	479	1,338	5,649	12,885	2,254	1,516	6,325	30,446	5.0	3.1
Hampshire	17,216	17,180	15,978	53,219	2,260	9,657	6,533	122,038	7.9	12.8
Hereford	2,534	3,323	6,169	20,361	2,129	8,381	344	43,241	19.4	8.1
Kent	2,164	2,368	4,941	81,349	5,142	6,464	5,825	108,253	6.0	11 <b>·1</b>
Lancashire	3,432	7,781	5,920	7,559	1,935	3,197	9,754	39,578	8.1	3.3
Leicester	535	4,084	4,366	2,302	935	873	257	13,352	6.2	2.5
Lincoln	2,880	7,760	15,883	3,374	1,315	7.291	2,369	40,872	17.8	2•4
Monmouth	14,429	1,097	5,040	15,874	3,441	4,449	167	44,497	10.0	12.8
Norfolk	12,423	11,806	5,569	6,263	1,843	5,878	5,138	48,920	12.0	3.7
Northampton Northumber-	1,220 18,656	949 9,848	7,746 7,358	12,517	444 4,0 <b>3</b> 6	1,553 11,433	657 4,144	25,086 55,700	6·2 20·5	3•9 4•3
land.	4 0 0 1		10.010							<b>7</b> . 0
Nottingham Salop	4,901	5,186	12,313	2,141	1,361	3,703	698	30,253	$12 \cdot 2$	5.6
Stoffand	5,840	8,912	15,148	5,317	2,942	10,647	1,576	50,382	21.1	5.9
Q.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	6,782	6,963	8,280	3,178	2,555	4,878	5,153	37,789	12.9	5.1
Change -	6,744	6,337	6.459	23,086	3,380	7,489	2,963	56,458	13.3	12.8
Warmial	6,672	7,786	13,314	81,676	4,698	9,132	6,840	130,118	7.0	14.0
Wilkels -	687	2.497	7,503	5,896	1,210	962	565	19,320	5.0	3.2
Worcester	4,832	6,128	10,216	20,607	2,310	2,934	4,536	51,063	5.7	5.9
York, East _Riding.	1,391 3,686	2,376 5,182	2,514 3,782	11,828	556 478	1,049 3,805	786 743	20,500 17 <b>,683</b>	5·1 21·5	$4.5 \\ 2.4$
York, North Riding	9,580	13,855	11,055	698	6,174	13,258	4,706	59,326	22.3	4.4
York, West Riding.	6,393	10,171	23,301	2,653	5,336	6.598	7,648	62,100	10.6	3.2
Wales.										
Carmarthen	1,886	1,590	2,435	5,564	2,473	8,154	819	22,921	35.6	3.9
Denbigh	3,774	4,280	3,840	1,472	634	3,055	892	17,447	17.5	4 • 1
Flint	872	1,816	2,391	326	555	1,035	173	7,168	14.4	4.4
Glamorgan	6,257	2.409	2,879	4,934	4,855	6,202	1,641	29,177	21.3	5.7
Merioneth	2,576	1,416	5,518	337	4,314	3,398	1,079	18,638	18.2	4.5
Pembroke	649	1,796	1,814	477	274	4,133	288	9,431	43.8	2.4
Scotland. Perth										
	39,221	12,371	7,683	2,841	22,506	27,615	4,607	116,844	23.6	7.3

## Consultative Committees.

The Consultative Committees for England, Scotland and Wales each held a meeting in the spring of 1926. Certain members of the English and Welsh Committees paid a visit of inspection in July to various parts of Thetford Chase. Formal references were submitted by the Commissioners to the Committees for their advice and assistance in the following matters :—

(1) The manufacture of sectional houses from small oak, &c.

(2) Prospective areas for State afforestation.

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

(a) Afforestation grants.

(b) Forestry propaganda and publicity.

(c) Forestry exhibits at agricultural shows.

The Commissioners regret to report the deaths of Mr. James Whitton on the 30th October, 1925, of Sir John Gladstone, Bart., on the 25th June, 1926, and of the Earl of Chichester on the 14th November, 1926.

The undermentioned were appointed or reappointed members of the respective Committees as from the 25th March, 1926, in accordance with Section 1 (3) of the Forestry (Consultative Committees) Order, 1920 :=

#### England.

Colonel Sir George L. Courthope, Bart., M.C., M.P. (Chairman).

Colonel The Earl of Chichester, O.B.E., D.L., J.P. (Vice-Chairman)—since deceased.

Percy Barker, Esq.

E. Callaway, Esq.

J. S. Corbett, Esq.

W. Cundiff, Esq.

H. L. French, Esq., C.B., O.B.E.

E. C. Horton, Esq., O.B.E.

Brigadier-Gen. H. G. J. de Lotbinière, D.S.O.

A. F. Luttrell, Esq.

Hugh Morrison, Esq., M.P.

Major The Hon. Harold Pearson.

Colonel B. J. Petre.

T. Roberts, Esq.

Major S. Strang Steel, M.P.

Christopher H. Turnor, Esq.

J. W. Watt, Esq.

Major Sir Granville Wheler, Bart., C.B.E., M.P.

T. Williams, Esq., M.P.

Leslie S. Wood, Esq., F.S.I.

Secretary: F. W. Hamilton, Esq.

#### Scotland.

Sir Hugh Shaw Stewart, Bart., C.B. (Chairman). Brigadier-Gen. Stirling of Keir (Vice-Chairman). F. R. S. Balfour, Esq. William Black, Esq. Gilbert Brown, Esq. Sir James C. Calder, C.B.E. Sir Isaac Connell, S.S.C. Robert Galloway, Esq., S.S.C. Sir John Gladstone, Bart. (since deceased). Sir Robert Greig, M.C., Ll.D. J. H. Milne Home, Esq. George Leven, Esq. Sir Robert Lorimer. H. L. Macdonald, Esq. Sir Kenneth J. Mackenzie, Bart. James MacLaren, Esq. J. Matson, Esq., C.B.E. P. McIntyre, Esq. Donald Munro, Esq., O.B.E. Joseph F. Rennie, Esq., F.S.I. James Scott, Esq., S.S.C. Professor W. W. Smith. Right Hon. The Earl of Stair, D.S.O. Secretary : G. R. Ditchburn, Esq.

#### Wales.

Right Hon. Lord Kenyon, K.C.V.O. (Chairman). Colonel F. D. W. Drummond, C.B.E., D.L. (Vice-Chairman). T. G. Boscawen, Esq. G. B. Bovill, Esq. Captain R. R. Conwy, R.N., C.M.G. Lieut.-Colonel J. R. Davidson, C.M.G. Colonel David Davies, M.P. Captain J. D. D. Evans. G. A. Humphreys, Esq. C. Bryner Jones, Esq., C.B.E. John Jones, Esq. Lieut.-Colonel W. N. Jones, J.P. F. J. Matthews, Esq. J. M. Naylor, Esq. Right Hon. The Earl of Powis, D.L., J.P. L. R. Pym, Esq. D. C. Roberts, Esq. J. Roberts, Esq. Major-General A. E. Sandbach, C.B., D.S.O. J. I. Storrar, Esq. C. D. Thompson, Esq., J.P. Thomas Thomson, Esq. R. W. Treseder, Esq. Colonel Charles Venables-Llewelyn, D.L., J.P. Colonel Sir H. L. Watkin Williams-Wynn, Bart., C.B. Percy Wilkinson, Esq. Secretary: F. W. Hamilton, Esq.

# Sub-Head L.—Forest Workers' Holdings: Expenditure, £75,820. Receipts, £3,374.

Details of expenditure and receipts are given in Table L below. The main items of expenditure are acquisition of land and buildings by purchase  $\pounds 23,028$ , erection of new buildings  $\pounds 37,519$ , adaptation and reconditioning of buildings  $\pounds 7,130$ . On the receipt side rents amount to  $\pounds 3,266$ .

aber.			Exp	Income (Table IIa, Col. (16)).										
Year ending 30th September.	Superior supervision and overhead charges.	Acquisition of land, buildings, etc., by purchase.		Adaptation, etc., of ppi existing Buildings.	Repairs and Renewals.	Fencing, Drainage, etc.	ts and Feu Duties.	Rates and Taxes, etc.	Other.	Total.	Rents.	Other.	Total.	Nct Expenditure.
Ye	Ing (1)		(3)	(+) exi	(5)	19 54 (6)	(2) Rents	В3 (8)	(9)	(10)	(11)	(12)	(13)	(14)
1924	£ 826	£ 5,000	£	£ 75	£	£	£	£	£	£ 5,901	<u>£</u>	£	£ 8	£ 5,893
1925	3,684	27,173	1 <b>6,</b> 069	7,415	23	620	183	17	1,354	56,538	876	381	1,257	55,281
1926	5,855	23,028	37,519	7,180	441	2,136	325	224	-338	75,820	3,266	108	3,374	72,446
Total	9,865	55,201	53,588	14,620	464	2,756	508	241	1,016	138,259	4,142	497	4,639	133,620

Table L.—Analysis of Forest Workers' Holdings.

Progress in Formation of Holdings.—The work of forming forest workers' holdings began in the summer of 1924 and at the 30th September of that year no holdings had actually been completed, but 35 were in hand. At the corresponding period in 1925, 198 were either completed or in hand. Relative figures at the 30th September, 1925-26, are shown in the Table below :—

Progress in Formation of Holdings.

	At 30th Sept., 1925.	At 30th Sept., 1926.
In course of formation. Equipped with new buildings Equipped with adapted or reconditioned buildings.	. 81 56	93 81
Total	137	174
Completed. Equipped with new buildings Equipped with adapted or reconditioned buildings.	3 58	63 123
Total	61	186
Occupied	52	183
Total number of holdings	198	360

The above figures apply only to holdings which comply with the conditions laid down in the scheme that 150 days' work is guaranteed to the holder. There are also in England and Wales 27 " bare land " holdings, *i.e.*, land let to forest workers occupying cottages which are not the property of the Commissioners.

The initial stages of the scheme entail the formation of holdings at any time that opportunity may offer, and they are frequently completed and let at a period in the year too late for any receipts from them on account of rents to appear in the annual account of the year under review. In addition the expenditure includes the whole cost of works "in progress," the return from which may be delayed for several months.

The demand for these holdings continues good, more particularly in the light land districts and where the scheme has been in operation for some time. In the heavy land districts and where no holdings have yet been formed there is apparently some reluctance on the part of workers to embark on a business in which they have not much experience and which involves some risk to their small capital. 'At the 30th September, 1926 three completed holdings were not occupied, but these have since been let.

In the Eastern Counties of England where the soil is of a very light and sandy nature it has been found necessary to exceed the 10-acre limit in order to provide a unit of a useful size and in other cases by the addition of some acres of rough or common grazing for cattle, but it will probably always be of advantage to have at least one holding of a larger type in each settlement where a man may be encouraged to keep a pair of horses for work on his neighbour's holding or for carting in the forest.

Exceptional circumstances render the cost of forest workers' holdings less than that of ordinary agricultural small holdings. The Commissioners have been able to purchase for forestry purposes at a moderate overhead price, estates which contain in many cases not only some land which is suitable for agricultural cultivation but also houses which at a comparatively small cost in re-conditioning have been made suitable for workers' dwellings. Particulars of costs and rentals of 186 holdings completed to 30th September, 1926, are as follows :—

Holdings equipped with new buildings:

63 holdings. Average cost of buildings, £623; of land, £69; total £692; average rental, £13 14s. per annum.

Holdings equipped with reconditioned buildings:

123 holdings. Average cost of buildings, £229; of land, £130; total, £359; average rental, £18 per annum.

Total holdings of both kinds:

186 holdings. Average cost of buildings, £360; of land, £110; total, £470; average rental, £16 10s. per annum.

In most cases local custom governs the style and type of buildings, but experiments are being made in different methods of wall construction such as timber, steel, concrete block and reinforced concrete with timber framing. These all make comfortable houses, but it is as yet too early to say how far they are economical. The bungalow type with three bedrooms, livingroom and kitchen scullery is popular and convenient. The limit of cost sanctioned,  $\pm 800$  for a completed holding (excluding the land), is sufficient except in certain remote districts such as the Western Highlands where carriage is very expensive and labour difficult to obtain. In such districts the strict limit of expenditure will affect the extension of the scheme.

As the forest emerges from the purely planting stage and becomes ripe for thinning and other cultural operations, a considerably larger number of men will be employed and it will become a matter for consideration whether the present limit of five holdings per 1,000 plantable acres may not in certain districts be extended with advantage both to forestry and to the general policy of increasing small holdings in the country.

In their last annual Report the Commissioners discussed the probability of an increase of staff to manage the agricultural side of their work; this side now represents a large and widely scattered estate and has already begun to present problems in management. Forest workers' holdings are increasing at the rate of 150 to 200 a year, entailing a large amount of work in the provision of new buildings and the adaptation of old; in addition there are always many arrangements to be made with existing tenants to obtain possession of the land. The greater part of this work is concentrated in the offices of the Assistant Commissioners without any trained assistance and, while it has been admirably done, it is taking up more time than these officers can afford for the purpose. But forest workers' holdings are not the only agricultural subjects with which the Commissioners have to deal. Estates purchased for forestry are, with a few exceptions such as deer forests, derelict agricultural land and devastated woodlands, invariably in some form of agricultural and pastoral occupation. These lands have to be managed as part of the estate until they are transferred to the forest or, in the case of agricultural land. until they are converted into workers' holdings. In Scotland a number of the rough grazings purchased include "bound" sheep stocks which have had to be taken at an acclimatisation value considerably in excess of their present market value. The business of disposing of these without serious loss takes up much time of a skilled man and with the selling or letting of fishings,

shootings and the accompanying lodges, frequently a matter of lengthy and difficult negotiation, the time of the Assistant Commissioner is diverted too much from his main business.

# Sub-head Z.-Income, £126,959.

The sources of income are given in Table IIA (page 16). Income from forestry operations shows a decrease of  $\pounds 11,593$ , as compared with 1925.

		Commission's Forests.	Transferred Crown Properties.	Total from Forestry Operations.
Land and buildings Rents (including mining rents a royalties).	 und	£ 13,684 13,875	£ 2,714 28,211	£ 16,398 44,664
Forest produce Other sales (including stores, l	 ive	7,109 14,785	37,555 4,91 <b>3</b>	44,664 19,698
stock, rabbits, gravel, etc.).		49,453	73,393	122,846

Under land and buildings, £3,358 is in respect of property acquired for the purposes of forestry operations, but transferred for forest workers' holdings; rents and royalties include £15,645 from the Forest of Dean mines; forest produce includes £42,822 from the sale of timber and £1,842 for nursery stock and seed; other sales include livestock, £8,182; sand and gravel in New Forest, approximately, £3,750.

## Total Employment in the Commission's Forests.

The course of employment provided by the Commission's forests is stated in the table below :---

		ĺ	Numbers					
	 		Summer (Minimum).	Winter (Maximum).				
 1920	 		210	1920/21				
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		

Note.-450 employees were transferred to the Commission with the Crown Woods on 1st April, 1924.

(Signed)\* LOVAT (Chairman).
F. D. ACLAND.
CLINTON.
L. FORESTIER-WALKER.
HUGH MURRAY.
R. L. ROBINSON.
W. R. SMITH.
A. G. HERBERT,
22, Grosvenor Gardens,
London, S.W.

#### APPENDIX.

Imports of Timber, Wood Manufactures and Pulp of Wood.

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

The effect of the coal stoppage of 1926 is reflected in a drop of 1,599,000 loads (16.3 per cent.) in the quantity of timber imported as compared with 1925, the value showing a corresponding decrease of  $\pounds 7,228,000$  (15.5 per cent.). The principal decline occurred in the case of pitprops, which fell by 919,000 loads.

Imports of wood manufactures and pulp of wood, however, continued to increase. Wood manufactures rose by  $\pounds 575,000$  (9.2 per cent.) and pulp of wood by 96,000 tons (7.8 per cent.) and  $\pounds 860,000$  (9.2 per cent.).

<sup>\*</sup> Sir John Stirling-Maxwell did not sign the Report, as he has resigned from the Forestry Commission pending the passing of the Forestry Act, 1927, to increase the number of Commissioners from 8 to 10.

Sir John Stirling-Maxwell's valuable services are not lost to the Commission, as, at the request of the Prime Minister, he is acting with the Commission in an honorary capacity at the present time.

	Q	uantities	(thousan	ds).	T	alue (the	ousands)	
Description.		Average 1914–18.	1925.	1926.	Average 1909–13.	<b>Averag</b> e 1914–18.	1925.	1926.
				Тімв	ER,			
Hewn-Hard-	Loads.	Loads.	Loads.	Loads.	£	£	£	£
Mahogany		_	65	51	—	-	851	626
Walnut	-	_	2		-	-	18	)
Oak	-		18	ר איז '	—	—	182	} 699
Teak	1	_	1	1	_	-	19	1
Other sorts	542	129	68 457	280	1 9 = 9	583	630	1 1 040
Hewn-Soft (Fir, pine, spruce, etc.).	042	125	407	400	1,353	000	1,865	1,042
Sawn-Hard-								
Mahaman			38	34		_	698	63 <b>3</b>
Walnut			13				334	1 000
Oak		_	186		_		2,419	1
Teak	_		39	<pre>&gt; 463 {</pre>	_		875	\$ 5,986
Other sorts		_	296	1 U	_		3,029	J
Sawn-Soft-				,			-,	
Deal and Planks		_	1,794	n i	_		9,079	1
Boards		_	1,281	} 4,790 {	<u> </u>	_	6,466	\$ 21,919
Other sorts	_	_	1,918	J ' []	-	-	8,747	1 '
Planed or Dressed-								•
Floorings	—	_	414	1) (	—	_	2,481	}
Matchings	—	_	80	} 60ō{	—	_	487	> 3,466
Other sorts	_		69	) (	_		451	)
Other Descriptions—								
Pitprops	2,944	1,673	2,503	1,584	3,510	4,425	4,595	2,991
Staves	161	71	116	107	795	648	918	868
Sleepers		130	451	223	_	602	2,207	887
Veneers and panel	_		2	3			119	132
wood.						24 0 0 0 3		
Not elsewhere speci-	6,557*	3,550*	3	2	21,903*	24,362*	26	19
fied.								
Total unmanufactured timber.	10,204	5,553	9,814	8,215	27,561	30,620	46,496	39,268
Prostant 2	1	,	. We	DOD MANI		s.		
Furniture and cabinet			-	_	416	115	669	724
ware. Builders' woodwork					100		1.007	1 400
/ I I I I I I I I I I I I I I I I I I I	-	-	_	_	180	62	1,087	1,430
(window frames, doors, etc.).							i	
Planad						1	1 4 4 7	
Tool handles	-	—	_		_		1,447 230	
Domestic woodwork	. —		_				253	1
(bread platters,	1 -	_	_	_	-	_	200	\$ 4,648
travs. etc.)						ļ		
Not elsewhere speci-				_	2,099	1,821	2,541	
fied.					2,000	1,021	2,011	,
Total manufactured timber.		-	<u> </u>	·	2,695	1,998	6,227	6,802
				D	W			
	1			PULP OF	W00D,			
	m	I m.	1 10		•	1	1	1
Pulp of Wood	Tons. 859	Tons. 682	Tons. 1,235	Tons.	4,058	<b>7.91</b> 5	9,312	10,172

Imports of Timber, Wood Manufactures and Pulp of Wood.

\* 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 classifica-tion from 1920 onwards. The direct foreign trade of the Irish Free State has been excluded from the figures for 1925 and 1926

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