

THE BRITISH FOREST ECONOMY
AND POLICY

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General

To the visitor from Finland, or indeed from almost any other country in the temperate zone, there are several features of British forestry which will strike him as peculiar. Although to the casual observer the country with many hedgerow trees may give a reasonably heavily-wooded appearance, this is not borne out by closer inspection and reference to comparative statistics shows that it has a smaller proportion of woodland than almost any other country in Europe. There are several things which help to explain this unique position.

During the Industrial Revolution which began in the second half of the 18th century Britain became a pioneer in the industrial techniques which made her favour the principles of free trade. Under what the political economists have called the Law of Comparative Advantage it amply paid her to concentrate her efforts on manufactures, a large proportion of which were exported and exchanged for food and other raw materials. The relative cheapness of ocean transport, the situation of the main industrial areas to the seaports, and the lavish use of coal as domestic fuel all help to explain why a heavy reliance came to be placed on imports of timber in spite of it being a commodity which was bulky in relation to its value. Of the total timber consumption over 96 per cent came from overseas and all but about 6 per cent was softwood.

This overwhelming reliance on imports for food and raw materials was not without its dangers in time of war and the fact that timber was bulky made it an even more difficult commodity to import when shipping space was severely curtailed. Such strategic considerations led during the critical times of two World Wars to an examination of the adequacy of the national forestry reserves. The first examination in 1916 led to the creation in the Forestry act of 1919 of what might be termed the first effective national forest policy in Britain.

A Forestry Commission was set up and with it the State became an active partner in the expansion of forestry. Although the Forestry Commission got off to a good start with its planting programme it soon ran into difficulties with the arrival of an economic depression. Uncertainty of the

basic finance — based on an annual vote in Parliament — was to remain a feature of the inter-war period. On the one hand, after the operations were curtailed on two occasions it was regarded, on the other hand, as a means of assisting the unemployed and helping with the policy of land settlement.

In the second war-time examination of the national forest policy the Forestry Commissioners set out, after reviewing the achievements of the previous quarter of a century, the extent to which home forestry should contribute to the future economy of Britain. In brief, the aim was that in England, Scotland and Wales there should be at the end of fifty years about 5 million acres of productive woodland. Slightly less than 2 million would be private woodlands and the remaining area would be afforested by the Forestry Commission. Broadly, it was hoped that these areas would provide about one third of the national annual requirement, but if necessary the whole requirement could be obtained for several years by cutting into the forest capital of the growing stock.

When the post-war Labour Government accepted these proposals it made it clear why an expansion of forestry was necessary and stated that after having given careful and detailed attention to future policy it had been impressed with the need as a safety measure of rebuilding as quickly as possible the national stock of timber; and of the possibility which systematic forestry and afforestation held out for both utilisation of large areas of poorly productive land and for increased rural employment in healthy surroundings. In addition, when giving weight to information about the prospective supplies of timber from overseas the Government considered that well-planned afforestation represented a sound national investment. For the first time forestry was to be a national responsibility — under the Ministry of Agriculture in England and Wales and under the Secretary of State for Scotland — and a closer link between the Forestry Commission and the agricultural departments was foreseen in view of this need to acquire large areas of land for afforestation.

The need for a change of emphasis in the policy becomes clear when the causes of the indifferent rate of planting up and restoring woods between the two wars are analysed. The Forestry Commission had had its special problems associated with irregular finances, land acquisition, schemes for helping over unemployment and land settlement and the apparent apathy of the bulk of the private woodland owners. Although the Forestry Commission had compulsory powers of acquisition it was reluctant to use them. The Commission did not have many years of existence before it expressed

dissatisfaction at the rate of response by private owners of woodland to the need for systematic and regular management. The annual reports of the Forestry Commission attributed this apathy to the prevailing social, economic and political trends; apart from the poor technical efficiency of the bulk of the estate owners they were badly organised.

In the inter-war years the private planting was at the rate of about 7 000 acres per annum and that of the State forests by the Forestry Commission of about 19 000 acres. The combined effort had been criticised as being scarcely capable of reaching the estimated 3 million acres then scheduled as forestry on a sustained yield basis.

The large inroads which were made into the remaining growing stock to meet the very heavy requirements of the Second World War made the inter-war rate of planting even more inappropriate as a standard for the post-war needs. The post-war policy recognised the need for fresh emphases and these were expressed in the Forestry Acts of 1945 and of 1947. The first of these Acts was concerned mainly with the reorganisation of the Forestry Commission to meet the special need for speeding up the planting programmes and to provide for the Ministerial responsibility which the increased scale of operations and land acquisition had made necessary. The ten Forestry Commissioners, appointed by Royal Warrant, comply with any Ministerial directions which may be given to them. An element of decentralisation was introduced by requiring the Forestry Commissioners to appoint National Committees for England, Scotland and Wales, and to give them such powers as they thought fit.

The main officers of the Forestry Commission include a Director-General, a deputy Director-General, and three Directors of Forestry responsible for England, Scotland and Wales. There are also Directors of Research and of Education, 19 Conservators and 263 Forest, Estate and Engineer Officers. There are 11 Conservancies and two Deputy Surveyor's charges which cover the New Forest and the Forest of Dean. Each Conservancy has its allocation of technical and clerical staff, with District Officers in charge of groups of forests with local supervision of individual forests delegated to foresters and foremen.

So that a close link may exist between conservators and those who are interested in forestry in the area, Regional Advisory Committees have been set up and these come under the direction of the National Committees.

The 1945 Act did not make any changes in the Forestry Commissioners' administration of forestry operations, grants, education and research. The second statute, the Act of 1947, laid down the policy for private wood-

lands — a policy which had the main aim of ensuring that existing woodlands would be treated seriously and dedicated to timber growing in perpetuity. As will be shown later this legislation represented a new and in some ways revolutionary approach to the problem of private woodlands: *laissez-faire* was abandoned for a large element of persuasion and compulsion.

There have only been about four major statutes concerned with forest policy in Britain since 1919 and the last one — the Forestry Act of 1951 — had as its main function the manner in which fellings should be restricted in order to achieve as rapidly as possible the national reserve of growing timber.

Although it can be said that the work of the Forestry Commission is mainly concerned with the acquisition and planting of land, it also deals with a great many aspects having a direct or indirect bearing on its forest policy. It now has over 2 000 acres of forestry nurseries. Protection work is mainly directed to control of fires, rabbits and squirrels. In 1952 thinning and clear fellings produced a total of 12½ million cubic feet for a gross income of £ 2.18 million. Other work was concerned with licencing of timber for felling and the construction of roads and houses. The Dedication scheme for private woodlands involved much work. Research, experiment, education and publicity are also important aspects of the work of the Forestry Commission.

As the Forestry Commission is a branch of the Public Service it is financed by annual estimates of receipts and payments and the net annual expenditure is met by Parliamentary votes. For the year ending 30th September 1952 expenditure was £ 9 227 642 and receipts were made up in the form of £ 6 883 000 as a Parliamentary vote and £ 2 365 033 from forestry operations, while the remainder was made up from the balance of the preceding year.

The Census of Woodlands undertaken between 1947—49 indicated that there were 3 448 362 acres in blocks of five acres or over while the small woods under 5 acres were estimated at 184 000 acre. Of the above total 82 per cent or 2 825 331 acres are held in 1947 by private owners, corporate bodies and by other government departments, although the last two categories only represent a very small proportion of the total.

Areas of woodlands classified by types and sub-types — all woodlands

Type	Great Britain Acres	% ¹
HIGH FOREST		
Coniferous	867 797	25
Mixed	166 066	5
Broadleaved	754 936	22
Total, High Forest	1 788 799	52
COPPICE		
With Standards	229 788	7
Coppice only	120 206	3
Total, Coppice	349 994	10
SCRUB	496 951	15
DEVASTATED	151 064	4
FELLED		
Before Sept. 1939	288 503	8
Since Sept. 1939	373 051	11
Total Felled	661 554	19
TOTAL, ALL TYPES	3 448 362	100

The Census data are to some extent a measure of the problems of restoring British woodlands to a fully productive state. The length of time which must pass before even the 1 788 799 acres of high forest can be regarded as fully productive can be assessed from the age-class data which show the preponderance of immature woodlands.

It is clear that the forest policy is one of rehabilitation. It will be many years before the building up phase is complete and the forests or woodlands can be described as going concerns. Meanwhile, one may ask how far the policy is appropriate for its main objectives. For convenience this is now discussed under four main headings: the scale or extent of the national forests; the scope for private enterprise; the considerations which influence the choice of land for the expansion of tree-growing; and the feasibility or otherwise of achieving some of the objectives by the alternative of a strategic reserve of imported stock.

¹ Percentage of Total Woodland area.

The Desirable Extent of British Forests

That the scale of forestry in Britain should eventually supply about a third of the annual or the total requirement for a period of years in an emergency can be taken as a fairly precise objective. Compared, for example, with the policy for agriculture it is much more precise in what might be termed its social and economic objectives. In a heavily industrialised country it is quite easy to understand — as already mentioned in the opening paragraphs of this article — why it was necessary to import about 96 per cent of the prewar timber needs when the area of land devoted to forestry was not only a very small proportion by any standard of comparison, but also because the area was associated with a very low out-turn. There is sufficient realism in the existing policy since it shows awareness of the need to build up the forest reserve to a level which is more appropriate to the strategic and economic needs of the country. Not only had two wars depleted the reserve but the country's balance of payments had deteriorated. Since 1943 there have been unforeseen changes in the world supplies and availability of timber and it is thus possible that a policy which was suitable and adapted to the conditions expected in 1943 is less suitable today. If a policy were being prepared on the basis of a current stocktaking it is almost certain that the extent and emphasis of the main aims would be different than those set in 1943, and would probably have implied the aiming at an even greater expansion of forestry. To some extent the problem is related to the wider question of land use and any great expansion of effective forestry implies competition with agriculture. The agricultural policy — the main basis of which was laid down in the Agriculture Act of 1947 — is also influenced by the world situation in farm products. It might be claimed with a certain amount of reason that food supplies in the international markets have got nearer to the pre-war levels than have the forestry supplies, and if this is so it is a consideration which would strengthen the claim of forestry to acquire some of the land at the expense of agriculture.

The Scope for Private Enterprise

Until after the first World War woodlands in Britain had been associated almost entirely with the system of private estates. The traditional private estate had a cluster of farms which were let off to tenants while the

owner retained the woodlands and perhaps the «home» farm in his own occupation. As only about 5 per cent of the country as a whole was under woodland it can be inferred that on the typical estate the area of woodland was likely to be little more than the national proportion. In this way, even supposing that the woodlands department had been treated seriously as a business its treatment to a considerable extent would have depended on the rest of the estate earnings. At the end of the 18th century and the beginning of the 19th century we see the great Whig landowners at the height of their political power. With the greater industrialisation of the country this governing class gradually lost its political power and by the end of the 19th century it is found that not only did the important source of income in agricultural rents decline but the owners were left with a growing burden of taxation. In the 19th century the intimate relationship between forestry and the navy ceased and other markets for timber began to suffer the severe competition of imported timber from overseas. In these circumstances it would not be a matter for great surprise if woodlands had been treated with even less attention than they had been in the past. Although on many estates the woodlands department had been managed systematically and with great pride, it was also evident that on a great many others they were mainly the background for amenity or the shooting of game birds. Furthermore, the capital represented in woodlands — even on estates where they were managed systematically and carefully — was liable to be raided for ready cash in the time of domestic or national crises.

A visitor from Finland would probably be struck by the lack of forestry associations in Britain. Although there are about five active co-operative societies they have not found any widespread favour in Britain. Clearly there would be great scope for such organisations in private forestry for overcoming some of the weaknesses inherent in the small scale activities of private forestry. The lack of the advisory and other facilities which a forestry association might be able to provide is met to some extent by the work of forestry consultants and contracting firms specialising in forestry operations. It should be mentioned, however, that the formation of co-operative societies may be encouraged by the grants and guarantees made available by the Forestry Commission.

It can thus be inferred that even before the first World War few private woodlands looked like being going concerns and since then the cumulative effect of war-time depletions associated with a restrictive price control and high taxation have made the task of restrotation so much greater (see Table). How can this task be tackled effectively? It seems clear that it

will be necessary to create among private owners some degree of confidence about the future of their forestry activities and investments.

Private woodlands under the present policy will always represent a large proportion of the total forest area of the country and there are several reasons why these lands should be made productive before bare lands should be taken from agriculture for afforestation. The fertility of these lands is likely to be higher than on the type of land which is being sought by the Forestry Commission for its own planting. They are likely to be suitable for the growing of hardwoods. The integration of forestry with other estate or farm work is a factor which should provide scope for efficient use of the labour force. In view of the size and of the scattered disposition of the private woodlands it would be relatively uneconomic for the State to take over these woodlands, but it does not always seem clear that the existing forest policy has done much to encourage these owners to make their maximum contribution. To a large extent the Dedication Scheme of the 1947 Forestry Act recognised that the restoration of private woodlands should be certain and rapid, that there should be proper maintenance and after-care following the establishment of plantations, and that there should be control of silviculture and of felling until the national reserve had been accumulated. If there were no satisfactory assurances within a stated period then the State should acquire the woodlands.

Dedication is effected in a legal document and it was the intention of the scheme that the arrangement would be tied to the land and thus would not be affected by ownership changes. There have been certain modifications in the original intentions and small woods may be considered under a special Small Woods Scheme and, more recently, provision has been made to provide half of the grants for »approved» schemes which are not »dedicated». There are two distinct bases for the direct financial assistance provided by Dedication: Basis I gives grants of 25 per cent of approved net expenditure on the whole area of woodlands; and Basis II gives grants £ 15 per acre for planting, and of 5.s. per acre for maintenance per annum for 15 years on all productive woodlands. Loans of up to 50 years are available at the prevailing rate of interest — at present about 3 per cent.

The chief obligations which the owners have to consider are: (1) to use the land in such a way that timber production is the main object; (2) to work to a plan, to be approved by the Forestry Commissioners, laying down the main operations to be undertaken; (3) to employ skilled supervision; and (4) where Basis I is adopted, to keep accounts in a prescribed form. An additional form of direct assistance has been provided since early

1949 as a thinning grant. In addition to providing grants and loans the chief objects of the State under the scheme is to render advice, for which purpose private woodlands officers are attached to each Conservancy. They have been occupied in recent years with the preparation of suitable plans and other arrangements for furthering the Dedication Scheme. By the end of 1952 about 250 Dedication Schemes, covering about 150 000 acres, had been arranged. In addition, there were 10 »approved estates» covering about 1 400 acres.

The writer has already described some of the problems and limitations of this new policy for private woodlands:

»The Dedication Scheme marked the end of *laissez-faire* in private forestry. Henceforth forests had to be taken seriously and rules of good forestry were implied in the arrangement. This appears to be in line with the general trend of twentieth century legislation and political philosophy which has at times viewed property as something to be held in trust for the nation. In other words, the owners were expected to develop their resources more positively in the national interest than formerly. Farmers for some time past, and more recently, landowners, have had to observe the rules of good husbandry and of good estate management. The chief deficiency of the Dedication Scheme in relation to the policy aims is that it does not appear to give sufficient weight to the economic realities of forestry investment. — at least in relation to the economic position of those who are called upon to make the investment.

To a limited extent there is a parallel movement in the forestry and in the agricultural legislation, as the canons of efficient management are backed by sanctions; but whereas the Agricultural Act of 1947 gives first place to price stability, no such consideration appears in the forestry legislation, although the planting and maintenance grants are in fact subject to periodical reviews on the basis of ascertained costs. In agriculture the degree of the economic guarantee goes much further, and an Annual Price Review takes cognizance of the movement of costs and ensures that the guaranteed prices are an incentive to the producers. The degree of price incentive can vary from time to time for individual commodities and, at least, a flexible instrument of policy is created. If forests were going concerns a similar kind of arrangement could be operated for private woodlands since their profitability would be a direct function of the ratio of costs to prices.

The existing policy appears to overlook the economic implication for private owners that the return on the new investment is long deferred,

and that the big economic task is to induce landowners to build up their woodlands to the productive stage. There is a psychological unattractiveness about any unduly deferred return and if owners neglected to intensify the management of their woodlands in the days of their apparent economic and political security, is it likely that they will, unaided, do so in the middle of the twentieth century? Even very substantial grants would leave owners to find large additional amounts of capital which — to make comparison with other investment opportunities — must be assessed at compound interest. If price assurances were to be given for private forestry then it would appear that interest, as well as direct costs, would have to be covered — at least in the first rotation. Development loans, repayable with accumulated interest at a date far enough in the future to ensure income from the investment, might be one of the most appropriate methods. The loans available through the Dedication Scheme do not appear to be sufficiently long-term for this purpose.

The Choice of Land

If the intention to have 5 million acres of effective forest land is achieved it would imply that nearly 2½ million acres will be transferred from agriculture to forestry. There is no adequate evidence available to show the comparative financial return from different qualities of land where used for food production and for forestry. It would probably be difficult for a forest policy to make any headway if it were based on the acquisition of good agricultural land, even if tree-growing gave the better return, since it is even more vital that a certain minimum proportion of Britain's food should be produced at home. In these circumstances, it is perhaps small wonder that forestry has become the »residual legatee» and has been left to make its choice from the lands which are described in the agricultural returns as »rough grazings» of which there are in all about 16 million acres. These lands are mainly associated with hill sheep farming which supplies store »wether» lambs and old ewes for fattening and for cross-breeding respectively on the lowland arable farm, and the appointed Minister may have to make hard decisions in order that the required area may become available for forestry. The foresters claim that the amount of wool and mutton lost through any transfer of land could easily be imported in a few ships and could be made up by some intensive agriculture elsewhere. At the same time, the timber would represent a store, and a commodity

which was increasing while in store, which in time of war or other emergency would save the space of a great many ships. The farmers, on the other hand, who make a living and have lived there for some time, are not so readily impressed by these arguments. There is a limit to what can be done to increase the productivity of the land which would remain on individual farms after the trees have been planted on the middle slopes of their hill land. The problem of providing winter keep or grazing is a bottle neck which limits the stock-carrying capacity of the land. By using only the middle slopes much of the other land could no longer be used for farming. If, however, the Forestry Commission were prepared to plant in smaller blocks of land then it seems that much economic and social improvement can be brought to many sheep farming districts by this form of integration of two industries. Many of these districts are on the margin of agricultural use and much social loss has resulted from the associated depopulation.

It is perhaps rather unfortunate from the point of view of national policy that although some of the land which may be sub-marginal for agriculture, and may be supra-marginal for forestry, is rather remote from the main industrial areas. Already it is clearly foreseen in Scotland, where about half of the afforestation effort of the Forestry Commission is concentrated, that in a few years there will be more than enough thinnings to provide pitprops for the coal mines in Scotland. There are at present only limited alternative markets for these thinnings. There is, for example, insufficient concentration of forests to provide the basis of a large-scale pulp factory and other forms of integrated forest industry which is familiar in Finland and Sweden.

Timber Stocks as an Alternative to Timber Growing

It is sometimes vaguely suggested that an effective alternative to expanding or restoring forestry would be to build up sufficient stocks to meet an emergency. There has been little discussion on the full implications of such a development although it would be difficult to calculate the financial costs of such a scheme in advance. In the immediate post-war years for one reason or another it was not easy to build up stocks to about one-third of their pre-war level. Not only were imported supplies relatively scarce but their prices were at a very high level compared with 1958 (e.g. sawn softwoods c.i.f. were at January 1951, 1952, 1953 and 1954 showing index numbers, with 1938 = 100, of 428, 704, 533 and 532 respectively).

In these circumstances it would have been an extremely costly business to get the raw material for the stocks and it would have to be widely dispersed. More storehouse accommodation would have to be built. Such a dispersal would indubitably interfere greatly with normal trading methods and add to the ultimate cost of distribution. At the same time a fairly substantial level of stocks has always been regarded as important for bargaining in the international markets.

Conclusions

Apart from other strategic considerations it is realised that the extent to which the national resources should be committed to forestry depends on the degree of comparative advantage which Britain is likely to have in the growing of trees. None of the reports on forestry policy and forestry possibilities ever examined very deeply this question of how far those national resources should be committed.

Most of the arguments favouring an extension of forestry have been based on broad conceptions or on special circumstances: the extremely low proportion of the land area devoted to forestry combined with a low average productivity; the strategic need for timber in order to save shipping space in war; a climate and soils which are favourable to tree growth — a growth which at the same time can represent a stock to be drawn on in time of crisis; and the scope for integration of forestry with agriculture in a crowded island with limited land resources. The post-war scarcity of timber arising from the cumulative effects of the war — the great reduction of trade with eastern Europe, the dollar difficulties of trading with North America, and the reconstruction of buildings and the re-equipping of industry — produced a situation which many felt was likely to be more than temporary. The fact that the exploitation of virgin forests is now becoming more and more a thing of the past has led to policies of conservation and systematic management of national forests in many countries, and tends to suggest that timber prices in the future will bear a closer resemblance to costs of production rather than to costs of exploitation only, than they have done in the past. Such a tendency would obviously increase the comparative advantage which in the past has been lacking in Britain. It is clear that in Britain the expansion of forestry, with the State participation since 1919, was shaped by ideas of national safety in time of war rather than by thoughts of achieving a direct profit. For this reason

it was rather surprising that in a time of economic depression uncertainty of finance should have played so prominent a part in the early history of the Forestry Commission. The need to have an adequate reserve in the shortest possible time, particularly for the vital pitrop requirement, has been a significant reason for the emphasis on conifers in Forestry Commission plantations.

The main economic task which remains is to build up the national forestry industry to the stage of a going concern so that it can provide the basis for continuous industrial activities. Now that it has been set afoot with reasonable assurance of national encouragement it seems clear, if the experience of forestry development in any other countries is a guide, that it will have much to offer as part of the social and economic policy governing the use of human and material resources.