

FORESTRY : ITS PRESENT POSITION AND FUTURE PROSPECTS IN IRELAND.

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IN a most interesting paper read before this Society in November, 1903, by the late Mr. C. Litton Falkiner, the forestry question was considered historically: in this paper I propose to discuss, chiefly with reference to Ireland, the most recent results of the consideration given to the present state of forestry, and proposals for its future, which are embodied in the Report of the Departmental Committee on Irish Forestry, published a year ago, and in the Afforestation Report of the Royal Commission, dealing generally for the United Kingdom with the subject of afforestation as a means of increasing employment during periods of depression in the labour market, which issued in January last.

The Irish report deals first with the present condition of Irish woods, and it is shown that the area under woods is shrinking. Apart from the cutting of hedgerow trees detrimental to agricultural holdings and other judicious felling, excessive clearings (often of trees which are quite immature) have resulted as an effect of the Land Purchase Acts: the vendor generally disposes of the timber for what it will fetch before selling an estate, woods having been detrimental to sales of land: the Estates Commissioners have been forced, generally, to act much in the same way after purchase, as no provision had been made of the money required for payment of purchase annuities and management of woods, which must therefore be disposed of.

Purchasing tenants, also, generally realise what they can on timber when entering upon their newly purchased holdings.

English and Scotch timber merchants are taking advantage of these forced sales, and the timber is being largely exported in the rough instead of furnishing material for Irish industries, while the prices obtained are so low as to give rise to the impression that the growth of timber is extremely unprofitable.

That the clearance of woodlands is not the outcome of an intention to utilize the land for agriculture is evidenced by the fact that when the timber is cut down the land where it stood is in most cases turned to no other use, but goes to

swell the area of "waste" or rough grazing already forming so large a percentage of this country. Even shelter belts have been felled, to the detriment of the farms on which they stood.

Little replanting is naturally taking place in these conditions, and the position of Ireland as (with the exception of Iceland) the least wooded country in Europe, is being more and more accentuated, though needing shelter woods and timber forest which this country is particularly suited to grow.

In the report of the Royal Commission the present unsatisfactory condition of British woodlands is reviewed, and it is shown that not only is the area under woods relatively much smaller than in other European countries, but owing to the unscientific methods of forestry the timber produced is generally inferior in quality. This is equally true in Ireland.

The defects in home-grown timber are generally due to want of density in the crop; the growth of branched oak trees for naval purposes in former days and the influence on sylvicultural methods of oak and larch, both light-demanding species, are instanced as causes for the too open character of our timber forests; while considerations of sport have exercised a preponderating influence in the management of private woods, and have resulted in a crop of semi-isolated trees with a dense undergrowth of bracken and brambles. Shelter has in many instances been the object for which trees have been planted, but the tendency for such woods to be arranged in the form of very narrow belts has prevented the production of timber of good value.

Too wide spacing of plants, for economy in creating plantations, coupled with overthinning and the removal of the better and more valuable stems before maturity while inferior trees are left standing are, I think, causes which have contributed very largely to the understocked and badly stocked woods which are so general.

In Part II. of the Irish Report the effects of the diminishing area of woodlands on Irish industries are considered.

The inquiry showed the existence in rural districts and country towns of a number of industries, many of them dependent on Irish woods and giving considerable local employment; witnesses expressed a conviction that if the present rate of diminution of Irish woodlands goes on unchecked these industries will have to close, as they could not be profitably continued on imported timber.

The excessive export of timber in the round (72 per cent. of the timber cut) aggravates the position of these industries which are deriving no present benefit, while woods, which in ordinary circumstances should form part of their future sources of supply, are being destroyed.

The importance of preserving existing industries in Ireland is insisted on by the Committee, especially these wood-working industries in rural districts, and the means proposed is that part of the woodlands should be acquired by the State, or by a local authority, and treated in an economic manner, thus checking the present rate of felling, which leads to excessive export in the rough—there does not appear to be any other practicable method of attaining this object.

In the British report evidence is recorded of the steady increase in the price of imported timber in recent years—20 per cent. during the past six years to 50 per cent. on the prices of ten or twelve years ago are the figures given by witnesses—while the quality of imports at these enhanced rates has fallen off.

The profitable exploitation even of natural grown forest containing the stored growth of centuries and which cost nothing to create or maintain, is limited; the cost of extraction of bulky material, such as wood, soon exceeds the market value as length of lead increases; even in this country the evidence before the Irish Committee furnished examples of woods being so situated that no profit could be got by extracting the timber.

If we consider the remoteness and inaccessibility of many of the forests which figure in foreign statistics we must be forced to the conclusion that there are immense areas under forest throughout the world which must be left out of calculation as possible sources of supply for export trade.

Take, for instance, Burma, where the forest area is very great, there being 22,858 square miles of reserved forest, and 107,597 square miles of other forest (from which further reserves will be selected) under the management of the Government Forest Department; it is only teak timber, among many excellent woods growing in these forests, which can be profitably extracted for sale from at least 95 per cent. of the area; and even at the present high price of teak such extraction depends largely on the fortunate fact that seasoned teak can be floated out down small hill streams, and cheap water transport is thus availed of, the trees being "girdled" and killed off at least two years before felling to insure the logs being dry enough to float.

Some of the more accessible forest cleared in the north of Europe and in America may be again used for the production of valuable timber, but to obtain such a result management and some expense will be necessary; they will not therefore compete under the same favourable conditions as before with our home-grown timber, and if the United Kingdom is to enjoy the advantages of timber at reasonable cost it must bring existing woods under more scientific management and extend their area considerably.

In Part III. of the Irish Report the arguments for a scheme of afforestation are considered. Foremost, with the passing of the landlord it is necessary for the State, or some public authority, to take charge of such matters of estate management hitherto performed by the large landowners which cannot be dealt with by small tenant purchasers; the Committee are convinced that the management of woods which pass from the ownership of landlords should certainly be so provided for; but beyond these woods there are large areas of mountain and waste land not forming part of tenants' holdings which are being sold with estates, and considerable parts of these lands are specially suitable for afforestation, but for little else.

If divided up among the tenants these lands will be put to little or no use, but their re-purchase later, if required by the State, would be a matter of difficulty; it is therefore desirable to retain them as State lands and to afforest them.

Limiting a national scheme of afforestation to "the maintenance directly or indirectly of an area of woodland sufficient to produce the supply of timber required by the country for domestic and farming purposes, for the development of industries and commerce essential to its prosperity, and for providing shelter needed for successful agriculture," the Committee come to the conclusion that an area of one million acres, consisting of land suitable for planting and which cannot be so profitably employed in agriculture, should be regarded as affording not more than a moderate insurance for the agricultural and industrial needs of the country.

As this estimate is based on less than 10 c.f. of wood of all kinds per head of population, while in England the consumption is estimated at 17 c.f., Germany 19 c.f., France 24 c.f., and Denmark (an agricultural country whose needs may suitably be compared with those of Ireland) 26 c.f. per head, it cannot be said that the Irish estimate is exaggerated.

The extent of land available for afforestation in Ireland is investigated in Part IV. of the Report. A detailed forestry survey of the south-eastern counties carried out in 1903 by Dr. J. Nisbet for the Department of Agriculture, supplemented by forestry surveys made subsequently in the mountainous portions of the north, south, and west of Ireland by Mr. A. C. Forbes, the Forestry Expert of the Department, together with reports from Inspectors of the Estates Commission and the Congested Districts Board, and replies from landowners, agents, and representative men throughout the country who were in a position to give direct information, have furnished much more reliable data as to the extent of suitable land available for planting than had hitherto been on record.

Land which would pay better as pasturage and land which

from its exposed position, altitude, or character could not be expected to be planted successfully from a financial point of view, was eliminated, and the reduction on previous estimates is further accounted for by the fact that under sales already effected much land which is more suitable for forestry than for agriculture has passed into the hands of tenants and being split up may be regarded, for immediate practical purposes, as no longer available.

An area of 750,000 acres of suitable land is estimated to be available for planting, of which from 200,000 acres to 300,000 acres are in blocks of 500 acres and upwards; thus, without disturbance of existing agricultural industries, and including the present wooded area of 300,000 acres, a total possible forest area of at least one million acres is attainable for economic forestry.

It is proposed that the larger blocks should be treated as State forest and the smaller administered by county councils or through private owners, and the period for afforestation is placed at 80 years.

This section of the Irish Report contrasts very strongly, and to the credit of the Irish Committee, with the similar section in the Report of the Royal Commission, where an attempt is made to determine the extent of land suitable for planting in England, Scotland, and Wales.

The Royal Commission had not at their disposal for these portions of the United Kingdom anything like the information obtained in Ireland, although the Forestry Committee of 1902 recommended a survey with the object of supplying reliable figures.

An inquiry was instituted by the Royal Commission through the Department of Agriculture and Fisheries into the total area of lands lying below 1,500 feet, shown in the agricultural returns as "Rough mountain and heath lands used for grazing," and a special inspection of such lands was made in six selected counties. The results of this inquiry are not considered altogether satisfactory by the Royal Commission, and the figures for Scotland deduced from the proportional estimates in Lanarkshire would seem to require some considerable correction, as the estimates of land situated below 1,000 feet in that county are applied to the total area of similar lands up to 1,500 feet in Scotland, and the result, five million acres, given as the area below 1,000 feet which might with success and advantage be afforested.

From the varying reports on the selected counties in England and Wales the Royal Commission found it still more difficult to arrive at a proportional factor that might be applied to the country as a whole; but they estimate one and a half million acres are suitable for afforestation, including lands up to 1,500 feet.

In addition to the rough mountain and heath lands above noted the Royal Commission propose to include in their scheme two million acres of existing tillage ; this, from the special point of view of unemployment, is undesirable and would seem to be at variance with the object which the Commission was directed to report on.

Whether ultimately inferior tillage should be afforested, and, if so, to what extent, are questions which may well await solution, so far as the State is concerned, until waste land has been dealt with. It is also questionable whether the limit of 1,500 feet in altitude is not excessive generally for commercially successful afforestation in Great Britain ; even where it is possible to afforest near this elevation the rate of growth will be slow.

Part V. of the Irish Report details the National scheme of afforestation proposed by the Committee. The general reasons for the State undertaking a share in the creation and management of woods are set forth, and the exceptional obligation for such intervention in Ireland is forcibly indicated in the following extract :—

“ At this moment the process of destruction of the woodlands which is going on is due to the legislation of the State and, as we have already pointed out, this grievous waste of the woods with its menace to industries depending on them, must continue unless the effects of this legislation are checked by further State action. But in the past it may be broadly stated that the excessive reduction of the woodland area of this country is due either to what the State has done or to what it has neglected to do. Leaving aside the cutting of forests in certain districts for political purposes which had reasons of State to explain it, the conditions under which great grants of land were made after the various confiscations requiring their use for the public benefit were never enforced in this respect. These lands, including the Crown lands from which the Quit and Crown Rents that are now administered by the Commissioners of Woods and Forests have been drawn, contained vast areas of forests which are described in the grant deeds as the King’s Woods. No precaution was taken by the State to save these in any way. Throughout the 17th and 18th centuries the grantees were allowed to do with timber as they pleased, and what they pleased was in the main to realise with reckless extravagance, with the result that the greater part of the country, for which at least shelter might have been preserved, is in its present bare and wind-swept condition. Had provident and intelligent Government action been applied to the subject in Ireland, undoubtedly the forest area and the general agricultural wealth of the country would be in a far better position than they now are.

“ It is, moreover, an important factor in the case that the proceeds of the Quit and Crown Rents which are entirely derivable from these lands, and which have yielded a return of upwards of £60,000 a year, have never, since the union of the Irish and British exchequers, been directly spent in Ireland or applied to Irish purposes, but have been, with the general Crown revenues, invested in Great Britain, sometimes even in promoting forestry. There is finally the fact that the State, in abolishing the landlord through the Purchase Acts, is bound to provide, and has not yet provided, a machinery to discharge his functions in respect of several matters, including woods, which cannot be left to individual tenant purchasers, and in which the general community, as well as the tenant purchasers, has now a specific interest.

“ Having regard to what is at present occurring in the country, we cannot hesitate to say that, not only does the responsibility lie on the State for taking action, but that if action be not taken at once it will mean a gross neglect, comparable with the improvidence of the past, and far less excusable.”

The Department of Agriculture and Technical Instruction in Ireland possesses legal powers for acting as a Forestry Authority, and has already exercised those powers to the limited extent possible with the funds at its disposal for the purpose.

Some legislation may, and probably will, be required as the scheme develops (for instance, powers for compulsory purchase of grazing rights would be desirable to prevent a few persons, acting on no reasonable motive, from blocking a scheme generally acceptable, as proved by the obstruction given by a minority of rightholders to an attempt by the Kildare County Council to plant up a small portion of King's Bog Common subject to common grazing; in this case the shelter that would be provided by the proposed afforestation would have rendered the grazing in the residue more valuable than the grazing of the entire area under existing conditions, and the evidence states that it was not on the question of the amount of compensation to be given that the minority objected to surrender their rights, but from a determination not to allow any interference).

As, however, no rights exist over large areas of the land which the Committee had in view for planting, much can be done without waiting for powers of compulsory acquisition, and there is no reason to delay action for such legislation; all that is needed is to place sufficient funds at the disposal of the Department for the strengthening and development of its Forestry Section as lands are acquired and planting extends

In Part IV. of their Report the Royal Commission detail the general reasons for State intervention in afforestation; these contain no new arguments except the belief that no appreciable progress is likely to be made by private initiative.

Exception may reasonably be taken to the declaration that "where, as in the case of forestry, a single commodity is produced whose sale is so simple as almost to be accomplished automatically, the State has proved itself an excellent administrator": the profitable disposal of the produce of forestry is not generally a very simple matter under existing conditions in this country, and the Irish Report shows that the importance of that side of the forestry question should not be neglected.

It is not, however, the principle of State intervention in forestry, but the extent to which such agency of management is proposed, which has called forth adverse criticism on the scheme embodied in the English Report. The Royal Commission propose that the whole of the nine million acres which they desire to see planted should be dealt with by the State; they make no reference to planting by Corporate Bodies in their Report, and give scant encouragement to private afforestation.

In the Irish Report, on the other hand, the co-operation with the State of County Councils and private owners is a strong feature in the scheme proposed.

The duties of the Forestry Section, as set forth in the Irish Report, would be the acquisition of land suitable for planting and such existing woods as owners wished to dispose of; the planting and management of such of the acquired lands and woods as may best be dealt with by the State; the vesting in County Councils of such of the acquired lands and woods as may best be managed by local authorities, advice and supervision being afforded by the Forestry Section; assisting and encouraging private owners in the development and extension of plantations on their lands; the charge of technical instruction applied to forestry; to undertake measures for facilitating and promoting industries connected with woodlands, and for the better organization of the Irish timber trade.

The Irish County Councils already administer, under the supervision of the Department of Agriculture, technical schemes for improving agricultural industry, and there is every reason to expect that they can most usefully co-operate in the scheme of national forestry which is proposed. For the forest areas placed under their care they would hold the position of tenant purchasers under the Purchase Acts.

The Committee suggest that in the County Surveyor and his staff the county councils have at their hand an agency which will enable them to deal economically with much of the

work required in the management of the small woods which they would administer under the expert advice and control afforded by the Forestry Authority, who would also provide trained foresters from its staff.

The willingness of County Councils to undertake the share in the scheme of national forestry proposed has been ascertained by a conference held in Dublin in January, 1908, at which 24 counties were represented, and has been further demonstrated by resolutions passed subsequently.

The Kildare County Council has given a lead ; it has already acquired three small woods of a total area of about 150 acres, and employ one of the Avondale trained foresters : replanting has been done over portion of the first wood which came under the control of this County Council, and nursery provision is being made in another of the woods where replanting is required.

The Westmeath County Council has also commenced to show in a practical way its desire to assist by the acquisition of two small woods 23 acres in extent.

The benefits of afforestation around reservoirs supplying water to towns should induce corporations interested in such waterworks to plant. Silt is lessened and the supply of water is increased and regulated by forests in the catchment area, while forestry is one of the few uses such land can be put to that are unobjectionable where a supply of pure water is required. Much attention is being paid to this matter in Great Britain, and it is well worthy of consideration in Ireland.

Although, owing to land legislation, it is likely that in Ireland the area of woods under private owners will not bear the high proportion to the total which is general, it is hoped that with facilities and encouragement the suitable portions of holdings may be planted.

The fact that woods have hitherto been an obstacle to sale of estates, the consequent tendency to cut them down, and the low prices obtained by such forced sales and for immature timber operate adversely to afforestation at present ; it will therefore need a change of feeling (which action to conserve existing woodlands and the example of planting by the State and by county councils should materially help to bring about) before much progress can be expected.

The Irish Forestry Society, which was founded seven years ago for the advancement of scientific and practical forestry and arboriculture, is doing good work in educating public opinion. The institution of Arbor Day is also being used to popularise the planting and to arouse the interest of children in the growth of trees.

The supply of sound and suitable plants at cheap rates with expert advice for the smaller holders, and loans (conditional on expert management under schemes approved

by the Forestry Authority) to be arranged so that during the unproductive period of a plantation interest only is chargeable, the repayment of principal being spread over a subsequent period, are the facilities proposed in the Irish Report for encouraging private planting.

The Department of Agriculture has already, through its Expert, given advice to owners of woods and persons who wish to plant, while the services of senior apprentices from Avondale are made available and two of them have been employed on nursery work and for planting under private owners.

Ten leaflets on forestry subjects have been published by the Department and are supplied free of cost to applicants.

In the case of the smaller holdings no doubt the benefit of having at hand a supply of timber for fencing, repairs and other domestic purposes, and the shelter derived from the trees while growing, will be strong incentives to planting; the labour, which is the largest factor in the cost of planting, would be that of the owner and his family, and would not be felt in the same way as direct expenditure in wages would be.

With the larger landed proprietor the planting of waste land is, perhaps, chiefly influenced by the improvement so effected in the sporting value of the estate, but the ultimate financial success of planting depends largely on the facilities for disposing at remunerative rates of the greater part of the timber, and the present low prices must act as a strong deterrent; measures to insure a ready market will probably do more to encourage planting in these cases than any other that are practicable.

Some such measures are considered in Part VI. of the Irish Report, which deals with the organization of the timber industry in Ireland.

The evidence shows that, except in a very few instances, there is little or no systematic business management applied to the exploitation of woodlands by those who own them, or in the utilization of the timber by those who buy the trees; only a small proportion of the wood is converted locally, and much of this is sawn without reference to the requirements of systematic trade.

There is in Ireland at present no steady supply of native seasoned timber of standardised dimensions, and for lack of this the Irish manufacturer is forced to obtain his supplies largely from a foreign market.

There can be no stability in timber trades supplied by fitful, unsystematic fellings; but with a considerable area of State forest under regular felling and county woods similarly regulated would come a more regular supply; combination among private owners holding small woods would also help in this direction. On the other hand, a ready market for the

produce of woods (except those most favourably situated for sea transport) depends largely on local timber industries, and there is a local interdependence between forests and the industries using timber which must receive attention.

The State, through a properly equipped Forestry Section, would introduce technical instruction both for the growing and harvesting of timber and assist in organizing the timber trade, promoting that mutual support which is necessary for the welfare of both producer and manufacturer.

In Part VII. of the Irish Report the importance of technical instruction is insisted on as a first step towards the improvement of forestry conditions in this country.

In 1904 the Department of Agriculture opened their Forestry School at Avondale for the training of practical working foresters such as will be required for afforestation, and since 1906 Mr. A. C. Forbes, the Forestry Expert to the Department, has taught forestry to the apprentices under training.

The nursery at Avondale is chiefly stocked with species which are not readily obtainable in quantity from seedsmen, and the forest plots are intended to demonstrate the utility, or unsuitability, of the less common and foreign species for forestry purposes; the work, therefore, is largely of an experimental character and might be open to criticism on that score; but we must remember that really indigenous trees are few in number, that we owe much to foreign species introduced in the past, and that the experimental cultivation of exotics likely to succeed in this country under sylvicultural conditions, so that advantage may be taken of suitable trees, is of very great importance.

It would be rash to afforest mainly with any but indigenous or well established species, but, on the other hand, there is a probability of great gain in rapidity of growth and, in some cases, in resistance to disease, by the introduction of well chosen foreign trees. We should consider carefully the qualities of such species, and their use will only be justified when they show distinct advantages over indigenous or established species.

The Department has acquired for purposes of economic forestry in Co. Wexford 300 acres of oak scrub at Ballyfad, and 600 acres (500 under wood) at Camolin. In Co. Tipperary 1,200 acres, of which 1,050 acres are wooded, have been acquired near Dundrum, and the management of these areas will help in the practical training of the apprentices. The Department is to receive a more liberal grant for forestry purposes in the current year, and further progress may therefore be expected.

The Report of the Royal Commission does not indicate any arrangement for technical instruction in forestry, nor do the

estimates disclose any provision for such teaching. So far as I am aware, the only place in Great Britain where a systematic course of instruction is given to working foresters is at the Forest of Dean, and much greater provision will be required for the training of such men if afforestation on a large scale is to be undertaken with any certainty of success; on the other hand, much greater progress has been made in Great Britain in higher instruction in forestry, which is now taught at several centres; it is to be regretted that Ireland is so backward in this respect and that the efforts of the Department of Agriculture to establish higher forestry instruction through the Royal College of Science have met with so little success.

In Part VIII. of the Irish Report the Committee deals with miscellaneous considerations, such as legislative amendments to prevent felling of plantations on estates while negotiations for sale are pending; to provide for exclusion from sales to tenants of plantations or land suitable for planting with a view to transfer to a Forestry Authority; to provide for compulsory powers in acquiring grazing rights, and to give County Councils power to build accommodation for woodmen employed in their woods.

With regard to the question of unemployment, the Committee consider that skill is one of the chief requisites for the labour engaged in forestry operations, and that forestry, while affording employment to the agricultural population of the vicinity and to an industrial rural population, is not suitable for furnishing temporary and irregular employment to large numbers of people belonging to various trades and callings.

The discussion of this question naturally forms a leading feature in the Report of the Royal Commission: the fact that the season when lack of employment is most acute coincides with that at which works connected with afforestation can be carried out is an argument for the suitability of afforestation in using unemployed labour. Within a limit of three years planting can be increased when unemployed labour is abundant and suspended when labour is scarce, by using younger or older plants from the nurseries.

The assistance that work in forests gives to holders of small allotments and to agricultural labourers during winter months is evident, and the advantageous connection between small holdings and forestry is illustrated by experience in Scotland and Wales, and on a larger scale in continental forest areas. As a means of preventing rural depopulation and the consequent drifting of agricultural labourers to towns, where they help to swell the ranks of the unemployed, most witnesses considered that forestry promised to be a powerful agent.

Taking actual experience of work on afforestation carried

out by gangs of unemployed the results, as might be expected, vary considerably, but the general conclusion arrived at is, that with careful selection and due regard to previous occupation ordinarily a sufficient number of suitable men might be obtained for afforestation mainly through the agency of the unemployed.

The view of the Irish Committee would seem to be the sounder, and, as pointed out by Dr. Schlich,* the ideal arrangement is the establishment of moderate sized blocks of woods scattered over the country in which the forest work in winter can be done without leaving their homes by persons engaged in field work in summer.

The important matter of rates of transport on timber and manufactured wooden goods was not specially inquired into (in Ireland the Viceregal Commission on Irish Railways was making a general inquiry into the whole question of transport), but such evidence as was given on the subject before the Forestry Committee tends to show that the rates by rail on manufactured timber are proportionately higher than on timber in the rough, and that facilities for loading are lacking; a deficiency of proper timber wagons and timber-carrying boats on canals is also brought to notice. The intermittent nature of the timber trade is an obstacle to improvement, and no doubt with an organised timber trade better facilities would be forthcoming.

On the subject of rating of woodlands the Departmental Committee do not consider that the rating is a serious factor, as the woods in Ireland are assessable on the value of the land without reference to the timber. In the case of established woods producing a regular income the rating is, of course, no heavier burden than on agricultural land, but in the case of new planting the annual payment of rates during the unproductive period, like other expenditure, mounts up at compound interest to a not inconsiderable sum.

In Part IX. of the Irish Report, under the head of Finance, estimates are given dealing in averages based on current costs and prices:—

- (i.) For the creation of State forests 200,000 acres in extent.
- (ii.) For the acquisition and maintenance of 50,000 acres of existing woods by County Councils.
- (iii.) For the acquisition and maintenance of 50,000 acres of existing woods by the State.
- (iv.) For the encouragement of planting by private owners.
- (v.) For forestry education.

In the Irish Quit and Crown Rents there is a fund coming entirely from Irish sources; up to 1699 the right of the Crown

[* Letter to the "Times," 22nd February, 1909.]

to alienate these rents was subject to no control, in that year the rents were by law made inalienable, and remained so until 1798 when the redemption of Quit Rents was authorised.

From 1798 to 1822 a sum of £20,484 was received in redemption and used on the current expenditure of Government; but since 1822 the proceeds of redemption have been treated as capital, and up to 1907 a total of over £796,000 had been so received and merged in the general capital administered by the Commissioners of Woods and Forests. Nearly all this sum has been re-invested in Great Britain, and benefits to this country which might have been derived from its re-investment in Ireland have been lost.

Purchase of lands for afforestation purposes in England, Scotland, and Wales have been made from capital by the Commissioners of Woods and Forests, and the rules for the investment of the fund would permit of similar application of capital in Ireland. The Forestry Committee consider that the proceeds of the Irish portion of the Quit and Crown Rents might appropriately be utilised for the acquisition and creation of State woods proposed in Ireland. The £796,000 received in redemption would cover the purchase for cash of the land required, and the income from the unredeemed Irish Quit and Crown Rents, which amounts to over £30,000 a year, would cover the working and administrative expenses under the scheme for State woods.

For the afforestation recommended by the Royal Commission financing by loan is proposed, as the outlay is a productive investment of capital; it is indeed evident that so large a scheme can hardly be undertaken without loans.

It was, perhaps, not to be expected that the subject of improvement of existing woods should receive much attention in either the Irish or British Reports, though the defects have been generally admitted. The proposals of the Royal Commission deal entirely with the planting of new areas and those of the Irish Forestry Committee, while making some provision for improving existing woods, are chiefly concerned with fresh planting; the urgency for acquiring the suitable lands for planting in Ireland, so that the exceptional opportunity afforded by the sale of estates may not be lost, make such acquisition a matter of the highest importance, and this is rightly emphasized in the Irish Report, but the general condition of existing Irish woods is such that considerable improvement is required, and in the case of private owners who may not have the means for both improvement and extension it would, I think, be wiser that the improvement of existing woods should take precedence of fresh planting.

In many cases it will be possible for such owners to do much by natural methods of regeneration, and where this is practicable it will be the cheapest and most satisfactory

method to adopt ; where natural seedlings cannot be obtained or where the introduction of species which do not form part of the existing stock is desired artificial sowing may be found a better and cheaper course than planting young trees from a nursery.

Natural reproduction is not so obvious a means of stocking a wood as the planting of established plants. It requires the exercise of a little faith by those who are not acquainted with the results obtainable, but it has many advantages over clean felling and re-planting.

As in the past, sport has been an incentive to the creation of private woods, so it is likely to be in the future in Ireland ; both in the improvement of existing private woods and their extension, therefore, the management must generally aim at meeting the shooting requirements of the owner as far as this is compatible with good forestry ; rabbits must, of course, be excluded from the woodlands and confined to wired-in warrens if woods are expected to pay, but good timber crops can be grown in woods from which good shooting is also obtainable

In a paper* read by Mr. M. C. Duchesne at the Surveyors' Institution in February last much practical advice is given on the subject of forestry and game, and how disagreement between the forester and the gamekeeper on the two points of undercover and keeping the woods quiet can be reduced, which is fully applicable in Ireland.

This subject ought to be carefully considered by experts who, under the proposals of the Irish Forestry Committee, will furnish advice to private owners so that the more varied objects which woods must satisfy in their case may be met.

It will also be desirable that the Forestry Authority in approving forestry schemes for estate loans should recognise that on residential estates woods managed with some consideration of their sporting uses contribute very largely to the sale and letting values of such property, and that in these cases it would be unreasonable to expect the owner to agree to a scheme of planting and management with the sole object of growing timber for profit. It is, of course, still more desirable that owners should themselves study the matter and take an intelligent interest in making the most of the lands they own both for sport and profit.

Irish public opinion in favour of afforestation is stronger than it has ever been. The means of attaining a moderate extent of woods to satisfy the national wants have been made clear, and though progress at first may be gradual it is to be hoped that it will be continuous and that the co-operation of private persons, County Councils, other Corporate Bodies, and the State in forestry may help to stem the tide of emigration and bring increasing prosperity to this country.

[* Practical English Estate Forestry.]