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AFFORESTATION IN NORTHERN IRELAND

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Northern Ireland with less than 2% of woodland stands greatly in need of large scale afforestation. Prior to the War the woodland area in Northern Ireland, apart from small areas of under 3 acres, was approximately 60,000 acres, and of this area at least one-quarter was unproductive. Since 1939 it is estimated that at least one-fifth of the productive area has been felled. Exact figures are not available, but at least 13,000,000 cubic feet of timber has been felled.

Most of this timber has been grown in and around private demesnes of the larger estates and had been planted mainly for shelter and ornament and for purposes of sport. Timber production was a secondary object, but as most of these woods were planted on fertile soils, much good timber has been produced, often in spite of lack of proper attention.

In the main these demesne woods consist of hardwood species, but it is evident that to begin with both hardwoods and conifers had been planted. The conifers tended to be cut out early in the life of the woods.

Again, during the war period, the heaviest demand has been for softwoods.

To allow areas on highly productive soil which have been clear felled to remain unplanted would result in a heavy loss in timber resources to the community and financial loss to the owner of the land. It is, therefore, of the first importance that all felled areas should be replanted as soon as possible and that the woodland should be properly managed so that full crops may be produced. With a view to encouraging replanting of these areas the Ministry have now made available Planting Grants at the rate of £7-10-0 per acre, and in addition, are taking what steps are possible to make plants available for replanting.

State Afforestation.

State afforestation in Northern Ireland dates back to 1912. Three small estates were purchased by the D.A.T.I. at Ballykelly, Co. Londonderry; Knockmany, Co. Tyrone, and Castlecaldwell, Co. Fermanagh. The rate of planting was, however, slow and up to 1921 only a little over 300 acres had been planted.

The end of the war period of 1914-18 brought the establishment of the Forestry Commission, with control of forestry in the British Isles as a whole. Under this Body 3,000 acres were leased on Baronscourt, Co. Tyrone, and planting was started there on a considerable scale.

With the passing of the Government of Northern Ireland Act forestry in Northern Ireland came under the Ministry of Agriculture, and some progress was made with planting, and additional land at Newcastle was acquired on lease. From 1922 to 1928 an average of 350 acres per annum were planted. It was then decided to increase the forestry programme and to plant at the rate of 1,000 acres per annum, and this programme was fully carried out up to 1940. Since then, owing to war conditions, there has been a slight reduction in the area planted annually.

The area of woods and plantations now owned by the Ministry is approximately 20,000 acres. The total area of land acquired by purchase and lease is now over 34,000 acres, of which something like 6,000 acres are unplantable owing to various causes.

The area acquired in each County is as follows:—

Armagh	200 acres
Antrim	3051 acres
Down	7111 acres
Fermanagh	1620 acres
Londonderry	13236 acres
Tyrone	9097 acres

In County Armagh only 200 acres of forest have been acquired. This County has not a large area of suitable forest land and what does exist is scattered in small units. It is hoped in time to secure additional land in this County, but the forest area is never likely to be a large one.

County Antrim has extensive hill ranges, but acquisition to date has been disappointing. Much of the land which has been offered in North Antrim has been at considerable elevation and covered with deep untractable peat, unfavourable to forest planting. The glens and slopes suitable for afforestation have a high grazing value and it has, so far, not been found possible to secure any large block at an economic price.

In County Down the Mourne Mountains form the principal range. This granite formation gives little scope for planting, the soil being mainly thin and unfertile, with a thin covering of poor peat. On some of the lower slopes and outliers silurian shales take the place of granite and give much better soil conditions for tree growth.

Forest areas have been acquired at both ends of the range—at Rostrevor and Newcastle. The Newcastle area includes Tollymore Park, famed locally for the quality of the Larch grown there. This area has also produced Beech of fine quality, and a very large Silver Fir. One Fir felled recently had a volume of 670 cubic feet.

County Fermanagh offers suitable soil and conditions, especially around Lower Lough Erne, and some progress has been made in this district.

Remnants of natural forest still exists on some of the islands and around the shores of the Lough. Many communities are represented:—Ash-Alder, Ash-Birch, Ash-Oak; Moist Oakwood and Dry Oakwood.

Land annuities are high in this district and this tends to slow down acquisition, but it is not unlikely that ultimately a considerable forest area will be built up.

In County Londonderry good progress has been made. Much of the hill land is very suitable and, partly due to the fact that the soil on most of the hills is too wet for good sheep grazing, it has been possible to acquire a good deal of land for afforestation.

The rocks are mainly basalt, giving a fairly fertile soil. A great deal of peat has been removed for fuel, leaving only a thin covering of peat over the mineral soil. Where the peat remains at a considerable depth much of it is of a type which is readily plantable.

There is every indication that this County will provide land for a very large forest area.

In County Tyrone reasonable progress has been made with the acquisition of land. The main hill ranges are composed of metamorphic rocks, and the soils produced are somewhat less fertile than those found in County Londonderry, and peat is more in evidence. Nevertheless, there is much suitable land available of a type which can be depended upon to produce heavy stands of timber.

Where suitable land is obtained, hardwoods are planted, but conifers form the bulk of the plantations. A larger area of Sitka Spruce is planted than of any other species, and Norway Spruce and Sitka Spruce together occupy more than half of the plantations. Sitka is used on all the poor peaty soils and on exposed elevated areas. Norway Spruce is preferred only on old woodland and for the less exposed sites and on peaty loam or mineral soils which are on the dry side for Sitka Spruce.

Douglas Fir is planted wherever suitable conditions exist. Very fertile friable soils are avoided, as it is found that the best results are obtained on moderately light rather dry soil. Under these conditions growth is controlled and trees of good type are produced.

European and Japanese Larches are planted extensively. Certain areas in County Down and County Antrim are very favourable for the growth of European Larch. All seed supplies of European Larch are either collected at home or procured from the North of Scotland. It has been found that plants grown from Continental seed are much inferior to those produced from seed grown in the British Isles. Japanese Larch grows well on a variety of sites in all Counties. Quite good results are obtained on poor soils and very fertile soils are avoided as they tend to produce a rather coarse twisted type of tree.

Scots Pine is used only on sites unsuitable for other species and, where suitable, 12½% to 25% of *Abies nobilis* is planted in admixture with the Pine. Scots Pine does well in the Mourne area, but over the rest of the Six Counties early development is retarded by defoliation which takes place each winter and spring and which would appear to be due to climatic conditions. Once canopy is formed defoliation becomes less troublesome and usually disappears altogether.

Pinus Murrayana is used to some extent on the poorest sites and as a nurse species with Sitka Spruce on the poorer heather covered peats.

Abies grandis is used to a limited extent, but as the trees require rather fertile soils and while the quantity produced is high, the quality of the timber is very moderate, it is not thought advisable to plant this species extensively.

Hemlock Spruce is used for under-planting thin stands of hardwood and for filling up blanks in natural regeneration. It grows very rapidly under these conditions and is regarded as a tree well worth cultivating. This species, together with *Thuja*, is used to some extent in admixture with European Larch, 12½% of one or the other species being mixed through the Larch.

Private Planting.

In addition to their State Afforestation Scheme the Ministry have encouraged private planting by means of Planting Grants and the supply of plants to farmers and others at low price. Up to date Grants have resulted in the planting of a small area, but as recently the amount of Grant has been increased to £7-10-0 per acre, it is anticipated that as a result considerable areas of woodlands which have recently been cleared of timber will be replanted.

The Scheme for the distribution of plants has met with growing success, and over a quarter of a million plants have been sent out during each of the past two seasons. The main conditions attached to the Scheme are that not less than 1,000 plants must be taken and that the applicant should undertake to plant the trees on his own holding. Up to 1943 the price charged was 30/- per thousand, but has now been raised to 40/-.