Irish Timber and the Sawn Wood Trade

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Summary

The status of Irish timber is outlined in the context of the world and European trade. The small size of the industry means that changes of supply can have a considerable effect on production. The present sawlog supply is given in relation to quantity and method of obtaining it. The requirements of the market and some indications of the size and competitiveness of the homegrown sawn timber industry are presented, concluding with a brief comment on its future.

In making an appraisal of how Irish timber supplies the needs of the sawn timber trade a variety of factors, ranging from supply and cost to the quality of the native material, must be considered. Not only that, but their relevance to and interdependence on each other must likewise be assessed before firm conclusions may be drawn. The fact that Ireland is a small country, with a late development in organised forestry tends to accentuate shortcomings in any area. Bearing this in mind, it is a worthwhile exercise to attempt to determine the place of Irish grown timber in the overall timber trade, both now and in the future.

The Status of Irish Timber

In terms of trade, a brief look at gross production statistics will broadly categorise the relevance of Irish timber. Of the world's timber supplies, approximately half of the roundwood produced is used for fuel, the other half being processed industrially. About two thirds of all industrial wood produced is sawn, and in 1968 this amounted to 389,000,000m^3. Europe consumed 75,000,000m^3 of this (Madas, 1974). Ireland's consumption of sawn timber at 600,000m^3 in 1976, is exceedingly modest by comparison, and even more modest is the contribution of homegrown timber to that market. But, for that very reason, any changes in the production of homegrown timber, while of little relevance outside our country, can have a very significant impact on the development of the home timber trade. Being an importing country, an increase in home produced raw material would have the added advantage of import substitution.

In some lower quality products, such as pallet wood and fencing, both hardwoods and softwoods may be interchangeable but, normally, they each have their own separate end uses.

Softwood consumption and production far exceeds that of hardwood, and sawn softwood is the greatest single category of timber used. In 1976, 517,000m^3 of sawn softwoods were consumed (C.S.O., 1977) equal to 1,000,000m^3 of wood raw material equivalent (WRME). Of this, 180,000m^3 WRME was home produced sawlog of 17.5cm minimum top diameter (FWS 1977, Gallagher and Purcell 1976). A further estimated 50,000m^3 of

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smaller wood was directed into the sawmill industry. Thus, 23% of total softwood sawlog consumption was derived from homegrown material.

The statistics for hardwood production are more difficult to ascertain, as the greater proportion of homegrown material is derived from private plantations, where records are not so readily available. However, Gallagher and Purcell (1976) estimate that 12,000m³ of sawlog are produced annually from plantations of 0.5 ha and larger. State plantations are not likely to produce more than 5,000m³ of hardwood sawlog for a long time to come. Our own observations indicate that hardwood consumption may be as high as 27,000m³, indicating that a lot of the material is purchased as single trees and from small groves on farms not rated as having hardwood plantations. In 1976, the imported hardwood saw timber WRME amounted to 135,000m³. An estimated 16.6% of hardwood is supplied from Irish sources. Therefore, supplying approximately 250,000m³ of sawlog, we provide for less than one quarter of our needs.

Sawlog Supply

In 1976 the state sold 227,654m³ of softwood timber 20 cm diameter breast high (D.B.H.) and over. This would have yielded some 142,000m³ of 17.5 cm minimum top diameter sawlog. Of all sales from state plantations in that year, 85% were sold standing (F.W.S. 1977) and felling was either undertaken by the purchasing mill, or by contractors who either had an arrangement with a sawmill, or who later sold their produce piecemeal; the former arrangement is far more common than the latter. Most sales of State timber are by sealed tenders, a system not always favoured by the sawmilling trade, on the grounds that it militates against effective stock control. As in previous years, a certain amount of pulpwood timber from state plantations would have found its way into the sawmills to be converted to pallet wood and fencing posts. In 1975, some 50,000m³ of pulpwood were diverted into sawn timber production. With the current financial and supply stresses in the sawn timber market and the drop in particle board production, the intake of such material into the mills currently is likely to exceed this figure.

Sales from private plantations range from the casual purchase of a few trees to a contracted sale of several acres of clear-felling. Many small mills exist through the former arrangement and, in certain cases, mills may contract to convert a farmer's own timber for him. Thus the collection of serviceable statistics is fraught with difficulty. In the case of larger estates, the sales would be reasonably negotiated, but in the case of many small parcels of trees, and less sophisticated estates, there is enough hearsay evidence to suggest that the owners

often have a poor knowledge of the worth of their timber. Table 1 summarises the proportion of State to private sawlog available.

TABLE 1

Available Homegrown Sawlog Timber
(m^3 : 1978)

	State Forests volume m^3	%	Private Forests volume m^3	%	Total volume m^3	%
Softwoods	142,000	59	40,000	17		
	50,000 (1)	21	+10,000 (2)	4		
					242,000	100
Hardwoods	5,000	16	12,000	37		
			+15,000 (2)	47	32,000	

(1) Estimated small wood diverted to sawn timber trade.
(2) From areas less than 0.5 ha. in extent, including hedgrow and single trees.

Hardwoods may be produced, in small lots, throughout the country with probably some greater emphasis on the larger estates of the midlands and south. Softwoods, on the other hand, can be grouped quite effectively into major areas of production. Approximately 70% of all sawlog is currently produced in the southern half of the country — that is south of a line from Galway to Dublin (O'Flanagan, 1973), with the highest production in the mountainous regions of Tipperary, Waterford and Wicklow. This situation will not change appreciably in the next 15 years, although from then on, crops in the western counties should make an impact. Of the total 7.8 million m^3 of softwood timber being grown at present, 5 million m^3 are in the 25 to 40 years old category, with greatest volume in the 30 years old group. Within 10 years from now, the volume of available sawlog will have tripled. The relative increase in sawlog supply in the western counties will be by a factor of five in the same period. The Forest and Wildlife Service are currently managing their coniferous woodlands on a 40 to 50 years rotation. This means that, on average, sawmillers will be handling trees of approximately 24 cm diameter breast high (D.B.H.).

These are not large trees and it is obvious that small logs will be the normal produce from Irish forests. If there is any tendency to reduce the length of rotation, this could further reduce the average size of sawlog available. The availability of homegrown sawlog is summarised in Table 1.

Sawnwood Timber Market

The latest date for which comprehensive figures relating to the timber market are available, is 1976. As shown in Table 2, five times

as much softwood as hardwood is imported. Softwood in construction accounts for 70% of the market. This includes structural and joinery timbers, also shuttering and formwork. Pallet and boxwood account for a further 15% with fencing, furniture and other items completing the picture. At present, very little homegrown timber is used for joinery purposes. There is a growing market for homegrown timber in construction, subject to certain limitations. Where stress graded timber is specified, imported material is likely to reach acceptance before homegrown. The current visual grading rules tend to militate against selecting homegrown timber, generally on rate-of-growth and knot-area-ratio factors, although incidence of twist may also pose problems. Mechanically stress graded timber tends to produce far higher yields of high-grade material, suitable for structural applications. The arguments as put forward by Knaggs (1977) for the proper sawing, drying and grading of spruce to command a good market apply equally to any homegrown softwood timbers. It is imperative that the material be presented in a form and condition at least as good as the imported product. At present the majority of market outlets are not involved in stress grading, and properly presented homegrown timber can be, and is being used alongside imported timber. With the advent of more stringent specifications, purchasers of homegrown timber are becoming concerned that it can meet the requirements of a more demanding market. The principal producers are aware of this problem, and are taking appropriate action to improve the quality of their produce. Small mills still have a large impact on the sale of homegrown timbers, and are likely to continue to do so. In these mills, the same attention to presentation is commonly not pursued. As a corollary, it is also evident that the impact of individual small mills is small and thus, poor presentation may not be too serious a factor. However, it has given Irish timber a poor name, and as such it behoves all mills to improve the image of the native product.

TABLE 2

Imports of Timber, 1976

	Softwood		Hardwood	
	m^3	£,000	m^3	£,000
Logs	1,840	95	2,160	300
Squares	25,240	1,295	3,320	341
Sawn	381,140	23,287	61,440	7,237
Planed	1,780	309	1,440	376
Sawn Equivalent	403,840	24,986	66,170	8,254

An examination of the relationship of homegrown timber to total consumption shows the extent to which our timber deficit must be made up by importation. In 1973, the total timber consumption in Ireland was 2.2 million m^3 WRME, of which 342,000 or 15.7% was supplied from homegrown timber. At that time, softwoods accounted for an average of 86.4% of the value of all timber imports at £54,269,000. These figures include all softwood uses. Softwood lumber imports were found to account for 597,000m^3, valued at £15,048,000, averaging 45.3% of volume or 28.5% of value of total softwood imports (Bulfin 1974-5). In 1976, an estimated 403,840m^3 of softwood logs, rough and planed lumber were imported at a total value of £24,986,000 whereas 66,170m^3 of hardwoods, valued at £8,254,000 were imported. The import bill for solid timber was thus £33,240,000. The estimated volume of home produced timber was 140,000m^3, of which 116,000m^3 were of softwood and 20,000m^3 were hardwood. The value of the homegrown softwood market would be approximately £10,000,000 or 28.5% of the total softwood market. A considerable proportion of hardwood is converted to pallet boards, and is therefore among the lower valued commodities. The market for hardwoods would hardly exceed £1,500,000. Thus, from home sources, and in terms of value we supply only 25% of the timber market.

Capacity of the Industry

There are an estimated 170 sawmills in Ireland well scattered throughout the country. If any discernible pattern does exist, it is ill defined. Perhaps the greater concentrations of mills are in the east and south—following the areas of greatest timber production, with a noticeable scarcity in the northwestern counties. A detailed analysis of the structure of this industry, particularly as it relates to the softwood trade, is currently being evaluated by a committee consisting of trade and government representation.

The majority of the mills are small with a throughput of less than 2,500m^3 per annum. The employment in these mills ranges from 1 to 4 people, averaging less than 3. There are six mills, large by Irish standards, with a sawing capacity in excess of 10,000m^3. Although most mills are small, even among the smaller mills the capacity exceeds current throughput. Of course many of these mills would not be capable of increased production without expansion of staff and rationalisation of production. But among the larger mills there is no doubt but that the equipment is under utilised. Within the past 2½ years, there has been considerable growth in the industry, with three mills expanding their milling capacities very considerably, and also installing drying kilns. Expansion is being considered by several other mills, and there is at least one new mill being erected, which will have

a considerable capacity. Whereas the smallest of the sawmills tend to operate inserted-tooth, circular-saw rack benches, frequently powered by belt-drive from a tractor, and the middle-of-the-range mills operate band-saw rack benches, the modern and modernised mills are operating automatic band mills, double slabbers and an array of sophisticated semi-automatic conveyors. Thus, it is likely that present capacity exceeds supply by 20 to 30%.

Competitiveness

There certainly is optimism within the trade to allow for this sudden expansion, and it is equally evident that there is a considerable import saving opportunity in the industry. However, there is a limit to the supply of raw material, which is not now meeting the capacity of the industry. This will likely result in the following effects, unless steps are taken to change the trends. The price of sawlog timber will remain high as long as it is in short supply.

Further expansion of the industry by continuing investment on the part of the major firms may ultimately result in the closure of some less competitive sawmills. This may not necessarily be beneficial, as local industry supplies not only local needs but local employment as well. Trends in this direction require to be watched carefully. The forest industry is a scattered enterprise, requiring a considerable amount of haulage of raw materials. Too much centralisation of effort could result in further extension of haulage distances. At present, whereas smaller firms do not travel great distances in search of timber, it is undeniable that most of the larger firms have to seek out timber wherever they can find it. Aspects of the competitiveness of the homegrown timber industry referred to in last year's Seminar should be mentioned as they are of prime importance. The presentation of homegrown timber must equal that of the imported product if it is to be marketed alongside it. The present low price of imported timber is putting a severe strain on the homegrown timber producer to improve his standards of presentation, but this he must do if he is to establish a firm footing in the market.

Future Development of Homegrown Trade

The present trend of increasing mill size and sophistication is likely to continue, although there cannot be many large mills in Ireland. There is a growing awareness of the need to dry timber properly, and the major mills are installing kilns or dehumidifiers. The implementation of grading rules such as stipulated in I.S. 193 (IIRS, 1978) is a further step in tightening up specifications which will inevitably reflect on the homegrown timber trade. There is an undoubted pressure on the trade to improve its product image. This, if achieved, will permit homegrown timber to enter more sophisticated markets. The

demand for timber is constantly growing to the extent that not only is the E.E.C. a net importer of timber, but even Sweden is now in that role. As shown in fig. 1, the gap between production and requirements is likely to continue expanding, which should improve the price obtainable for Irish grown sawn timber. As long as we can effectively increase our acreage of forest lands, producing sawlog timber of quality and supporting an industry which is not too capital intensive by today's standards, then it would appear that the sawmilling industry has a future in Ireland. By the turn of the century Ireland could be a timber exporting country.

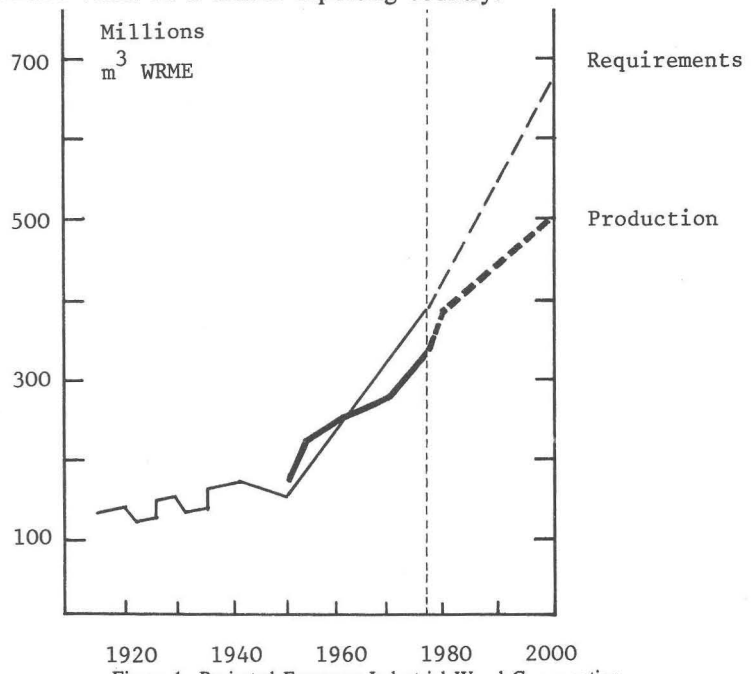

Figure 1. Projected European Industrial Wood Consumption.

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