

Future Markets for Irish Wood Products

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INTRODUCTION

The utilisation of small roundwood was probably the problem of greatest concern to private growers and State foresters in 1979. At present, Irish forests are capable of producing approximately 420,000m³ of pulpwood *per annum* and this is expected to increase gradually to about 900,000m³ by 1990 (1). This wood might be used in the manufacture of a vast array of end products from plastics to shatterproof glass and possibly may be used in manufacturing animal foodstuffs or as a source of energy. However those, at present minor uses of wood develop in the future, it is unlikely that they will have any major effect upon the utilisation of pulpwood within the next 5-10 years. We are therefore left with the traditional products for small dimension roundwood and mill residues, i.e. to process them into particleboard (Chipboard), fibreboard¹ and, pulp and paper. The users of small wood have all experienced very difficult market conditions over the past few years. However, there are indications that these difficulties are now easing and that the markets for processed wood products are set for renewed growth.

PARTICLEBOARD

Estimated consumption of particleboard in Ireland in 1978 was about 110,000m³ (equivalent to 154,000m³ of roundwood). 50,000m³ of this was imported adding £3½ million to our imports bill (2). Thus, it is evident that the building of even one modern mill (assumed capacity 150,000m³ *per annum*) would more than adequately cater for the home market and that any increase in the production of particleboard must aim for the export market.

1 Fibreboard includes — Hardboard, Fibre Building Board and Insulation Board.

In this context it is encouraging to note that there was a dramatic resurgence in the U.K. particleboard industry last year (1979), leading to much greater activity and an increasing share of the market for British manufacturers (Table 1).

Table 1 Nett Apparent Consumption of Particleboard (m^3) in the U.K. in the Periods January-July 1978 and 1979 (3).

Year	Total Consumption	% Increase	Imported	% Increase	U.K. Produced	% Increase
1978	1,074,000		814,000		260,000	
1979	1,221,000	13.6	863,000	6.1	358,000	37.5

$$1\text{m}^3 \text{ particleboard} = 1.4\text{m}^3 \text{ WRME}$$

The principle suppliers to the British market in this period were, Belgium ($157,378\text{m}^3$), Sweden ($144,604\text{m}^3$), Finland ($128,868\text{m}^3$), Federal Germany ($79,970\text{m}^3$), Spain ($60,413\text{m}^3$) and Portugal ($51,870\text{m}^3$). Ireland's share of this market was $5,965\text{m}^3$. The value (incl. insurance and freight) of the imported material in Britain in the seven month period was about $\text{£}74/\text{m}^3$. This contrasts with the minimum EEC agreed price of $\text{£}60/\text{m}^3$ in 1978.

Total consumption of particleboard in Britain is expected to reach 2.1m^3 million in 1979 (4). 1.3m^3 million of this will be imported material. However, despite the fact that Britain is currently the largest importer of particleboard in the EEC, it is still low in the particleboard consumption league, with a *per capita* consumption of $28\text{m}^3/1000$ people, as compared with West Germany and Finland with $96\text{m}^3/1000$ people (5). Thus, although production of particleboard has increased in Britain from $250,000\text{m}^3$ in 1976 to $700,000\text{m}^3$ in 1977, there is still plenty of scope for market expansion. In addition it is now clear that the acute over-capacity situation of the 1974-78 period is gradually being absorbed by a combination of market growth and mill closures. The Annam factory of Weyroc Ltd., Flakeboard Ltd. of Monmouth and

Munster Chipboard at Waterford have ceased trading. On the Continent a few mills have closed and many have been and are deliberately working below capacity. However, this over-capacity in Europe, assessed at 20-25% in 1978 was reduced in 1979 and is likely to be less than 5% in 1980 (4). Growth is also foreseen in the European markets for wood based panels in 1979 and 1980 (2). The rate of growth may be much slower than in the pre-1973 era, but it should amount to 4%-5% or 1.5 million m³ of board material. These estimates of market growth have given the industry a renewed degree of confidence and some British manufacturers are already expanding their scale of activity and re-equipping to meet the expected increase in demand. Caberboard Ltd. of Cowrie, Stirling, have this year invested £800,000 in replacing machinery (5).

In addition, technological innovation in the particleboard industry may not only make this material economically more competitive, but also may expand its share of the total timber market by substituting in many applications for blockboard, plywood and even sawn goods. Bisen-Werke in West Germany have, for example, developed an oriented structural particleboard which has strength properties approaching those of structural timber (5). In addition some Canadian firms now find that dried, pulverised conifer needles, which contain phenol-type chemicals with good adhesive properties, can replace 50% of the expensive resins currently used in particleboard manufacture. Furthermore, the use of melamine-formaldehyde glues which are much more water resistant than urea formaldehyde ones, combined with edge sealing now permits the use of particleboard in many outdoor situations. These developments should further encourage an already expanding market for this product.

FIBREBOARD

Fibre building and insulation boards however have had a declining share of the total panel market since 1970 (Fig. 1). The sales of these products have primarily been curtailed because of low cost competition from other panels such as plasterboard and thin particleboard.

In addition, high energy costs involved in the wet method of production are rising disproportionately in relation to other materials. Energy use as a proportion of direct manufacturing costs is 25% and rising. Prices obtainable for the products are such that many mills have ceased production over the past two years. Ironically, this has created a better market balance between production and consumption and has led to an increase in price. An increase of about 10% in hardboard prices and perhaps a slightly smaller uplift in insulation board prices seems to be the average

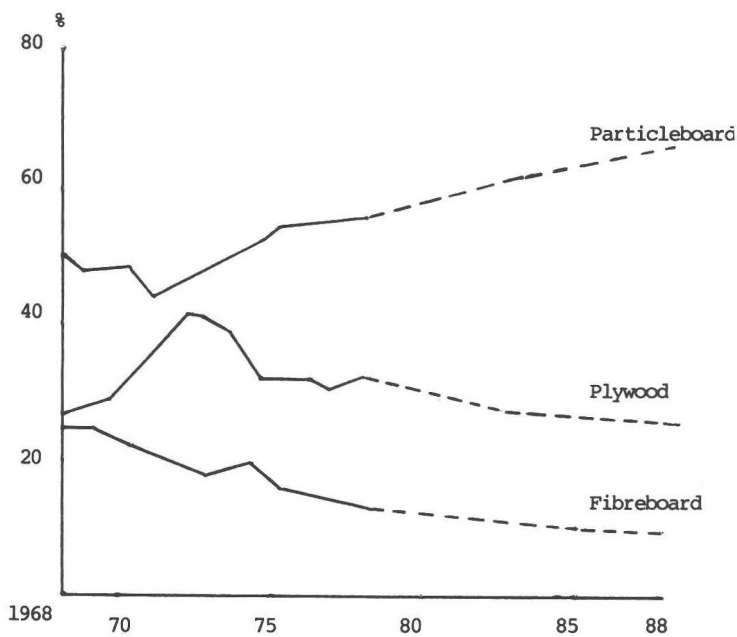


Fig. 1 Panel Market Share. U.K. (6)

forecast for 1980 (7). However, the survival of many mills in 1978 and 1979 has been due to the fact that they belong to a complex of otherwise profitable woodgoods enterprises. Most suppliers to the British market now concentrate on value-added products in an attempt to compensate for negative market growth and the reduction in demand for standard 3.2mm hardboard has frequently been offset by mills in this way. In the light of these developments it is perhaps understandable that there is no rush to build fibreboard mills in Europe. At the same time, demand for medium density fibreboard (480-880kg./m³) is now showing every sign of outstripping domestic production capacity in the U.S., despite a dramatic growth in production capacity over the past five years (8).

PULP AND PAPER

The utilisation of pulp production capacity in Europe in general has been falling throughout the 1970s. Much of this under-utilisation has occurred in the groundwood¹ sector. In Britain some 69,000 tonnes of capacity has been withdrawn from production

1 Groundwood = Mechanical pulp.

since 1973, reducing the mechanical sector from 225,000 tonnes to 156,000 tonnes (9). In part, this reduction in capacity has been the result of decreasing prices for newsprint and other mechanical pulp-based products. However there is no lack of faith in the future of mechanical grade production, but planned increase in capacity is based on the thermomechanical process¹ which offers technological and environmental advantages over the conventional stone groundwood process. At comparable freeness (freeness is generally used as a parameter to control the quality of stone groundwood) thermomechanical pulp is superior to groundwood in a number of important properties (Table 2).

Table 2 Some Properties of Thermomechanical Pulp Relative to Groundwood (10).

Property	Groundwood	Thermomechanical Pulp
Bulk	1.00	1.10
Breaking Length	1.00	1.30
Tear Factor	1.00	1.70
Shives	1.00	0.30
Burst Factor	1.00	1.40

These improvements in quality permit the use of greater proportions of mechanical pulp in the mix with more expensive refined pulps for the production of fine quality papers. Indeed, already post-refiner chemical treatment of thermomechanical pulp are achieving properties far removed from those of pure mechanical pulp and so these partially refined mechanical pulps are forming an increasingly larger proportion of the furnish in fine paper manufacture.

The market share for sulphite pulps had steadily decreased over the past five years and there is every indication that it will continue to do so (8). This situation is highlighted by the threatened closure of the Wiggins Teape mill at Fort William which has never returned

¹ Involves pressure refining as in fibreboard manufacture.

profit in its twelve years in existence and which in 1978 recorded losses amounting to £2.7 million on a production of 60,000 tonnes of pulp (9). On the other hand the importance of sulphate pulp has grown rapidly over the past decade and it seems likely to retain its position as the most important pulp grade in paper making. The future growth rate in consumption of paper making pulp is expected to slow to about 1.5% *per annum*, but a substantial deficit of world pulp and paper is predicted by the mid-1980s (8). Possibly, in anticipation of this situation, one of the major Swedish pulp producers has raised the price of its pulp to European paper producers by £70 per tonne since 1977, to bring the price of chemical pulp to £238/tonne in 1979. On the market side it is worthy of note that Britain currently imports 90% of its wood pulp requirements, while Italy imports 95% and Holland 96% (9).

IMPLICATIONS FOR THE MARKETING OF IRISH FOREST PRODUCE

From this brief review it is clear that the European market for some forest products is still expanding and that Britain in particular is a large scale importer of these materials. At the same time freight charges often account for a high percentage of the value¹ of these products and since the majority of processed wood goods available in the U.K. come from non-EEC countries, they are subject to import duty. Thus, exports of processed wood goods to the U.K. from Ireland would be likely to have a competitive edge of between 15%-35% on the British market, *vis-a-vis* existing suppliers (7). Britain will this year (1979) have an adverse trade balance in wood goods well in excess of £2,000 million, and the EEC region will have a similar negative trade balance of approximately £13,500 million.

By 1990 we will have over 1,000,000m³ of smallwood and wood residues available for processing (1). From this raw material we may be manufacturing any or a mixture of products as follows:

434,000 tonnes of thermomechanical pulp.

OR

200,000 tonnes of chemical pulp.

OR

714,000m³ of particleboard.

OR

200,000 tonnes of thermomechanical pulp + 300,000m³ of particleboard.

¹ Including cost of insurance and freight.

By current world production levels these quantities of materials would not have any marked impact on world trade. For instance, the world production of mechanical and chemical pulps is about 30 million tonnes and 77 million tonnes respectively (11). In view of the market situation as outlined in this paper it is tempting to assume that it will be easy to sell these Irish wood products abroad. However, the closure of some of our processing plants and the difficulties which others have experienced must alert the forestry industry to the fact that small individual processing units cannot compete with multi-national integrated complexes especially during periods of trade recession or oversupply. Since prices are fixed by these multiproduct concerns it is clear that they can accommodate ailing sectors of their operations during periods of difficult trading conditions, without unduly affecting their overall profitability. Thus to make an impact on the available markets the industry in Ireland must have available to it modern, fully integrated, export oriented industrial capacity, located near the timber supply. Given this kind of processing facility there appears to be considerable scope for innovation in the wood processing sectors and a considerable opportunity not only to utilise our smallwood supply but also to add substantially to its value.

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