THE COMPETITIVE MATERIAL CHALLENGE

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WORLD INDUSTRY PROFITABILITY

Lumber producers in North America, Chile and the small sawmills in Belgium, made a profit in 1987. The North American operations can attribute their success to their competitiveness (exchange rates) in world markets. Chile devalued their currency by 100% over the past several years and Belgium has an unusual no-tax structure on their domestic logs.

- Japan's sawmill industry saw a further reduction of some 800 sawmills in the past year.
- German, French and British lost money through most of 1987.
- Finland and Sweden lost money in the first half of 1987 and had only marginal profits in the second half.
- The New Zealand dollar increased in value from 48 cents to 68 cents during the past year, resulting in financial losses. They are currently restructuring their industry.

WORLD INDUSTRY PRODUCTION GROWTHS

Jack Puusepp mentioned a forecasted decline in production in the Pacific Northwest. What he did not mention was the significant production growth in many parts of the world. The European postwar tree plantations are now coming on stream. As Dick McRae pointed out, Germany is already 2/3 self-sufficient in lumber production. The UK currently produces 20% of their requirements and is expected to top off at 30% of their consumption demands within 10 years. France, our second largest European customer after the UK, is expected to produce volumes equal to their demands within the next 6-7 years. European production will increase by 5-6 million m^3 between 1988 and 2000 and 13-26 million m^3 between 2005 and 2020.

The above is the good news. The bad news is that if it is decided to harvest the acid rain damaged forest, the production increases will double; i.e., 10-12 million m^3 increase between 1988 and 2000.

Currently it is estimated that 1.2 billion m^3 has severe damage caused by acid rain. Severe damage is defined as having a needle loss of 25% or more. It occurs primarily on the older, larger trees. 800 million m^3 is in western Europe and 400 million m^3 in eastern Europe. In addition to the more traditional 'home grown' forests, there are the enormous Radiata tree plantations of New Zealand, Chile and South Africa. New Zealand's current cut is approximately 10 million m^3 and is expected to triple by the year 2005. The forest of Chile, in the short term, is expected to equal New Zealand's. (By the year 2000 Chile is expected to have 2 million hectares planted with a rotation of 25 years; New Zealand and Chile together are expected to produce more volume than the Council of Forest Industries Northern Interior Lumber Sector and Coast combined.) Australia is expected to be able to produce its own requirements within the next 10-12 years. New Zealand and Chile have small home consumption markets, therefore, all the additional volumes coming on-stream will be for export.

Radiata pine should not be sold short as a competitive species even though there are only 2 1/2 annual rings per inch on average. The Australians led the way in developing kiln schedules involving high temperature (above boiling), weight constraints

(5000 lbs. per load) and fibre stiffening through cooling. The net result is stabilized lumber that lies flat and stays flat. It is one of the best combined quality control and marketing stories that can be told in the lumber industry. As difficult as it may be to believe, 2 1/2 rings per inch Radiata pine framing lumber sells for more than 20 rings per inch KD SPF or fine-grained, old-growth, coast Douglas-fir.

Major Trend Change

Mr. Puusepp mentioned in his talk that there was a substantial increase in lumber consumption in the USA and that much of this increase was due to the repair and remodeling market. This is a trend which applies to much of the western world and in some markets (such as Germany) the money spent on improvements exceeds that spent on new housing. The UK currently has 3.8 million dwellings which are in need of renovation. The money spent on the renovation market in Canada is expected to equal or surpass what will be spent on new housing by the mid 1990s. According to the National Association of the Remodeling Industry in the USA, approximately 65 billion US dollars were spent on remodeling projects in 1987. The NARI forecasts this figure will increase to $90 billion by 1990. The following table shows the sum spent according to projects:

Remodeling Projects

Type of Project	1987 Dollar (Billions)
Windows/Doors	$10.679
Kitchens	8.697
Room Additions/Dormers	7.149
Roofing	7.047
Siding	5.644
Commercial	5.588
Bathrooms	4.897
Rec/Family Rooms	3.197
Soffits & Facia	1.861
Insulation	1.692
Subtotal	$56.451
Miscellaneous	8.949
Total	$65.400

(By 1990 NARI projects $90 Billion)

Forty percent of Southern Yellow Pine lumber is preservative-treated for uses such as decking, etc., and presumably is included under miscellaneous.

Competitive Materials

Another major factor, and one which should concern all lumber producers in the world, is the rapid inroad competitive materials are making against lumber products. I will devote the balance of this presentation to the subject of competitive materials and endeavour to address three questions:

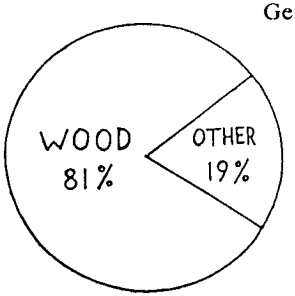
1) Are competitive materials taking markets away from wood products? and if so

2) Why is this happening? and

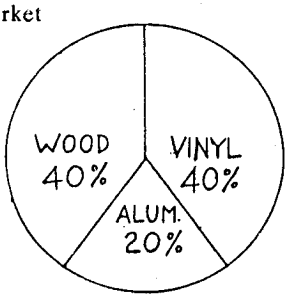
3) What can we do about it?

Window Industry

Germany-Window Market



1971

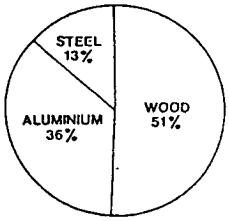


1983

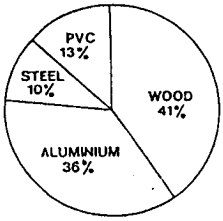
Source - COFI

The German window industry is leading the world in the use of PVCs, either in solid or overlays.

Doors and Windows
Market Shares of Alternative Materials



1975=£218m



1985=£813m

Source - Business Monitor

The use of PVC in the UK window industry is relatively new but already close to 15% of the windows are made from PVC.

Material	Windows % of Market 1982	% Changeover 1974
Aluminum	58	+16
Wood	26	-42
Aluminum clad	1	n/a
Vinyl clad	8	+167
Steel	2	n/a
Vinyl	4	+100

A study in the United States in 1983 showed a reduction of 42% in the use of solid wood. Vinyl, overlaid over wood, has been used for some time in North America, but it is only in recent times that the Americans have adopted the European solid vinyl concept. Vinyl is forecasted to become a major factor in window production.

I would like to point out that the majority of the wood windows produced in the world are produced from tight-knotted material. In North America, where there has been an abundance of clear wood fibre, we have tended to use clear wood. In poorer or developing nations such as China, grades the equivalent of wane free No. 1

Structural, are used. In Europe, over 65% of the windows are made from tight-knotted material equal to wane free Select grade. Approximately 25% of the total production of Finland and Sweden is used for window, door or other joinery purposes. If these end uses are lost to competitive materials, this volume will then be sold for general building purposes and compete directly with KD SPF or other North American construction materials.

Window Market (USA)

	Vinyl
1982	4%
1987	10%

New Houses 1%

	Remodeling
1985	11%
1986	17%
1987	20%+

Note that vinyl is making the biggest gain in the remodeling area.

Ladder Industry

	1975	1985
France	4 MMFBM	1.5 MMFBM
UK	12	2.5
	16 MMFBM	4 MMFBM

The trend away from wood to aluminum in the ladder industry is now a worldwide trend.

A study in 1983 in the USA, showed a dramatic 450% increase in the use of steel for front doors.

Front Doors

Material	% of Market	% Changeover
	1982	1974
Wood flush	24	+380
Wood panel	9	-86
Steel flush	31	+19
Steel embossed	33	+450

This phenomenal growth has continued since 1982 and without some form of action by the wood door manufacturers and the lumber producers, this past major end-use for wood will virtually disappear. Another major user of wood is the overhead garage door industry and they too are facing the same threat from steel and other alloy products.

Siding Market (USA)

Market Share Forecast

	1967	1988	1995
Aluminum	18%	13%	12%
Vinyl	1	23	31
Brick	20	17	13
Hardboard	8	17	17
Wood	12	2	1

Source: Predicasts

Wood is fast becoming a material of the past as an exterior cladding. In British Columbia, the heart of WR Cedar country, 75-80% of exterior cladding is now competitive materials (mostly vinyl).

Much of the competitive material inroads we have mentioned involve clear type wood fibre. Those of you producing construction material only should not feel complacent for it is also happening in the area of general construction.

Housing (UK)

Ground Floors	1940	1960	1987
Wood Joists	95%+	50%	18%

The use of wood joists for ground floors in the UK has virtually disappeared. Experiments are currently underway using pre-cast concrete for first-level floors in single family housing. Pre-cast concrete has been used extensively in apartment or larger buildings for years throughout Europe.

Concrete, with built-in heating systems, is also making progress right here in Canada and the United States.

Traditionally, in Australia, wood joists were used for ground floors. Approximately 12 years ago the concrete association started a promotional campaign to capture the ground floor business for themselves. Today more than 80% of the ground floors are concrete.

Ground Floor Housing (Australia)

1975	Wood Joist	80%-
	Concrete	<20%
1987	Wood Joist	<20%
	Concrete	80%+

The Big Threat - Framing Market

In mid 1986 the Australian steel industry directed their steel association to go after the house framing market. They gave the association a mandate to capture 25% of the framing market over the next 4-5 years. The program was funded in the amount of $1.9 million (Aust.). Steel-framed houses are being built and it is estimated that approximately 4% of all starts are now steel framed.

The Radiata Pine Association has mounted a promotional campaign against steel housing as have other trade associations in Australia.

A large, traditional market for Douglas-fir is the facia board market. Galvanised steel is now being used particularly in the Queensland state.

Steel and aluminum studs are used extensively in the Vancouver/Lower Mainland area. At this stage it is used primarily in non-single dwellings. Building contractors promote the use of metal studs using the argument of fewer or no call backs due to the warping aspects of wood.

The answer to question one is clearly, yes, we are losing markets due to competition.

Why Are We Losing Markets

Some of the main reasons are:

- Some competitive materials are better suited than wood for the end use. For example, the one-time very large roller-blind market of Europe has been taken over by plastics due to much lower maintenance costs.
- Not enough innovation - let competition create a perception that their products are better than ours.

- Lumber is too complicated compared to other products. For example, there are 15 grades within the dimension section of NLGA Rules, all with different bending ratios and stress values (should only be 3, maximum 4).
- The tendency to be complacent and inflexible; i.e., many mills will produce and sell anything as long as it comes under the category of S4S dimension.
- Poor quality assurance - our products are not closely enough aligned to the end use. For example, we produce green studs out of peeler cores knowing full well that this type of stud will not lay still in use (warp-prone wood fibre).
- Failure to supply exactly what the buyer wants; e.g., someone going into business to manufacture windows using competitive materials has to buy equipment for window assembly only. If they choose to manufacture wooden windows they must first buy numerous pieces of equipment to produce the window components.
- Inconsistent suppliers - too quick to move to higher priced markets.
- Erratic pricing system.
- Lack of standardization, e.g. cedar (or other species) siding sizes vary between producers. Vinyl siding sizes are standarized.
- Poor distribution channels - competitive materials tend to have more and better organized distribution and sales channels.

WHAT CAN WE DO?

Some of the obvious things to be done are:

- Make it easier to use wood
- Simplify
- Educate
- Improve quality control
- Produce to end user requirements and standards
- Develop new uses for wood
- Greater cooperation between primary and secondary manufacturers
- Specialised highly targeted promotion
- Initiate more, and better, research to improve wood product performance

In summary, to overcome the difficult times that lie ahead, we have to enhance wood products by making wood easier to use, making products more dependable, and sell people on the concept that 'wood is good.'