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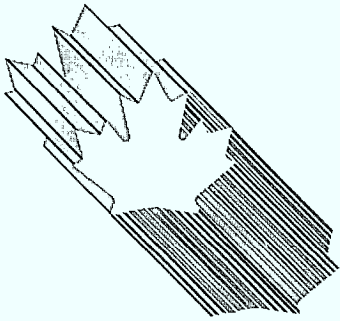


Industry, Science and
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Wood Shakes and Shingles

Canada

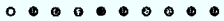


I N D U S T R Y P R O F I L E

WOOD SHAKES AND SHINGLES

1988

FOREWORD



In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to survival and growth. This Industry Profile is one of a series of papers which assess, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological and other key factors, and changes anticipated under the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the papers.

The series is being published as steps are being taken to create the new Department of Industry, Science and Technology from the consolidation of the Department of Regional Industrial Expansion and the Ministry of State for Science and Technology. It is my intention that the series will be updated on a regular basis and continue to be a product of the new department. I sincerely hope that these profiles will be informative to those interested in Canadian industrial development and serve as a basis for discussion of industrial trends, prospects and strategic directions.

Minister

1. Structure and Performance

Structure

The Canadian wood shakes and shingles industry produces premium residential roofing and siding products. These products are generally selected for their attractive appearance and expected long service life. Shakes are used mainly as roofing material but shingles are applied to both roofs and the sides of structures. Shingles are sawn from blocks of wood while most shakes are produced by first splitting very short (i.e., 18-inch, 24-inch) blanks from blocks of wood and then diagonally sawing the blanks to produce two tapered shakes, each with one smooth face.

In many countries, shakes are manufactured on a very small scale by rural inhabitants from local wood species to provide roofing material for nearby markets. In contrast, North American shakes are a prestigious roofing material often specified by architects for premium structures such as fine homes, elegant shops, churches and public buildings, to take advantage of the unique characteristics of cedar: its rich earthy colors, subtle patterns of texture, ease of installation, low maintenance and durability.

In 1986, approximately 260 mills with employment of about 4300 shipped \$107 million worth of shingles and \$193 million of shakes. This sector represents about 2.8 percent of total shipments for the wood industries. The market for Canadian production is almost exclusively in North America. Canada is the world's largest exporter of wood shakes and shingles. Exports in 1986 totalled \$268 million, of which \$265 million was shipped to the United States. Imports into Canada are relatively negligible. Ownership in this industry is mainly Canadian and the companies are primarily small. Very little vertical integration with other forest products sectors occurs in this industry.

The principal raw material used by this industry is old-growth (i.e., 200-300 year old) western red cedar, which only occurs in western North America. Eighty percent of the North American inventory is located in British Columbia. Various sources estimate that this province holds enough red cedar to support current levels of shake and shingle production for 50 to 100 years.

Out of a total of 260 mills, some 170 are located in British Columbia. However, almost 90 percent of the combined Canadian shake and shingle production, representing about two-thirds of the nation's shingle output and 100 percent of shake manufacturing, is in British Columbia. Some 10 companies, which undertake various activities such as logging and manufacturing, also act as sales agents for another 50 companies and consequently account for close to 80 percent of exports from British Columbia. The industry is fiercely competitive: markets favour the lowest-cost mill.

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Imports, Exports and Domestic Shipments
1986

* Estimated

About 90 percent of B.C. production of shakes and shingles in 1986 was exported to the United States. California is the largest market for B.C. shake producers, while Texas and the northeastern United States are the major shingle markets. Washington and Oregon are also very important markets for B.C. producers of shakes and shingles, although a significant percentage of shipments to those states is treated with fire retardants or otherwise further processed and sent on to other markets such as Texas and California. There is limited demand for these products outside of North America, and only about one percent of production in British Columbia is exported offshore.

Quebec and New Brunswick shingle output accounts for about eight and four percent respectively of total Canadian wood shake and shingle production. The eastern Canadian industry uses eastern white cedar, which is smaller in size and exhibits properties somewhat different from products made out of the old-growth western red cedar used in British Columbia. About 90 percent of eastern Canadian production is shipped to nearby markets in the northeastern United States where it is used mainly as siding, as are most imports into that region. In other regions, red cedar products are often applied to roofs. Offshore shipments account for less than one percent of production.

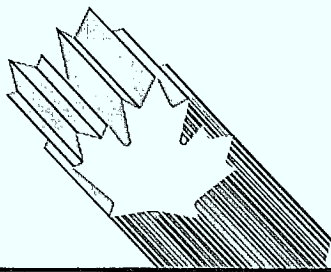
Performance

Between 1973 and 1986, Canadian production of shakes and shingles increased by about 70 percent to around 5.2 million roof squares. This increase was mainly due to a large (more than 200 percent) surge in the production of western red cedar shakes, which rose from about one million squares in 1973 to around 3.3 million in 1986. Output of B.C. western red cedar shingles fell by about 20 percent, from 1.6 million squares to 1.3 million over the same period. The reasons for the decline in red cedar shingle production include competition from other roofing materials and the impact of a 35 percent duty on imports into the United States imposed in 1986. In eastern Canada, production of shingles manufactured from eastern white cedar increased by 77 percent, from about 350 000 squares in 1973 to 620 000 in 1986. Export performance paralleled the production pattern since about 90 percent of Canadian production is exported.

While data on U.S. production prior to 1974 are not available, the shake and shingle output by the U.S. industry between 1974 and 1986 is reported to have declined by some 58 percent to 1.2 million squares, mainly because of a decline in resource supply. Stiff competition from alternative roofing and siding products and increased restrictions on the use of untreated shakes and shingles by building code authorities caused a decline of about 19 percent in apparent U.S. consumption of cedar shakes and shingles between 1978 and 1985. Canadian suppliers, with their better resource supply, increased their market share to about 70 percent of the U.S. wood shingle and shake market in 1985.

In June 1986, the President of the United States imposed a five-year program of tariffs on imports of western red cedar shakes and shingles, beginning with a 35 percent tariff for 30 months. Available information indicates that in 1987, total Canadian exports of red cedar to the United States declined by about 22 percent as compared to 1985 levels. Some manufacturing has been moved from Canada into the United States.

Building codes in some American cities, especially in Texas and California, have restricted the use of wood roofing by requiring fire-retardant roofs. The increase in cost necessary to produce and install wooden shakes and shingles treated with fire retardant has given other forms of roofing an opportunity to increase sales. It should be noted, however, that over 20 years ago, the industry developed pressure-treated products that meet or exceed building code requirements for fire-retardant roofs, and that the increase in cost associated with the treatment is relatively moderate in terms of the premium price this prestigious roofing material can command. Manufacturers of steel, concrete tile and asphalt shingles have introduced new products designed to imitate the appearance of cedar shakes and shingles. The inherent resistance to fire of these products (and in some cases their lower cost), has intensified the competition for Canadian producers.



A significant structural change has been occurring in the B.C. industry. Starting in the 1970s and continuing in the 1980s, it has seen the establishment of many small mills, while several large ones closed. A number of factors have been causing this trend. Production is very labour-intensive, with limited economies of scale. Low capital cost and a ready supply of raw material has thus facilitated the start-up of many small mills.

The financial performance of the Canadian industry is extremely difficult to gauge accurately because most operations are privately owned firms which do not publish financial reports. In general, the small mills which have proliferated in the last decade, with their lower overhead, and in some cases lower variable costs, appear to be doing well. As noted above, however, large shake and shingle mills such as those employing 50 or more workers, have faced severe competitive pressures and several have closed permanently.

2. Strengths and Weaknesses

Structural Factors

Mills in Canada and the United States vary in size, employing between a few workers and more than 50. On average, Canadian mills appear to be slightly larger than their U.S. competitors, perhaps reflecting the larger resource supply accessible by many Canadian mills. About 40 percent of the cost of production is accounted for by the cost of wood raw materials.

The raw material used by the eastern Canadian industry is eastern white cedar, which converts into products with a lighter colour than those made out of western red cedar. Because of the strong demand related to good market acceptance and its tariff-free access to U.S. markets, the eastern white cedar shingle industry has expanded production to near the maximum possible, given the resource supply available in Canada and that imported from isolated northwestern regions of the State of Maine. Little resource is available to support significant expansion of this industry sector.

The industry in the United States, where about 90 percent of Canadian production is marketed, is facing significant difficulties with its supply of western red cedar in terms of both quantity and quality. American production of shingles from eastern white cedar is extremely limited.

While the industry is labour intensive, availability of suitable personnel is not a problem. Employees can be trained in a relatively short period of time and the piecework rate or wage rate is sufficiently high to attract suitable personnel. Technology is essentially the same in Canada and the United States.

Both the American and Canadian red cedar industries are located far from their major markets in Texas, California and the northeastern United States; therefore, producers face transportation cost disadvantages vis-à-vis producers of alternative roofing and siding materials in these markets.

This transportation cost disadvantage is offset to some extent by the extensive use of trucking as a backhaul for fruit and vegetables brought north to Washington State and British Columbia. Eastern Canadian mills have transportation cost advantages, since the eastern industry is closer to its markets in the northeastern United States than the producers in British Columbia and the northwestern United States, which also serve that market.

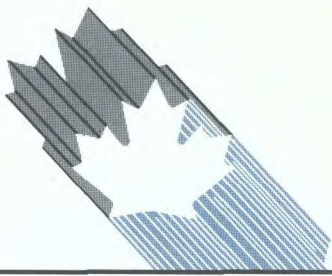
While most of the production is shipped green in strapped bundles, some Canadian mills manufacture products with more value-added, such as kiln-dried shingles for home siding which have been sanded or grooved, squared and packed in boxes. Some siding is also sprayed with a base coat of paint.

Trade-related Factors

Prior to June 1986, trade with the United States was duty-free and non-tariff barriers did not exist. Production in both countries was and is graded to similar product standards. Increasingly, however, some American building code authorities in the major red-cedar markets have been restricting or prohibiting the use of untreated shakes and shingles on roofs. This development has forced builders to purchase more expensive shakes and shingles treated with fire retardants or change to competing asphalt, concrete tile, or steel products.

In 1986, following a petition by the U.S. cedar shake and shingle industry for protection from imports, and an investigation by the U.S. International Trade Commission, the president imposed a five-year program of tariffs on imports of red cedar shingles and shakes. These tariffs do not apply to shingles of other species, such as those of eastern white cedar produced in Quebec and New Brunswick. The first stage of this program was a 35 percent tariff which took effect in June 1986 for a 30-month period. The tariff is scheduled to fall to 20 percent for the following 24 months and to eight percent for the final six months.

As part of the original measure, the president will decide by December 6, 1988 whether the program of declining tariffs should be terminated effective December 6, 1988. His decision will take account of whether general market conditions continue to warrant import relief and whether the U.S. industry has begun to make progress to adjust to imports. Lacking a termination by the president, the five-year measure will finish June 6, 1991. However, under U.S. law the U.S. industry may petition for an extension for not more than three years at a tariff of not more than eight percent.

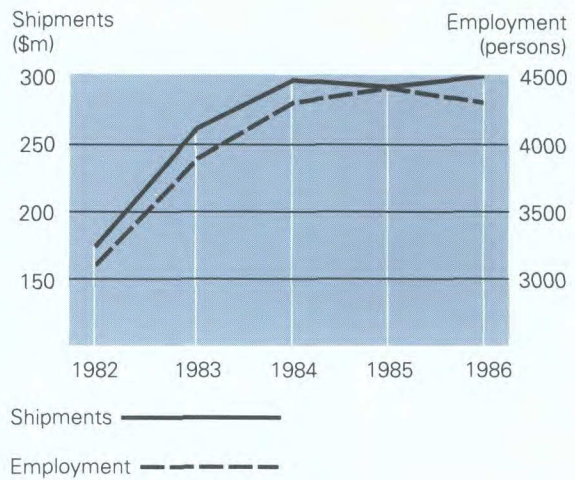


Although the tariff was imposed in June 1986, the volume of exports for the year as a whole remained at a level comparable to that of 1985 because of the large volume of material already in the distribution channel. However, reduced logging activity, caused by a hot summer and a lengthy labour dispute during the last half of 1986 in British Columbia, reduced the supply of raw material available for 1987 production and forced prices up. In addition, a good market for western red cedar lumber encouraged sawmills increasingly to purchase some of the lower-quality logs, which had previously been processed only by the shake and shingle industry. This practice added to the upward pressure on shake and shingle prices. Single-family detached housing starts in the United States, a key demand factor, remained relatively stable in 1985, 1986 and 1987.

Because of the complex nature of this industry, the impact of the 35-percent U.S. tariff is difficult to fully assess. The latest data show exports of shakes from Canada to the United States during 1987 were about twelve percent (326 000 squares) below the 1985 levels, while the decrease in red cedar shingle sales was almost 43 percent (593 000 squares) for a total decline in red cedar exports to the United States of 22 percent. At the same time, in 1987, eastern white cedar shingle exports, which are not subject to the tariff, rose by about 19 percent (90 000 squares) over 1985 levels. It appears that U.S. production of red cedar shakes and shingles has increased somewhat because of the tariff, although statistics are not available. As an additional impact, further manufacturing activities such as sanding, grooving and treating are increasingly being done in the United States rather than in Canada. This has resulted in several Canadian firms moving equipment across the border to escape some of the duties levied in the United States.

Under the Canada-United States Free Trade Agreement (FTA), the U.S. has bound the previous duty-free entry of western red cedar shakes and shingles and will restore the duty-free treatment upon the termination of the current import relief. If the U.S. industry were to petition in the future for this type of import relief, any relief provided must not reduce imports below the trend of imports over a reasonably recent base-period with an allowance for growth and, in addition, the U.S. would be required to provide acceptable trade-liberalizing compensation (this was not the case in 1986). These obligations, along with the dispute settlement provisions of the FTA, will be a very important brake on any possibility of a repeat of this import relief measure.

Market acceptance of Canadian shakes and shingles as a premium product in some developed and developing countries is very limited. In other markets, where increased sales appear possible, a very substantial promotional program would be required to increase the awareness of architects, builders and consumers.



Total Shipments and Employment*

* Estimated.

The duty on imports into the European Community (E.C.) is 4.9 percent, which is not considered a significant impediment to trade. In 1988, this duty was temporarily suspended for an undetermined time period. In the United Kingdom, the shake and shingle roofing market is restricted by the building code, although there appears to be room for growth. In other countries of the E.C., building codes restrict the use of wood on urban roofs, but since demand is primarily for other premium uses such as for chalets and interior decoration, imports are not seriously restricted. In Australia, building codes and fire regulations are a serious barrier.

Technological Factors

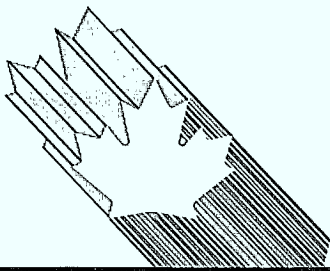
Production systems in the shingle industry were developed in the 1920s. Relatively few significant advances have been made in the last several decades.

While shake production technology has changed very little for many decades, developments such as hydraulic splitters and automated resaw guides were adopted in the late 1970s and early 1980s. Automated resaws eliminated one or two jobs per shake production line, greatly increasing productivity. The Canadian industry has implemented this new shake technology rapidly.

Research on exterior fire retardants and wood preservatives is important to maintaining the industry's market share in the face of competing materials. Such research is undertaken largely by the chemical industry.

Other Factors

With some 90 percent of production exported to the United States, changes in the exchange rate of the Canadian and U.S. dollars have a significant impact on the competitive position of this industry.



Management of the resource is important to the long-term viability of the industry. Provincial policies concerned with maximizing the yield of the resource generally require the harvesting of low-grade western red cedar logs, which can then be processed by shake and shingle producers.

A high degree of co-operation exists between the industry and governments. The Forest Sector Advisory Council (FSAC), which is composed of representatives of industry, labour and institutes of higher education, provides the federal government with input to policy development on a range of issues. Another body, the Federal-Provincial Forest Industries Development Committee (FIDC), also meets to discuss forest industry policy issues and programs at the federal and provincial levels.

3. Evolving Environment

The 35 percent tariff on western red cedar shake and shingle imports into the United States has encouraged U.S. markets increasingly to draw on U.S. production. However, the U.S. industry has only about 20 years of suitable western red cedar available, and since supply is relatively unresponsive to price increases, the number of U.S. producers which can increase production appears quite limited.

The recently initiated western red cedar shake and shingle market development program, which is supported by federal government as well as Canadian and U.S. industry contributions, is designed to enhance product image and acceptance in the United States, and thereby recover lost market share over the long term. The responsible industry association is the B.C. Fraser Valley Independent Shake and Shingle Producers Association, which works closely with the Red Cedar Shingle and Handsplit Shake Bureau of Bellevue, Washington, U.S.A. Product image and market acceptance is to be enhanced through an educational campaign delivered via selected media as well as personal contact with builders, architects, contractors, insurance agents, firefighters, legislators and regulatory officials. Its aim is to increase awareness in the roofing market that treated red cedar shakes and shingles meet U.S. building code requirements.

The trend toward limiting the use of wood shakes and shingles in residential roofing because of fire concerns and price is expected to continue.

While the FTA will not affect the five-year program of U.S. tariffs established in 1986, provisions in the agreement governing the nature of any additional or subsequent restrictive measures will improve security of access to the U.S. market in future.

4. Competitiveness Assessment

The Canadian red cedar shake and shingle industry is extremely competitive with the industry in the western United States, especially in terms of resource supply and cost. However, the imposition of the 35 percent tariff has severely damaged the position of the British Columbia red cedar industry. Exports decreased significantly in 1987 (22 percent below 1985 levels) and some value-added activities have moved from Canada into the United States. Producers of competing products have been given an opportunity to increase market share. It is expected that after the tariff is phased out in 1991, the industry will recover its previous position.

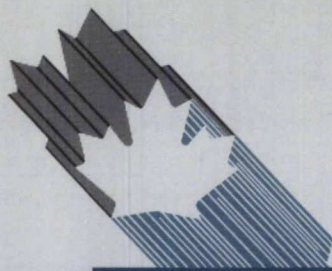
Because the U.S. tariff does not apply to eastern white cedar shingles, this industry has gained an advantage in the marketplace, and is expected to continue to dominate markets for eastern white cedar shingles. However, the supply of raw material for eastern white cedar shingle production is fairly restricted; consequently, the outlook for expansion is relatively limited.

The FTA will not have an immediate, direct impact on the industry. However, effective January 1, 1989 the FTA will provide for more secure access in future periods after the existing program of U.S. tariffs is terminated.

For further information concerning the subject matter contained in this profile, contact:

Resource Processing Industries Branch
Industry, Science and Technology Canada
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(613) 954-3040



PRINCIPAL STATISTICS

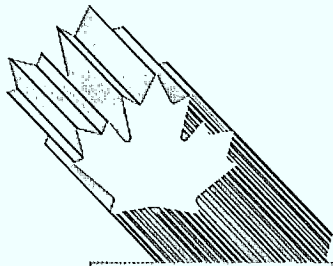
SIC(s) COVERED: 2511*

	1973	1981	1982	1983	1984	1985	1986
Establishments	130	230	200	240	250	250	260 ^e
Employment	2 600	3 100	3 100	3 900	4 300	4 400	4 300 ^e
Shipments (\$ millions)	90	193	176	261	298	291	300 ^e
Shipments (million roof squares)	3.0	3.8	3.7	4.7	5.2	5.3	5.2 ^e

TRADE STATISTICS

	1973	1981	1982	1983	1984	1985	1986
Exports (\$ millions)	80	170	156	232	265	257	268
Domestic shipments (\$ millions)	10	23	20	29	33	34	32 ^e
Imports (\$ millions)	N/A	1	1	2	2	3	4
Canadian market (\$ millions)	10	24	21	31	35	37	36 ^e
Exports as % of shipments	89	88	89	89	89	88	89
Imports as % of domestic market	N/A	4	5	6	6	8	11
Source of imports (% of total value)				U.S.	E.C.	Asia	Others
			1982	100	—	—	—
			1983	100	—	—	—
			1984	100	—	—	—
			1985	100	—	—	—
			1986	100	—	—	—
Destination of exports (% of total value)				U.S.	E.C.	Asia	Others
			1982	98	2	—	—
			1983	98	2	—	—
			1984	98	2	—	—
			1985	99	1	—	—
			1986	99	1	—	—

(continued)



REGIONAL DISTRIBUTION — Average over the last 3 years

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments – % of total	8	25	—	—	67
Employment – % of total	5	10	—	—	85
Shipments – % of total	4	8	—	—	88

MAJOR FIRMS

Name	Ownership	Location of Major Plants
Western Canada		
Anglo-American Cedar Products Ltd.	Private	British Columbia
Green River Log Sales Ltd.	Private	British Columbia
Watkins Sawmills Ltd.	Private	British Columbia
Meeker Cedar Products Ltd.	Private	British Columbia
Parker Cedar Products Ltd.	Private	British Columbia
Canadian International Timber Corp.	Private	British Columbia
International Forest Products Ltd.	Private	British Columbia
Fraser Cedar Products Ltd.	Private	British Columbia
Inland Shake and Shingle Co. Ltd.	Private	British Columbia
Vedder River Shake and Shingle Ltd.	Private	British Columbia
Eastern Canada		
Maibec Industries Inc.	Private	Quebec
Sovebec Inc.	Private	Quebec, New Brunswick

* SIC on 1980 basis.
e Estimates.

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