

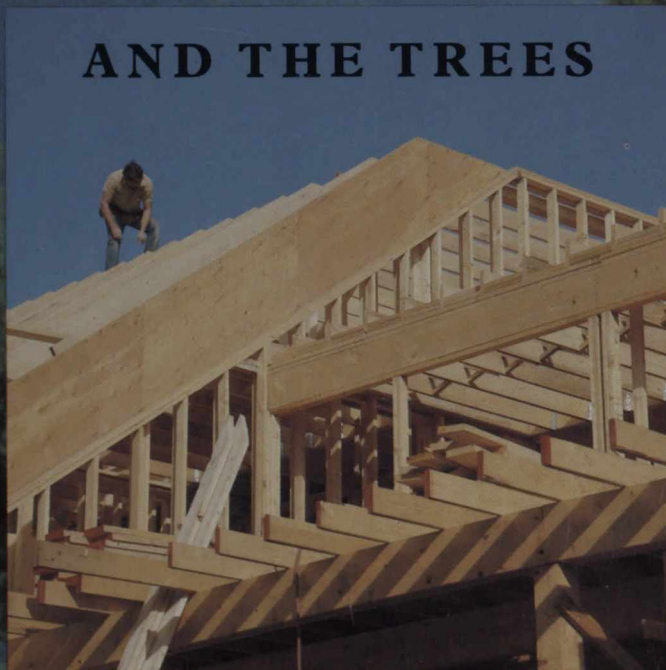
Canada Today/d'aujourd'hui

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THE FORESTS AND THE TREES



"In general the Canadian and United States industries are similar in structure. The Canadian industry is slightly more concentrated and has a greater percentage of large mills . . . Canadian employees outproduce their U.S. counterparts . . . (a fact that may be) attributed to the U.S. having a larger proportion of small mills (less than twenty employees) that are not as efficient as larger mills." **U.S. International Trade Commission Report.**

The forest industries of the United States and Canada are similar but distinct. The differences have much to do with production and costs.

MILLS AND WORKERS The United States has thousands of softwood saw and planing mills, many small; Canada has far fewer, most of them large. Big plants are usually more efficient than small ones. In 1984 the average Canadian mill employee produced in an hour 95 board feet of lumber more than his U.S. counterpart. Wages are an important variable cost and while actual hourly wages were generally higher in Canada, the labour cost of producing 1,000 board feet was \$20 higher in the U.S. Wages accounted for 30 per cent of the production costs in the U.S., and for 27 per cent in Canada.

SPECIES The species of trees found in one country are not always found in the other. Some types of trees are worth more than others.

Some valuable species are more plentiful in Canada but in general the United States has a more valuable mix. The better species naturally bring higher prices.

MILLWORK QUALITY Canadian mills have maintained higher quality within grades. Some mills in the U.S., particularly those in the Southeast, have concentrated on increasing production and have allowed quality to slip.

MARKET SIZE The American market is ten times as large as the Canadian.

PROXIMITY AND PRICE Generally speaking, Canadian forests are more remote than American ones and this affects timber prices—a tree close to the mills and the markets is worth more than one far away.

TRANSPORTATION Transportation costs are a significant part of the total cost of producing lumber and delivering it to market. Rail and trucks are the principal carriers in both countries but the Canadian industry uses cheaper water transport as well and this helps to keep rail rates low. Water transport is not economically viable in the U.S. because of legal restrictions.

THE CURRENCY EXCHANGE The U.S. dollar is worth more than the Canadian dollar. As the gap has increased in recent years, Canadian producers have been able to enjoy a higher return in Canadian dollars from U.S. sales, without raising their selling prices.

FOREST MANAGEMENT COSTS In Canada almost all timberland is publicly owned and leased to private producers. Leaseholders are often responsible for many of the management costs.

Most public timberland in the United States is managed by the U.S. Forest Service. Much of the American softwood timber supply is owned by large U.S. forest product companies.

TAXES Owners and users of timberland in the United States have tax advantages that Canadian forest industry firms do not. Canadian firms on the average pay more taxes than American firms.

MARKET ECONOMICS The industries in both countries have been under severe pressures in recent years.

Although the American dollar is higher than the Canadian, the Canadian is also higher than most other currencies and the overseas sales of both countries have been affected adversely.

Dept. of External Affairs
Min. des Affaires extérieures
OTTAWA

APR 16 1986

The Great Lumber Dispute

Each year American home builders buy a substantial amount of Canadian softwood.

In 1982 the Canadian forest industries supplied 28 per cent of the U.S. lumber market. In 1984 they supplied 29 per cent.

The sales reflect the facts: that Canada has an abundance of forest resources while the U.S. has little surplus, that many Canadian mills are more technologically advanced than their U.S. counterparts and that builders prefer some Canadian species.

Some American producers, however, have contended that the differences between U.S. and Canadian prices for timber are the result of subsidization.

In 1983 the U.S. Department of Commerce ruled that this was not so. Some U.S. producers, however, continued their claims, and early last year Rep. Gibbons (D-Florida) and others introduced bills in Congress which would restrict lumber imports.

The Congressional Budget Office estimates that the proposed tariff increase would add 13.5 per cent to the cost of imported lumber and this would increase the price of the average house by hundreds to thousands of dollars. The U.S. National Association of Home Builders estimates that for every \$1,000 rise, more than 300,000 families would be priced out of the housing market.

Last March the United States Trade Representative asked the United States International Trade Commission to undertake a thorough study of "conditions relating to the importation of softwood lumber into the United States."

The Trade Commission's exhaustive, 224-page report, which was released in October, supports the Commerce Department's conclusion that there is no significant subsidization by the Canadian governments. It also details the differences between Canadian and American lumber production and the way they affect sales.

In this issue of *Canada Today/d'aujourd'hui* we report on the ITC study and on both competitive and cooperative aspects of North America's commercial lumber industry.

PREAMBLE

The forests of North America reach from Florida to the Arctic. They are among the most productive in the world.

They are not, however, what they were.

Once, when they supplied most of the world's low-cost timber, it was assumed that they were inexhaustible. A plane passenger looking down on today's endless trees might still assume that nature needs no help, but he would be wrong.

The tall white pines that once stretched across the northeastern part of the continent have been replaced by scrub pine, and many northern Canadian forests are too far from markets to be harvested.

The forest industries of Canada and the United States now have world rivals with whom they compete for both the markets abroad and those close to home. In North America they compete with each other but they cooperate as well.

They share advanced technology and they work closely together to control fire and insects, the forests' prime evils. Both are engaged in extensive research to improve growth and they are planting the trees that will supply future home buyers who are now in their cradles.

The old assumption—that the forests of North America are inexhaustible—is still basically true; they will, if properly cared for, last forever.



Mechanical feller-bunchers have made it economical to harvest small trees in interior British Columbia and eastern Canada.

THE COST OF TREES

The Verdicts

"Direct comparisons between prices paid for stumpage and delivered costs are difficult." **ITC Report.**

The initial costs in the lumber industry are the cost of trees and the costs of cutting them down and delivering them to the mill.

For a number of good reasons the price paid for the trees is, on the average, lower in Canada than in the United States, but it is this difference that has been the basis for charges that provincial governments have subsidized the Canadian industry.

In 1983 the U.S. Department of Commerce found that the difference in prices reflects differences in the makeup of the forests, in geography, in climate, in production costs and in distances to markets.

Both the U.S. Forest Service and private consultants concluded in earlier studies that the industry in the United States has natural advantages that make much of its standing timber more valuable than corresponding Canadian stands.

The report of the U.S. International Trade Commission last fall supports these conclusions.

The trees of Canada and the United States are not always interchangeable. There are different species, with different

An Alabama pine plantation.



Council of Forest Industries of British Columbia

levels of quality within the species, different sizes, in different places and best suited for different markets. Forests vary greatly, not only from country to country but from region to region. A Canadian spruce is not a southern yellow pine.

The Industry

Canadian firms tend to be large, and the five largest account for almost a quarter of all forest production.

The lumber segment produced 20.6 billion board feet of softwood lumber in 1984, enough to build two million homes. It exported some 13 billion board feet to the U.S., worth U.S. \$2.5 billion.

The Forests

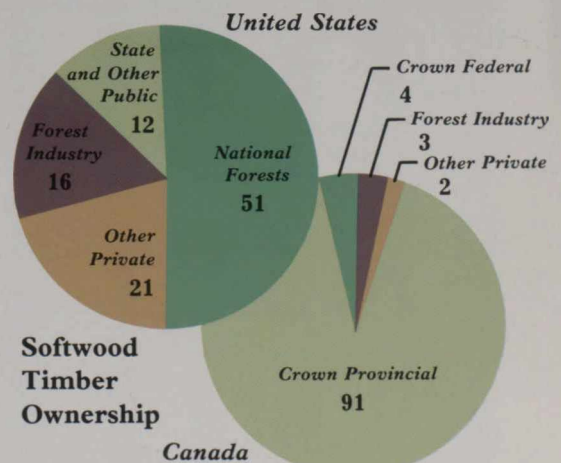
"The current available supply of timber in most regions of Canada is more than sufficient to meet the productive capacity of the license holders."

ITC Report.

Canada has 1,320,462 square miles of lonely hills, mountains, flatlands and swamps topped by coniferous trees. Canada's softwoods constitute 14 per cent of the world's supply. The softwoods of the United States represent another 11.5 per cent. Together they are a vital world resource.

Canada has twice as many trees as the European Common Market countries. It has 34.5 acres of inventoried forest for every inhabitant.

It has eight forest regions, four of them in British Columbia. Each region has a different soil, a different climate and a different mix of trees.



Source for all charts, unless otherwise noted, is ITC Report.

Ownership

Almost all of Canada's productive forests are publicly owned. In the United States, although the public lands constitute only about a third of the whole, they have 63 per cent of the softwood timber.

They are, however, the least productive because timber cutting on them is held, as a matter of public policy, to around 10 billion board feet annually.

In 1976 (the last year for which figures are available) the U.S. forest industry's land, though only 16 per cent of the whole, produced 37 per cent of the harvests, while the public lands produced 33 per cent and the other private lands 30 per cent.



Council of Forest Industries of British Columbia

The Different Kinds of Trees

"The species mix of the U.S. Pacific Northwest is considered more valuable than that of British Columbia."

ITC Report.

The largest and most productive forests in both Canada and the United States are in the far West. In 1984, 44 per cent of the trees harvested in Washington and Oregon were Douglas fir, a relatively valuable species. In British Columbia Douglas firs accounted for only 9 per cent.

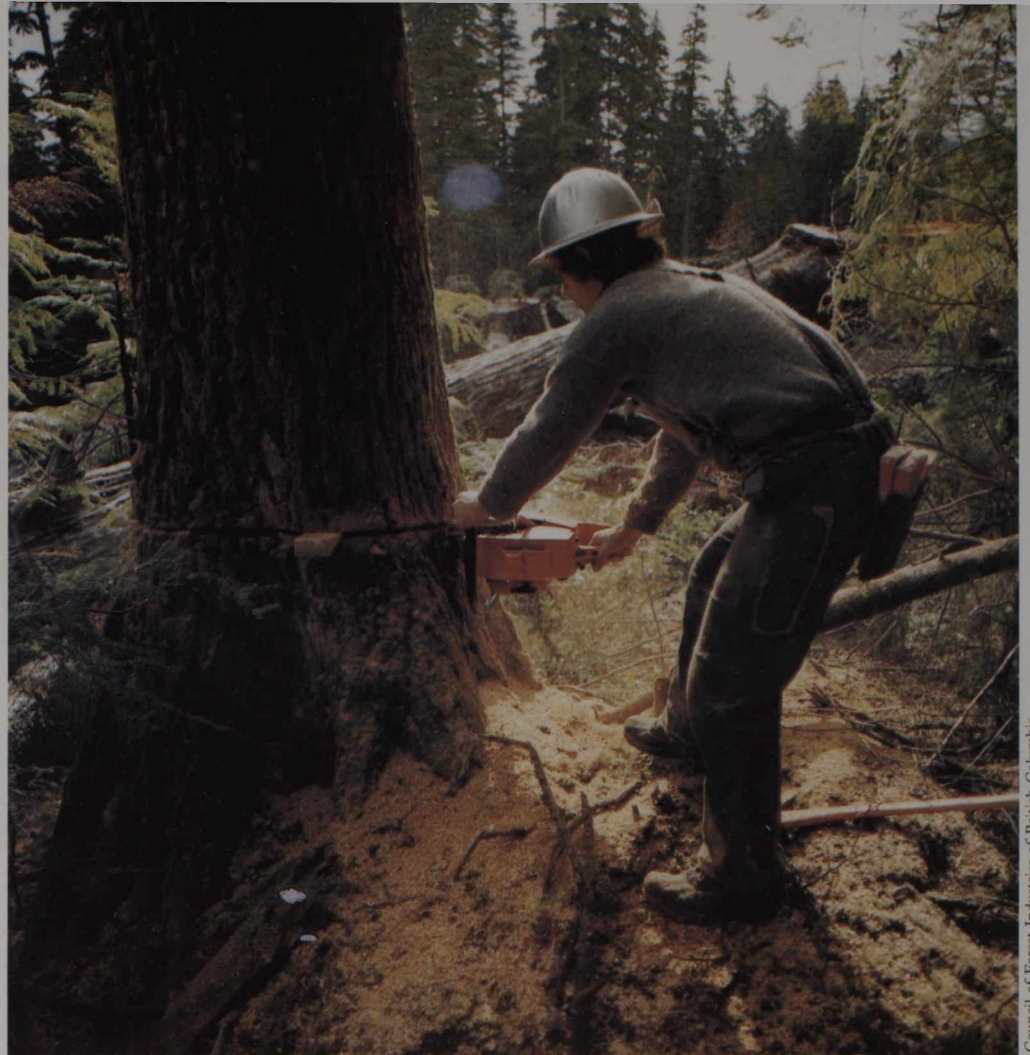
Some species are suited for one commercial purpose, some for another.

Market preferences cross the border. Redwood and red cedar of the Pacific Northwest are preferred for home exterior sidings, white pine for moldings.

West Coast builders prefer Douglas fir and ponderosa pine for framing. Northeastern and southern builders prefer spruce-pine-fir (SPF) for framing and millwork.

SPF accepts nails better than southern pine; it is white, light and doesn't warp; and it is easier to paint or stain. Southern pine is stronger and it accepts preservatives better. It is preferred for load-bearing beams.

The different characteristics of different species and the difference in the



Trees in the mountainous parts of British Columbia are still felled by chain saws.

quality of millwork of the same species in different localities make comparisons of general prices difficult at best and often impossible.

A Misleading Statistic

Some American lumber spokesmen have claimed that the rise in Canadian lumber imports has been spectacular and have cited the fact that the Canadian share of the U.S. market went up from 19 to 32 per cent between 1975 and 1984.

This gives an erroneous picture. The Canadian share in 1975 was uniquely low because the industry was hit by strikes and production was far below normal.

The industry's production and its share in the U.S. market returned to their historical norms in 1976 and 1977. The ITC in its report used Canadian production in normal years to measure change.

The Canadian share has shown only a modest increase. According to the ITC report it went from 28 per cent in 1982 to 29 percent in 1984, a gain of one-half a percentage point a year. The growth closely paralleled the increasing strength of the U.S. dollar, which gives Canadian lumber a 35-per-cent advantage in U.S. dollars.

A Southern Pine

"To sum it up, the lumber grade is just not as good as it was 10 to 15 years ago," Tom Hook, of Boozer Lumber Co. in Columbia said. "Southern pine has too many knots. It warps and, although it meets the needs of customers, they are actually accustomed to receiving better quality than they're getting now . . ."

"Gifford Shaw, owner of Shaw Components in Sumter, is one of several truss fabricators who recently switched to Canadian lumber. 'It is just that much better,' Shaw said.

"You'll find most truss fabricators have switched to Canadian spruce over the last few months because it's straighter, lighter, easier to cut, is not as hard on the saws and there is less downgrading in Canadian.

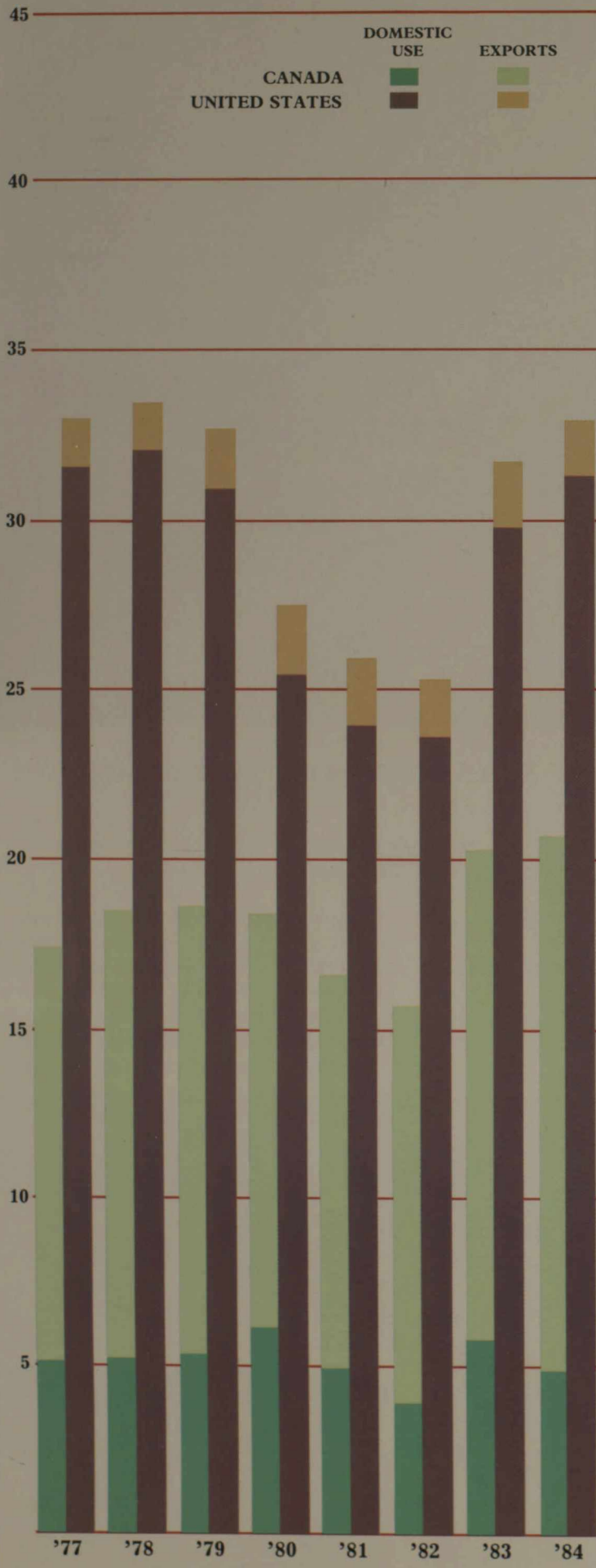
"We're using 80 per cent Canadian and pay 10 per cent more because we feel we can see the savings in the long run," he added."

Carolina Forestry Journal, Aug. 1985. (A publication of the South Carolina Forestry Association.)

Sitka Spruce

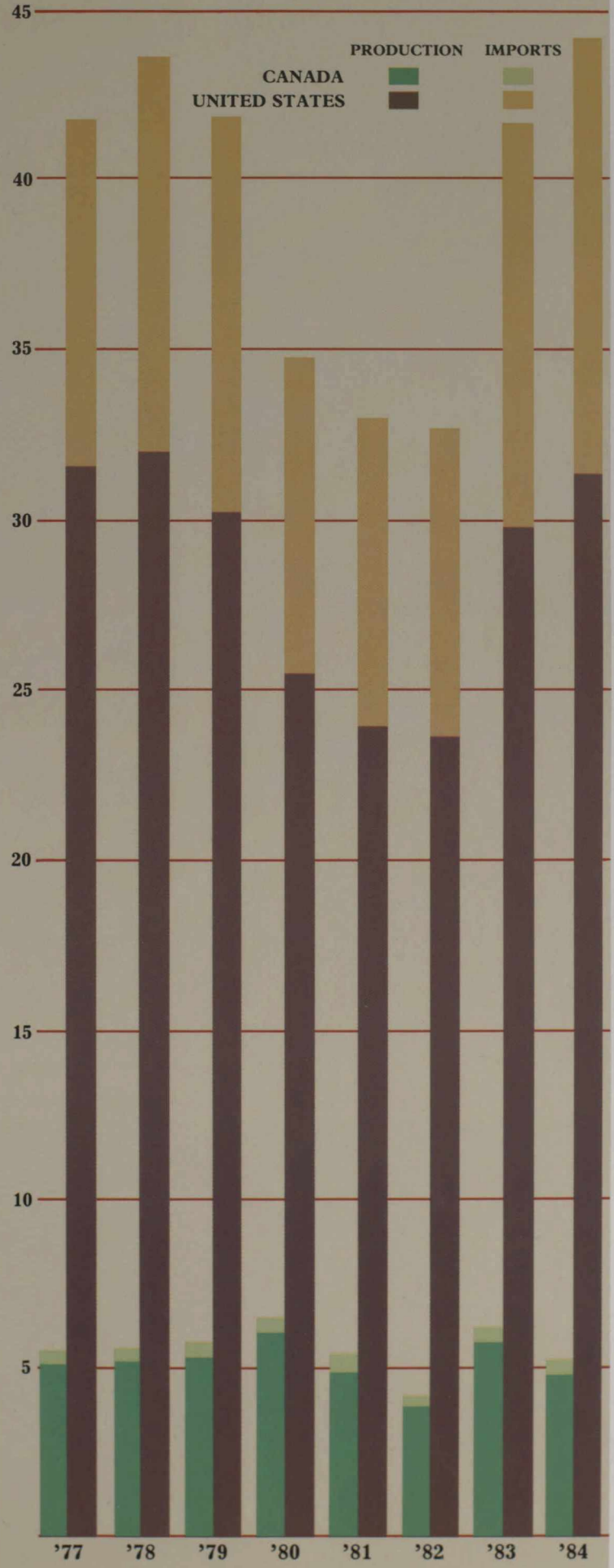
Production

in billion board feet

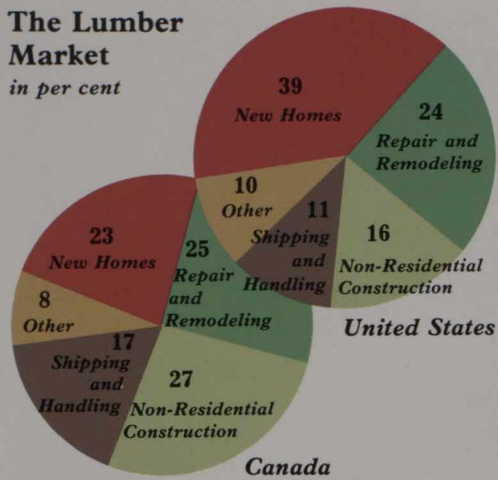


Consumption

in billion board feet



The Lumber Market in per cent



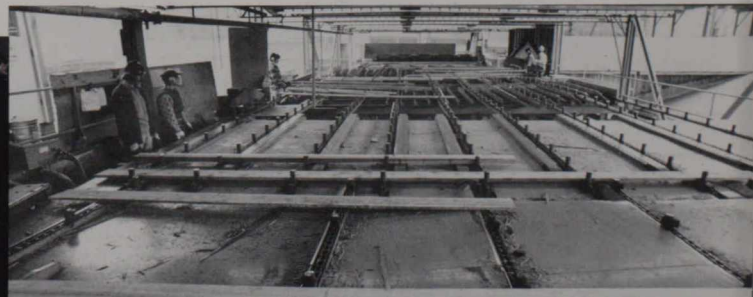
A Hidden Tax . . . on Home Buyers

"The timber industry is important to those of us in the building industry and we would hope our domestic timber industry could be strengthened. However, we strongly question whether a hidden tax of several billion dollars on American home buyers is the best way of doing it."

John J. Koelemij,
President, National Association
of Home Builders, before the
Senate Finance Committee, Sept.
19, 1985.

Western Red Cedar

Canadian mills have modern electronic equipment.

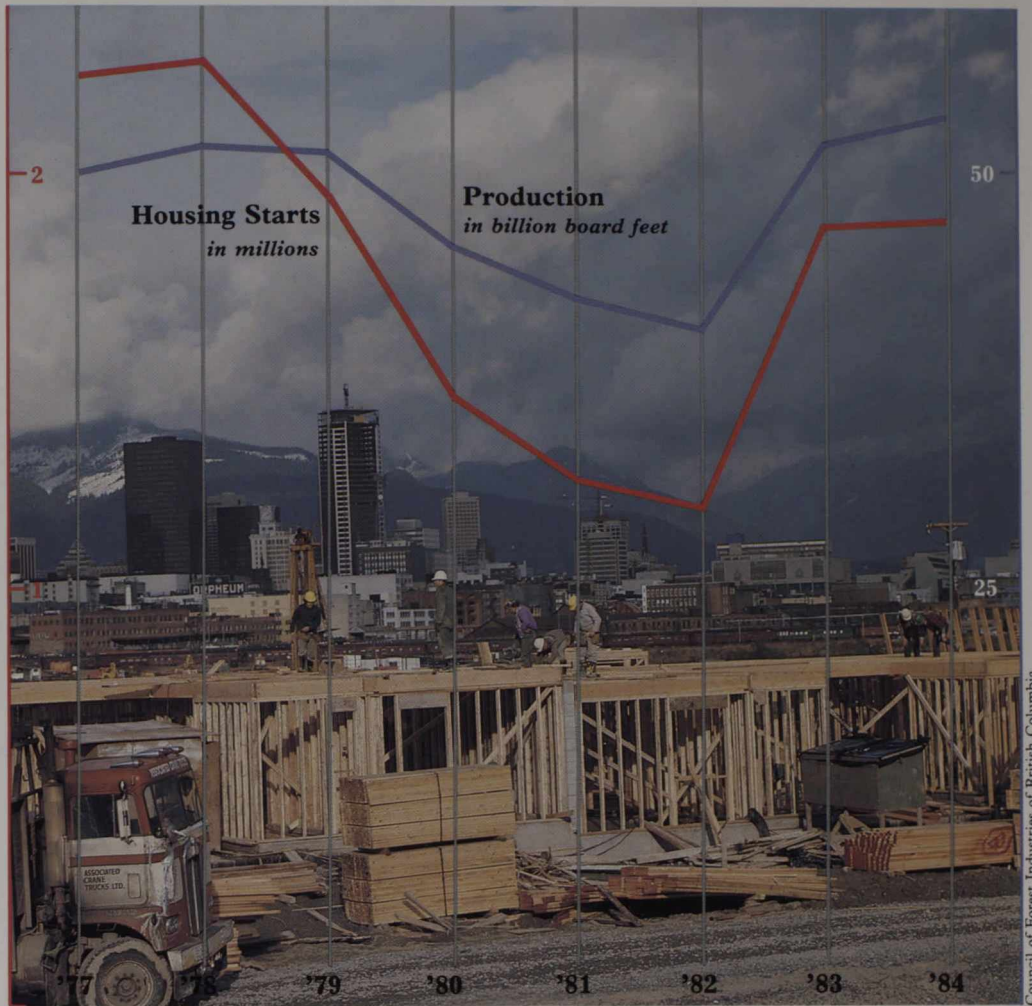


The Work Force

The increasing mechanization of the softwood mills has cut the work force in both countries, more severely in Canada.

According to the International Woodworkers of America, between 1978 and 1984 the work force in the United States fell by 15 per cent, the Canadian force by 18 per cent.

MacMillan Bloedel Ltd.



Housing Starts and Lumber Production in North America

"It is estimated that about 39 per cent of the annual U.S. consumption of softwood is used in new residential construction." **ITC Report.**

The prosperity of the American and Canadian lumber industries largely depends on the number of houses being built.

A dramatic drop in domestic building in 1981 and 1982 had a drastic effect on the lumber market.

It was followed, however, by a strong upturn. Housing starts in both countries rose from a total of 1.2 million in 1982 to 1.8 million in 1984. In response North American softwood production went up 31 per cent, from 40.7 billion board feet to 53.4 billion board feet.



Council of Forest Industries of BC

Productivity

"Canada is now investing in plants and equipment at a faster rate than the U.S. . . . Canadian firms have derived a productivity advantage." **ITC Report.**

The technology of the forest industry sector has advanced rapidly in recent decades, and many of the most significant advances have originated in Canada.

Loggers employ power saws and wheeled skidders and are using mechanical tree shears and feller-bunchers at an increasing rate.

Huge machines grapple and cut the trees, bunch them together and carry them out of the forest.

At the mills electronic equipment controls sawing, trimming and drying, and lumber sorting is automated.

The increasing mechanization of the industry has raised productivity significantly.

Data from the International Woodworkers of America shows that Canadian softwood workers work fewer hours and are generally more productive than their U.S. counterparts.

The overall gap in lumber output per hour worked in 1984, the last year reported, was 61 per cent.

In British Columbia, Canada's principal softwood region, industry workers were 46 per cent more productive than workers in Idaho, Montana, Oregon and Washington.

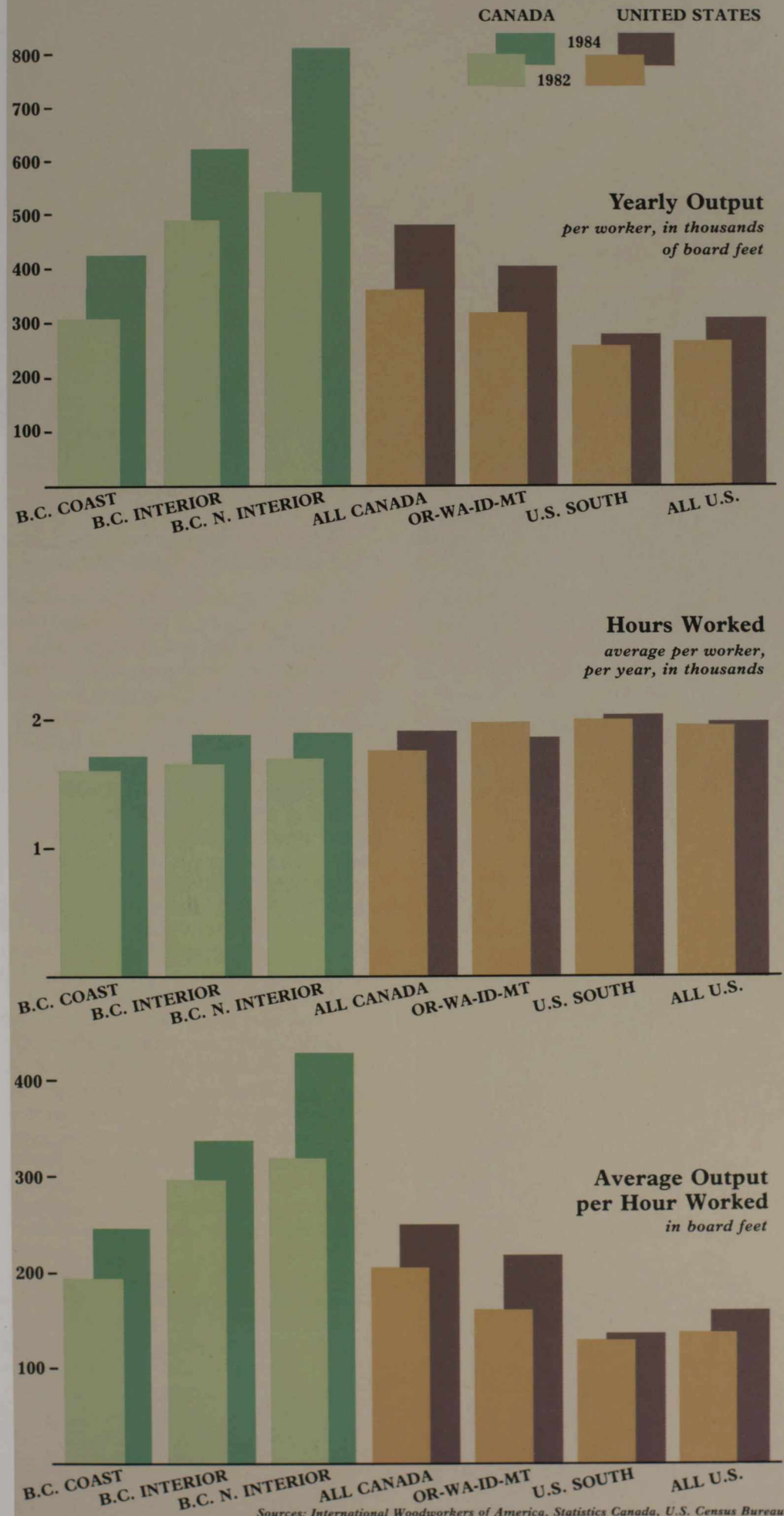
There had been increases in productivity in both countries in the previous two years, but the most dramatic leap had been in the northern interior of British Columbia, where sawmills were modernized and expanded and per-worker hourly production went up by 35 per cent.

There and elsewhere, Canadian productivity advantages reflected economies of scale made possible by larger and more productive mills, as well as investment in state-of-the-art technology.



Council of Forest Industries of BC

Softwood Lumber Productivity, by Region



Sources: International Woodworkers of America, Statistics Canada, U.S. Census Bureau

Exports

An increase in overseas competition and the rising values of both the U.S. and Canadian dollars have made the industries in both countries more dependent on the North American market.

In 1984 United States offshore lumber exports dropped by 345 billion board feet, Canada's by 461 million board feet, compared to 1980.



Council of Forest Industries of British Columbia

Transportation

"Waterborne shipments of lumber from the U.S. West Coast to the U.S. Atlantic Coast are nonexistent." **ITC Report.**

In general rail rates in Canada are cheaper than in the United States. This is true even when the shipments are from the West to markets in the eastern United States.

One reason Canadian rates are lower is that Canadian lumber shippers may also ship by water, and though some 90 per cent of shipments to the U.S. are by rail or truck this option tends to keep rail freight charges down. Canadian shippers may use ships of any flag, and they search for the ones with the lowest rates.

In the United States long-range water transport of lumber has virtually ceased because of the provision of the Merchant Marine Act of 1920 (known as the Jones Act) which requires the use of U.S.-flag ships between American ports. Virtually the only shipments of lumber from coast to coast are from British Columbia to U.S. Atlantic ports. Recent changes in U.S. rail freight rates have made the U.S. carriers more competitive but Canadian shippers still have lower in-country rates.



CIP Inc.

A Diminished Export Market for Paper

The contention that the sale of Canadian forest products has increased rapidly in the United States does not reflect reality. The Canadian share of the U.S. construction lumber market has increased slightly, but the share for pulp and paper has been greatly diminished.

Canada once supplied almost 75 per cent of U.S. newsprint. It now supplies about 58 per cent.

The Gibbons Bill

"There are two reasons to oppose (Gibbons') remedy. First unemployment in Canada already exceeds America's But the more important objection . . . is that a tariff would make hash of widely accepted ideas of what constitutes an unfair trade subsidy and only invite retaliation from the United States' largest customer

"To argue that Canada's stumpage fees are 'unfair' is no more valid than to argue that lower land prices in Burlington would give Vermont wines an 'unfair' advantage over Bordeaux."

The New York Times,
July 15, 1985.

"The (Gibbons) proposal is a bad one, all the worse because it is a form of protectionism that relies on changing the rules in the middle of the game It is almost certain to impose price increases on consumers of at least 10 to 15 per cent

"Last year, despite the growth of imports, American (lumber) companies showed a marked increase in sales, almost equal to their 1978 record Canadian competition has benefitted U.S. consumers. The partnership has contributed to prosperity on both sides of the frontier."

Los Angeles Times,
Aug. 9, 1985.

Spruce-Pine-Fir

Stumpage Fees

"Canada has a large natural resource base, relative to a small domestic market . . . U.S. policies limit cutting even during periods of high demand. Supply has held at a fairly constant level in recent years. Intense, competitive bidding drives prices up." **ITC Report.**

"Actual stumpage price trends of (U.S.) forest-industry-owned timber are hard to determine . . . Lumber producers that own timberland . . . generally use market prices in accounting . . . rather than original costs." **ITC Report.**

Stumpage fees—the amount of money paid for the tree as it stands on the forest floor—are, on the average, lower in Canada than in the United States.

This reflects a basic fact—Canada has a relatively large supply available to a relatively small market. Canada has 544 million acres of productive forest land, some 61 million acres more than the United States, and one-tenth the population.

There are other factors. Much of Canada's timber is far from markets. Generally speaking, the higher the costs of producing and moving lumber the lower the stumpage fee.

Almost all of Canada's timber is government-owned and the income from forest leases is a significant part of provincial income. The governments lease the land on long-term contracts, primarily to make sure that the forests give them a continuing income. The long-term tenures attract the large timber users which, without a guaranteed wood supply, would be unable to invest the large sums required. In exchange the leaseholder assumes many of the costs of



This self-dumping log carrier moves timber from the remote Queen Charlotte Islands down the B.C. coast to the mills, where it unloads by taking on water and tilting to a 30-degree angle.

road-building, reforestation and forest management.

The stumpage fees paid in British Columbia are based on market appraisals at time of harvest. The end-product selling price is calculated and then milling costs and operating costs are deducted from it. The sum remaining is the stumpage fee.

(The actual methods are much more complex than this capsule formula suggests.)

In the other nine provinces timber prices are set by regulation or statute and are adjusted to reflect market prices and to provide a fair return to the governments involved.

In the United States the price-setting mechanisms and the prices paid vary widely, reflecting, among other factors, the variety of ownership. In general timber from public lands brings higher prices than timber from private, non-industrial lands.

The price for industry-owned timber is the hardest to pin down. The book value of such timber—the price at which it was acquired—is far below current market values. In many instances, however, the companies fix the cost for accounting purposes as high as is legally permissible, to take maximum advantage of the United States capital gains tax opportunities.

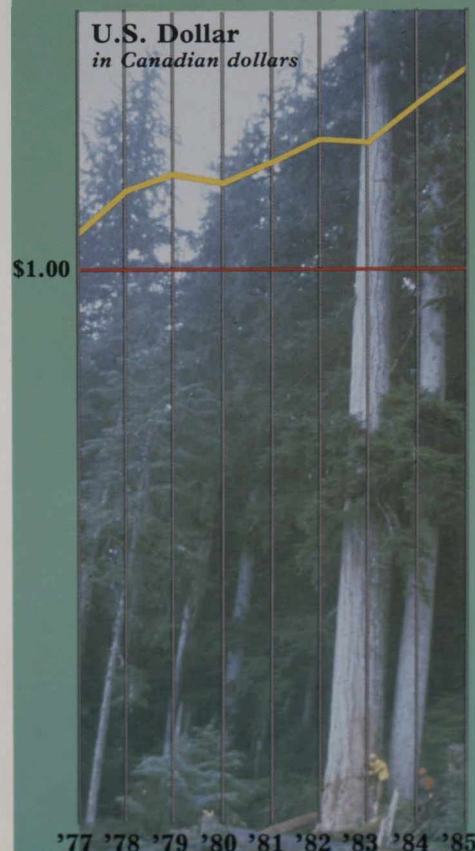
In general the United States timber with the lowest recorded prices comes from firms and other non-industrial, private owners. The prices, however, vary widely from region to region—in 1984, when softwood in the North sold for

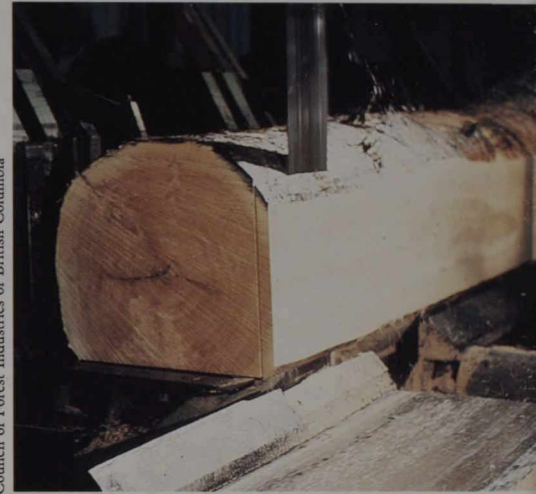
Exchange Rates

Canada's dollar—which in the 1970s was at par with the U.S. dollar—has been notably weaker in recent years.

By late 1985 it could be exchanged for about 71.5 American cents.

The comparative weakness of the Canadian dollar works to the advantage of Canadian sellers and buyers in the U.S.—in effect, \$100 U.S. buys \$140 worth of Canadian lumber.





\$41.63 per 1,000 board feet, the average price in the South was \$110.44.

Timber from U.S. government land is first appraised and then opened to competitive bids. The auction bids are often higher than the appraised value because the timber will be cut later and the buyers are anticipating future rather than present markets. The yearly fluctuations in bidding reflect the fact that the amount of timber available annually is

remarkably stable. In recent years it has remained between 10 billion and 11.5 billion board feet. When the market demand rises, the prices bid rise too. When it declines, they decline.

The average price bid for U.S. Forest Service sawtimber in 1979 (when the construction business was in a boom) was \$173.22 per 1,000 board feet. By 1982 (when prospects seemed poor) it had fallen to \$61.24.

The bid prices considered alone, however, are misleading. In 1980, for example, when the average bid price for timber to be cut in future years was \$172.60 per 1,000 board feet, the average price paid for the timber actually cut that year was \$79.52.

In 1984 Congress passed a law permitting buyers who had overbid to get out of their contracts.

Douglas Fir

Old Growth

Canadian forests have large numbers of old trees, at or past their prime. The need to harvest these has imposed particular cost burdens on the Canadian industry, as this excerpt from the ITC Report explains:

“The most overriding issue for all Canada’s commercial forest land is the large portion of old growth timber that still remains. This timber is being destroyed by insects and disease that eventually will leave much of the timber worthless. As a result the immediate removal of the old growth timber is necessary if it is to be profitably harvested. In some areas, before second-growth timber, which is generally closer to the mills, can be harvested, all of the old growth timber must be removed.”

Income and Taxes

“The principal difference between U.S. and Canadian treatment of income from forestry is that owners of timberland in the U.S. can claim stumpage revenue as capital gains instead of regular income . . . This represents a considerable advantage for U.S. citizens and corporations. In Canada, where 91 per cent of forest land is government-owned, stumpage revenue is viewed as ordinary income.

“. . . U.S. capital losses can be carried forward or backward to achieve the maximum reduction of tax burden . . . Canadian logging firms paid a higher effective rate of income tax than their U.S. counterparts because of the capital gains provision . . . An integrated U.S. firm has the ability to shift income to its logging operations in order to benefit from capital gains treatment, particularly during years of high profitability.”

ITC Report.

COOPERATION

Canada and the United States have worked together to conserve their forests for years. Listed below are current joint endeavours.

CANUSA: The CANUSA cooperative research agreement on the spruce budworm was signed in 1977. It is the most extensive international forestry project ever undertaken. It was designed to avoid the expensive duplication of efforts to control this insect pest and to make the best use of both countries' research facilities and scientists. A similar joint project is devoted to the control of the mountain pine beetle.

FIRE CONTROL: The two countries signed a fire suppression agreement in 1982. It provides for the exchange of intelligence, equipment and personnel.

MARKET RESEARCH: Working groups, with representatives from both countries, develop models on timber supply, product demand and trade exchanges.

New Brunswick Department of Forests, Mines and Energy



The spruce budworm has ravaged balsam fir forests in New Brunswick.

The Emerging Truth About the Spruce Budworm

In 1977 Canada and the United States signed a joint multimillion-dollar project to control the ravages of the spruce budworm.

Since 1909 the worm has destroyed hundreds of millions of cubic feet of timber in eastern Canada and New England. In recent years it has destroyed 60 million acres of spruce.

In the ordinary course of things the worm returns in force every thirty years, producing larvae that eat foliage, stems and cones of balsam fir and five varieties of spruce.

In recent decades control efforts have relied mainly on the spraying of infected forests with chemical pesticides. This method kills the majority of the pests but has an unfortunate side effect. In the natural cycle the worm larvae eventually ate all the available foliage and then starved to death. The spraying saved much of the foliage and provided food for the next generation of surviving worms. The old cycle was broken and the destruction continued year after year, though on a reduced scale.

The joint research program has tested

a variety of control methods including bacteria, viruses, predators, sex attractants and growth-regulating hormones.

The most effective agent found so far is *Bacillus thuringiensis* (usually called Bt), which has a protein that is toxic to a broad range of insect larvae. It has been used successfully to protect cabbages from pests for twenty years. One advantage is that it affects only a few species, particularly the spruce budworm, the hemlock looper and the tussock moth, all destructive insects, and leaves other, harmless species unharmed.

Biological controls have on occasion proved dramatically successful. A \$300,000 pilot program in 1940 stopped the infestations of the European spruce sawfly in the Gaspé peninsula of Quebec after it had destroyed half of the spruce there. In 1970 a winter moth control program costing \$500,000 saved an estimated \$45 million worth of red oak.

Other non-biological control programs are still in experimental stages but some are promising.

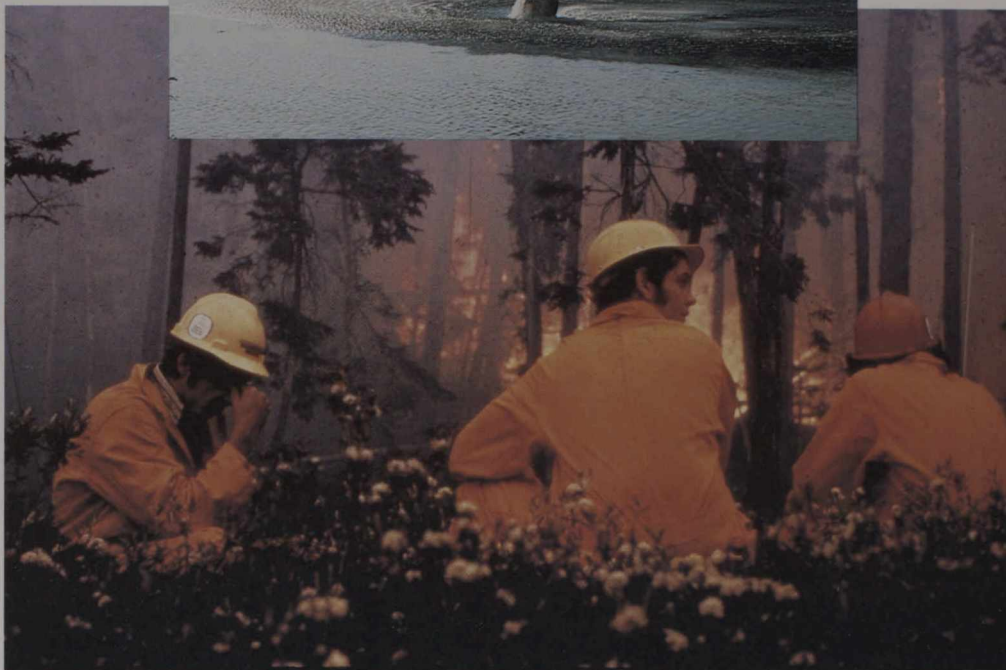
Sexual attractants duplicate the natural smell of female insects. They are sprayed over forests, confusing the males who, after many false alarms, grow indifferent to the real thing.

Autocidal controls involve the introduction of sterile or genetically different pests which attract males but produce no offspring.

The progress in both sexual attractant and autocidal controls has been slow but advances in genetic engineering promise to speed things up. Present prospects are that such controls may prove practical for use in high-value stands of trees in seed orchards.



Canadian Forestry Service



Ontario Ministry of Natural Resources

Fighting Forest Fires

Forest fires destroy 5 million acres of Canadian forests in an average year.

The Canadian and United States forest services fight fires together, exchanging intelligence, equipment and personnel, regularly and routinely as needed.

The fire losses—which average \$101 million a year in Canada—would be much higher if it were not for cooperation with the U.S. and the use by both services of highly sophisticated techniques, including satellites, computers, helicopters, sensors and water bombers as well as water, dirt and shovels.

The first line of fire defence is weather reporting. The Canadian Forest Fire Weather Index predicts fire based on temperature, relative humidity, wind-speed and rainfall. A computerized information bank adds data on thunder-storm paths and historical patterns.

The second line is sensors in the forest which detect lightning as it hits the ground. Ten seconds after it strikes in a northern Ontario forest a blip appears on a computer screen 740 miles away. Helicopters and planes take off, some with parachutists.

After locating a new fire a crew lands by helicopter, lays out hose and pumps water from the nearest lake. (In northern Ontario a lake is always handy.)

The pilot radios for water bombers and they arrive in minutes. Each one carries six tons of water. They dump it all at once, with enough force to knock down trees, then fly low over the lake, scooping up another 1,430 gallons, and return to the fire within five minutes. A bomber can make twenty drops an hour. In areas where no lakes are nearby the bomber carries 3,000 gallons of chemical retardant.

Meanwhile a helicopter crew member is cutting down burning trees with a chain saw. In most cases the flames are out in an hour but the crew continues to drench the embers for six more hours.

Three per cent of the fires cause 95 per cent of the damage. If a fire gets out of hand it creates its own weather and becomes virtually unstoppable until it burns itself out.

Bigger, Better, Faster Forests

North America's forests belong, in a very real sense, to future generations of home builders and home buyers.

The Canadian Forestry Service has six regional research centres concerned with improving quality and increasing production. Other research programs are sponsored by provincial governments and the industry.

Current programs include the introduction of more productive, non-native species, such as Norway spruce, Japanese

larch and European larch, and the enhancement of native species through selective breeding.

One research effort has produced white spruce with 15 to 20 per cent greater than natural growth. The Ontario Ministry of Natural Resources has developed a hybrid poplar which can be used for veneers and in manufacturing fine paper.

Studies have found that when trees are scientifically grown they attain the bulk in fifteen years that they would gain in fifty to fifty-five years of unsupervised growth.

Future Plans

"Both the United States and Canada are committed to maintaining an adequate supply of timber in perpetuity."

ITC Report.

The realization that forests need to be managed and replenished came slowly but it is now fully accepted.

The emphasis in both Canada and the United States is on a systematic renewal and improvement through a combination of seedling plantings, direct seeding and natural regeneration.

In 1980 the Canadian Council of Resource and Environmental Ministers launched a nationwide coordinated program to increase the annual crop of harvestable timber. Since then there has been a 250 per cent increase in replanting and the annual rehabilitation of 240,000 acres of neglected backlog lands a year. The program also includes the weeding, fertilizing and spacing of almost a million acres a year.



Council of Forest Industries of British Columbia



MacMillan Bloedel Ltd.



White House

President Reagan and Prime Minister Mulroney will meet in Washington on March 18 for their second summit conference. The talks will consider a number of high priority issues, including acid rain, the NORAD treaty renewal and trade enhancement. The photo above was taken at their first conference, held in Quebec City last March.

Canada Today/d'aujourd'hui

Available free upon request in the U.S. only. The views expressed are not necessarily those of the Canadian Government. **If you wish to change your address, please include the number on the top of your mailing label.** Written by Tom Kelly, edited by Judith Webster, designed by James True.

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Canadian Embassy
 Ambassade du Canada
 Room 300
 1771 N Street, N.W.
 Washington, D.C.
 20036-2878
 (202) 785-1400
 Address correction requested

Quebec Liberals Win Over Separatists

The Liberal Party of Quebec won a clear victory over the Parti Québécois in December.

It was an election of historic interest since it marked the end of a tumultuous period in Canadian history.

The Parti Québécois took office in 1976 and its remarkable leader, René Lévesque, became the province's premier. The P.Q. came into being as the principal advocate of Quebec separatism, and the movement reached a climax in 1980 when a majority of the provincial voters voted "no" in a referendum on a P.Q. proposal that called for the separation of the province but the maintenance of an economic union with the rest of Canada.

With the rejection of the plan, Lévesque realigned the party toward more moderate goals, but radical members left the party and Lévesque resigned as party leader last June. He was succeeded by Pierre Marc Johnson, the son of a former Quebec premier. Johnson campaigned on a platform of economic renewal. On December 2 the P.Q. was defeated by the Liberals, who took 56 per cent of the vote to the P.Q.'s 30 per cent. The Liberal leader and new Quebec premier is Robert Bourassa, who was premier from 1970 to 1976, when his party was defeated by the P.Q.

In an editorial in *Le Devoir* Jean-Louis Roy underlined the significance of the election for Quebec's relations with the rest of Canada: "Pour la première fois depuis une décennie, les Québécois ont élu un gouvernement franchement fédéraliste. Les effets de ce choix devraient normalement être nombreux et significatifs . . . (pour) toutes politiques reliées à la dualité du pays."

The New York Times remarked editorially that with the P.Q.'s defeat the "debate about separatism . . . has lost its menacing rancor (and) Canada's union has survived a severe test."



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