

Notebook

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EDITED BY TED CUSHMAN

Quotas Bring Chaos to Lumber Market

Speculation, Uncertainty Amplify Price Swings

The year-old U.S./Canadian softwood agreement has brought an unprecedented level of confusion to the always turbulent market for framing lumber. In January, western spruce-pine-fir 2x4s were trading at \$410 per thousand board feet (mbf), up from \$245 a year before, according to the lumber market newsletter *Random Lengths*. But near-record high prices were only part of the problem: The wild swings in prices throughout the winter were an equal concern. Homebuilding groups and lumber dealers alike are blaming the April 1996 softwood deal for bringing on the most volatile prices in recent memory.

"With the introduction of the quota system, we are seeing falsely inflated

price spikes ... panic buying ... and further price increases," said a position paper from the National Lumber and Building Materials Dealers Association. "These prices are not set by supply and demand, but arise from psychological fears caused by government intervention in the marketplace."

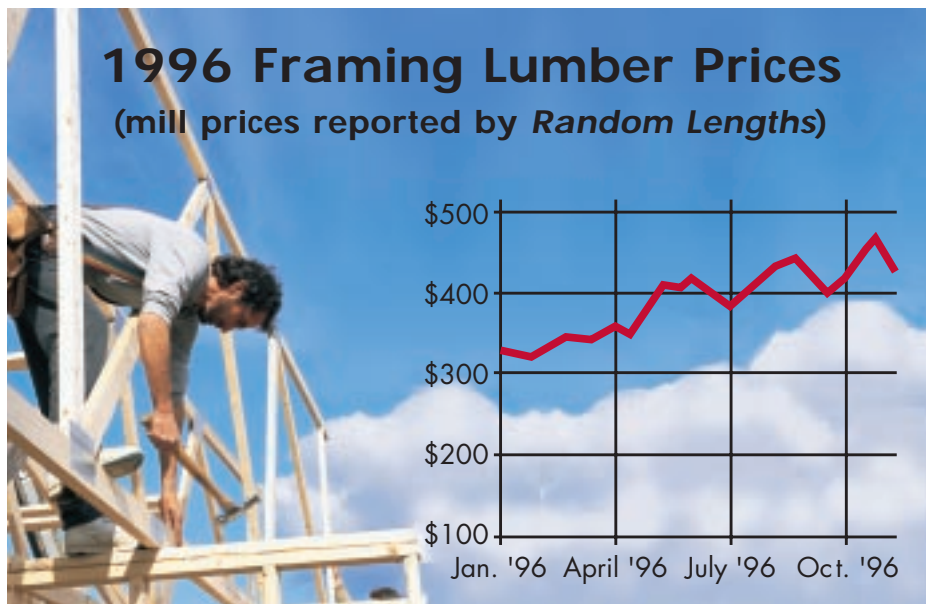
A complex quota system. The April 1996 agreement imposes a conditional \$50 to \$100 per mbf export tax on Canadian softwood. The tax kicks in whenever Canadian lumber exports exceed a set quota (around 4 billion board feet) in any calendar quarter. As each quarter's end approaches, dealers on both sides of the border have been anxiously watching total export fig-

ures in an attempt to predict whether the whopping surtax will be triggered or not. Reactions of traders to statistical reports and rumors have amplified the forces of supply and demand. Delays and inaccuracies in market reports compound the uncertainty and the overreaction.

Coping strategies. In the long run, competition from other materials acts as a ceiling on sawn lumber prices. Engineered wood, concrete, masonry, and steel, though more expensive when wood is cheap, are practical alternatives when wood prices rise — and prices for the nonwood choices generally are much more stable. NAHB economist David Seiders recently repeated his long-standing advice to builders to develop their capabilities for using alternatives to sawn lumber, as a hedge against market situations like the present one.

In the meantime, builders using wood still have the headache of uncertainty to face. This year, a builder who estimates a job in April has no way to predict what a 2x4 will cost in June or July, when he's actually framing. While large builders have sometimes been able to lock in lumber prices that far ahead, small builders rarely have that kind of market clout.

However, some builders have reportedly found a way to pass the risks on to the customer: They treat framing lumber as an allowance item, requiring the customer to pay whatever the wood costs up to a given figure. □



A whipsaw lumber market reflects traders' reaction to the complicated new quota system for Canadian wood.

OFFCUTS

CertainTeed Corporation has issued an apology

for a 1996 shortage of shingles in the face of record orders. The company says unexpectedly strong sales caught it by surprise during a period when strikes and machinery upgrades had temporarily closed several plants. With capital improvements now completed, CertainTeed promises customers no repeat of the shortfall in 1997.

Insulation installers face a very low risk of a fiberglass-related fatal illness,

according to a study by Harvard University physics professor and risk analyst Richard Wilson. Wilson extrapolated from the known risks of high-dose exposure to estimate the hazards of the low-dose exposures typical on jobs. Although his calculations indicate that a zero risk is a possibility, said Wilson, a conservative risk estimate would be one death per million worker years from effects of fiberglass exposure — 300 times lower than the job-related death rate of construction workers in general.

Light-gauge steel framing standards

are slated to enter the CABO *One and Two-Family Dwelling Code*. The committee tasked with amending the code voted in October to adopt detailed requirements based on the "Prescriptive Method for Residential Cold-Formed Steel Framing," developed by NAHB Research for the U.S. Department of Housing and Urban Development (HUD). The HUD standard is available for \$5 by calling HUD USER (800/245-2691).

The Endless Shower

Whenever you take a shower, you heat water by some 70°F, use it for a few seconds, and send it on its way down the drain. The shower provides a temporary benefit to your friends and associates, but the heat in the water is, as it were, lost forever.

Used to be — but not anymore. Research at Old Dominion University, sponsored by Virginia Power, has verified that a new heat recovery device called the GFX can recover more than half of hot water's energy as the wastewater

tube and is warmed by wastewater running down the drain.

GFX inventor Carmine Vasile explains that the efficient heat transfer takes place because of running water's inclination to follow the path of least resistance. Water dropping in a vertical pipe forms a thin film around the inside surface to avoid air resistance in the center of the pipe, giving off heat along the way to the water passing up the wraparound coil.

More hot water, less cost. "If your water heater would run for an hour without running out, it will now go for three hours," said Vasile. "An oil water heater will never run out — it's an endless shower. It doubles the efficiency."

If you don't understand the math that connects doubling the efficiency to tripling the capacity, don't worry — neither do we. However, energy guru Ned Nisson explained the calculations in detail in December 1996's *Energy Design*

Update, assuring readers, "This product is a no-brainer for homes with electric water heaters and a cost-effective energy saver for homes with gas water heaters."

Nisson pointed out, however, that GFX recovers heat only if water is draining out at the same time it flows in. Since that doesn't happen when you use the bathtub or the washing machine, actual energy savings in individual homes will vary according to water usage patterns.

With price tags ranging from \$89 to \$450 (the typical single-family home would probably use the \$179 model with a 5-foot heat-exchange element), GFX is currently being manufactured and distributed by Vaughn Manufacturing Corporation (P.O. Box 5431, Salisbury, MA 01952; 508/462-6683). For additional information, contact inventor Carmine Vasile at Water Film Energy Inc. (P.O. Box 48, Oakdale, NY 11769; 516/758-6271). □



Drain water passing through the GFX's large vertical tube gives back 50% to 60% of its heat to incoming cold water in the smaller wrap-around pipe.



flows down the drain. Tested in combination with a variety of common water heaters, the device cut energy use by an average of 57%.

Water flow wonders. The simple but effective GFX consists of a section of 3-inch or 4-inch copper drainpipe, run vertically, with a coil of 1/2-inch or 3/4-inch tubing wrapped around it. Incoming cold water supplying the water heater passes through the coiled

Two-Part Foam Claims High Performance

New types of foam insulation have attracted a lot of attention recently (see *Eight-Penny News*, 10/96), but one old standby is also pushing into the national market. Corbond 2, an ozone-safe two-part polyurethane originally available in the immediate area of Corbond Corp's Bozeman, Mont., headquarters, is now available in many parts of the northern U.S.

The 2 lb./sq. ft. foam's trademarked lavender color is the result of blue and red dyes added to its components before application. As the foam is sprayed, applicators can control mix quality by visually monitoring the color consistency.

Super performance. Corbond president Neal Ganser says lab testing at Architectural Testing, Inc., of York, Pa., has shown that rigid foam performs best under the harshest conditions, confirming Ganser's experience of spraying foam in Montana's harsh

climate as a contractor. The initial test results, which showed that a Corbond-insulated wall and a fiberglass-insulated wall (both R-19) performed almost identically in a standard ASTM hot-box, were disappointing. However, at -25°F with a 15-mph wind, the Corbond wall showed half the heat loss of the fiberglass wall, according to the lab report.

Handling the hard freeze. Such severe conditions are rare in some parts of the country, but in Montana, they happen often enough to make spikes in heating demand a serious problem. "In the winter of 1989, it went down to -47°F with 45-mph winds," notes Ganser. "Montana Power had to buy power from California."

For individual homeowners, degraded insulation performance was an unpleasant surprise. "There were brand-new homes here, built to Super Good Cents standards, that you couldn't heat above



Corbond's trademarked lavender color allows applicators to monitor product consistency by eye. The medium-density foam has an insulation value between R-6 and R-7 per inch, and good air-sealing properties.

40°F," says Ganser. "That didn't happen to our houses. Our business went way up after that."

For information on Corbond 2, contact Corbond Corp. (32404 E. Frontage Rd., Bozeman, MT 59715; 406/586-4585). □

TAX TALK

About Benefits

by Len Pytlak

Webster's dictionary defines a fringe benefit as "a benefit given in addition to salary and wages," but that doesn't mean benefits are deductible on an employer's tax return.

In fact, benefits paid to business owners or highly paid employees are not deductible unless rank-and-file workers receive the same benefit. For instance, if a business pays 100% of the owners' health insurance premium when the owners work only 30 hours a week, but pays only 50% of the premiums for employees who work 40 hours a week, the IRS considers the owners'

benefit package "discriminatory" and does not allow its cost to be deducted. On the other hand, if it's the owners who have to work longer hours for a lesser benefit, the full cost of both benefit arrangements is deductible. The same principle applies to other benefits, like paid vacations.

As always, there are exceptions: For instance, if union and non-union workers in the same company get different benefits, both packages are still treated as deductible expenses.

Give them a choice. For larger employers, one way to provide varying benefits is to offer a "cafeteria plan" (or "Section 125 plan"). These plans let each worker pick the benefit package he or she prefers from a menu of available options. Similarly, a flexible

spending plan lets employees choose to receive some compensation in the form of fringe benefits such as insurance, instead of cash wages.

Economical pay raise. Providing a benefit increase instead of a cash raise can be better for an employer's bottom line. For instance, a \$1-an-hour raise costs \$2,080 annually based on a 40-hour week. But when the increased comp premiums, payroll taxes, unemployment taxes, and possible overtime are figured in, the total could come to over \$2,800. By comparison, a basic catastrophic health care plan could cost \$1,200 a year or less. □

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Safer Garage Doors

Hinge Guards Protect Fingers

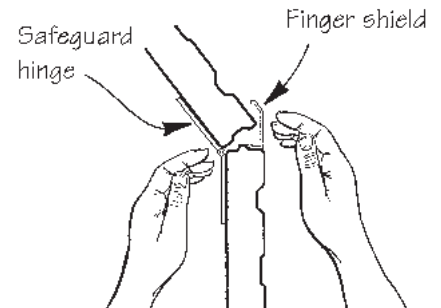
The security and convenience of powered garage doors sometimes come at a price. As the heaviest moving object in a home, garage doors can pose a serious safety risk: When a person tries to close a door manually, door hinges can pinch, crush, and even amputate fingers.

Hospital records tabulated by the Consumer Products Safety Commission reveal an estimated 68,380 finger injuries blamed on garage doors from 1988 through 1995, an average of 8,550 per year. According to Mike Martin of Martin Door Manufacturing in Salt Lake City, Utah, the bulk of these injuries happen to people trying to manually close a power garage door whose opener is malfunctioning or disconnected.

To address this concern, Martin Door has begun to equip all its residential garage doors with a redesigned hinge and guard to keep fingers out of the crack between door sections (see illustration).



With 1,000 pounds of force per square inch, a closing garage door hinge can crush fingers. Martin Door's new hinge design (inset) aims to prevent this frequent injury.



The doors are available throughout the U.S. and in 37 foreign countries. For information, contact Martin Door, Inc., 2828 S. 900 West, Salt Lake City, UT 84119 (800/388-9310). □

Support for Back Supports

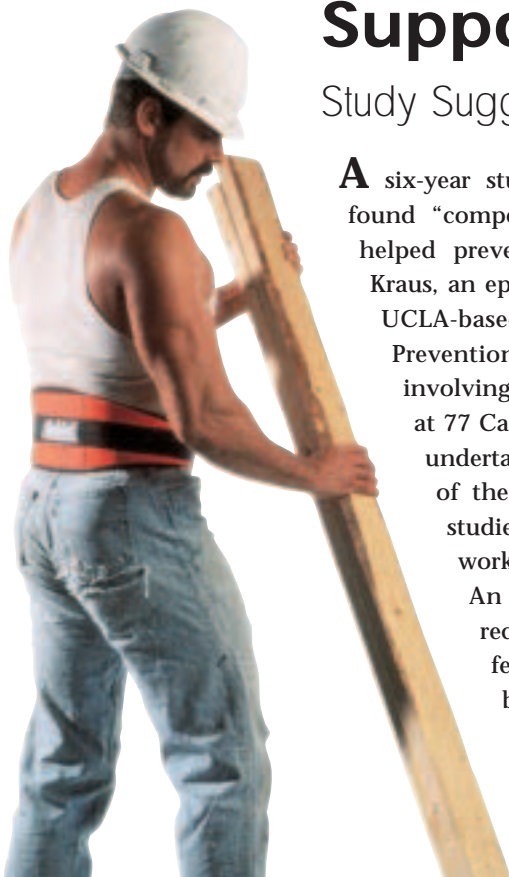
Study Suggests Belts Help Curb Injury Rate

A six-year study of back support belts has found "compelling evidence" that the belts helped prevent injuries, according to Jess Kraus, an epidemiologist and director of the UCLA-based Southern California Injury Prevention Research Center. The study, involving 36,000 Home Depot employees at 77 California stores, is the largest ever undertaken to examine the effectiveness of the belts. Home Depot employees studied logged more than 100 million work hours during the study period. An analysis of employee health records revealed that back injuries fell by a third after Home Depot began requiring workers to wear the belts. Funding for the study was provided by Southern California Injury Prevention Research Center, the UCLA Center for Occupational and Environmental Health, the California Department of Industrial Relations, and the

3-E Company, a San Diego-based industrial safety consulting firm.

Back injuries account for a fifth of all job-site injuries and a quarter of all comp claims. Support belts are widely used to prevent and treat back strain, but the practice is controversial: A 1994 National Institute of Occupational Safety and Health (NIOSH) review of published studies judged the results inconclusive, saying data did not justify routine use of the devices by healthy workers. NIOSH noted concerns that routine use of back belts might lead to muscle weakening and increased risk of injury, or that workers wearing belts might be tempted to lift excessive loads.

But UCLA's Kraus, initially a skeptic, found the Home Depot data surprisingly convincing. "Along with worker training and proper workplace ergonomic design, back supports can be part of an overall back injury prevention program," said Kraus. He cautioned, however, that the study did not examine construction workers, and said more study will be needed to evaluate the usefulness of back support belts in the building industry. □



Back support belts cut injuries by a third in a six-year, 36,000-worker study.