

C I N T R A F O R

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The Market for Softwood Lumber in Japan : Opportunities for Douglas-fir Structural Lumber for Hirakaku

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Executive Summary

For fifteen years between 1989 and 2004, US exports of softwood lumber were mired in decline. During this period, the volume of US softwood lumber exports plunged from approximately 8 million m³ to less than 2 million m³. This trend was a reflection of the relatively strong dollar which undermined the competitiveness of US softwood lumber, coupled with regulatory changes in major export markets (particularly Japan) and a strong housing market in the US. This combination of adverse factors influenced many US softwood lumber manufacturers to abandon their traditional export markets. This was especially evident in Japan where US exports of softwood lumber dropped from 3.5 million m³ in 1989 to just 115,000 m³ by 2005.

Recent years have seen a rapid reversal in some of the macroeconomic factors affecting the US softwood lumber industry. The US dollar has weakened considerably against both the Canadian dollar and the euro, greatly increasing the competitiveness of US wood products in export markets. Since 2002 the US dollar has weakened by 33.7% against the Canadian dollar (and is now almost at par with the Canadian currency) and by 34.1% against the euro. This alone has substantially increased the competitiveness of US softwood lumber in most markets.

At the same time, demand for softwood lumber in the US has fallen substantially as a result of the weak housing market. Since 2005, housing starts in the US have declined by 12.8% from 2.06 million starts in 2005 to 1.8 million starts in 2006. Housing starts are projected to drop further in 2007 to between 1.5-1.6 million. In response to the weak housing market, demand for softwood lumber in the US dropped by 6.4%, from 64.3 bbf in 2005 to 60.1 bbf in 2006. More worrying is the fact that US softwood lumber demand is projected to drop to 54.2 bbf in 2007 before recovering only slightly in 2008 to 56.7 bbf.

With prices low and demand weak in the US market, many softwood lumber manufacturers have begun looking offshore again. Between 2004 and 2006, the volume of US softwood lumber exports grew by 18.6% to reach 2.2 million m³. More importantly, the value of softwood lumber exports has jumped by 35.5% to reach \$592 million. Softwood lumber exports have remained strong during the first four months of 2007, with exports increasing by 14.5% in terms of volume and 25.7% in terms of value. Encouragingly, the strong export performance of softwood lumber has not been confined to a small group of traditional softwood lumber export markets but has occurred across a broad range of markets. In the UK, softwood lumber exports are up by 675% in the four months of 2007, propelling the UK from the 14th largest market to the third largest market for US softwood lumber.

Douglas-fir (DF) lumber used for beam applications (hirakaku) continues to enjoy success in Japan. This success can largely be attributed to the superior performance (with respect to strength, straightness, dimensional stability, and visual appearance) of DF relative to other timber species. Thus, DF maintains a reputation as the premier timber species for hirakaku applications. Yet despite its strong reputation, DF has seen its market share slowly eroded by alternative lumber products such as European whitewood and European redwood glulam lumber. The primary basis for this trend has been the shift towards pre-cut housing components as well as the price sensitivity of Japanese home builders and pre-cutting manufacturers.

The objective of this research was to evaluate the use and specification of structural lumber within the Japanese post and beam construction market, particularly with respect to Douglas-fir lumber in beam applications. In addition, this project follows up on the recommendation of an earlier marketing report recommending that US Douglas-fir manufacturers consider the feasibility of developing and introducing branded DF hirakaku lumber in

Japan . In order to develop a better understanding of the potential opportunity for branded DF hirakaku lumber, two focus groups sessions were held with home builders in Japan . The focus group sessions were supplemented by personal interviews with Japanese post and beam home builders and pre-cutters, the two major end-users of DF hirakaku. Finally, visits were conducted to the major DF sawmills in Japan to develop a better understanding of the competitive role of Japanese DF lumber producers in the market and to explore the role of branding in the marketing of domestically sawn Japanese DF lumber.

Material use in the residential construction industry has been affected by several regulatory changes in Japan . In May, 1998 the Building Standard Law of Japan (BSL) received its first major revision since 1950. To a large degree these revisions were in response to the widespread devastation caused by the Kobe earthquake in 1995 and the perception that the structural performance of wooden post and beam homes, as well as the regulation of construction practices, needed to be improved to ensure the safety of homeowners in Japan . However, the single most important factor affecting the use and specification of structural softwood lumber for use in residential construction in Japan has been the Housing Quality Assurance Act (HQAA). The HQAA was promulgated to improve the quality and performance of new homes and provide homebuyers with specific safeguards and rights when purchasing a new home. The HQAA was developed partially in response to the poor performance of post and beam houses in the Kobe earthquake, but also in response to increasing complaints from home buyers about construction defects and the lack of responsiveness on the part of home builders in correcting those defects.

Japan 's domestic lumber industry presents a contrast to the overall low level of timber self-sufficiency. Whereas over 80% of Japan 's total timber supply is derived from imports, only about 40% of Japan 's softwood lumber demand is provided by imports. Despite Japan 's relatively high level of self-sufficiency in softwood lumber, the domestic lumber industry is characterized by declining production levels as smaller, less efficient sawmills have closed down. The domestic sawmill industry was particularly hard hit by the Asian economic crisis, with the number of sawmills declining from 14,028 in 1996 to 12,810 in 2001. These sawmill closures resulted in large declines in productive capacity from 1997 to 1998. Over the past five years, domestic lumber production has declined from 25 million m³ to less than 14 million m³ (and the number of sawmills in 2006 has declined to 8,590), while lumber imports have increased to approximately 9 million m³ . The combination of declining domestic lumber production and slowly increasing import volumes means that self-sufficiency dropped from 74% in 1991 to the current 60%.

Recent developments in Japan and the US have favorably affected the competitive position of US softwood lumber in Japan and renewed US exporters interest in the Japanese market. The weakening of the US dollar relative to its major competitors in Japan , a weak US housing market and the announced export tariffs on Russian logs all bode well for US lumber in Japan . Therefore, it is in the US forest products industry's best interest to work to work with their Japanese customers to convince Japanese home builders and home buyers that using DF hirakaku is worth the small price premium it commands in the market. For example, a promotional campaign emphasizing the strength, durability and natural beauty of Douglas-fir structural lumber could be very helpful in Japan . In the absence of this type of promotional effort, DF hirakaku products can be expected to continue losing market share in the long-term. One recent estimate derived from interviews with pre-cutters and lumber wholesalers suggests that between 2000 and 2010 the market share for DF hirakaku could shrink from 83% in 2000 to 70% in 2010.

There are a number of factors that constrain the competitiveness of solid sawn US DF hirakaku in Japan, including: high cost of kiln drying large size DF hirakaku, the difficulty in shipping green hirakaku to Japan without developing surface mold and discoloration, the difficulty in maintaining a stable moisture content for kiln dried DF hirakaku during the shipping period to Japan, price fluctuations, reluctance to cut to the lengths required by pre-cutters, the size of the domestic Japanese DF sawmill industry, the high cost of maintaining inventory in Japan, the ready availability of lower cost hirakaku products from domestic DF sawmills and foreign glulam suppliers, the extremely large number of hirakaku size combinations that require a huge number of different hirakaku product sizes (approximately 140 size combinations) and the attendant high inventory costs, and the difficulty in establishing an effective distribution system in Japan

Given the serious constraints associated with establishing and maintaining an adequate supply of imported DF hirakaku in Japan , we would recommend that the US industry not develop a branding program for DF hirakaku in Japan . This decision is further supported by the fact that there is currently a large, well established domestic DF

sawmill industry in Japan . The fact that Japanese DF sawmills have already developed branded hirakaku products further supports this recommendation. It is difficult to see where US sawmills would have a competitive advantage over Japanese sawmills producing branded products, particularly considering the well established distribution channels that the Japanese sawmills have already developed within the pre-cutting and home building industries. Despite this, there are substantial opportunities for US DF sawmills to establish direct supply relationships with medium-sized regional homebuilders and larger national homebuilders. These homebuilders have become extremely cost conscious in the past decade and many expressed interest in purchasing building materials directly from US sawmills as a way to reduce distribution channel costs and improve product quality.

In addition, there is a good opportunity to export kiln dried DF glulam lamina to glulam manufacturers in Japan . This is particularly true if the US industry were to promote DF glulam hirakaku as a superior product to either European whitewood or redwood glulam. However, it would be important for US lamstock producers to resolve the forward pricing issue that currently provides European glulam manufacturers with a competitive advantage. There is also an opportunity to export lamstock produced from other species as well. For example, Alaska yellow cedar lamstock for glulam sill plates (dodai) and Sitka spruce for glulam hirakaku. Further research would be required to develop a better assessment of the potential for exporting lamstock to Japanese glulam manufacturers.

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