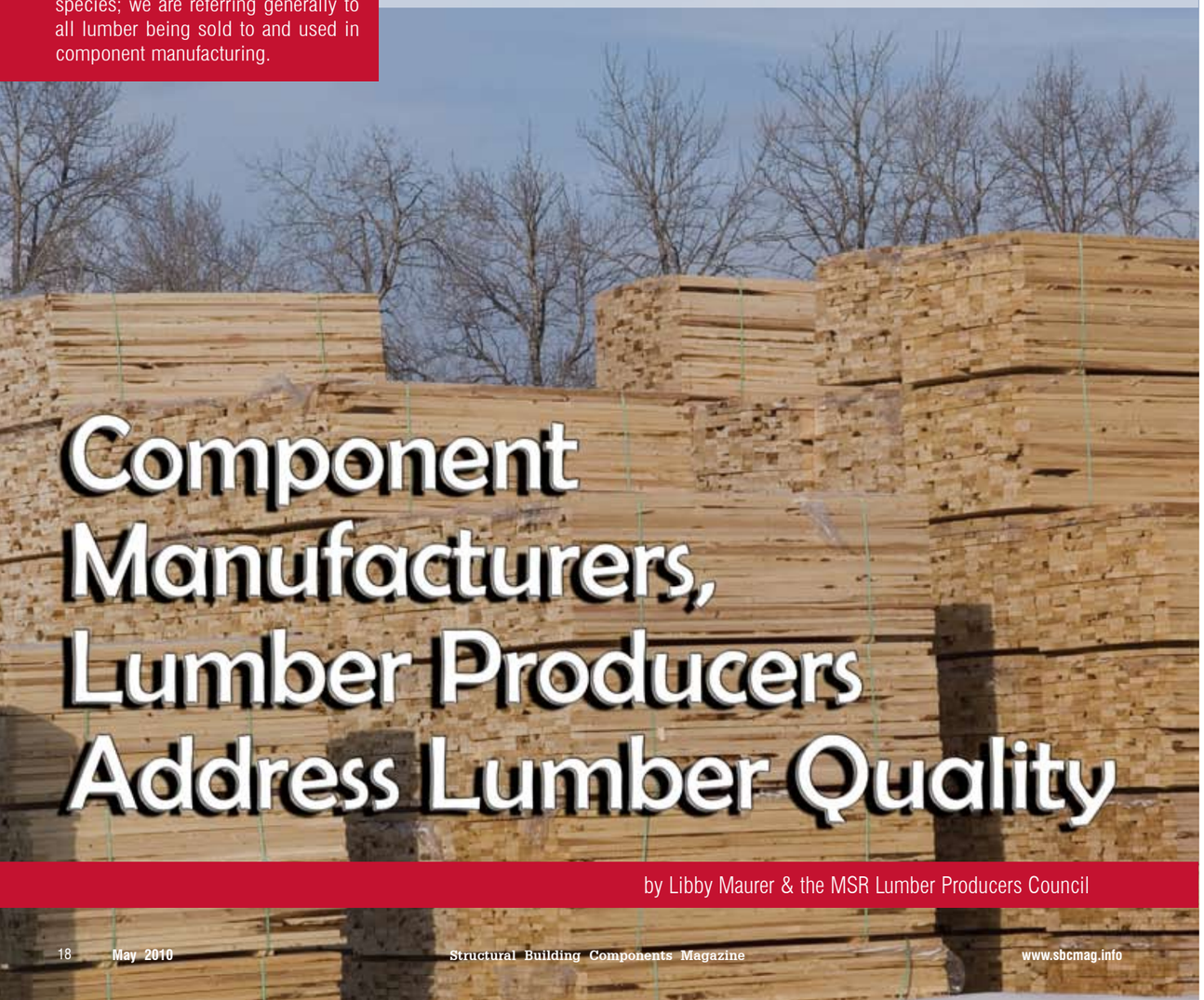
Component Manufacturers, Lumber Producers Address Lumber Quality

by Libby Maurer & the MSR Lumber Producers Council



Editor's Note: We have heard from many readers on the topic of lumber quality. *SBC Magazine* does not have the ability to provide a solution for any type of quality issues. Yet we believe it is important to define the points of view as they have been relayed to us. The information presented in this article was taken from recent interviews with lumber producers and component manufacturers. In the comments that follow, we have purposely left out specific lumber species; we are referring generally to all lumber being sold to and used in component manufacturing.

Do you find yourself talking about lumber quality more now than you did a couple years ago? You aren't alone. Concern over the quality of softwood lumber is an emerging topic for the industry, regardless of whether it's MSR or visually graded.

We were asked to speak with companies to get their perspectives on the issue and share it with ***SBC*** readers to help the industry gain greater insight. Note that their views represent a small sample of people that have many years of industry experience, yet are not intended to be representative of the entire industry. Here are their five top concerns of component manufacturers on one hand and lumber producers/suppliers on the other hand.

Top 5 Component Manufacturer Lumber Quality Issues

1 **Cull rates have risen significantly and steadily.** Component manufacturers said there's been a noticeable decline in the quality of the type of lumber readily usable for manufacturing trusses in the last five to seven years. They estimate culling anywhere from 15 to 40 percent of lumber they purchase, whether it's MSR grades or visually graded. This is compared to an estimated 5 to 10 percent maximum cull rate, which had been typical in the past.

The reason for the increased cull rate stems from the need to reduce certain characteristics which have become more prevalent in the lumber supply, even though they remain within the existing parameters defined for each grade regarding maximum allowable defects. The existence of wane and knots in the plate area often results in increases in connector plate size and therefore cost. Too much wane means the plate size will need to be increased so that enough teeth are embedded into the plate area. Too many knots can yield the same result, but is more challenging due to the random nature of loose knots and knot holes. Some of the poor quality wood can be diverted for secondary uses like gable ends, wall studs etc. The amount of sorting makes for a very inefficient, labor-intense process.

With current cull rates this high, some manufacturers stated it makes more sense for them to buy a grade up. But even then, there are no guarantees. The higher cull rates seem to occur in these grades: No. 2 & BTR, No.2, No. 3, 1650 and 2100.

2 **Poor appearance.** Component manufacturers said lumber just doesn't look as good as it used to. Specifically they've noticed more wane, knots, cracks and splits. Manufacturers noted MSR grades in the past have been known to be generally wane-free with few knots, but are now showing a larger amount of wane than expected.

Manufacturers said much of their lumber appears dryer than in the past and is more prone to split. They link this dryness to beetle-killed wood that is being processed and may be cut after standing dead for a period of time before being processed at the mill.

3 **Certain grades can't be relied on for quality anymore.** Component manufacturers said it has become harder and harder to rely on certain grades like they have in the past. One example is that the quality of No.2 lumber appears more like a No.3 grade now compared to a stick of No.2 five years ago.

Manufacturers reported lately they've been "up-grading" to higher MSR grades to avoid the occurrence of wane and knots. Some manufacturers have completely eliminated grades like No.2 & BTR and 1650 from their inventory until the quality issues can be resolved.

4 **Higher quality wood is being exported.** There is a strong perception that lumber with superior visual quality is being sold in other markets—namely China, Japan and U.S. and Canadian "big box" stores where appearance is critical to generating high volume.

Component manufacturers therefore believe lesser quality lumber is being supplied to U.S. and Canadian construction markets, because there is really no other place to sell this lumber to.

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5 Lumber industry isn't correcting the problem quickly enough. Component manufacturers are frustrated with lumber quality, and some feel that lumber producers are not working fast enough to address it. Many manufacturers have made adjustments in how or where they buy lumber. Some said they avoid wood from the provinces where the beetle kill is most profound, while others have become very choosey about the mills they purchase from. Some manufacturers have abandoned certain species or grades altogether to raise their chances of maintaining quality lumber supply.

Top 5 Lumber Producer/Supplier Issues

1 Lumber isn't specifically graded for components. Lumber producers believe that there is a disconnect between the commercial grading of lumber for general markets and the concept of grading lumber for a specific end use such as truss manufacturing. Producers want component manufacturers to understand that lumber grades were developed for a wide range of markets and sales opportunities. While the end use is important to utilization of the lumber purchased, the mills generally do not know the final market the lumber will be used in and therefore have a very difficult time meeting the specific needs of construction applications—particularly with the focus of solely truss and component uses in mind.

2 Improved grading technology makes lumber more true to specific grades. Producers explained that advances in modern grading technology have helped narrowly define lumber grades per grading rules. Grading machines have laser scanners that collect strength and defect data on each board and compare the results to grade rules. Producers say new technology has made grading extremely accurate.

Prior to the improved scanning technology, graders would make a grade judgment on a stick of lumber based on a visual inspection of maximum knots, wane, checks, splits, etc. Years ago, a visual grader may have downgraded sticks with certain characteristics to "play it safe." For this reason, producers said visual graders may have been unintentionally inflating grades. Producers gave No.2 & BTR as an example; ten or twenty years ago most of the lumber in this grade was probably BTR instead of No.2.

Today's grading machines have removed the subjectivity in the grading process. They are calibrated so specifically that lumber is accurately sorted far closer to actual grading rule limits. Customers who regularly purchase No. 2 & BTR may see more No.2 sticks than BTR these days, which leads them to believe the quality of the lumber has declined. In reality, the marketplace is seeing the result of improved grading technology enabling more accurate identification of strength reducing characteristics.

3 Fiber quality today is not the same as it was five or ten years ago. Producers pointed out that one of the main factors contributing to lumber quality issues today is the pine beetle epidemic. They believe that the logs their companies harvest today are simply not of the same quality as they used to have because the beetle has killed roughly 70 to 80 percent of SPF standing timber stock.

Producers said there is so much fiber damaged by the beetle that the industry can't keep up with the harvest. These trees are left to stand and start drying out before they can be cut. The beetle-killed wood eventually makes its way to the mill, where it is heat treated to comply with Animal and Plant Health Inspection Service (APHIS) regulations.[1] However, it is not kiln-dried because its moisture content is already low enough. Once lumber is overdry there is nothing producers can do to add moisture.

Producers said beetle-killed lumber by and large maintains its strength properties. They indicate that this has been scientifically tested and proven. Beetle-killed wood does affect the appearance of wood, however, characterized by a bluish-colored stain. Due to the fact that so few logs originating from British Columbia aren't affected by the beetle, producers said mills are facing a lot of pressure to use logs that are visually less appealing.

4 Grading rules have not changed. Some component manufacturers have questioned whether grading rules or procedures have become more lenient. Producers said this is not at all the case. The U.S. and Canadian lumber industries are governed by grading rules set forth by the National Lumber Grades Authority (NLGA).[2] The NLGA is enforced in Canada by the Canadian Lumber Standards Accreditation Board (CLSAB)[3] and in the U.S. by the American Lumber Standard Board of Review.[4]

NLGA's National Grading Rule applies to all North American dimension lumber 2" to 4" (i.e., 2x3, 2x4, 2x6, 3x4, 4x4, etc.). The National Grading Rule establishes standard lumber grades and grade names, assuring users of uniform design and performance for all commercial species of dimension lumber. The countries' lumber industries work very closely to ensure that the grade rules and protocol are maintained. Producers said it is important for the marketplace to know that nothing had changed with respect to grading rules.

In some cases, producers choose to calibrate grading machines to a level higher than the standards set forth by NLGA. This may explain the quality differences among producers.

5 The lumber industry is working on ways to address the issue, but it will take time. Lumber producers said if component manufacturers notice lumber quality issues on a consistent basis, they should not hesitate to talk with their suppliers to work through the issues being seen. They want to know if customers are unsatisfied, and want the opportunity to address the problem. They believe that communicating on this issue is important.

It is also critical for component manufacturers to track cull rates. With tangible figures, salesmen and brokers have concrete data to present to their mills. Keeping accurate records of cull rates will put component manufacturers in a much better position.

Editor's Note: The WTCA QC database has a lumber section that was created specifically for this purpose.

Now that the lumber industry is aware of the extent of the quality issues, it will continue to take measures to improve the situation. Producers are confident that the marketplace will start seeing a noticeable improvement in lumber quality in the next six months to a year. SBC

[1] www.aphis.usda.gov/import_export/plants/plant_exports/wpm/wpm_faqs.shtml
[2] www.nlga.org/app/dynarea/view_article/1.html
[3] www.clsab.ca
[4] www.alsc.org

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