

CrossCut Edger *[Patent Pending]*

...the next big thing?

Yield or recovery is all about fitting the sawing profile to the shape of the log as best possible. Optimum rotation of the log at the primary breakdown, curve sawing at the secondary, and proper skewing and positioning at the edger, are all working toward the goal of the best fit possible - for the best yield possible. Curve sawing cants, which has reached almost 100% acceptance, has led many users to wish they could adapt this technology to their board edger. Since almost 40% of boards in a normal mill are edged, the wish is understandable. Sawing around the curve in a swept flitch, while possible and would certainly give a longer board, results in a swept board - totally undesirable. Now a breakthrough has occurred using cross cut saws in the edger infeed, to cut candidate boards in two; and edge them individually. Both portions are positioned simultaneously. Separate skew and best offsets or even different saw sets are possible for each portion of the cut in two board. Swept flitches, edged this way, pick up markedly more overall length for the two boards compared to the conventional single board. An example is a swept flitch that a conventional edger would make into the most valuable board, usually the longest. Say the flitch is nominally 20' long and considering the sweep, selected to make a 2x4x14'. With *CrossCut* Technology the most valuable solution might be to cut the flitch into 2 boards and edge one into a 2x4x10' and the other into a 2x4x8'. The example in many instances could be a 2x6x8' on one end and a 2x4x10' on the other. In normal primary breakdowns, horns down is almost always the best choice. This automatically gives a swept side board. Cross cutting effectively

straightens out the board, by cutting it in two. Additionally, tapered boards, with or without a little sweep, benefit by *CrossCut* Technology from the possibility to edge different width boards from each end, plus around a different center line and different skew angle. On multiple saw edgers, the advantage is even greater, allowing a two or other multiple board solutions on one end and different multiple or single boards on the other. This cross cut sawing pattern in a rudimentary form has already been in use very successfully for years in what is known as trimsave. Trimsave is where the trimmer optimizer decides it can give more value by trimming the good end of a board and sending the smaller end for reedging. This has always yielded ½% or more increase and is very popular in most mills. The *CrossCut* pretty much eliminates the need for trimsave, by already performing that function and a lot more, while the flitch was being edged initially. Trimsave requires a flitch to pass through the edger twice using valuable edger capacity. *CrossCut* does not require an additional pass. Even more importantly, the *CrossCut* saws in ways that trimsave can't, greatly increasing the benefit. An example is a swept flitch that has been edged conventionally into a board say 16' long. When this board, which was contained in a 20' long flitch, reaches the trimmer, it can't be trimsaved because it has already been edged. The saw line on the inside of the sweep has cut across the portion of the board that the *CrossCut* could have made into the second board. The *CrossCut* could have made into two boards containing 20' total length.

Yes, it takes a lot of computer power for the optimizer to solve all the potential solutions, but with today's microprocessors, it is possible without slowing down the line. In fact, the only slowdown required is when a different saw set is picked for each end of the board, requiring a gap to be automatically generated to allow the set. Saw sets at different offsets and separate skew angles require no gap (assuming the outfeed landing chain can accommodate). Yield improvements can be predicted using simulations. A typical 20' system gains 6.5 – 7.0% edger board volume for a mill run sample which averages around 18% cross cut candidate boards. Taking into account the relative value of long and short boards, a typical value increase of 6.0 to 6.4% is realized. If the 40% edger board approximation is used, then a staggering 2.0 to 2.5% mill wide value is gained. This is almost half a curve sawing system gain for a fraction of the price. Furthermore, the *CrossCut* requires no mill level technology leap like the curve saw – and adds very little complexity and no footprint to the edging function. Generally speaking, the *CrossCut* Technology can be adapted to existing systems or, at worst case, pays for a new system to replace an out of date or under capacity old system. Just when we all thought we are doing everything possible to squeeze all the value out of a tree and production out of a mill, a new idea like this come along to move the bar a little higher. With market conditions like they are, it couldn't come at a better time.

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