Brewco Resaw
vs.
Circle Saw

A Yield Comparison Taken
At Beshear Lumber Company, Princeton, KY

Yield Comparison

Concept and Method

In order to prove that a Brewco B-1600 Thin-Kerf Resaw System does indeed provide increased yield of boards vs. a traditional circle saw carriage system the following method was chosen in order to provide actual real-world results that would be believable. Our customer, Beshear Sawmill in Princeton, KY has both a circle saw carriage and a Brewco B-1600 Grade Run-Around System and most importantly was willing to devote the time to perform this study.

After much discussion it was decided that the best approach would be to identify six logs to use in this study. These logs were chosen by Tyler Beshear, owner of Beshear Sawmill. The logs were segregated into three two-log samples with each of pair of logs the same diameter. All logs chosen are red oak and are 10'-6" in length. One pair was 16" diameter, one pair was 17" diameter, and one pair was 19" diameter. The log ends were spray-painted in order to identify the boards coming off the green chain. The 16" diameter logs were painted red, and the log

being sawn on the Brewco had additional yellow stripes. The 17" diameter logs were painted orange, with the log being sawn on the Brewco had additional blue stripes, and the 19" diameter logs were painted blue, with the log being sawn on the Brewco having additional red stripes.

The logs were loaded onto the circle saw log deck and opened up on the circle saw. The three logs going to the Brewco were shimmed and squared just enough to pass through the 16" x 16" opening. (Note that this required some of these boards to be sawn on the circle saw).

The other three logs were all sawn up on the circle saw. Each board was 4/4 by random, and all cants would be sawn down to a 3-1/2" x 6" cant.

Some boards of every log had to be edged since these had wane on them.

The three logs (cants) that were sawn on the Brewco were all sawn down to 4/4 by random leaving a 3-1/2" x 6" cant, the same saw method as the circle saw.

All material was taken to the off-line grading area and graded and tallied. Then all this material was segregated according to paint color and placed on a deck for further inspection.

All boards were tallied according to grade and board footage. See the table following for the results of this tally.

Results of All Three Log Pairs

	FAS	1 FACE	1 COMMON	2 COMMON	3 COMMON	CANT	TOTAL
BAND SAWN	161	50	70	54	24	53	412
CIRCLE SAWN	86	27	80	83	5	53	334
DIFFERENCE	75	23	-10	-29	19	0	78
% DIFFERENCE	87.21%	85.19%	-12.50%	-34.94%	380.00%	0.00%	23.39%
BAND BOARD COUNT	20	7	13	9	5	3	57
CIRCLE BOARD COUNT	13	4	15	13	1	3	49
DIFFERENCE	7	3	-2	-4	4	0	8
DIFFERENCE %	53.85%	75.00%	-13.33%	-30.77%	400.00%	0.00%	16.33%
BAND UPPERS	51.28%						
CIRCLE UPPERS	33.88%	17.39%					
BAND $	$314.27						
CIRCLE $	$225.89						
DIFFERENCE	$88.38						
% DIFFERENCE	39.12%						

On average, there was a 23.39% increase in overall lumber yield, a 16.33% higher board count, and a 17.39% increase in upper grades (FAS and 1 FACE).

Regarding the total overall value difference the prices for the different grades were gathered from the Market Report dated 3/28/16 using the Southern area values. The three cants sawn on the Brewco were worth $88.28 more, a 39.12% increase. This is in spite of the fact that the 17" diameter log (painted orange with blue stripe) yielded 5 board feet *less than* the similar log sawn on the circle saw (see below).

Individual Log Tally

	ORANGE LOG BAND SAWN						ORANGE LOG CIRCLE SAWN					
	FAS	1 FACE	1 COMMON	2 COMMON	3 COMMON	CANT	FAS	1 FACE	1 COMMON	2 COMMON	3 COMMON	CANT
TOTAL BF/GRADE	18	15	34	32	3	17.5	44	0	35	18	0	17.5
TOTAL BF	119.5						114.5					
TOTAL BOARD COUNT	16						16					
	BLUE/RED LOG BAND SAWN						BLUE LOG CIRCLE SAWN					
	FAS	1 FACE	1 COMMON	2 COMMON	3 COMMON	CANT	FAS	1 FACE	1 COMMON	2 COMMON	3 COMMON	CANT
TOTAL BF/GRADE	84	13	24	6	6	17.5	0	7	32	60	0	17.5
TOTAL BF	150.5						116.5					
	RED/YELLOW LOG BAND SAWN						RED LOG CIRCLE SAWN					
	FAS	1 FACE	1 COMMON	2 COMMON	3 COMMON	CANT	FAS	1 FACE	1 COMMON	2 COMMON	3 COMMON	CANT
TOTAL BF/GRADE	59	22	12	16	15	17.5	42	20	13	5	5	17.5
TOTAL BF	141.5						102.5					

It was determined that the 17" diameter log sawn on the Brewco had sweep in it resulting in a lower than normal amount of boards.

Conclusion

Obviously there is more lumber to be gained and a higher value due to the percentage of uppers increasing. Remember that this study compares only three logs. If one uses a conservative value of only $20 per log to be gained (instead of the $29.46 average in this study) and multiplies this by 150 logs per day, it is not unusual or far-fetched to see that by installing a Brewco behind a circle saw could gain an additional $3,000 *per day, $15,000 per week*, *or* $750,000 *per year*.

Looking at it another way, by *not installing* a Brewco one is losing $3,000 per day, every day. Suffice it to say that there is *no other* piece of sawmill equipment that can be installed that will *immediately allow* a mill to see a 20% increase in usable product.

Or, one could saw the same amount of lumber per day as before with 20% fewer logs. Just think if you could saw 150 logs worth of lumber with only 120 logs? How much is that worth?

Considering these factors one could pay for the investment in a Brewco in much less than one year.

How Much Does It Cost?

All mills are different, but on average a typical installation of a Brewco B-1600 will cost around $300,000 (complete system, some extra material handling, installation, etc.). A monthly lease payment for this is around $5,500. This is about $270 per work day. That sounds like a lot of money… but is it?

If you could gain an extra $20 per log (extra yield) it really means that it only takes 15 logs a day to make the payment.

Let's look at this another way—whether you have a Brewco or not, you are already paying for one. You are paying for it with lost revenue going into your sawdust pile.

Which Weighs More… A Truckload of Lumber or a Truckload of Sawdust?

(This is a trick question). Answer: They both weigh the same. A truckload of lumber on average weighs about 25 tons. A truckload of sawdust weighs on average about 25 tons. However…

Which One is Worth More… A Truckload of Lumber or a Truckload of Sawdust?

A truckload of lumber is worth around $3500 minimum (8000 board feet at $.42 a board foot equals about $3500). And, $.42 a foot is on the low end of the pricing. This is where it gets interesting… $3500 divided by 25 tons calculates out to $140 a ton. On the other hand, sawdust averages about $25 a ton.

Not convinced yet??? Just pull a few recent lumber tickets out and compare them to a few sawdust tickets. (We didn't discover this on our own, a good customer of ours proved this to us years ago).

Which would you rather sell? A truckload of lumber or a truckload of sawdust?

Where Is the Missing Lumber?

We found out just where the missing 23.39% of the lumber went… (See next page).

We Call this "FAS Sawdust"

A good Brewco customer once said, "It doesn't matter whether it is good times or bad times, 20% more lumber is 20% more lumber".

Want More Information?

Please visit our website at www.brewcoinc.com

Brewco Incorporated

P.O. Box 150

Central City, KY 42330

800-237-6880