



# The Indiana Hardwood Report

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2016 in Review

Mike Seidl

Hardwood Economic Development

Jeff Settle

Forest Products Specialist

Jackson-Washington State Forest

## **Introduction**

The Indiana forest-products industry is the sixth-largest manufacturing industry in the state, employing more than 32,000 people. Forest-based manufacturing provides \$3.2 billion in value-added and more than \$7 billion in value of shipments to Indiana's economy each year. Indiana ranks first nationwide in the production of wood office furniture, wood kitchen cabinets, hardwood veneer, and several other wood products. The majority of the businesses involved are small and family-owned. Wood products companies average fewer than 50 employees and play an important role in rural communities.

The wood-using industry relies on one of Indiana's most valuable renewable natural resources. Proper management of Indiana's timber helps guarantee primary wood-using firms a supply of quality wood fiber. These sawmills and veneer plants, in turn, provide top-quality materials for the secondary industries to produce paneling, fine furniture, cabinets and similar finished products.

This report contains market information on log, lumber and veneer manufacturing sectors. The report contains data regarding green-lumber prices per species as well as pallet cants and ties. Also included are comments and graphs depicting a variety of data related to the export of Indiana wood products. We hope you find this paper both informative and helpful.

The Department of Natural Resources (DNR) is committed to sound forest management practices on all state forests and to being SFI and FSC certified.

## Domestic Market Comments

Reports from the hardwood industry on domestic markets have been described as fair. Most sawmills are able to move most of their production but profitability is a big issue with many species. Domestic orders are fair to steady, with most mills running at or close to capacity to keep inventories level due to longer dry times during winter. Concentration yards have reported good to strong export sales. Residential flooring plants are buying good volumes of both red and white oak. Both red and white oak markets continually improved throughout 2016 with green lumber prices 13% and 15% higher, respectively. Many times it has been said that the housing market drives the hardwoods market. Residential housing grew more slowly in 2016 compared to 2015. Through November, year-to-date total housing starts were up 4.8%.

Mills currently have decent log decks but are closely watching their hickory and hard maple production. Normally, the production of these whitewoods is at high levels but due to poor markets, both loggers and sawmillers are trying to limit production. The competition for walnut and white oak logs still remains as the demand for veneer, lumber and staves continues, both domestically and internationally. Higher timber and log pricing continues to cause tighter margins for many mills (as mentioned above).

In the Appalachian Region, ash prices started 2016 on a high note but softened through QRT3/2016. QRT 4/2016 saw prices rebound slightly but overall; 4/4 ash prices were down 18% from the first of 2016. The export markets are keeping ash alive as domestic markets are sluggish. Hard maple prices held firm before falling throughout the second half of the year. Demand fell from both the cabinet and flooring sectors. Hard maple prices ended up down 10.5% at the end of the year. Much the same can be said for hickory, and those prices were down 8.5% from the first of the year. Soft maple prices rose significantly from QRT 1/2016 and peaked in the second quarter. Prices have dropped but overall, lumber prices were up 2% from the first of the year. Much of this can be attributed to manufacturers choosing soft maple over hard maple, especially in the cabinet sector. Red oak was the surprise of the year. Exports propelled red oak prices soon after the New Year and that trend continues with prices being 13% higher since the first of the year. White oak lumber production was constrained due to extremely high demand for staves and quartersawn lumber. Demand, however, continued to rise through the year, especially from overseas. Prices for white oak were 15% higher at the end of 2016. As with several species, the export market kept the upper-grade poplar markets steady. However, the common-grade markets were not as fortunate with #2C being especially hard to move. KD walnut prices were among the most stable of 2016. Higher shipments to China helped offset higher production. In the end, walnut lumber prices showed a moderate increase of 4% for 2016.

Low-grade markets suffered through most of 2016 with the exception flooring lumber. Pallet cant inventories continued to build throughout the year. Both railroads and treating plants are flush with ties. Prices for pallet cants and ties decreased 10% and 5%, respectively.

Green Hardwood Lumber Prices (Dec-2016)

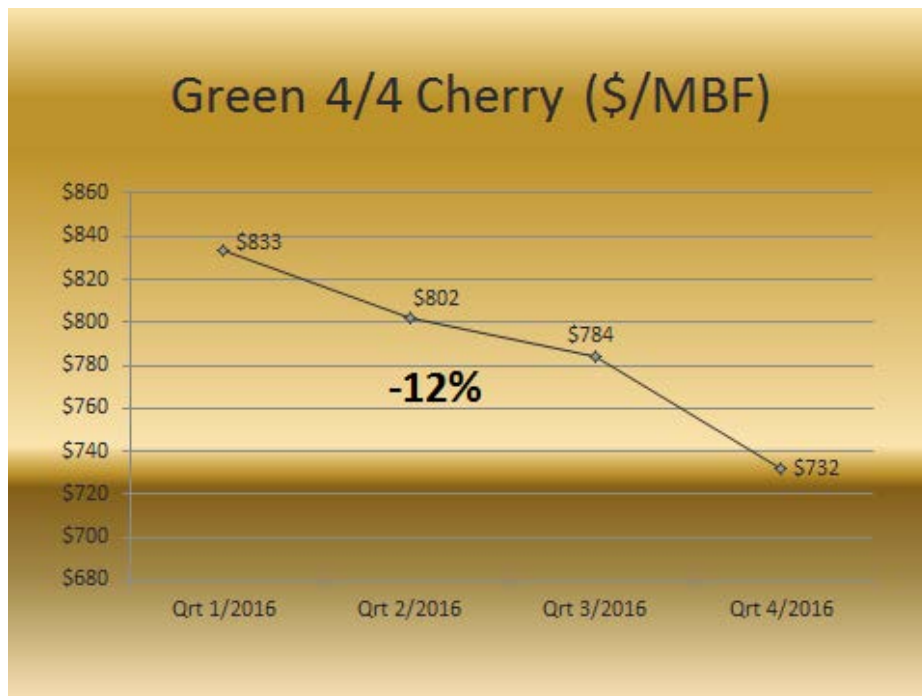
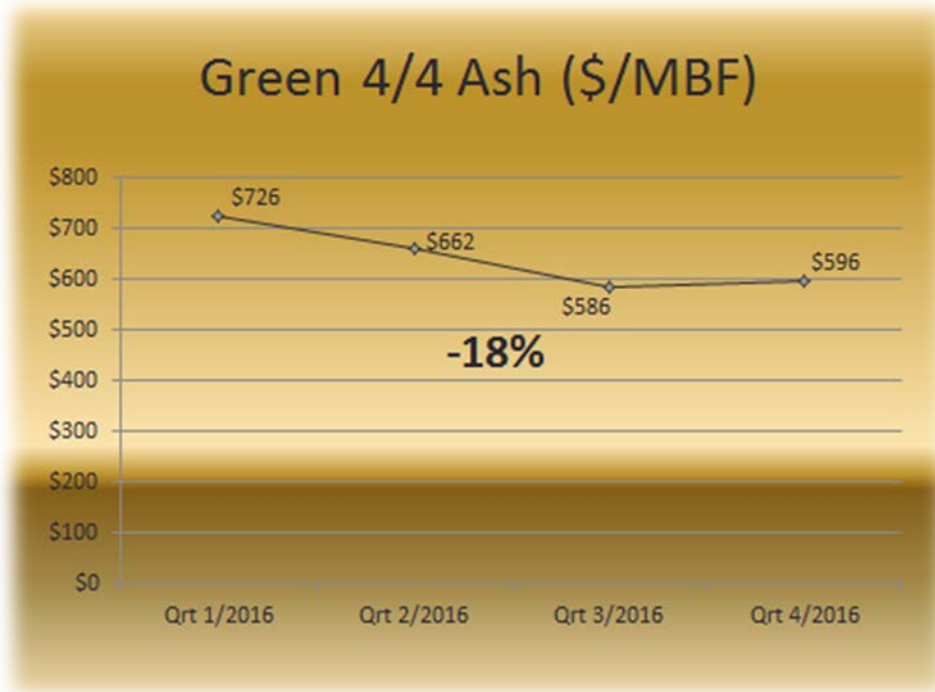
Dollars per one thousand board feet (MBF), 4/4 (1-inch-thick) Appalachian Market Area

	<b>FAS</b>	<b>#1C</b>	<b>#2A</b>	<b>#3A</b>
Ash	965	575	350	
Cherry	1050	705	385	
Hickory	800	520	365	
Hard Maple	1155	730	420	325
Soft Maple	1255	815	400	
Red Oak	1170	805	580	500
White Oak	1725	965	560	520
Poplar	835	410	265	
Walnut	2470	1145	595	

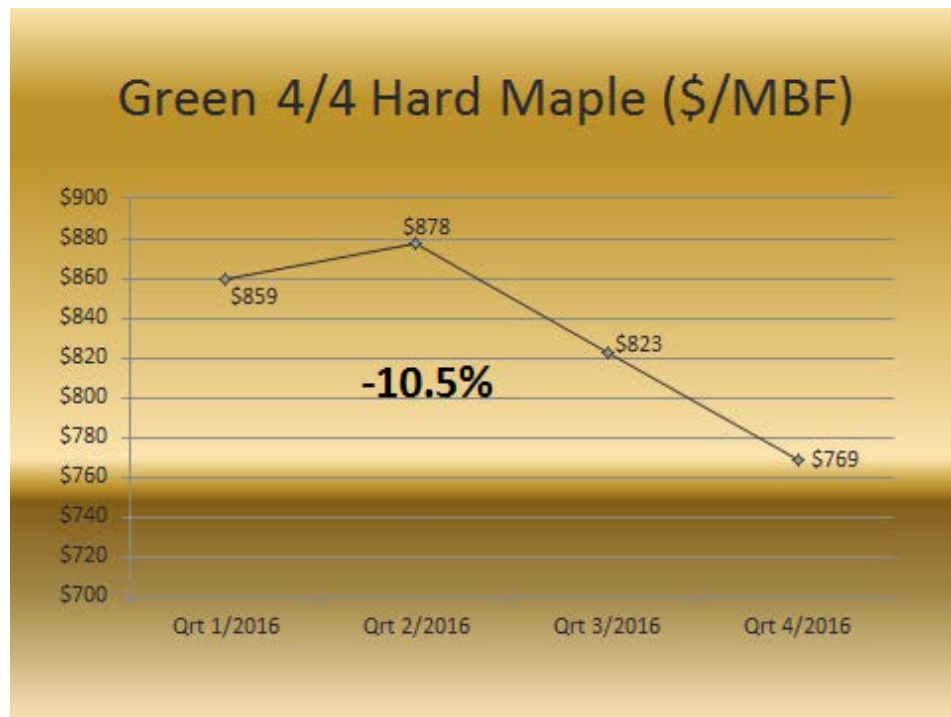
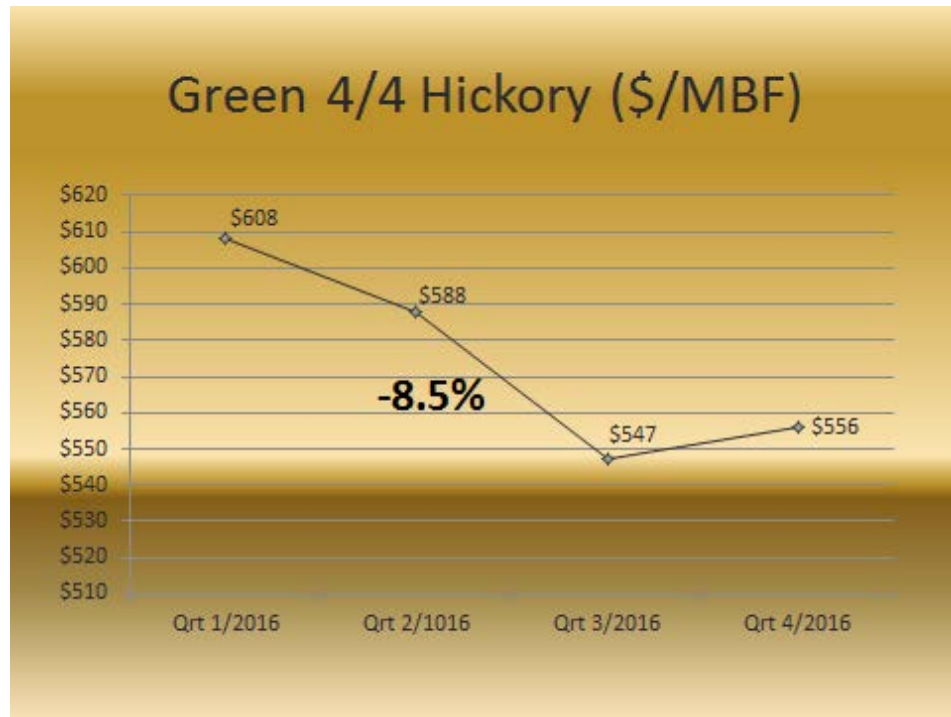
Source: *Hardwood Review* P.O. Box 471307, Charlotte, N.C. 28247-1307

The following graphs compare green 4/4 lumber prices per species across all grades for each quarter of 2016. Also included are comparisons for pallet cants and ties.

Data were obtained from weekly reports from the Hardwood Review Weekly.

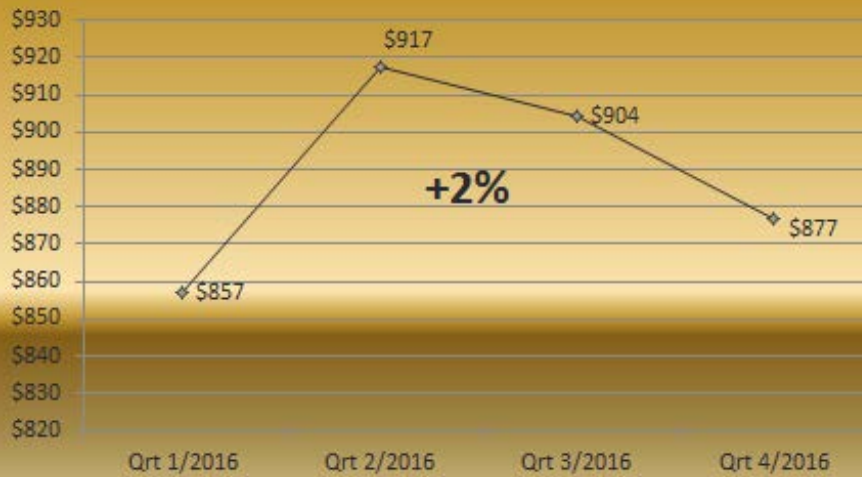


Lumber price graphs continued

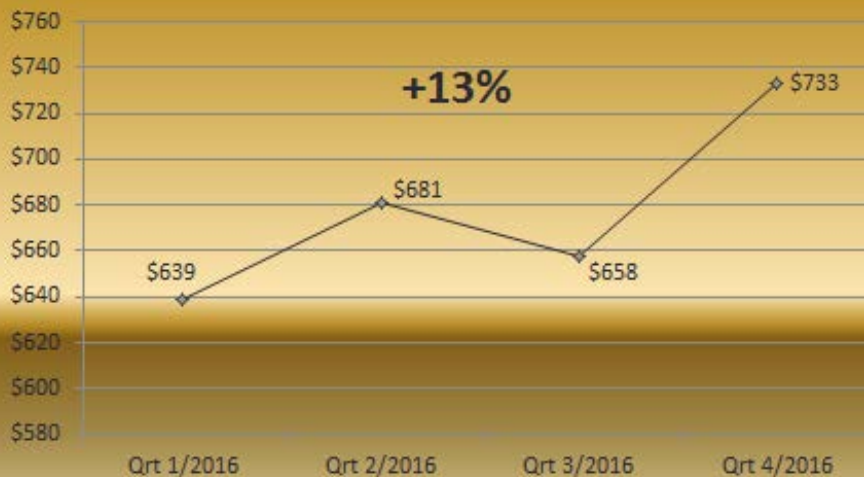


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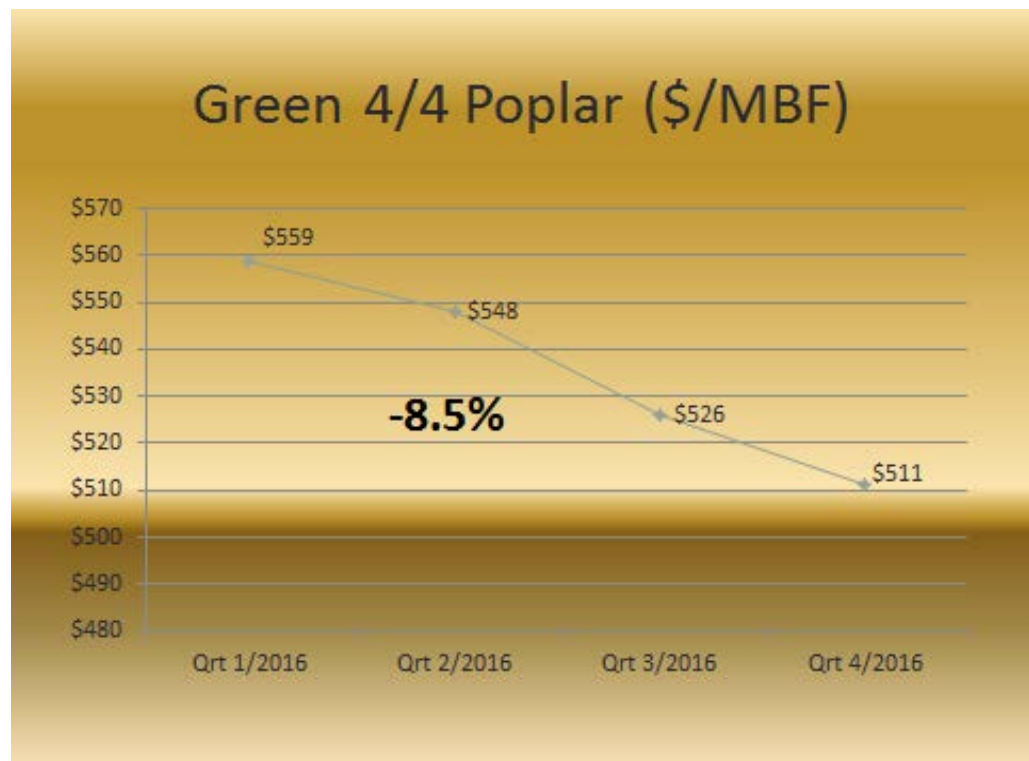
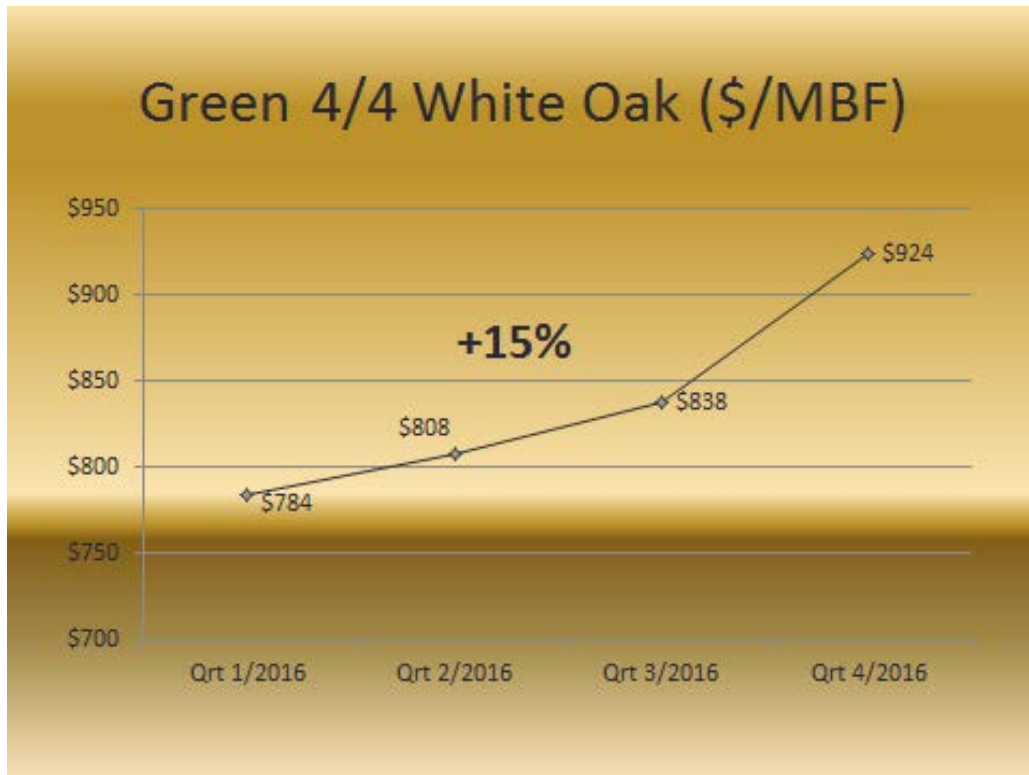
### Green 4/4 Soft Maple (\$/MBF)



### Green 4/4 Red Oak (\$/MBF)

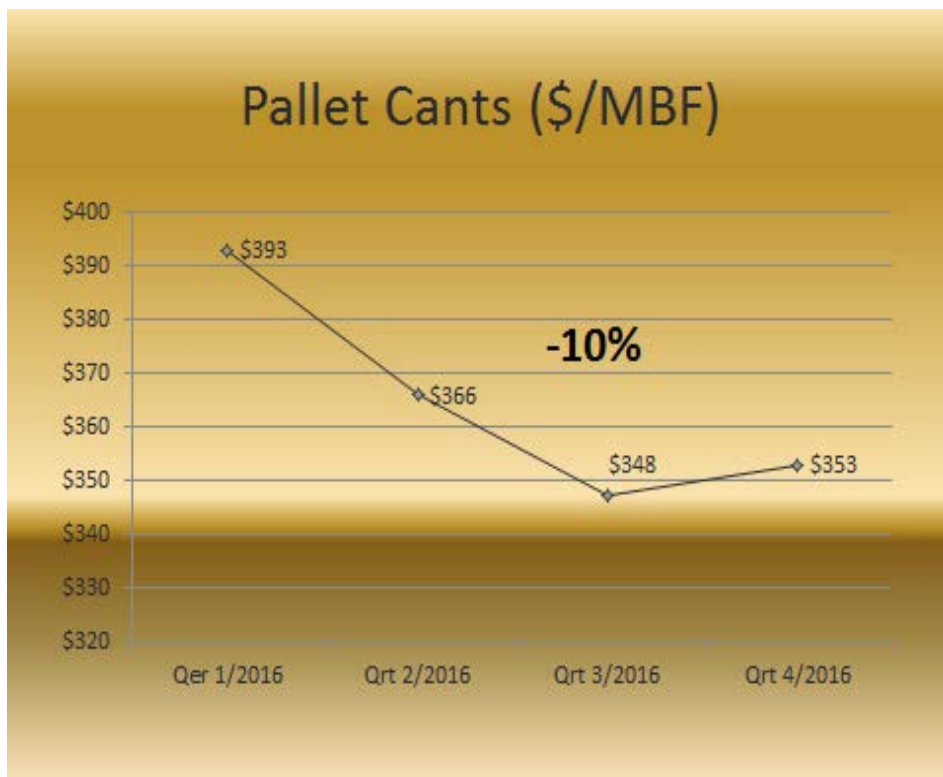
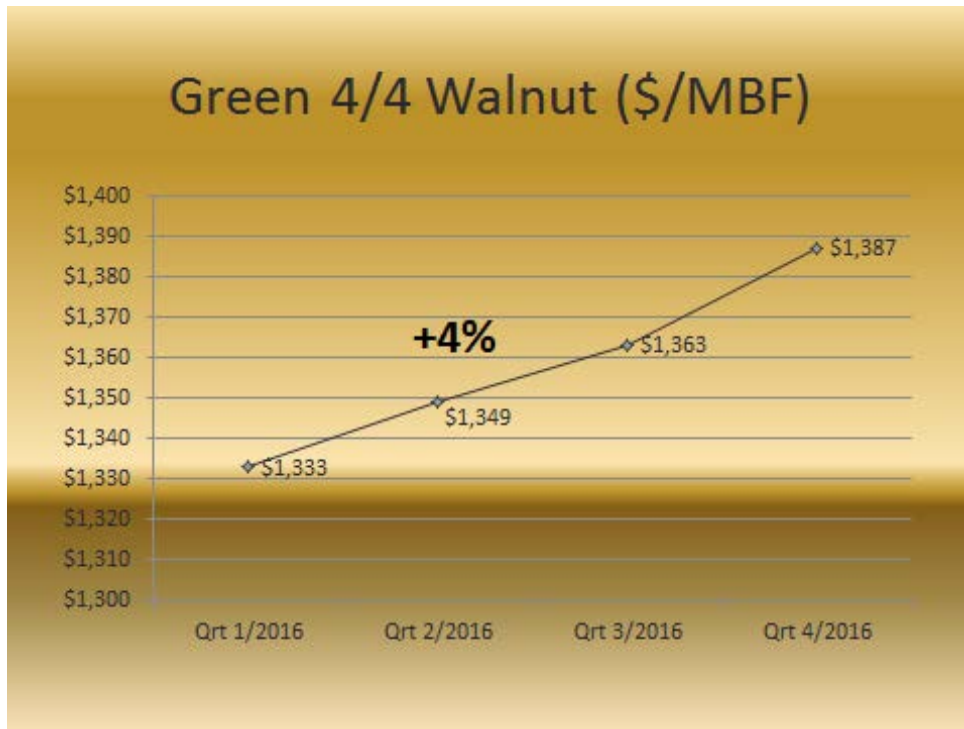


Lumber price graphs continued

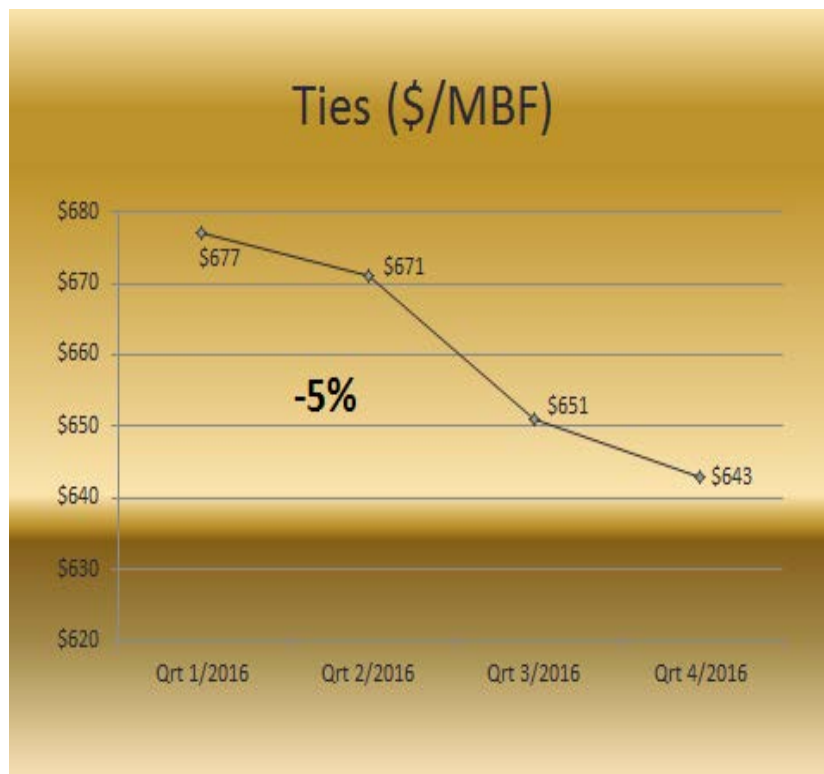
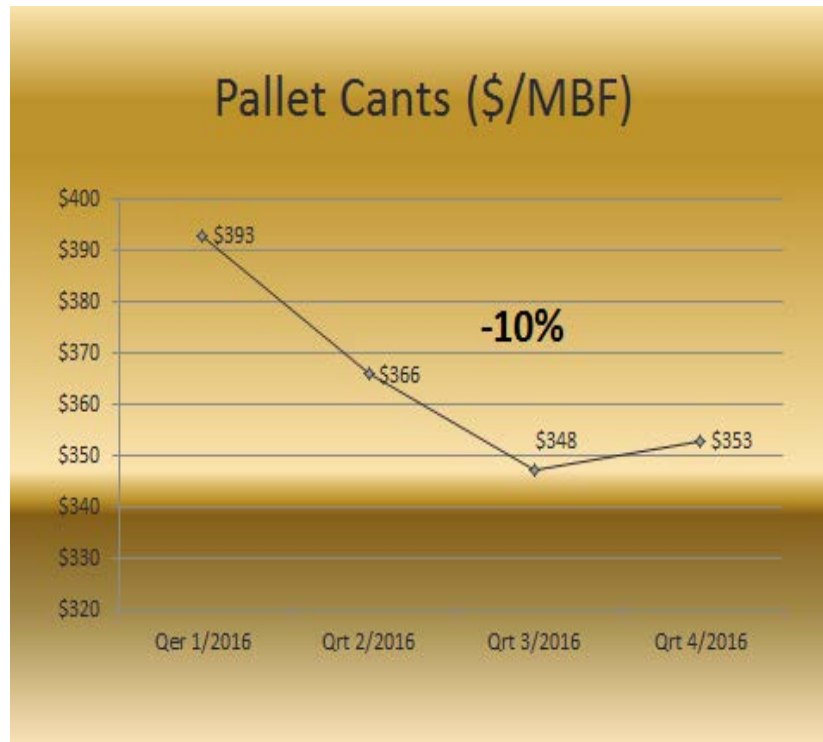




Lumber price graphs continued



Lumber price graphs continued



Exports

Indiana continues to surpass its previous year's export volumes of hardwood logs especially the first 11 months of 2016. Year-to-date log export dollars were 17% higher when comparing 2015. Overall, year-on-year exports to China, Mexico, Germany and Vietnam have been positive, while Canada and Japan were off -4% and -11%, respectively. First-half export performance came as a surprise, as shipments were up when we expected a slow start to 2016 given the strong shipment volumes of last fall. However, in the second half exports began to level off and the gains were smaller, probably due to increased inventories overseas. Still 2016 will be a solid year for Indiana exporters.

Indiana's primary exports of hardwood products (log, lumber, veneer) continue to be a viable part of the overall hardwood sales. China and Canada more than double the next-closest market and make up 63% of the total hardwood exports. China reigns as Indiana's largest overall market, ranking first in log and lumber imports, fourth in veneer, and gaining on No. 3 Spain. Japan, Mexico and Germany make up the remaining top-five markets for Indiana's log and lumber exports. Vietnam, an up-and-coming market, has shown considerable growth the first 11 months this year for lumber and logs. Veneer manufacturers' largest markets are Canada, Germany, Spain, China and Portugal.

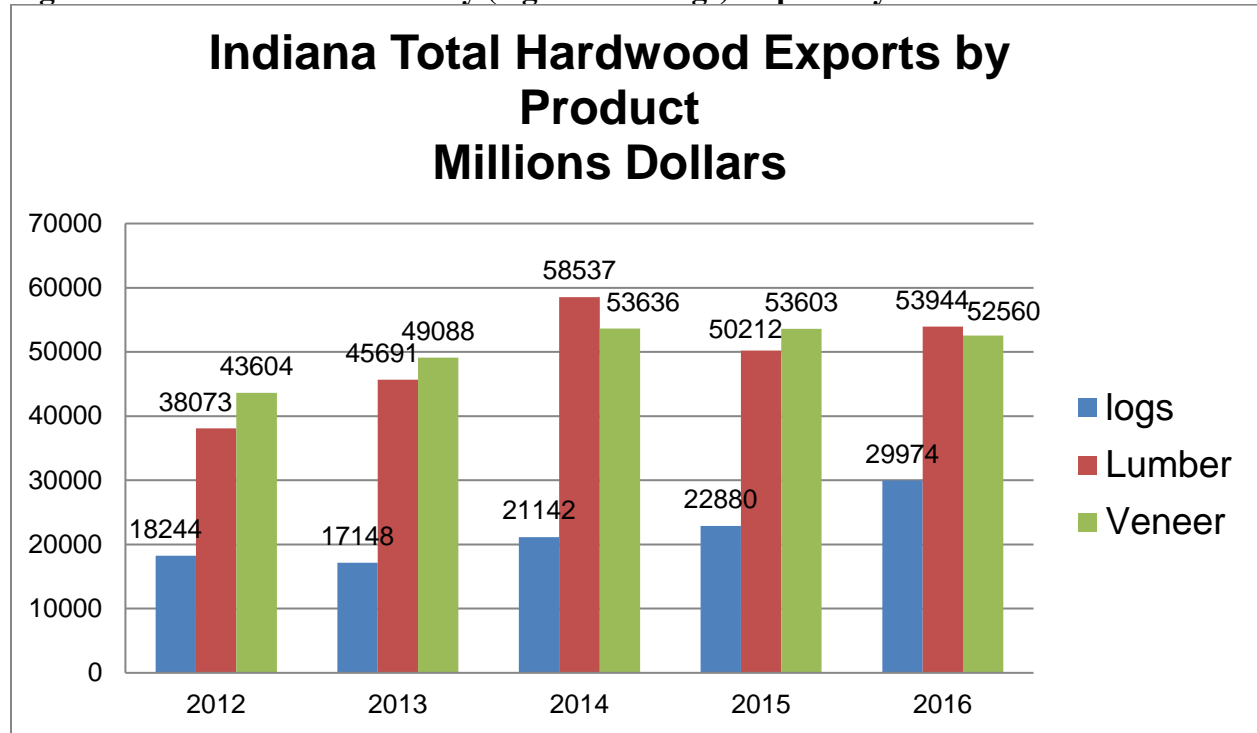
We see positive gains for the most part the first 11 months on lumber and log exports, so why the decrease in veneer? The decrease in veneer exports possibly is caused by several different market conditions. First, the strong dollar has hurt all exports; however, the effect on veneer is compounded due to veneer's price point, especially in Canada and Europe, the two largest markets. Second, log prices in the first six months, especially in the stave market, drove up pricing across the board, making veneer logs expensive, thus making veneer prices higher. Finally, struggling economies, especially in Germany and China, as well as the turmoil in the United Kingdom caused by Brexit, have also taken a toll on consumer spending.

So why then hasn't this affected the logs and lumber as much? It has but with an opposite effect. First, log exports have been on the increase for the past several years due to increased interest worldwide from countries like China, United Kingdom, Turkey and now Vietnam. Many of these importers have their own facilities to manufacture lumber and/or veneer, usually with lower labor costs. Adding to this, demand for staves and veneer, etc., has leveled off, which has helped to regulate raw-material costs. Finally, most veneer mills still have high-cost inventory that was manufactured when veneer logs were at their peak. The result is that importing logs has once again become economically feasible to manufacture at their facilities.

On the lumber side, 2015 was a down year after a robust 2014 that created high inventories for the manufacturers and import yards. Now that that lumber inventories have been reduced to a low point, importers began to replace inventory in late 2015 or lose business. Additionally, China drives this market more than any other one country (55% of volume), and it is slowly on the rebound, which has added to the lumber demand.

Figure 1 compares Indiana’s primary hardwood products for the past five years. The numbers reflect the first 11 months of each year to make the comparisons equivalent. 2016 log and lumber exports have increased by 31% and 7%, respectively, with veneer down 2% when comparing to 2015 shipments.

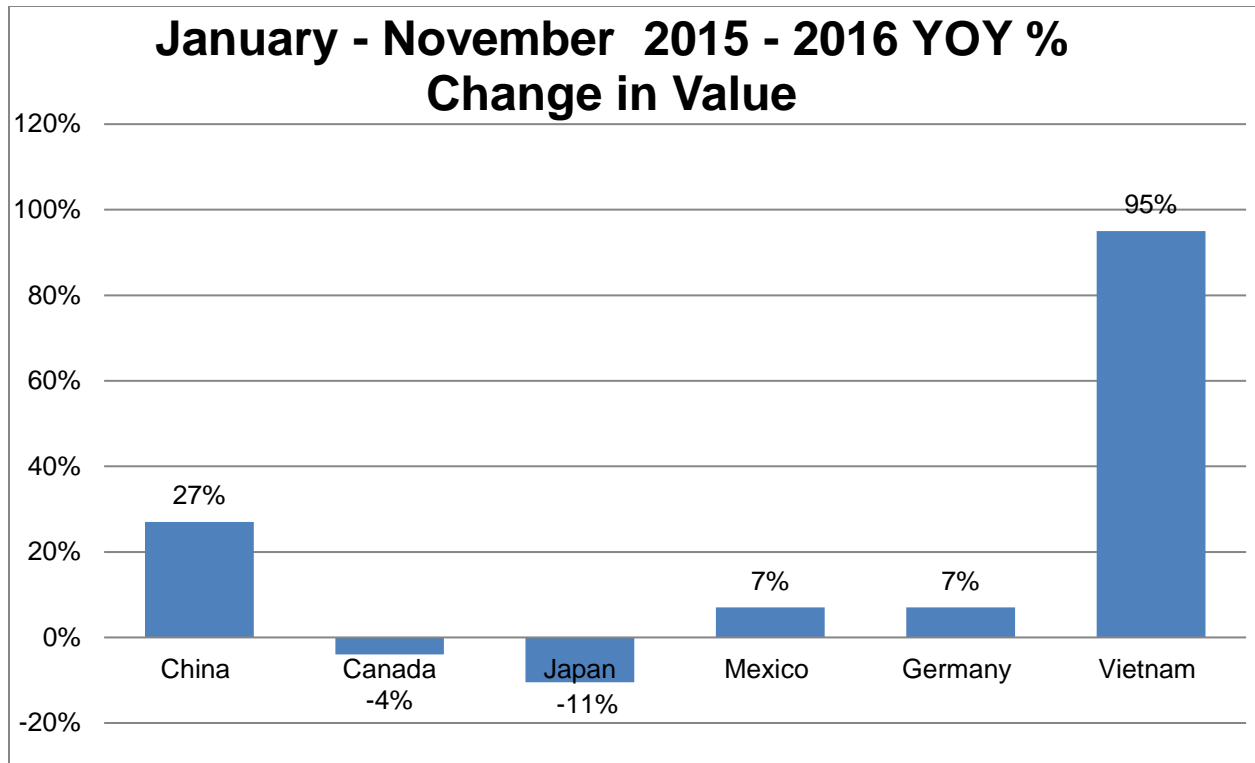
**Figure 1- Indiana’s Total Primary (log- lumber-logs) Exports by Product**



**U.S. Census Bureau’s Hardwood Export Statistics - January to November**

Figure 2 compares Indiana’s top individual (logs, lumber & veneer) markets in 2015 to the current gain or loss in value by percentage for the first 11 months in 2016. The chart below reveals only two of Indiana’s major export markets, Canada and Japan as the only decreases at -4% and -11%, respectively. All the remaining export markets, China, Mexico and Germany, show positive numbers, with Vietnam displaying substantial growth at +95%.

Figure 2 - Gain or Loss



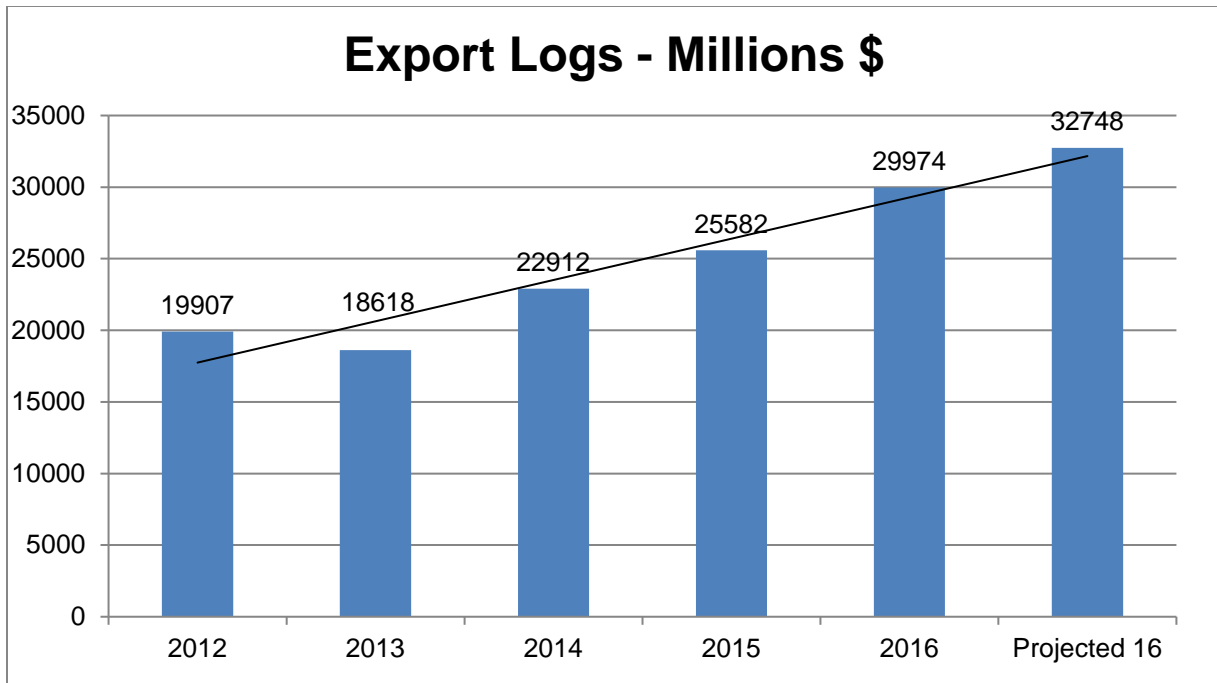
U.S. Census Bureau's Hardwood Export Statistics

### Logs

China, Vietnam and Japan are consistently the three largest importers of hardwood logs from Indiana. U.S. Census Bureau's Hardwood Export Statistics show that Indiana exported \$25.5 million worth of logs to the world in 2015. Using \$3500/m' for an average this is approximately 7 million board feet (BF), enough to supply a large sawmill.

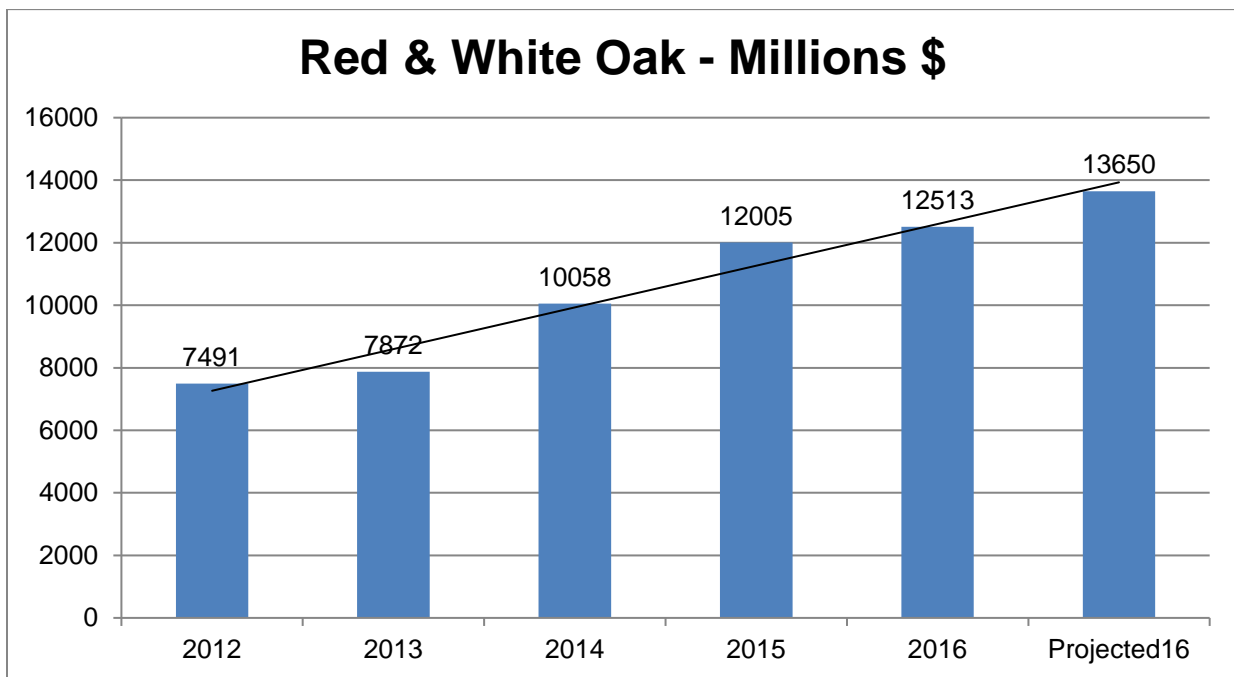
China is by far the largest importer at almost \$18 million or approximately 70% of the market. Red oak, black walnut, ash and white oak veneer, along with 2 & 3 side's clear saw logs remain the core for China. More than 20 countries compete to purchase logs from Indiana, including cherry, hard maple, ash, hickory and tulip poplar. In the second quarter of this year, log prices began to level off and even drop in some species from historic highs. The normal seasonal slowdowns in the veneer market, along with fragile economies globally and the continued strength of the U.S. dollar, are the primary reasons for this change.

**Figure 3 – Indiana’s Total Log Exports to World**



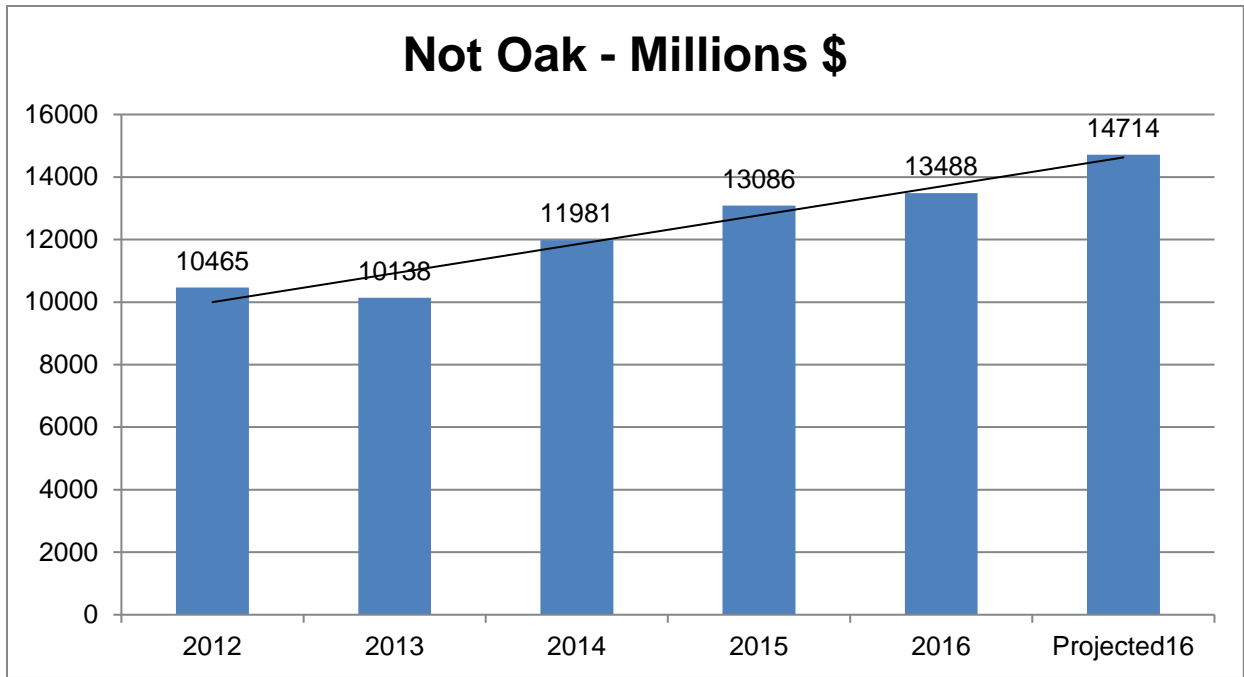
U.S. Census Bureau’s Hardwood Export Statistics - \*2016 Numbers January – November

**Figure 4 - Red & White Oak to World**



U.S. Census Bureau’s Hardwood Export Statistics - \*2016 Numbers January – November

**Figure 5 - Not Oak to World**



U.S. Census Bureau's Hardwood Export Statistics - **\*2016 Numbers January – November**

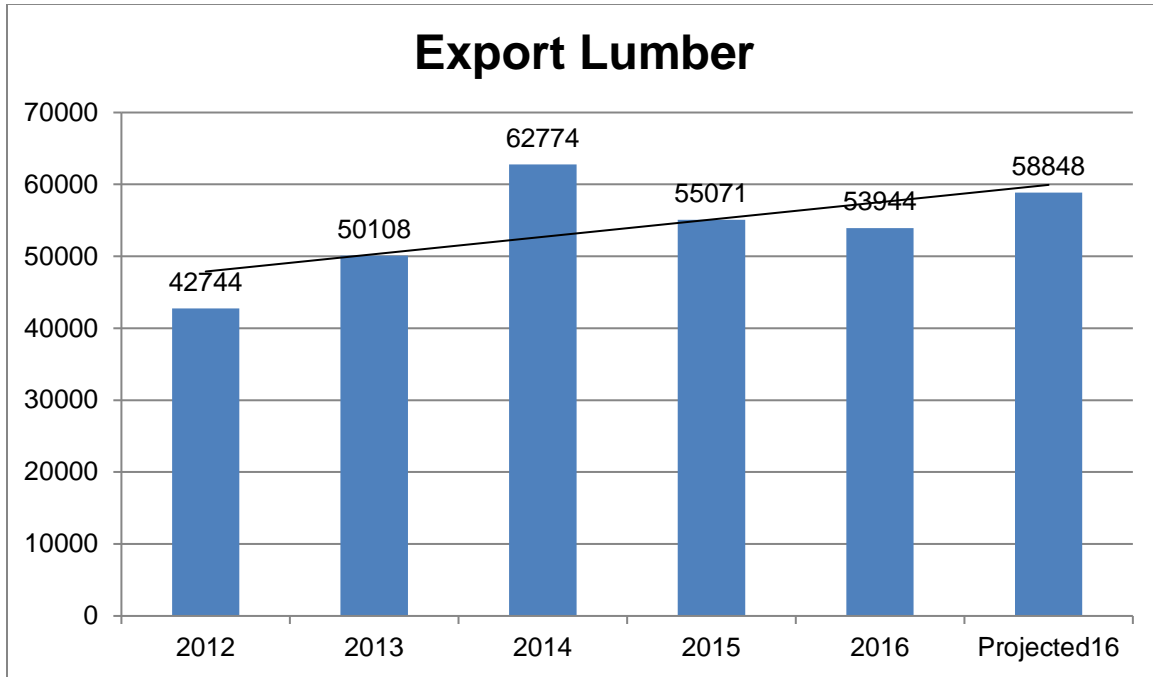
### **Lumber**

Indiana's hardwood export market has experienced an adjustment period over the past several years but is still in a strong position globally. 2016 has shown more resilience than first expected, especially considering the strong dollar and weakness in the global economies.

Indiana's lumber exports were \$55 million in 2015, a drop of 14% from 2014, which was a record year in lumber exports. However, at the current pace, 2016 lumber exports are projected to come close to or possibly exceed 2015 levels. This is welcome news for manufacturers.

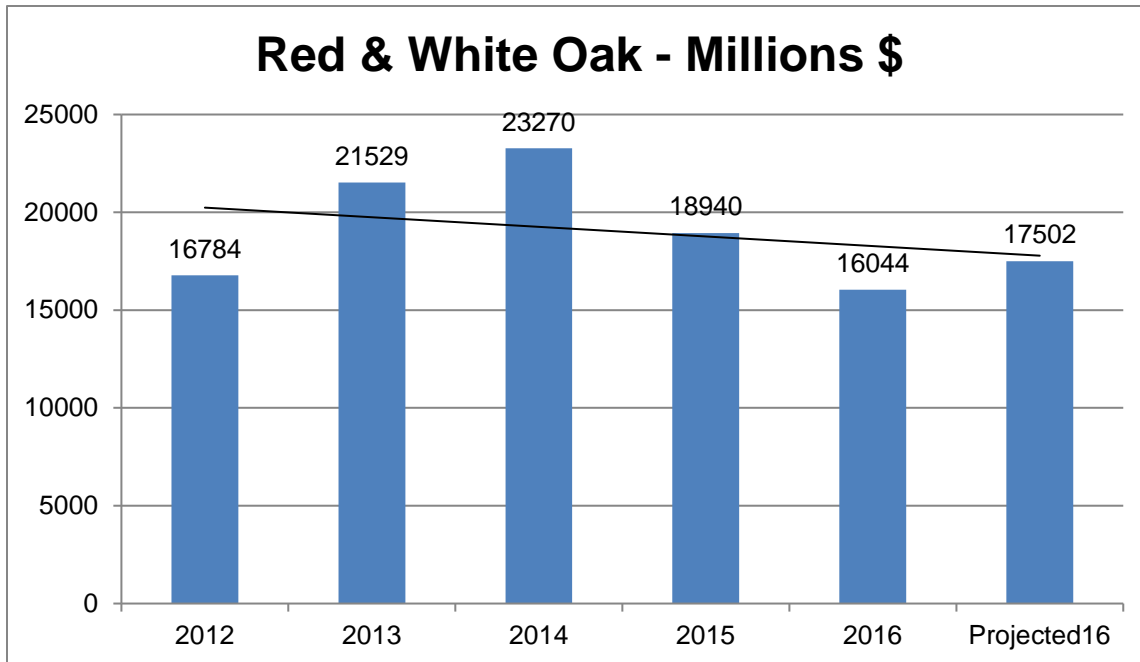
China, as stated earlier, is Indiana's largest export market and is followed closely by Japan. Canada, Mexico and Vietnam make up the remaining top five markets. Vietnam continues to slowly gain ground due to its need for the #1C and #2C grades mostly used in home furnishings and kitchen cabinet construction.

**Figure 6 – Indiana’s Total Lumber Exports to World – Millions \$**



U.S. Census Bureau’s Hardwood Export Statistics - \*2016 Numbers January – November

**Figure 7 - Red & White Exports to World – Millions \$**



U.S. Census Bureau’s Hardwood Export Statistics - \*2016 Numbers January – November



## Veneer

Veneer demand continues to be spotty, depending on the species, with most mills still running at 75%-85% capacity. Custom cutting has become the norm for some to fill operational capacity and costs.

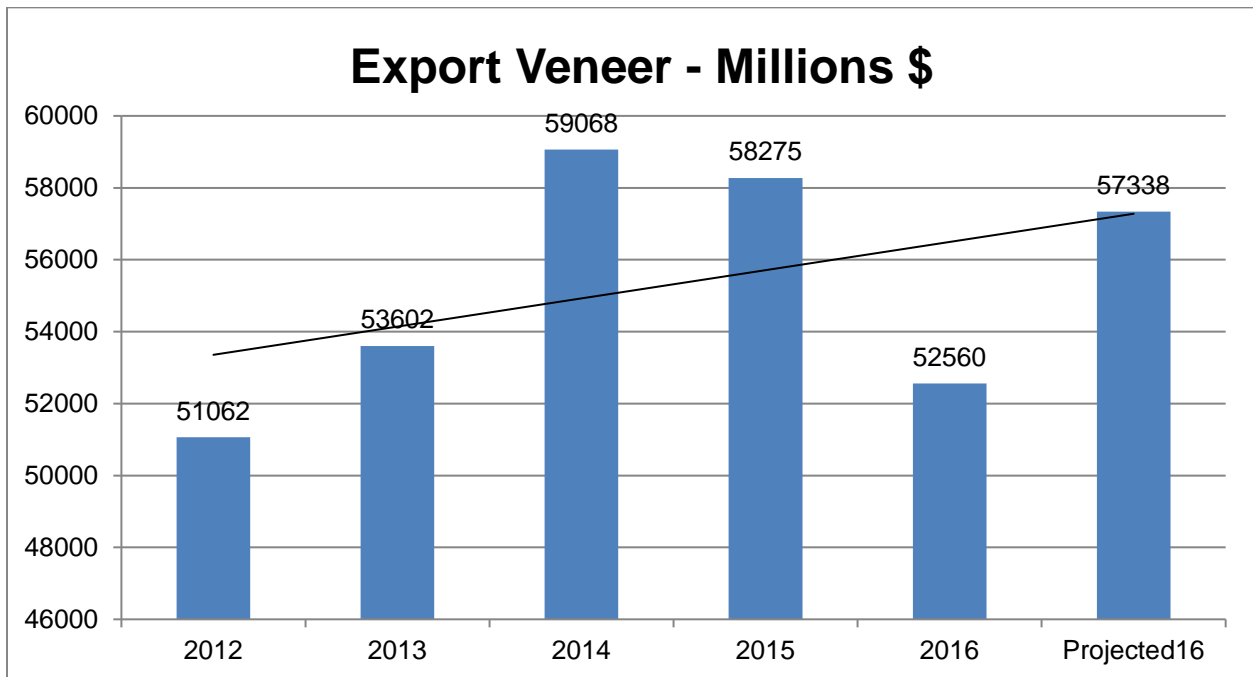
High-quality veneer log pricing remains static for most species; however, margins continue to be squeezed with the slower overall veneer demand. Stave log supply/demand ratio is in better balance, creating a leveling off from higher pricing in the first quarter of the year. Still, wet weather conditions this fall along with the economic environment can play havoc on log pricing and volumes available.

Black walnut and white oak sliced-veneer pricing remains competitive on all grades, especially the high-end “A” grades with the middle “A-B” grades making up the majority of sales. Additionally, there is a good demand for rift and quartersawn white oak. Hard maple, ash, cherry and hickories remain sluggish with only the special cuts like burl, curly, quartered etc., in demand.

Presently, 2016 veneer sales should remain close to or slightly under 2015 levels.

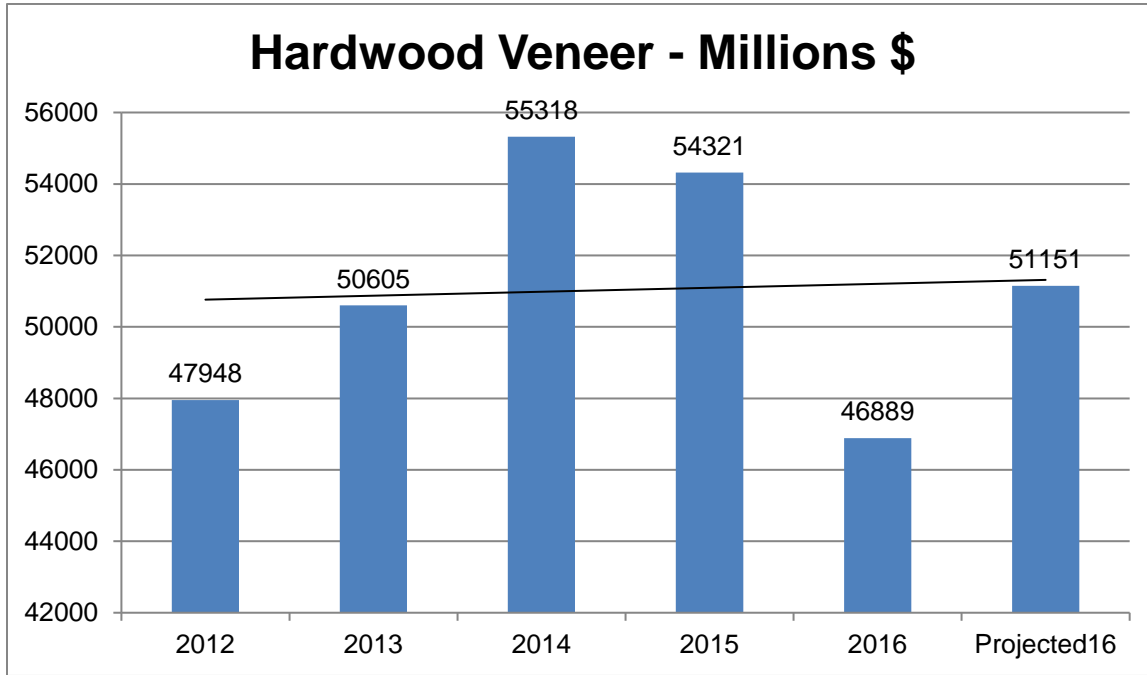
Nevertheless, the outlook for veneer, 4SC, 3SC and stave logs should continue to remain constant for 2017.

**Figure 8 – Indiana’s Total Veneer Exports to World**



U.S. Census Bureau’s Hardwood Export Statistics - \*2016 Numbers January – November

**Figure 9 - Hardwood (excluding softwood & tropical) Veneer Exported to World**



U.S. Census Bureau's Hardwood Export Statistics - \*2016 Numbers January – November

