

# Hardwood Lumber and Veneer Series



## Cottonwood

FNR-282-W

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**EXPERT**  
REVIEWED

Eastern cottonwood (*Populus deltoides* Bartr.ex Marsh.) ranges from Saskatchewan through the great plains and east to the Appalachians and the southeast coastal plains. It prefers moist river bottoms and flood plains, and it is often mixed with willow, sycamore, and elm. Cottonwood cannot tolerate shade. It is a very fast growing with forest grown trees forming a long clear bole and a small crown. In the south, saw log size timber can develop in 20 to 30 years.

The trees are usually 80 to 100 feet tall and 3 to 4 feet in diameter. The largest reported tree is nearly 12 feet in diameter at 4½ feet above the ground.

### Wood Color and Texture

The sapwood is whitish and not always distinct from a somewhat darker grayish brown heartwood. As a white, predominate sapwood species, the wood is easily discolored by oxidation and fungal stain. The pores are small, and the wood has a uniform grain pattern. The wood is odorless when dry, but when wet, it has a characteristic disagreeable odor. The wood is tasteless.

### Workability

The wood is rated at or near the bottom of the list in regards to planning, shaping, turning, and boring. The wood tends to fuzz.

### Strength

At 12 percent moisture content, cottonwood weighs 28 pounds per cubic foot, making it one of the lightest commercially available woods. The wood is strong for its weight but not comparable to the dense heavy woods.



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Cottonwood tree

### Steam Bending

The wood does not bend well with steam.

### Drying

A moderate kiln schedule is used to dry the wood.

### Shrinkage

The total volumetric shrinkage from green to oven-dry condition is 13.9 percent, which is

intermediate when compared to the other hardwoods.

### **Decay Resistance**

The wood is not resistant to decay.

### **Commercial Use, Grading, and Value**

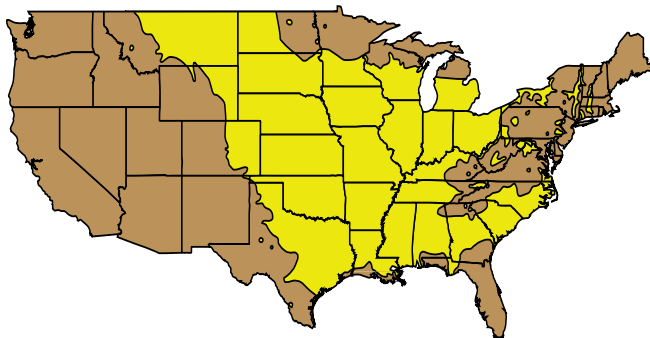
The positive aspect of cottonwood lumber is its light weight and its ability to be nailed or fastened without splitting. As such, it has been used to manufacture boxes and crates, and sometimes pallets where heavy loading will not occur. It is preferred by at least one major producer of caskets. It can also be used for concealed furniture parts, core stock, or wherever a functional wood species is needed. Where codes permit, the lumber could be used for local construction, particularly sheathing. But, it must be kept dry.

The wood is graded standard by the NHLA rules. In addition, there are two specialty grades that cover cottonwood. These grades require exceptionally wide stock for paneling, boxes, and wagons that can be developed with cottonwood due to the size of trees. However, there is little demand for these grades at this time.

The wood is priced only in the southern market, and it is comparable to yellow-poplar or aspen in the north. It is somewhat more expensive than the gums, sycamore, and elm but much less than the more decorative hardwoods.

As a light weight, relatively inexpensive, functional wood, cottonwood deserves more consideration.

The woods of cottonwood and aspen are similar, but aspen is somewhat finer textured. Dark streaks and knots in aspen will show a yellow fluorescence when exposed to a UV light; cottonwood does not do this.

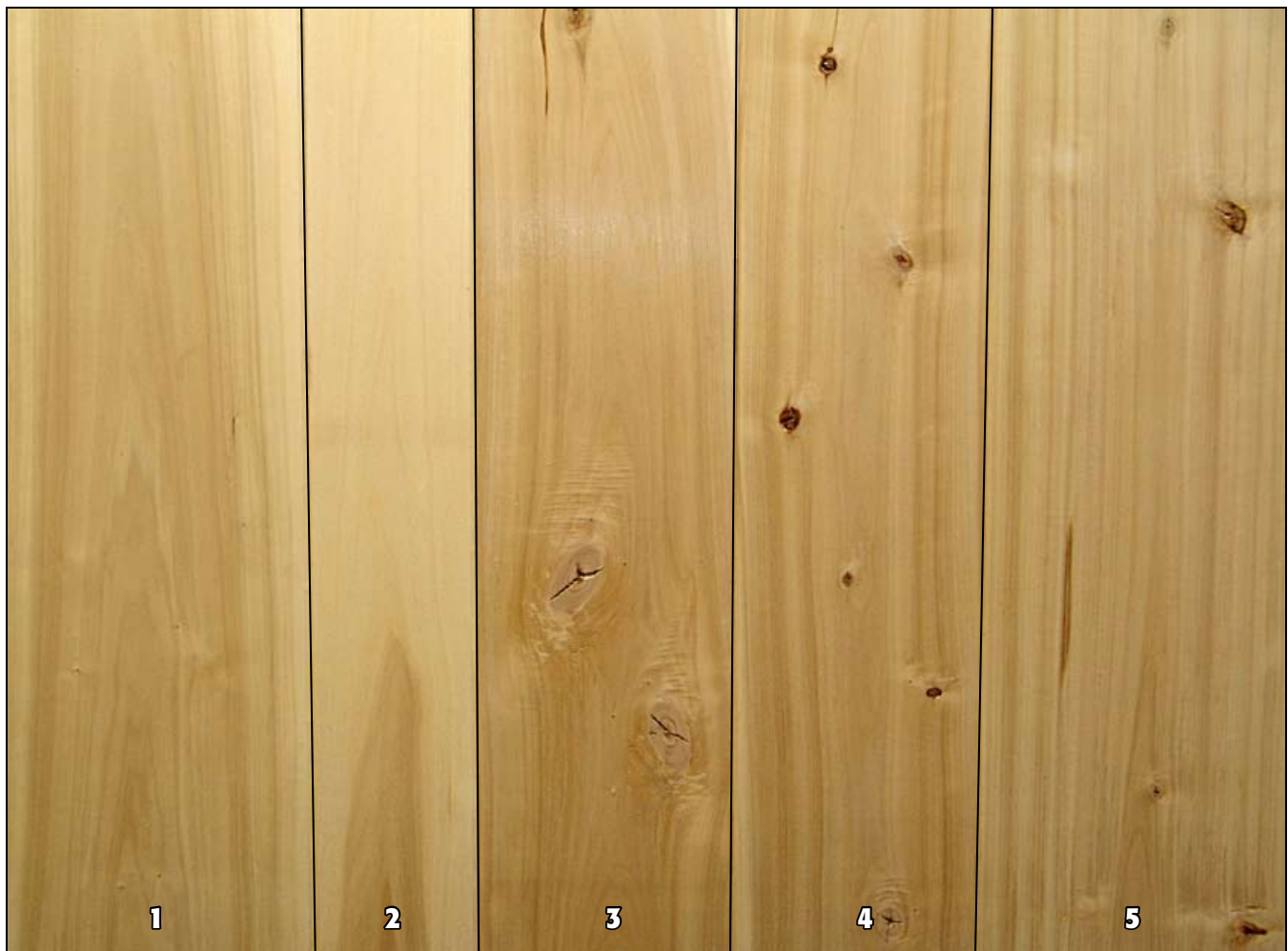


Range of the eastern cottonwood



Cottonwood logs

Chip Morrison



Chip Morrison

Cottonwood is one of our softest and fast growing species. Most commercial grade lumber production is in the southern Mississippi Delta states, but it also commonly grows in lowland areas of the central states.

Board 1 shows a subdued grain pattern, grayish heartwood, and white sapwood. The amount of heartwood can vary substantially, and it is not always easy to separate from the sapwood.

Board 2 is mostly white sapwood and has a very light stain from two sticker marks that is barely visible.

Board 3 is mostly heartwood with two large knots. Sapwood with blue fungal stain is present at the top edges of each side of the piece.

Boards 4 and 5 show typical knots and light mineral streaks.

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