

Hardwood Lumber and Veneer Series



Aspen

FNR-273-W

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Aspen and cottonwood are very closely related; see discussion of cottonwood for additional information. There are three species of aspen in North America. All species are widely distributed in the North as well as at higher elevations in the Western United States.

The largest quaking aspen reported is 3.4 feet in diameter; the largest big tooth aspen is 2.8 feet in diameter; and the largest balsam poplar is 4.4 feet in diameter all at 4 ½ feet above the ground.

Wood Color and Texture

Once processed, the woods of the Aspens, Balsam Poplar, and Eastern Cottonwood are very similar. Cottonwood is said to be somewhat coarser textured, darker in color and never creamy as with aspen. It is devoid of luster. Dark streaks and knots will fluoresce yellow under ultraviolet light; whereas, these characteristics in cottonwood will not.

Workability

Aspen is rated just somewhat better than cottonwood for planing, shaping, boring, and mortising.

Strength

At 12 percent moisture, content quaking and big tooth aspen weigh about 26 to 27 pounds per cubic foot or just slightly less than cottonwood. These are some of our lightest woods. The mechanical properties of the two species are comparable and relatively weak compared to others. Balsam poplar weighs just 23 pounds per cubic foot at 12 percent moisture content, making it an even lighter wood.

The mechanical properties are also substantially reduced compared to the other aspens and cottonwood.

Steam Bending

Data is not reported on the ability of the wood to bend when treated with steam. The wood will probably not bend well.

Drying

A relatively severe schedule can be used to dry aspen; however, collapse and wet pockets can be a problem.

Shrinkage

The shrinkage of both aspen species and balsam poplar is relatively low and substantially less than cottonwood.

Decay Resistance

None of the species exhibit any resistance to wood decay.

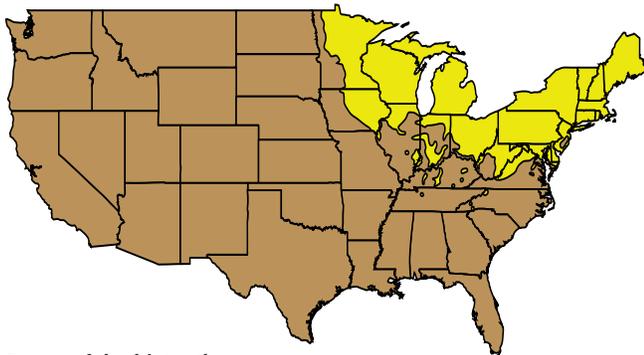
Commercial Use, Grading, and Value

Aspen is graded standard just like cottonwood except stain is admitted in all grades.

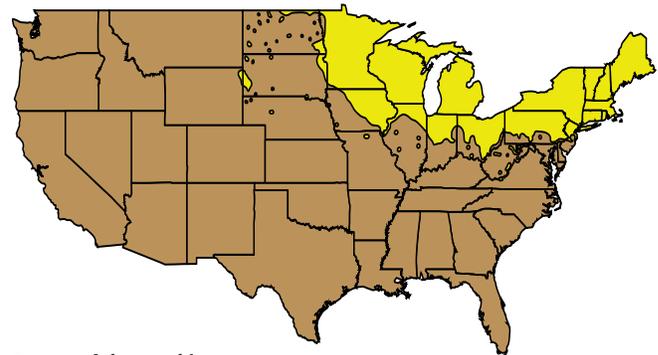
At one time aspen was considered a weed tree and delegated to the pulp and paper industry. It is also a favorite species for the manufacturer of panel boards. Now it has a well established lumber market in the Northern region, and its value is about the same or slightly more than cottonwood in the South. Most of its reported properties are somewhat better than cottonwood. It has a uniform texture and takes stains well.

Table 1. Common and scientific names, range, preferred sites, and other information about different aspen species.

Common and Scientific Names	Range	Site	Comments
Quaking Aspen <i>Populus tremuloides</i> Michx.	Wide ranging from Newfoundland through Alaska in the West, South to Arizona. In the Midwest South to Northeastern Iowa, northern Illinois to Pennsylvania. Found in some scattered areas in the Appalachian Mountains	Adaptable to a variety of soils ranging from moist loamy sands and clay. Intolerant to shade.	Most widely distributed tree in North America
Big Tooth Aspen <i>Populus grandidenta</i> Michx.	Nova Scotia West through southern Canada to northeastern North Dakota then southeast to the Ohio River and along the mountains to Tennessee and then to coastal New Jersey.	More site quaking aspen and prefers well drained upland soils of medium to good quality	
Balsam Poplar <i>Populus balsamifera</i> L.	The range is similar to quaking Aspen, but more restricted in the southern portions.	Prefers moist alluvial bottomlands and stream banks	The buds are covered with a sticky, amber colored resin that has an aromatic bouquet



Range of the bigtooth aspen



Range of the quaking aspen