

Shopsmith Woodworking Academy Notes

Hardwood Information You Should Know — PART 2 of 4

In Part one of this series, we researched hardwoods in general and investigated the characteristics of poplar and hard maple – two of the eight most popular hardwoods. In this article, we'll continue our discussion with a look at cherry and red oak.

Cherry (Black) — genus: *Prunus* — only lumber species: *Serotina*

When Early American colonists began their moves Westward, they encountered vast forests of cherry in the Appalachian Mountains of New York, Pennsylvania and West Virginia. As a result, cherry became more and more available to fine furniture craftsmen.

The cherry tree is most commonly referred to as black cherry...however, it's also often called choke cherry, wild black cherry, rum cherry and whiskey cherry. Black cherry varies from shrubs 10 feet tall to towering trees that could be over 100 feet high.

When first cut, cherry wood is generally light red...but with age and exposure to air and light, it turns an astoundingly beautiful deep-glowing red. WOW! Many antique experts rely on the deepness of the color to judge the age of a cherry antique.

Cherry is one of the most pleasant hardwoods to work with hand or machine tools. Its heaviness lends to exceptional stability. It won't warp easily, is almost always free of checking and is extremely shock-resistant. It's tough, durable stuff!

Perhaps the most delightful characteristic of cherry is its unique quality to produce glassy-smooth surfaces when machined. For most hardwoods, it is known that two major factors (other than density) affect the production of smooth surfaces during machining: (1) Straight, uniform grain and (2) Heartwood free of hard mineral deposits and streaks. Cherry easily meets both of these requirements and offers a medium density – all of which makes it easy to produce incredibly smooth surfaces.

The chart below exemplifies how well cherry responds to basic machining operations. The numbers presented in the chart represent the percentage of *perfect* or *good-to-excellent* pieces produced by different machining methods. Woodworkers around the world will attest to the overall smoothness of cherry after sanding. It's equally responsive to finishes, because its small, uniformly spaced pores typically absorb stains and oils very evenly.

Operation	Machining Quality	Red Oak	Cherry
Turning	good to excellent pieces	84%	88%
Planing	perfect pieces	91%	80%
Boring	good to excellent pieces	99%	100%
Shaping	good to excellent pieces	28%	80%
Mortising	good to excellent pieces	95%	100%
Sanding	good to excellent pieces	81%	not tested
Steam-Bending	unbroken pieces	86%	n.t.
Nail Splitting	pieces free from complete splits	66%	n.t.
Screw Splitting	pieces free from complete splits	78%	n.t.

Cherry's unmatched warmth and patina have made it a premier cabinet wood, second only to walnut. Its richness of color and overall beauty reserve it almost exclusively for fine furniture and architectural woodwork.

Red Oak — genus: *Quercus* — principal lumber species: *Rubra* (Northern Red Oak). Other common lumber species: *Pin Oak*, *Black Oak*, *Southern Red Oak*

There is no better known or more widely used hardwood group in the United States than the oaks. Together, they comprise numerous species, but they are generally classified as either red oak or white oak. When freshly cut, both red oak and white oak look similar in grain pattern and texture, but red oak has a distinct reddish tone compared to white oak's light brown appearance.

There are several distinctions which separate the red oaks from the white oaks. Masses of cells called *tyloses* appear in the pores of some hardwoods (namely white oak and black locust). These *tyloses* in the pores make the wood extremely water resistant. Red oak has **FEW** *tyloses*, meaning it is **NOT** water resistant unless it is sealed.

Northern red oak grows across the Eastern United States, as far South as Arkansas and Alabama, reaching an average height of 65 feet. The Northern red oak may be the fastest-growing of our native oak species. The open pores of red oak give it an open grain and coarse texture. Grain patterns can vary significantly, depending on the way the wood is cut.

Red oak is heavy and stiff, extremely strong and very shock resistant. It is moderately easy to work and holds nails and screws exceptionally well. As you can see from the chart, red oak rates fairly high for almost every operation.

Like all oaks, red oak finishes well, but for a super-smooth surface, you should fill it before painting or finishing. You can, however, achieve a variety of textures with red oak because of its open grain.

Many of today's kitchen cabinets are made of solid red oak or red oak veneer. Its popularity for kitchens is probably attributed to its warm, soft color – perfect for the “hub” of the home. Red oak blends beautifully in contemporary or traditional decors, and its strength and durability make it a popular choice for furniture, architectural moldings and cabinetry.

Coming up in the November/December issue — PART Three of Four
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