

Marketing Your Timber: Forest Products

Forest products and Mississippi have a long history. Southern yellow pine lumber from Mississippi helped rebuild Chicago after the great fire of 1871. Pine poles and pilings used to build the Panama Canal came from Mississippi. Millions of hardwood crossties from Mississippi helped build the railroads that forged this nation. Mississippi hardwoods can be found in homes and businesses all over the world, in flooring, furniture, cabinets, and panels.

Mississippi forests provide timber for a multitude of products. Southern yellow pines (loblolly, slash, shortleaf, and longleaf) are used to make structural lumber, plywood, trusses, poles, timbers, and decking. Hardwood species in Mississippi (more than 30 commercially important) are used to produce lumber, furniture, flooring, cabinets, and caskets, along with many more specialty products.

Depending on what the final finished product is, the price of the timber will vary. Buyers are willing to pay more for standing trees if they will be used to make high-value products. For this reason, it is important for landowners to understand what products are produced. Depending on the current market for the end product, there may be more or less demand for trees of a certain species, either driving up or lowering the price a buyer is willing to pay.

The Products

While there are many products that can be made from both pine trees and hardwoods, there are products that are not interchangeable. To help forest landowners understand what products are made from which type of timber, the beginning of each section lists the type of trees that are used by two simple classifications, pine and hardwood.

Pulpwood

Trees used: pine and hardwood

Pulpwood has been an important forest product in Mississippi for many years. It is defined as wood primarily cut for the production of pulp and paper, while in

recent years, some pulpwood has gone into oriented strand board (OSB).

Any size trees can be used as pulpwood, but mainly trees that are 5 to 9 inches in diameter at breast height (DBH; 4½ feet above the ground) are used because they are not very useful for other products. Most pulpwood is cut from thinning of forest stands to reduce the overall number of trees per acre and to allow more growing space for defect-free trees that will grow into trees of high quality. This does not mean that large-diameter trees cannot be pulpwood; if a tree has a defect, such as rot or severe crookedness, it also may only be acceptable as pulpwood.

Pulpwood is often measured in cords or, more recently, in tons. A cord is a stack of wood 4 feet high, 8 feet long, and 4 feet wide, including wood, air, and bark. Cords are a measure of volume, and the amount of wood in a cord varies somewhat depending on the size of the logs in the stack. (A cord of logs that is 20 inches in diameter will have less air space than a cord of logs that is 8 inches in diameter). For this reason, and because transport of pulpwood by truck has become common, the forest industry favors weight measurements of pulpwood. Today, most pulpwood is referred to in tons.

Though the weight of a unit of wood can vary by species, size, and season, standard pulpwood weights are often used for conversions (See Table 1).

Table 1. Weights for a cord of pulpwood.

| Species | Weight (pounds) | Weight (tons) |
|----------------|-----------------|---------------|
| Pine | 5,200 | 2.7 |
| Soft hardwood | 5,400 | 2.7 |
| Mixed hardwood | 5,600 | 2.8 |
| Hard hardwood | 5,800 | 2.9 |

To some extent, these weights will vary with seasonal changes.

Energywood

Trees used: pine and hardwood

Energywood is basically pulpwood that is being used for making products that are used to generate energy. Many coal-fired powerplants are doing what is called “co-firing,” where wood chips or pellets are added to the coal to reduce emissions of greenhouse gases. Here in Mississippi, there are several wood pellet plants that turn pulpwood and sawmill residues into pellets for heating and energy production, which are used in both the United States and overseas. In the future, there will be more opportunities for wood to be used in this way.

Chip-n-Saw

Trees used: pine

Chip-n-Saw is a registered trade name for a sawing machine that cuts small logs into lumber and chips in a single operation. This innovation is about 40 years old and has only begun to affect Mississippi markets since the mid-1980s. As the use of this machine spread, some forest industry firms began to purchase a category of smaller logs commonly called “chip-n-saw.” Some firms that previously had used only sawlogs installed chip-n-saw mills and began to also use smaller logs.

The result has been the creation of a category of forest products called chip-n-saw that includes the large pulpwood and small sawlog diameter range. Chip-n-saw logs are usually between 8 and 12 inches DBH (although some chip-n-saw machines can process up to a 22-inch log), and since chip-n-saw logs yield lumber and chips, they can bring higher stumpage prices than pulpwood to the landowner.

Chip-n-saw logs are not just large pulpwood. Because they will be used to make lumber (typically 2-by-4s or 2-by-6s), the qualifications for a log to be chip-n-saw are stricter than for pulpwood. Usually the specifications for chip-n-saw logs will include a minimum butt diameter, minimum top diameter, minimum length, and low allowance for defects such as disease or crookedness. All chip-n-saw can be used for pulpwood, but all pulpwood is not good enough to be chip-n-saw.

Chip-n-saw is commonly purchased and handled in tree lengths like pulpwood, with prices being quoted by the cord or ton, but prices also can be quoted by merchantable board-foot (MBF), similar

to sawtimber. If you, as a landowner, are confused about which offer might be best among offers given in different measurement units, ask the buyers to tell you their conversion factors or to furnish you a bid in a unit you prefer.

Landowners should also take into consideration that chip-n-saw logs are only valuable if there is a mill that can take them within a reasonable hauling range.

Sawtimber

Trees used: pine and hardwood

Sawtimber (also sawlogs) is the most important category of Mississippi forest products and accounts for nearly two-thirds of the annual harvest value. Both pine and hardwood species are harvested each year, but the pine sawlog harvest volume is usually more than twice the hardwood volume.

Sawtimber or sawlogs are defined as trees large enough to be cut into lumber. Specifications for sawlogs refer to length and diameter inside the bark (d.i.b.) at the small end. Log specifications are regional and vary between pine and hardwood. Most mills have log specifications based on the type of equipment being used in their particular mill. Several industries purchase sawlogs using exact specifications for special products. Some of these will be discussed later in this publication.

Sawtimber is usually measured in board feet. A board foot is a unit of measurement defined as a board 1 inch thick, 12 inches long, and 12 inches wide when it is rough and green. Board feet is used as a measure because the aim of lumber manufacturing is to produce rectangular lumber from round logs. Board feet estimates how much lumber a certain size log will yield. Normally, logs are measured in thousands of board feet (MBF).

Log rules estimate the lumber volume in logs. A log rule is a mathematical formula that predicts lumber yield based on log measurements and sawing variables. Hundreds of log rules have been developed since the 1800s. In Mississippi, the Doyle Log Rule was the official, statutory unit for sawlog transactions for many years until the law was changed in 1996. Today, sawlog purchases may be made by volume, using cubic feet or the Doyle, Scribner Decimal C, or International quarter-inch log rules. In addition, sawlogs may be purchased by weight in standard 2,000-pound tons.

As with pulpwood, the forest industry has begun to purchase sawlogs by weight. Weight scaling is a fast and convenient method for some mills but does not apply to all operations. Uniform weights for sawtimber have not been established as they have in pulpwood, primarily because weight conversion of logs to lumber volume is much more complicated. Factors such as species, origin of the logs, location in the state, log diameter, and mill equipment make uniform weights for sawtimber difficult to calculate and less useful. Each mill may have its own unique conversion table for comparing log weight (tons) into MBF.

Poles and Pilings

Trees used: pine

Poles and pilings are another special category of pine logs. Although in other regions of the country hardwood species have been used for poles and pilings, most of the market is now dominated by softwoods. Southern pine is a major species used for poles and pilings because of its availability, strength, and treatability. Poles are used for applications such as electrical and utility transmission and distribution lines, street lights, outdoor billboards, pole buildings, and many others.

Piles are poles or heavy timbers that are driven into the ground to provide a secure foundation for structures built on soft, wet, or submerged sites. Pilings are used for buildings, wharfs, and bridge foundations built near water or on soft soils. Specifications for poles and pilings are very exact and are described by the [American National Standards Institute](#).

To qualify as a pole or piling, a tree must meet criteria for diameter, length, straightness, grain, knots, and rate of growth, among others. Poles are divided into 15 classes, each with minimum size and length requirements. Trade in the smaller class poles is the most consistent business for pole companies. These utility poles used for distribution lines usually range from 35 to 50 feet long. This means poles can be merchandised out of sawtimber and sometimes chip-n-saw sales, so landowners should not forget the pole market as a marketing opportunity. As few as five to ten utility poles per acre, or just two larger poles (80 feet or longer) per acre can be an acceptable cut. Poles are purchased on a per-thousand-board-feet basis, such as sawtimber, or by the piece. Poles also have strict density requirements. Six growth rings per inch in the outer part of the tree

is a common requirement. Thus, trees grown quickly may not qualify for pole manufacturing. You should identify and contact pole companies in your market area to explore the opportunities for selling poles before making a timber sale.

Veneer Logs

Trees used: pine and hardwood

Both hardwood and pine logs are used to make veneer (also called peeler logs or plywood logs). Pine logs are used mostly to make veneer for Southern pine structural plywood. There are several pine plywood mills in Mississippi, largely in the central and southern parts of the state.

Hardwood logs produce veneer that is used for many interior and decorative purposes. Hardwood veneers are used for furniture, boxes, cabinets, doors, baskets, plywood, flooring, and other products. The most common hardwood species used for veneer in Mississippi are red oak, white oak, yellow poplar, sweetgum, and pecan.

Pine veneer logs are often purchased from landowners by a procurement forester as sawtimber or from other companies who merchandise their logs. You can increase your odds of capturing this value by asking plywood companies to bid when you market timber.

It is less common in Mississippi for landowners to market veneer hardwood logs. Usually, veneer logs are sold as part of a hardwood sawtimber sale and then merchandised to the veneer market from the mill. The main reason for this is that hardwood log value depends on grade, and few landowners are experienced enough to recognize they have veneer-grade material. Also, because only high-quality logs are suitable for decorative veneers and only a few species may be in demand at a particular time, veneer logs often represent a small portion of the sale volume. The mill yard is a logical and efficient place for a veneer buyer to purchase logs.

If you have a stand with enough volume and quality of veneer-grade trees, you should explore the veneer market. As a first step, consult a forester to see if your trees meet the veneer grade. Then, contacting a few local hardwood mills should help identify a veneer buyer for your area.

How Does Product Knowledge Affect You?

Have you ever sold a car? To market that car properly, you have to know how old it is, how it works, how many miles it has been driven, and who owned it before. You should also know many other facts about it. Without a detailed understanding of that car, your ability to sell it for maximum value will be limited, especially if you're trying to sell it to an experienced buyer, like a used car dealer. The same is true when marketing your timber. You must know the type of timber you have, what species it is, which mills are nearby or within hauling range, and what

products can be made from your timber. For example, forest landowners who sell pine poles for sawtimber prices miss a chance for additional income.

Through a lack of knowledge, many landowners may not get full value from their timber when it is sold. Landowners who educate themselves about forest products before marketing their timber will be more likely to be satisfied with their efforts when the timber is sold. Marketing is an important stage in the life of your forest. Before you market your timber, learn all you can about what is in your forest. By doing so, you will help yourself get full value for your forest and ensure that a new forest will take its place for the future.

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Revised by **Rubin Shmulsky**, PhD, Professor and Head, Sustainable Bioproducts, from an earlier edition by Robert A. Daniels, PhD, retired Extension Professor, Forestry.

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