

HOW HARDWOOD IS PROCESSED

In the processing of wood and the production of hardwood products, virtually none of the tree is wasted.

Modern sawmills and finished products manufacturing facilities have more in common with high tech companies than the wood products industry of yesteryear. Even small operations have incorporated computerized equipment. Larger sawmills use computer-controlled, laser-guided bandsaws, planers and edgers to obtain the maximum yield from a log. Manufacturing facilities use computer-assisted drawing (CAD) programs to accelerate the design and development of new products.



In the 1970's as much as 20 percent of the tree was not utilized. That fell dramatically to about 7 percent waste in the 1980's. Today waste is negligible or nonexistent. There are several reasons:

- Precision equipment is used to process each log efficiently.
- Once wasted, bark now is used for landscaping, garden mulch and other products.
- Sawdust is recycled as a fuel for lumber drying kilns and other industry needs or is sold as animal bedding.
- Chips are used to make paper, composite boards and other products.
- Odd sizes and small pieces of boards that otherwise would be discarded are now glued together to make complete boards.

Pennsylvania leads the nation in the production of hardwood lumber. The Commonwealth is also a leading state in other value-added wood manufacturing -- the processing of the raw lumber into a product of even greater value.

How the wood is used usually depends on the species, size and quality.

The Sawmill

The processing of the log relies on increasingly sophisticated equipment -- computer monitoring as well as human skills -- from sawing to lumber grading, packaging and warehousing.

At the sawmill, logs are fed into machines to be debarked. Bark goes on to become landscaping mulch and other products.

Logs are then analyzed and cut to produce the maximum amount of quality lumber. Irregularly shaped or small pieces, and trimmings, go on to be chipped and usually are sold to paper mills or composite board manufacturers. Boards are edged and trimmed, then individually graded for size, quality and other features. Boards may be sold as green lumber or placed in a kiln for drying prior to sale.

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Sawdust from the milling process is recycled; for example, to fuel the dry kilns, sell to farmers for animal bedding or process into fuel pellets for wood stoves.

Engineered Wood Products

Wood today can be engineered for use in a wide range of composite products. Such processes break down the woody material into chips, flakes, particles or other elements and reconstitute it into products such as panels, joists, beams, plywood, particle board, medium density fiberboard, hardboard and strandboards.