



Sustainability of American Hardwood

The sustainability of American hardwoods should be celebrated as part of the solution to the changing climate. American hardwoods support carbon storage and sequestration, reducing atmospheric CO₂ and storing carbon throughout its life cycle from growth, standing, and use in forest products, aiding the world's climate. The ultimate sustainable and environmentally friendly product, hardwoods aid in healthy forests, water sources, and communities; while also producing safe and environmentally conscious products that create economic opportunities for our rural communities and supply chains.

American Hardwoods are the original “green” product, storing carbon throughout their lifecycles as they grow and also when harvested. Responsibly grown and harvested American hardwoods have a lower energy footprint than most other building materials¹. Making products from aluminum, glass, plastic, cement, or brick can require as much as 126 times more energy than making them from wood. Wood products make up 47% of all industrial materials in the U.S. but consume only 4% of the total energy to manufacture those materials².

American Hardwoods are the ultimate carbon sinks, reducing the net amount of carbon dioxide in the atmosphere as they grow, while also releasing needed oxygen. 50% of the dry weight of a tree is stored carbon – carbon that is not released even when harvested or used along the forest products supply chain³. If a tree falls in the forest or succumbs to poor health and invasive species and begins to decompose the carbon stored is released in the form of methane (the most harmful greenhouse gas).

American Hardwoods are the ultimate renewable resource. An abundant, renewable, and usable material, every piece of a tree from bark to solid wood core to the sawdust from harvesting and mills can be used in myriad ways from building materials to paper to animal bedding to energy production. Hardwoods are officially recognized by the U.S. Department of Agriculture (USDA) via Congressional Act as a Green and Renewable product that is sustainably managed and is an environmentally preferred natural resource.

American Hardwood biomass created in the forest products production process is used to generate heat and electricity and often is used to power the very mills and operations creating the biomass. In many rural areas this power is often sold back to the energy grid supporting local communities.

American Hardwoods growth far exceeds removal with more than twice as many trees planted as harvested each year. The USDA Forest Service (FS) reports the volume of American hardwoods has increased 119% since 1953⁴ with a focus on reforestation efforts, forest health treatments, and proper maintenance.

American Hardwood forests offset 12-15% of U.S. emissions each year⁵.

¹ Shaobo Liang, et al. (2020). Comparative Life-Cycle Assessment of a Mass Timber Building and Concrete Alternative.

<https://www.fs.usda.gov/treesearch/pubs/60137>

²Michigan State University College of Agriculture & Natural Resources. Facing the Facts.

<https://www.canr.msu.edu/news/facing-the-facts>

³ WoodWorks. Carbon Footprint. <https://www.woodworks.org/why-wood/carbon-footprint>

⁴American Hardwood Information Center. Fast Facts on American Hardwoods.

<https://www.hardwoodinfo.com/consumer/rediscovering-hardwoods/fast-facts-american-hardwoods/>

⁵National Alliance of Forest Owners. Forests and Climate Change for Policymakers 101. <https://nafoalliance.org/forests-and-climate-change-for-policymakers-101/>