

Public Abstract

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Title:AN ASSESSMENT OF THE WHOLE TREE WEIGHT, WOOD DENSITY, AND SPECIFIC GRAVITY OF FOUR SPECIES GROUPS IN WASHINGTON COUNTY, MISSOURI

New methods of scaling logs by weight are becoming more prevalent in the Ozark forests of Missouri. In 2009, a major weather event known as a derecho downed millions of board feet of timber in Missouri and the ensuing salvage harvest following the event necessitated the need for a faster method of scaling logs at area sawmills. It is now common in Missouri for sawmills to assume that a green board foot (bf) of oak (*Quercus* spp.) will weigh approximately 12 pounds (lbs.). Four species groups were selected for harvest; white oak (*Quercus alba*), black oak (*Quercus velutina*), post oak (*Quercus stellata*), and hickories (*Carya* spp.) which were not separated into specific species. Of these species groups, 220 trees were selected for harvest and felled following the collection of the diameter (in.), total height (ft.), and crown height (ft.). The total weight of the trees were collected prior to bucking and followed with the collection of the weight of the merchantable portion of the stem alone, without the tree top, and the weights of any sawlogs bucked from the merchantable stem. The data collected were used to produce averages of weight per board foot that are species specific to some of Missouri's oaks species and hickories and that will allow for better estimation of board feet volume at the sawmill.