OHIO AGRICULTURAL EXPERIMENT STATION
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Forestry Mimeograph No. 32

WOODS IMPROVEMENT
IN THE WISELEY TRACT - OAK OPENINGS

by

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Experimental Farmwoods No. 18, one of a series of 30 experimental areas of the Ohio Agricultural Experiment Station's Forestry Department, is located near Neapolis, close to where the Counties of Henry, Fulton and Lucas adjoin. This 34-acre woodland, called the Wiseley Tract of the Maumee State Forest, lies in the 130-square mile "Oak Openings" region of northwestern Ohio.

The Wiseley Tract has various unusual features. Interlacing belts of knoll and swale exhibit marked contrasts in soil, drainage and vegetation. On hillocks of coarse Plainfield sand is found the upland oak forest type, wherein white and black oak predominate. More fertile muck-covered pockets of Newton and Maumee fine sand support a swamp hardwood association consisting of cottonwood, pin oak, soft maple, elm and hackberry. Uncommon shrubs to be seen include the buckthorn, prickly ash and sandbar willow.

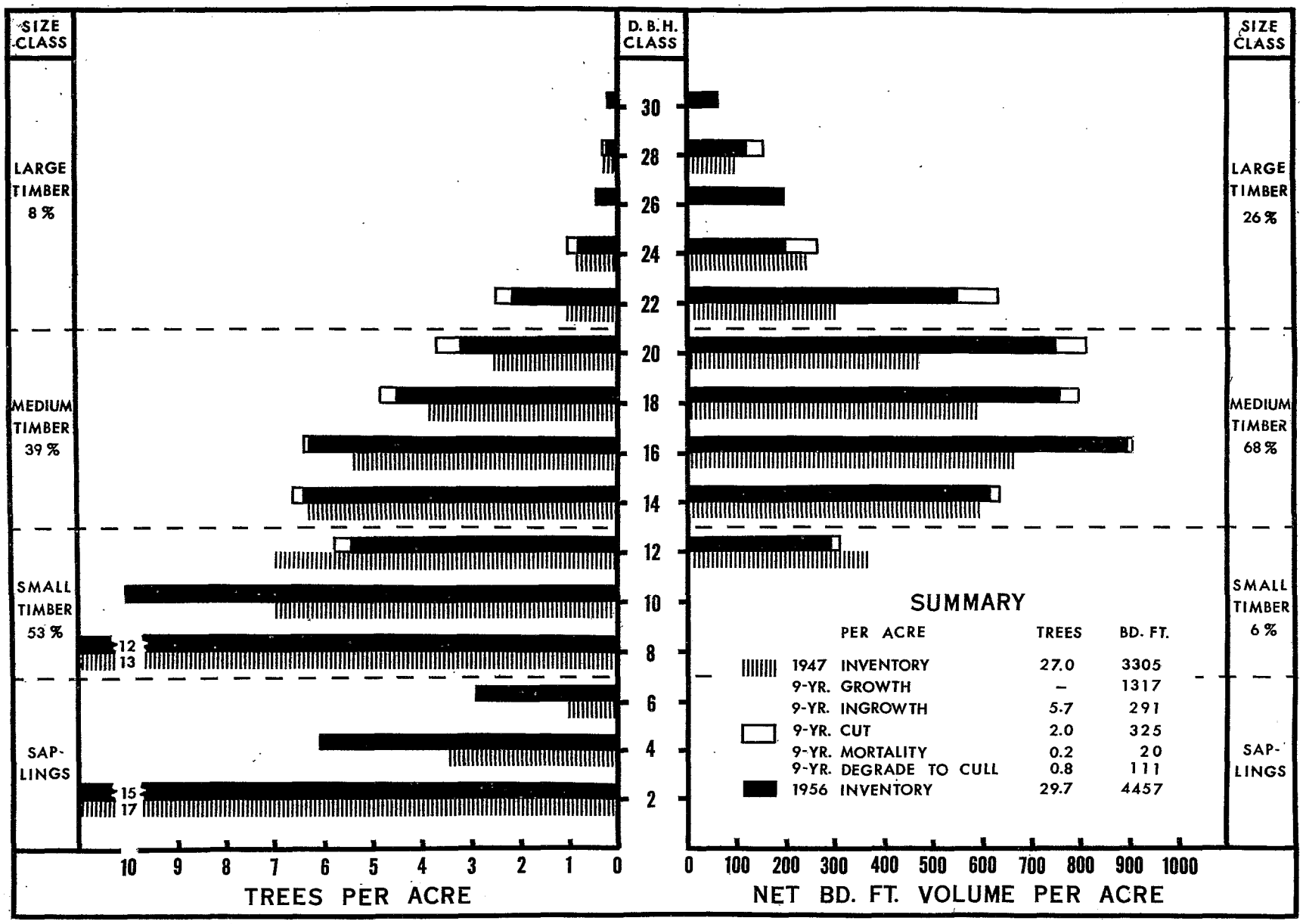
Stand variability is reflected, too, in the tree size classes, their stocking and merchantability. Spots of dense mature timber intergrade with open woods, brush or sometimes grass. The form of the trees differs accordingly. In places there grow fine large cottonwoods and oaks, but wide-spreading trees of low value are quite common. Sapling reproduction is rather sparse. Evidently this tract had been heavily cut, hi-graded and grazed prior to its purchase by the Ohio Division of Forestry.

Since the Wiseley Tract became an experimental woods in October, 1947, it has served to demonstrate good woodland management practices to farm owners in that region. A basic part of intensive forest farming is to keep a continuous inventory of the tree growing stock. Accordingly, research foresters remeasure here at 5-year intervals the numbered trees on 60 permanent one-fifth-acre sample plots, and record the data by species, tree diameter, grade and vigor classes. From these data they accurately determine the periodic growth rate for the entire tract. Then, by balancing the planned cut with the growth, the tract is handled on a sustained yield management basis.

Our charted data depict the present status of this woods. Taken as a whole it obviously is understocked. Last year's inventory showed 29.7 trees of sawlog size per acre with a net volume of 4,457 board feet, International Scale. When fully stocked this site might easily support a stand of 6 to 8 thousand board feet to the acre.

Woods improvement has only begun on the Wiseley Tract. Over much of the forest the best trees are short and limby. Cull deduction often reaches 15 to 20 per cent. The stand average of sawlog size cull trees is .75 per acre. Dutch elm disease has become so devastating that American elm, comprising 14 per cent of the per acre volume, is here a "high risk" tree.

To manage timber successfully as a farm crop, the periodic cuts should not exceed the net growth between successive logging operations. In 1947 the Wiseley Tract received an improvement cut of 325 board feet to the acre. In October 1956 it was marked for a heavier cut about equal to its 9-year net growth of 1,317 board feet per acre. Almost half (44%) of this recently marked volume is elm, the remainder defective or inferior trees of little prospective value for sawlogs. Unwanted trees not profitable to cut will be girdled or poisoned. Subsequent cuts will then contain more commercial timber of higher quality. The aim will be to develop a fully-stocked, all-aged stand having the maximum annual growth potential of high-quality wood products.



GROWING STOCK IN WISELEY TRACT

WASHINGTON TWP; HENRY CO; OHIO

1947 – 1956