

Ohio's Forest Resources, 2009

Research Note NRS-99

This publication provides an overview of forest resource attributes for Ohio based on an annual inventory conducted by the Forest Inventory and Analysis (FIA) program at the Northern Research Station of the U.S. Forest Service. These estimates, along with web-posted core tables, will be updated annually. For more information, please refer to page 4 of this report.

Table 1. – Annual estimates, uncertainty, and change

	Estimate 2009	Sampling error (%)	Change since 2006 (%)
Forest Land Estimates			
Area (1,000 acres)	8,021	1.0	1.3
Number of live trees 1-inch diameter or larger (million trees)	4,136	2.1	1.8
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	465,847	1.6	4.4
Net volume in live trees (1,000,000 ft ³)	16,062	1.8	4.5
Annual net growth of live trees (1,000 ft ³ /year)	460,800	4.7	--*
Annual mortality of live trees (1,000 ft ³ /year)	181,038	6.9	--*
Annual harvest removals of live trees (1,000 ft ³ /year)	225,349	11.8	--*
Annual other removals of live trees (1,000 ft ³ /year)	10,287	49.2	--*
Timberland Estimates			
Area (1,000 acres)	7,776	1.1	1.1
Number of live trees 1-inch diameter or larger (million trees)	4,037	2.2	1.7
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	451,235	1.7	3.8
Net volume in live trees (1,000,000 ft ³)	15,552	1.8	3.9
Net volume of growing-stock trees (1,000,000 ft ³)	13,903	2.0	1.6
Annual net growth of growing-stock trees (1,000 ft ³ /year)	376,086	4.5	--*
Annual mortality of growing-stock trees (1,000 ft ³ /year)	116,812	7.6	--*
Annual harvest removals of growing-stock trees (1,000 ft ³ /year)	181,838	12	--*
Annual other removals of growing-stock trees (1,000 ft ³ /year)	32,024	34.3	--*

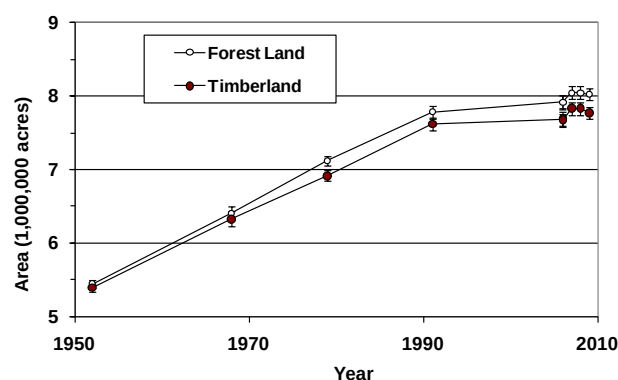


Figure 1. – Area of timberland and forest land by year.

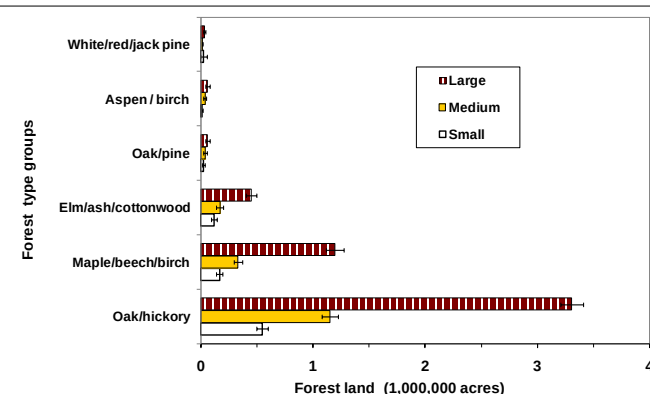


Figure 2. – Area of forest land area by top six forest type groups and stand size class, 2005-2009.

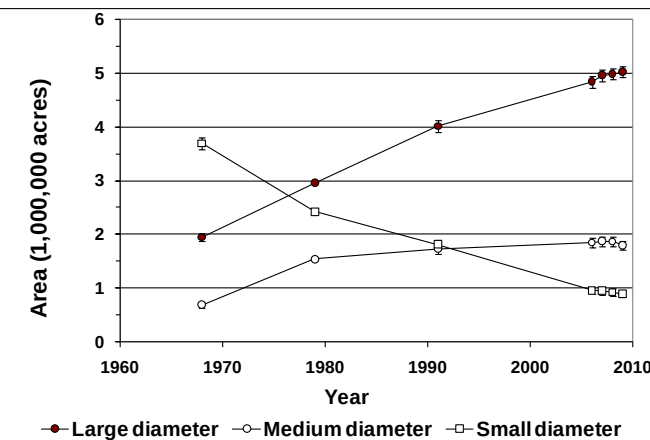


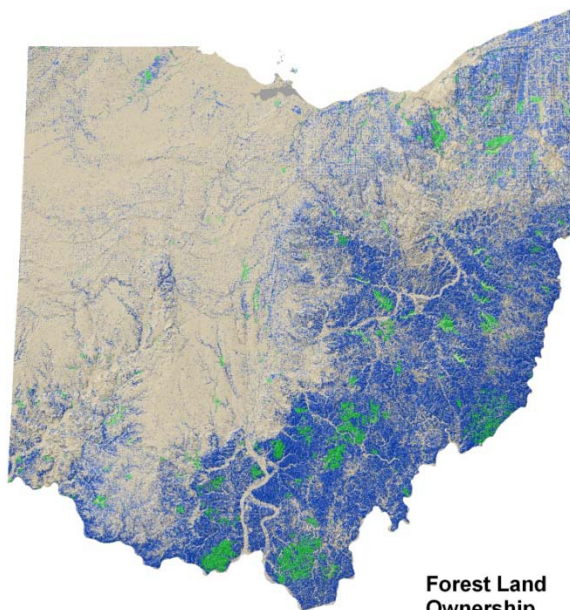
Figure 3. – Area of timberland by stand size class and year.

*Due to high sampling errors for these attributes, estimates of change are not reliable at this time.

Note: When available, sampling errors/bars provided in figures and tables represent 68 percent confidence intervals.

Table 2. – Top 10 tree species by statewide volume estimates, 2005-2009

Rank	Species	Volume of live trees on forest land (1,000,000 ft ³)	Sampling Error (%)	Change since 2006 (%)	Volume of sawtimber trees on timberland (1,000,000 bdf)	Sampling error (%)	Change since 2006 (%)
1	Red maple	1,628	5.3	7.4	3,928	7.4	8.2
2	Yellow-poplar	1,565	6.9	6.6	6,087	8.5	7.2
3	Sugar maple	1,346	5.5	5.9	3,672	7.5	5.8
4	Black cherry	1,137	5.9	5.1	2,871	8.7	2.9
5	White ash	1,014	6.1	4.5	3,298	8.2	6.3
6	White oak	955	6.9	-0.4	3,849	8.2	1.4
7	Northern red oak	846	8.0	10.0	3,522	9.8	8.0
8	American beech	516	9.9	-3.5	1,852	12.6	-5.3
9	Shagbark hickory	486	7.8	6.1	1,427	10.2	7.5
10	Black oak	485	9.8	2.5	1,939	12.0	2.3
	Softwood species	586	12.0	-3.2	1,752	15.0	-2.4
	Other hardwood species	5,499	2.9	4.5	16,336	4.2	6.7
	All species	16,062	1.8	4.5	50,531	2.6	5.2



Forest Land Ownership

Public
Private

Data sources: USDA Forest Service, Conservation Biology Institute Protected Areas Database, National Land Cover Database 2001. Geographic base data provided by the National Atlas of the USA.

Private forest land – 87 percent of all forest land

Public forest land – 13 percent of all forest land

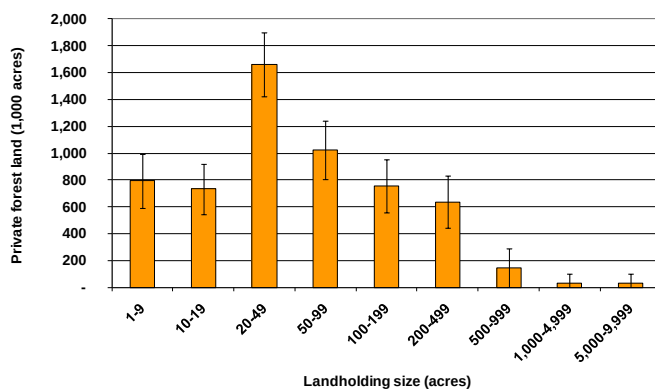


Figure 4. – Area of forest land by major owner group (2008) and size of private family forest landholding (2006).



Decreasing role for oak species in Ohio's future forest

There is growing concern for the sustainability of oaks across the oak/hickory forests of the northern United States. Oaks (*Quercus spp.*) serve as keystone species in forest ecosystems in that they create a community structure and environment that maintains critical ecosystem processes. The hard mast of oaks provide an important food source for wildlife. Oak mast is especially important because other sources of mast have become scarce due in part to the demise of American chestnut and reduced numbers of large American beech in many areas because of beech bark disease. Oaks are also important to the forest products industry in Ohio.

Examination of the numbers of trees, especially in the lower diameter classes can provide insight into future changes in forest species composition. Currently, oaks comprise a third of the trees in diameter classes 18 inches and larger versus 6 percent of the trees less than 10-inches in diameter. By contrast, maple species represent a fourth of the trees less than 10-inches with their share decreasing as diameter increases (Fig. 5 and 6). By 2-inch diameter class, numbers of oaks have decreased in the 2-, 4-, 6-, 8-, and 10-inch classes since 1991.

A lack of oaks in the small diameter classes means that as large oaks are harvested or die, it is likely that they will be replaced by species such as red and sugar maple that dominate the lower diameter classes. Maples will play an increasing role in Ohio's future forest. The area occupied by the oak/hickory forest type is likely to undergo a long-term decline.

Figure 5. – Species composition by diameter class, Ohio, 2008.

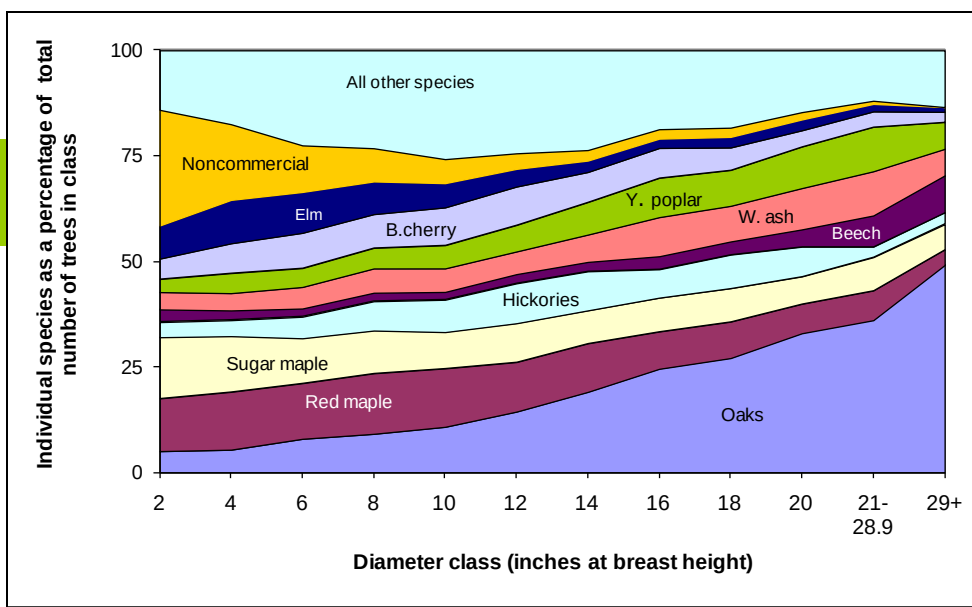
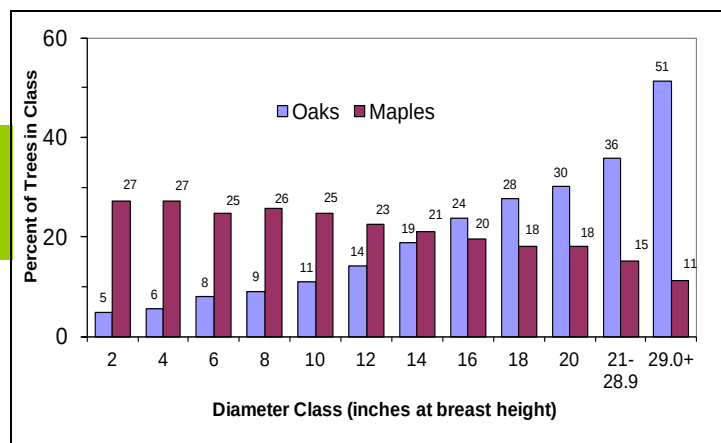


Figure 6. – Comparison of oaks and maples as a percentage of total number of trees in diameter class, Ohio, 2008.



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FIA Program Information

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Additional Ohio Inventory Information

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Estimates, tabular data, and maps from report may be generated at: fiatools.fs.fed.us

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