

Image credit: Paul Wray, Iowa State University, Bugwood.org

Iowa's Forest Resources, 2008

This publication provides an overview of forest resource attributes for Iowa based on an annual inventory (2004-2008) conducted by the Forest Inventory and Analysis (FIA) program of the U.S. Forest Service, Northern Research Station. These estimates, along with web-posted core tables, are updated annually. For more information please refer to page 4 of this report.

Table 1.—Annual estimates, sampling errors, and change, Iowa, 2004-2008.

	Estimate	Sampling error (%)	Change since 1999-2003 (%)
Forest Land Estimates			
Area (1,000 acres)	3,033	2.5	13.8
Number of live trees 1-inch diameter or larger (1,000,000 trees)	1,159	4.2	11.8
Biomass of live trees 1-inch diameter or larger (1,000 tons)	114,682	3.7	11.8
Net volume of live trees (1,000,000 ft ³)	4,256	4.3	11.4
Annual net growth of live trees (1,000 ft ³ /year)	143,562	8.5	--
Annual mortality of live trees (1,000 ft ³ /year)	61,047	8.6	--
Annual harvest removals of live trees (1,000 ft ³ /year)	26,889	23.0	--
Annual other removals of live trees (1,000 ft ³ /year)	21,780	25.3	--
Timberland Estimates			
Area (1,000 acres)	2,970	2.6	15.2
Number of live trees 1-inch diameter or larger (1,000,000 trees)	1,134	4.2	12.4
Biomass of live trees 1-inch diameter or larger (1,000 tons)	111,251	3.7	11
Net volume of live trees (1,000,000 ft ³)	4,115	4.3	10.1
Net volume of growing-stock trees (1,000,000 ft ³)	3,027	5.1	4.6
Annual net growth of growing-stock trees (1,000 ft ³ /year)	102,528	8.4	-12.7
Annual mortality of growing-stock trees (1,000 ft ³ /year)	36,288	11.4	48.1
Annual harvest removals of growing-stock trees (1,000 ft ³ /year)	20,449	26.0	7.2
Annual other removals of growing-stock trees (1,000 ft ³ /year)	25,234	45.5	292.6

Note: Sampling errors and error bars shown in the tables and figures in this report represent 68% confidence intervals for the estimated values. Volumes are for 5-inch and larger diameter trees.

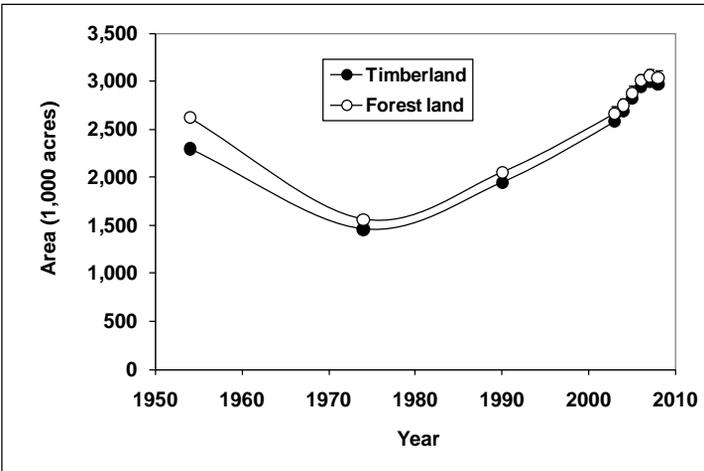


Figure 1.—Area of timberland and forest land in Iowa by year.

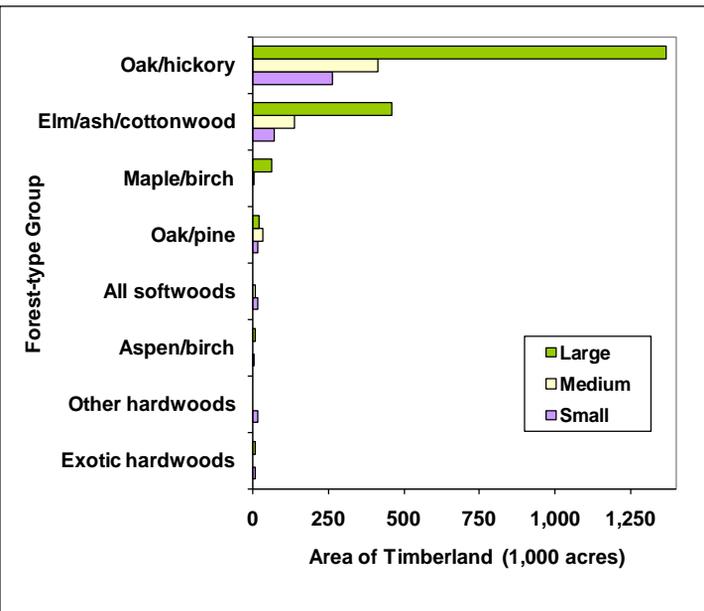


Figure 2.—Area of timberland by forest-type group and stand-size class, Iowa, 2004-2008.

Note: Forest type definitions have changed and may not be directly comparable with published estimates from previous years. Large diameter trees are at least 11.0 inches diameter for hardwoods and at least 9.0 inches diameter for softwoods. Medium diameter trees are at least 5.0 inches diameter but smaller than large diameter trees. Small diameter trees are less than 5.0 inches diameter. Additional details are available in USDA Forest Service (2005).

Table 2.—Top 10 tree species by statewide volume estimates, Iowa, 2004-2008.

Rank	Species	Volume of live trees on forest land (1,000,000 ft ³)	Sampling error (%)	Change since 1999-2003 (%)	Volume of sawtimber trees on timberland (1,000,000 board feet)	Sampling error (%)	Change since 1999-2003 (%)
1	Silver maple	485.0	18.4	17.3	1,127.3	21.0	3.2
2	Bur oak	476.4	11.4	19.2	1,081.3	14.5	13.8
3	Cottonwood	367.1	28.1	8.4	1,521.9	28.4	3.0
4	White oak	350.2	14.1	-5.2	1,172.9	15.6	-2.2
5	Black walnut	282.6	12.0	27.1	966.2	14.3	28.7
6	Northern red oak	231.3	14.8	-14.9	868.3	16.7	-16.5
7	American elm	222.3	8.1	-3.8	323.5	16.0	-18.5
8	American basswood	199.4	14.5	20.7	681.1	17.0	23.0
9	Hackberry	194.5	12.6	17.2	491.4	16.6	25.8
10	Shagbark hickory	166.5	11.7	2.6	444.0	15.4	10.8
	Other softwood species	47.5	16.5	15.9	64.5	27.1	-36.3
	Other hardwood species	1,233.3	5.0	18.7	2,417.0	7.9	12.6
	All species	4,256.1	4.3	11.4	11,159.4	5.9	6.3

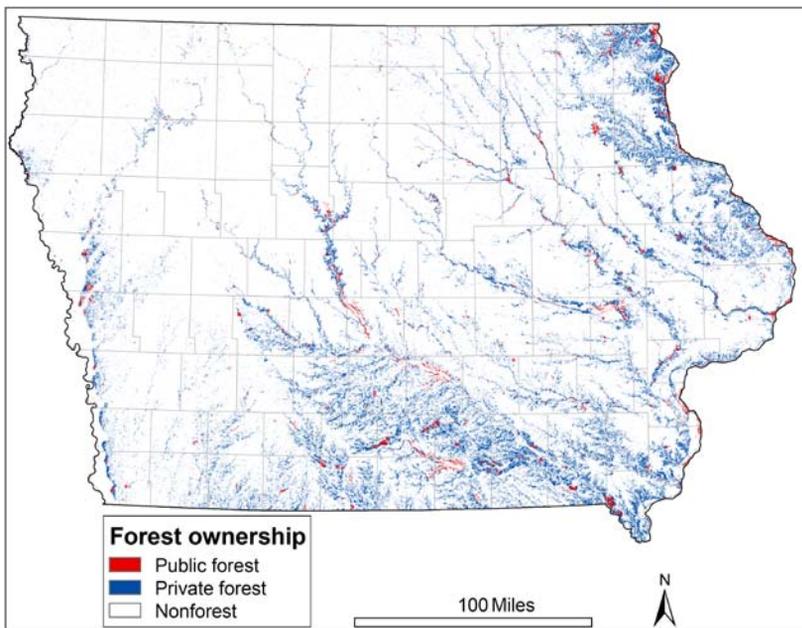


Figure 3.—Distribution of forest land by public (0.469 million acres) and private (2.586 million acres) owner groups, Iowa, 2006.

Projection: UTM Zone 15N, NAD83.

Data sources: forest/nonforest - U.S. Forest Service, 2001 Forest Type Groups map, (Ruefenacht et al. 2008); ownership - Conservation Biology Institute, Protected Areas Database, 4.5; basemap - ESRI Data & Maps.

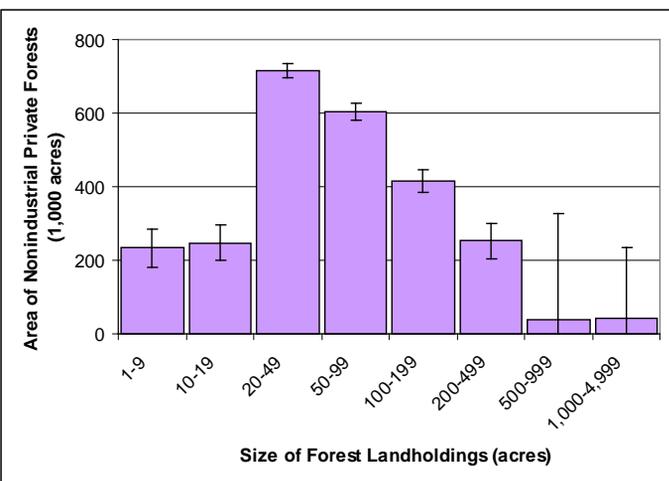


Figure 4.—Area (± 1 s.e.) of nonindustrial private forest land by size of forest landholding, Iowa, 2006. Data were derived from Butler (2008).

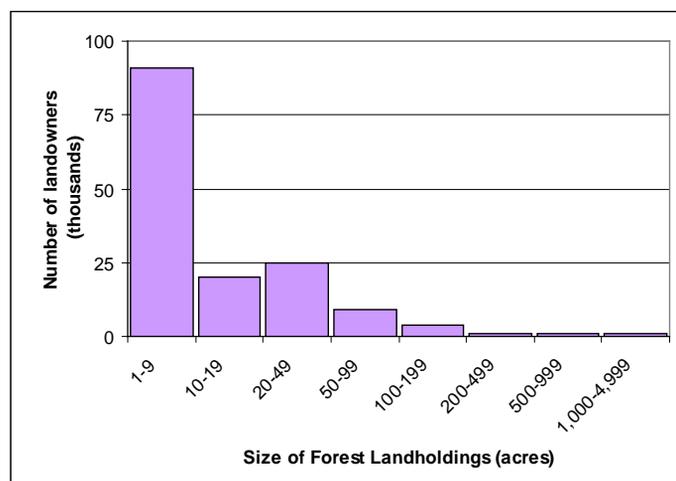


Figure 5.—Number of nonindustrial private forest landowners by size of forest landholding, Iowa, 2006. Data were derived from Butler (2008).

Issue Update: Bur Oak Blight

Bur oak (*Quercus macrocarpa*) is distributed throughout the Eastern United States and the Great Plains and its geographic range is centered in Iowa. As one of the top two tree species in the state by volume (Table 2), bur oak provides substantial value for wood products and is a source of wildlife habitat and mast (acorns).

Recent investigations by Iowa State University (ISU) have identified a serious threat to bur oak. Bur oak blight (BOB; *Tubakia spp.*) is a newly named disease that shows symptoms of v-shaped brown discoloration of leaves and browning of leaf veins (Figure 6). Severe effects include mortality of branches or entire trees. The disease has been confirmed in more than two dozen Iowa counties.

ISU and the Iowa Department of Natural Resources are working with their U.S. Forest Service counterparts to keep a watchful eye on Iowa's valuable bur oak resource. Figure 7 portrays the geographic distribution of bur oak trees observed between 1990 and 2008 by Forest Inventory and Analysis (FIA) field crews. Of bur oak trees at least 5 inches in diameter, about 10 percent were dead in both the 1990 and 1999-2003 inventories; about 12 percent were dead during 2004-2008. Ongoing monitoring efforts will help determine whether increasing mortality is linked to BOB.



Figure 6.—Bur oak (*Quercus macrocarpa*) leaves afflicted with bur oak blight (BOB; *Tubakia spp.*). Photograph by Fanny Iriarte, Iowa State University Plant and Insect Diagnostic Clinic; used with permission.

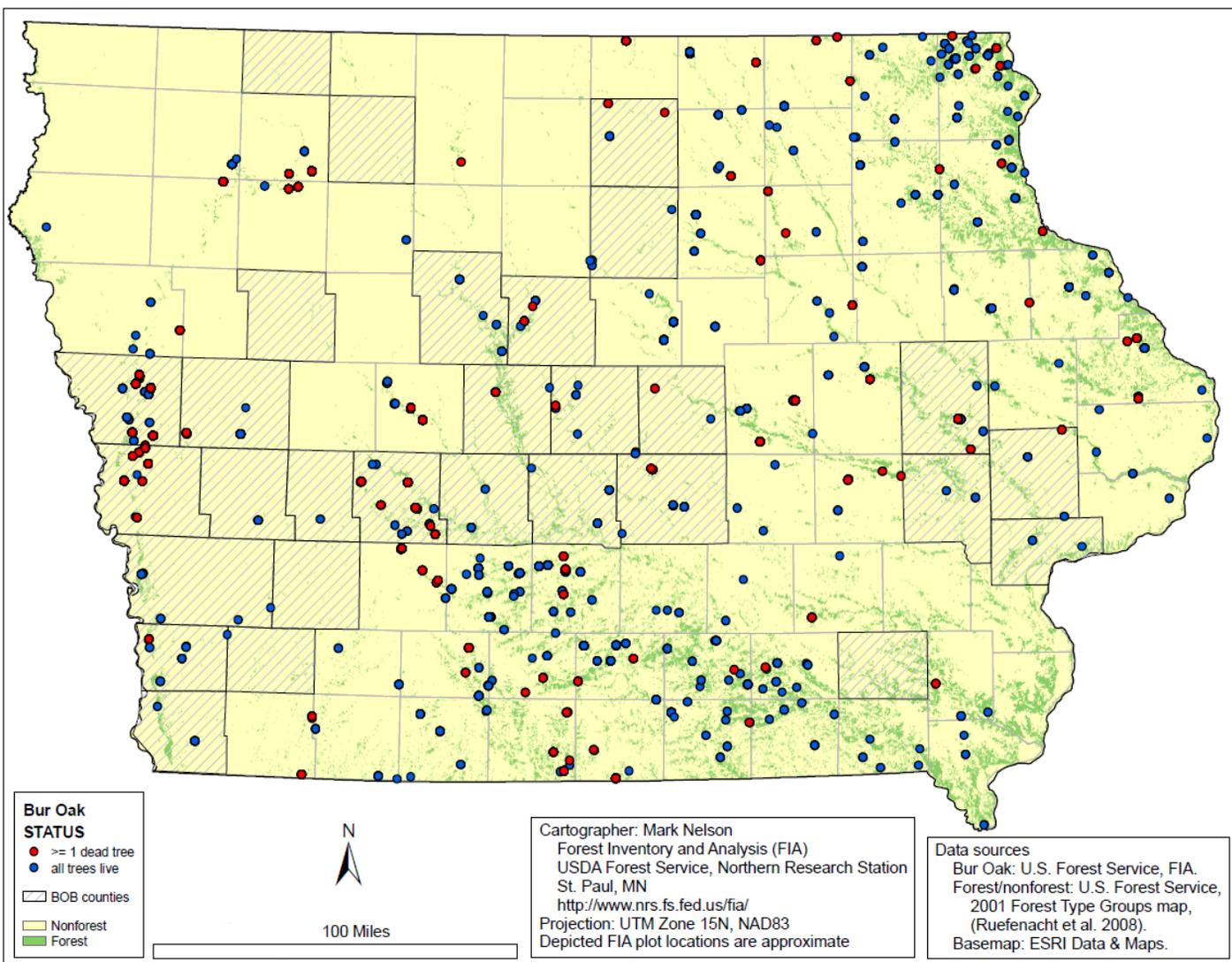


Figure 7.—Locations of bur oak trees observed on forest inventory plots in Iowa, 1990-2008.

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Additional Iowa Inventory Information

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Metadata

Information published in this report and in related tables is based on Forest Inventory and Analysis Database (FIABD), processed using National Information Management System (NIMS) version 4.0, 15 October 2009. Due to periodic changes to NIMS and FIADB, trend analyses should be made using FIA's online estimation tools, not by comparing published reports or tables.

FIA estimates, tabular data, and maps may be generated at <http://fiatools.fs.fed.us>

Contact Information

Lead Analyst: Mark Nelson, (651) 649-5104; mdnelson@fs.fed.us
Data Processing/Access: Mark Hatfield, (651) 649-5169; mahatfield@fs.fed.us
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