Ohio
Forest Health Highlights

April 1999

The Resource

According to 1994 U.S. Census Bureau figures, 11,102,000 people inhabit Ohio's 26,209,700 acres. Forestland comprises 30 percent of the total land area, and other agricultural lands comprise about 48 percent. Forested area has increased dramatically since 1940, including an increase from 7.1 to 7.9 million acres since the late 1970's. Ohio's forestland is 93 percent privately owned and 96 percent deciduous forest types.

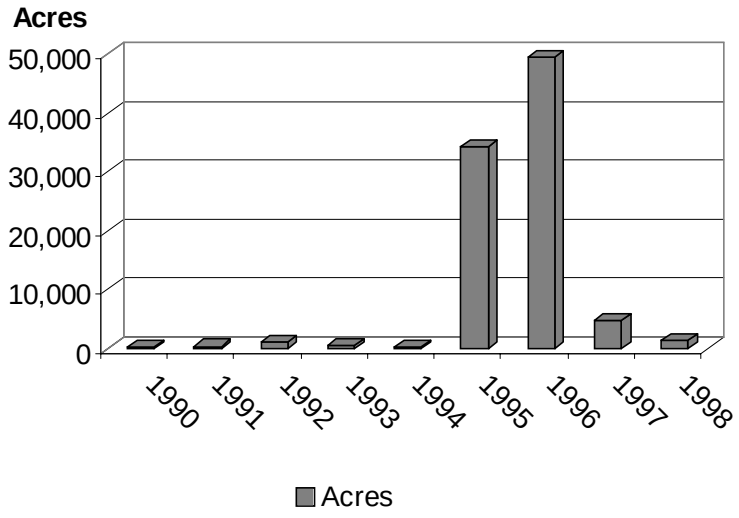
Field windbreaks are an important component of many nonforested agricultural areas in northwestern Ohio. Since 1979, more than 1,100 field windbreak plantings, totaling over 600 row miles, have been documented.

Ohio's 942 incorporated municipalities (cities and villages) occupy 11 percent of the State's land area and represent a substantial urban forest resource.

Special Issues

Gypsy Moth — Gypsy moth surveys conducted by the Ohio Department of Agriculture revealed high population densities on State and private forested areas throughout Ohio. The impact of gypsy moth includes economic losses through timber mortality, loss of recreational opportunities in areas severely defoliated, and nuisance from gypsy moth caterpillars. Though gypsy moth populations have declined over the last several years, 4,852 acres of defoliation were observed, mostly in northeast Ohio in 1997. In addition, 1,986 acres of oak mortality occurred in four counties due to repeated defoliation. The threat of gypsy moth has been lessened recently by the occurrence of the insect pathogen, *Entomophaga maimaiga*. This fungal pathogen has drastically reduced gypsy moth populations in many areas since 1996. Even though this insect pathogen is present in Ohio, it is not known if it will continue to affect gypsy moth populations. Though not much is known about how the pathogen survives or spreads, it is generally thought that abundant rainfall during the late spring and early summer contributes to increased spread of the pathogen.

Gypsy Moth Defoliation in Ohio



Elm mortality — Two diseases are affecting elms (American elm and Red elm) in Ohio - Dutch elm disease and elm yellows. Dutch elm disease is caused by a fungus often spread by bark beetles. Elm yellows, once referred to as elm phloem necrosis, is caused by a phytoplasma (a bacteria-like organism). Both diseases result in tree mortality. Historically, elm yellows was more prevalent in southern Ohio and Dutch elm disease was more common in northern Ohio. Both diseases have been found extensively in central Ohio. In 1998, the Ohio Division of Forestry participated in a multi-state survey to establish areas of elm mortality. Results of this survey indicated the presence of both elm yellows and Dutch elm disease across the state.

Butternut Canker — Decline and mortality of butternut (*Juglans cinerea*) has occurred throughout Ohio. In an attempt to protect the remaining resources and its potential genetic resistance to the disease, the Ohio Department of Natural Resources Division of Forestry developed and implemented a butternut management policy in 1994. The policy requires retention of healthy butternut trees on state forest lands. It also encourages education of private woodland owners regarding proper health assessment and management of this threatened species.

Forest Health Monitoring

In 1996, the Ohio Division of Forestry initiated a forest health monitoring system on state forest lands. Twenty-five permanent plots were established using guidelines set by the USDA Forest Service, National Forest Health Monitoring Program. Measurements include tree data, crown conditions, and damage. In 1996, all 25 plots were measured to establish baseline conditions. Thereafter, 1/3 of the plots have been measured to monitor trends annually.

FHM Plots

	1996 (25 plots)	1997 (8 plots)	1998 (9 plots)
No. of Trees Measured	604	141	249
No. of Saplings Measured	111	46	37
No. of Seedlings Measured	1557	470	376
No. of Dead Trees	89	12	25

Data collected from these plots will be used to detect changes in forest conditions related to forest health issues. For example, crown dieback or the progression of branch and twig dieback is an indicator of tree health. Ninety percent of all trees measured in 1996 had less than 5 percent crown dieback. This indicator will be assessed over time as a detection method for problems that might otherwise have gone unnoticed.

Scarlet Oak Sawfly — An outbreak of the scarlet oak sawfly across Lawrence, Scioto, Gallia, and Jackson Counties continued to expand in 1998 encompassing an area over 290,000 acres. The sawfly damages oak foliage by skeletonizing the leaves resulting in a browning of treetops. Repeated defoliation by this insect may cause tree mortality.

Flowering dogwood — Since 1996, cool and moist spring weather has contributed to the occurrence of dogwood anthracnose affecting dogwoods across the State. Dogwood anthracnose is a fungal disease first reported in 1978. It is causing widespread and often rapid deterioration of flowering dogwood across many areas of the northeast United States. In Ohio, reports of dogwood mortality have been increasing, especially from counties in southern and southeastern Ohio.

Urban Forests

Measurable management activities indicate that Ohio communities are committed to managing their urban forest resource. Data from 1992-1998 shows that Ohio communities are annually planting more than twice as many trees as they remove, while maintaining three times as many trees as they plant each year. In addition, 219 of the 942 Ohio communities currently enjoy Tree City USA status. These trends show that sustained comprehensive urban forestry programs implemented by Ohio communities result in healthier, safer, and more functional urban forests.

Forest Fragmentation

Forest fragmentation is caused by land use changes that convert forestland to another purpose. Historically, forests were often cleared for farming. Some of these agricultural lands are reverting to forests, resulting in an increase in forested acreage. Today, however, land development breaks our forests into smaller parcels as an increasing human population places demands on Ohio's land. Forest fragmentation decreases woodland continuity, impacting plants and animals, which depend upon large areas of continuous forest cover. Buildings, roads, and utility corridors, while important to our economy, significantly impact the quantity and quality of Ohio forests. The Division of Forestry's land acquisition program focuses on purchasing parcels of land, which connect existing parcels of state forestland. The goal is larger, contiguous acreage of permanent forestland for Ohio.

For More Information

Ohio
Department of Natural Resources
Division of Forestry

1855 Fountain Square, H-1
Columbus, OH 43224-1327
Phone: 614/265-6694
Web: http://www.hcs.ohio-state.edu/ODNR/Forestry.htm

USDA Forest Service
Northeastern Area
State and Private Forestry

Forest Health Protection
180 Canfield Street
Morgantown, WV 26505
Phone: 304/285-1541