

Pennsylvania

Highlights of the 1989 Forest Inventory

The report contains both 1989 tables and 1978 tables.

Forest Land Area

- Fifty-nine percent (17.0) million acres of Pennsylvania's total land area (28.7 million acres) is forest land, an increase of less than 1 percent since 1978.
- Of the 17.0 million acres of forest land, 93 percent (15.9 million acres) is classified as timberland (formerly known as commercial forest land). timberland acreage is virtually unchanged since the 1978 inventory.
- Seventy-nine percent (12.5 million acres) of the timberland area in Pennsylvania is privately owned.
- The oak/hickory forest-type group is the most common in the state, making up 47 percent of the timberland area. Northern hardwood forests cover 38 percent of the timberland area.
- Sawtimber stands make up 54 percent of the timberland area, poletimber stands 31 percent, and sapling/seedling and nonstocked stands 15 percent

Tree Biomass

- The net dry weight of all live trees on timberland in Pennsylvania is 913.0 million tons, or 57.5 tons per acre. Hardwoods account for 852.9 million tons, or 53.7 tons per acre; softwoods contribute 3.8 tons per acre, for a total of 60.1 million tons.
- Sixty-four percent, or 583.6 million tons, of the net dry weight of all live trees is in growing-stock material. Of the remaining 329.4 million tons of all live tree weight, 63 percent is in growing-stock tops, 23 percent is in saplings, and 15 percent is in cull trees.
- Salvable dead trees contribute an additional 12.7 million tons of dry weight biomass.

Timber Volume

- Growing-stock volume in Pennsylvania is 24.8 billion cubic feet, an average of 1,561 cubic feet per acre. This is an increase of 19 percent since 1978 when the growing-stock volume was 20.8 billion cubic feet.

- Sawtimber volume increased by 39 percent from 48.1 billion board feet to 66.7 billion board feet, and currently is yielding an average of 4,203 board feet per acre.
- Red maple is the leading species in growing-stock volume with 18 percent of the total volume. Northern red oak and black cherry have the next highest amount of volume with 10 percent each, and sugar maple accounts for 9 percent of the total growing-stock volume.
- The same species are the top four for sawtimber volume as well. Red maple makes up 15 percent of the total sawtimber volume; northern red oak, 13 percent; black cherry, 11 percent and sugar maple, 8 percent.
- Across the state, 34 percent of the volume of larger sawtimber (15 inches in diameter or larger) hardwood trees is in log grades 1 and 2. Northern red oak has 47 percent of its volume of larger sawtimber trees in the two best grades.

Change

- The average annual net growth of growing-stock volume, 618.5 million cubic feet, yields 39.0 cubic feet per acre per year, and is 2.5 percent of the 1989 inventory.
- The growing-stock volume net growth to removals ratio is 2.1 to 1.
- All oaks showed an overall average annual loss of 15.8 million cubic feet per year. Chestnut oak growing-stock volume showed an average annual net loss of 11.1 million cubic feet; other oaks (primarily black and scarlet oaks) had an average annual net loss of 10.4 million cubic feet; and select white oaks decreased by 7.2 million cubic feet per year.
- Northern red oak was the only oak species or species group that showed a positive change in growing-stock volume, with an increase of 12.8 million cubic feet annually.
- Average annual net growth of sawtimber, 2,441.2 million board feet, is 3.7 percent of the 1989 inventory.
- Average annual removals of sawtimber is 1.4 percent of the 1989 inventory.
- The sawtimber volume net growth to removals ratio is 2.6 to 1.
- All species showed a positive change in sawtimber volume.

For complete information, refer to the statistical summary report:

Alerich, Carol L. 1993. Forest Statistics for Pennsylvania-1978 and 1989. Resour. Bull. NE-126. Radnor, PA: U.S. Department of Agriculture. Forest Service, Northeastern Forest Experiment Station. 244 p.

A statistical report on the fourth forest survey of Pennsylvania (1988-90). Findings are displayed in 157 tables containing estimates of forest area, numbers of trees, wildlife habitat, tree biomass, timber volume, timber products output, growth, and change. Data are presented at three levels: state, geographic unit, and county.