

to 2000, APHIS personnel reported 38 interceptions of species of the genus *Agrilus* in shipments of SWPM at ports of entry in 11 different States, and those shipments originated in at least 11 countries. Since EAB larvae can overwinter in the sapwood they burrow into, it is uncertain whether debarking of lumber is an effective way to destroy the pest.

#### Specific Risks to Urban Forests

Urban areas of the United States cover approximately 3.5 percent of the total land area of the country, contain more than 75 percent of the population, and

support an estimated 3.8 billion trees valued at \$2.4 trillion. Michigan's total urban tree population is estimated at 110,858,000 trees, and ash is a vital component of this urban forest. Trees in urban Michigan, like trees in any city, sequester gaseous air pollutants and particulate matter, help people conserve energy through the shade they provide, assist in the dispersal of storm water, provide protective shelter belts for urban fauna, and contribute aesthetic pleasure to the lives of city-dwellers and tourists.

Field data from eight cities suggests that ash trees comprise up to 14 percent

of the total leaf area of those cities. Based on these data, the ash tree resources at risk in just those eight cities would amount to \$565 million; see table 1 below. The survey, the only available data regarding urban ash at risk, concentrates on ash in the eastern United States; however ash is more widely planted in urban regions of the midwest. These estimates are based on the assumption that all living ash in the cities may be destroyed by EAB and did not incorporate estimates of the EAB's biological or artificial spread rates, since those are not known.

TABLE 1.—PRELIMINARY ESTIMATES OF TREE RESOURCES AT RISK FOR INFESTATION BY *AGRILUS PLANIPENNIS* IN EIGHT U.S. CITIES (ORDERED BY ASH LEAF AREA) BASED ON THE TOTAL OF ALL LIVING PREFERRED HOST SPECIES (ASH TREES)

City	Leaf area (%)	Number of ash trees	Value lost	Value per tree
Chicago, IL .....	14.4	603,000	\$230,949,000	\$383
Baltimore, MD .....	8.5	292,700	227,568,000	777
Philadelphia, PA .....	4.7	117,000	68,408,000	584
Boston, MA .....	0.9	29,200	13,341,000	457
Syracuse, NY .....	0.9	6,900	6,400,000	929
New York, NY .....	0.3	27,600	9,770,000	354
Atlanta, GA .....	0.3	38,900	7,119,000	183
Oakland, CA .....	0.2	7,500	1,514,000	202
Total value loss for all cities .....	.....	.....	565,069,000	.....

Further, assuming that the EAB is capable of spreading through all urban areas of the lower 48 States and destroying all urban ash trees, the United States could suffer a national undiscounted loss of \$20 to \$60 billion. Since firm data are not available regarding the pest's biological or artificial spread patterns in North America, all losses are based on limited data that assume a 100 percent destruction rate. More field data from urban areas across the United States are needed to provide more accurate estimates of the resources at risk from EAB.

#### Specific Risks to Timber

Within Michigan, there are 693 million EAB-susceptible trees grown on

timberland, with an undiscounted compensatory value estimated at \$18.92 billion. In the 6 counties first quarantined by the State of Michigan, there are more than 31 million ash trees at risk. We are investigating possible monetary losses to forestry interests based on stumpage<sup>1</sup> value. These losses are likely to be less than monetary losses based on compensatory value, since stumpage values are usually applied to older trees that are greater than 5 inches in diameter, and compensatory values are applied for trees greater than 1 inch in diameter.

Should the EAB spread or be artificially introduced to areas outside of Michigan, monetary losses could grow significantly. Ash trees for timber

products are predominantly concentrated in the East, and available data on production volumes for ash were available only for this region. Table 2 shows the net volumes of ash trees grown for sawtimber in the Eastern region of the United States in 1996, the most recent year for which data is available. A net volume of 113,916 million board feet of ash sawtimber is grown in the Eastern region, comprising 7.5 percent of the volume of all hardwoods. The average stumpage price for sawtimber sold from national forests in 2000 was \$220.30 per 1,000 board feet for all eastern hardwoods.

TABLE 2.—NET VOLUME OF SAWTIMBER ON TIMBER LAND IN THE EASTERN UNITED STATES, BY REGIONS AND SPECIES  
[In million board feet]

Species	Total East	Total North	Northeast	North central	Total South	Southeast	South central
Ash .....	113,916	35,575	11,740	23,835	78,341	34,848	43,493
Total hardwoods .....	1,516,086	519,699	229,504	290,195	996,387	424,233	572,154
Ash as % of all hardwoods .....	7.5	6.8	5.1	8.2	7.9	8.2	7.6
All species .....	2,055,509	665,938	321,067	344,871	1,389,571	599,100	790,471

<sup>1</sup> Stumpage value refers to the commercial value of trees standing in the forest. Stumpage prices may

be offered in reference to board foot volume (\$/m.b.f.), weight (\$/ton), or truck loads (\$/load).

(From: [http://extension.usu.edu/forestry/Management/Timber\\_Valueterms2Know.htm](http://extension.usu.edu/forestry/Management/Timber_Valueterms2Know.htm))