Use of parasitic wasps to fight ash borer grows to 24 states

May 25 2016, by David Pitt

Millions of tiny wasps that are natural parasites for the emerald ash borer have been released into wooded areas in 24 states as the battle against the tree-killing borer is now biological.

The U.S. Department of Agriculture has researched and approved for release four species of parasitic wasps that naturally target the larval and egg stages of the ash borer, which has killed an estimated 38 million ash trees in urban and residential areas. The estimated cost of treating, removing, and replacing the lost trees is $25 billion, according to a report written by USDA and U.S. Forest Service entomologists earlier this month.

On average, federal and state resource managers spend more than $29 million per year to manage ash borer populations.

The tiniest of the wasps looks like a pepper flake on a white surface. It lays eggs inside ash borer eggs, preventing them from hatching. Three other wasps, one the size of a gnat, lays eggs inside ash borer larvae halting development into adult beetles.

They were identified in China in 2002 and studied for several years before scientists concluded they could be safety released in the United States to fight the ash borer.

The wasp release program is in 24 of the 26 states where the ash borer has been found, said entomologist Ben Slager, the manager of the

laboratory in Brighton, Michigan, producing the wasps run by the U.S. Animal and Plant Health Inspection Service, a USDA agency. Plans are to also distribute wasps to Texas and Georgia, the final two states not yet in the program.

"This isn't going to save anybody's tree in their yard or in the city. What we're working to do is to protect the next generation coming up," Slager said Tuesday. "It's really a long-term management strategy."

Ash was the most commonly planted tree species used to replace elm trees decimated from the 1920s through the 1980s throughout North America by Dutch elm disease.

Scientists believe the ash borer was accidentally introduced into North America in the 1990s, most likely in wooden shipping crates from Russia, China, Japan or Korea. The ash borer feeds on tree tissue beneath the bark, destroying the ability to move water and nutrients to branches.

Iowa, the latest state to introduce the wasps, will begin distribution in the next few weeks in a 133-acre timber near Fairfield, about 100 miles southeast of Des Moines. The ash borer was found there in 2013 and continues to spread, said Mike Kintner, the ash borer program coordinator for Iowa Department of Agriculture and Land Stewardship.

Iowa has about 52 million rural ash trees and about 3.1 million more urban areas, the USDA Forest Service said.