Implementation of EAB biological control in Minnesota

Jonathan Osthus¹, Angie Ambourn¹, Chris Mallet¹, Monika Chandler¹, Brian Aukema², Rob Venette³

¹Minnesota Department of Agriculture
²University of Minnesota
³US Forest Service

Biological control of emerald ash borer (Agrilus planipennis) (EAB) was initiated in Minnesota in 2010 and remains the most practical landscape level management option. Program implementation includes EAB detection, site assessment and parasitoid release and recovery. As of October 2016, a total of 449,049 parasitoid wasps (314,779 Tetrastichus planipennisi, 108,631 Oobius agrili, 24,026 Spathius agrili and 1,613 Spathius galinae) were released at 35 sites in the Twin Cities and southeastern Minnesota. Releases of S. agrili were discontinued in 2013 because national program researchers theorized that S. agrili and EAB lifecycles are not synchronized in northern latitudes. Both T. planipennisi and O. agrili were recovered. Tetrastichus planipennisi were recovered by peeling ash trees to look for wasp larvae and pupae. The species was also recovered by dissecting EAB larvae to look for internal wasp larvae. Oobius agrili was recovered using a bark sifting method. Recoveries over multiple years demonstrated that parasitoids are overwintering, dispersing, establishing and increasing in population. Further studies are needed to assess impact on EAB populations and evaluate a new biocontrol agent, Spathius galinae.

Presenting Author: Jonathan.Osthus@state.mn.us