EMERALD ASH BORER BIOLOGICAL CONTROL PROGRAM
5-YEAR PLAN
(January 2008)

Emerald ash borer (EAB) or *Agrilus planipennis* is a small Asian beetle killing ash trees throughout urban, forested, and riparian areas of Michigan, Ohio, Indiana, Illinois, Pennsylvania, Maryland, and West Virginia. Currently there are no effective management tools, other than tree removal. The USDA's Animal and Plant Health Inspection Service (APHIS) and Forest Service have established a 5-year plan for developing and testing possible biological control techniques for this pest.

Research on EAB biological control began in 2002 when this destructive beetle was first found in Michigan. Much of the biocontrol research was done in China, where studies of EAB led to the discovery of three specific insect natural enemies: *Spathius agrili*, *Oobius agrili* and *Tetrastichus planipennisi*. These natural enemies are tiny stingless wasps that seek and kill EAB eggs and larvae. Five years of research led to an environmental assessment[1] of field release of these natural enemies. After a 60-day public comment period and a Finding of No Significant Impact, APHIS and the State of Michigan approved release of these wasps for control of EAB. Small-scale releases were completed in Michigan in 2007. The sites will be monitored for establishment of the natural enemies and their potential to control and slow the spread of EAB in the United States.

An EAB biocontrol laboratory is being established at the APHIS facility in Brighton, Michigan. With oversight from APHIS and the Forest Service, the laboratory will be responsible for rearing these three natural enemies for scheduled releases. The releases will start in Michigan and progress to other states as determined by program needs, regulatory approval, and production capabilities. Release sites will be determined by APHIS and the Forest Service in consultation with State partners. The challenges of rearing these natural enemies will limit their availability for release until the laboratory is fully operational. As rearing methods improve, production and release of these stingless wasps will increase over the five years.

Over the next five years, specific release sites will be designated for research and tracked to collect data to determine:
- successful establishment of natural enemies
- numbers of natural enemies needed for establishment
- site conditions required for establishing natural enemy populations
- interactions among the three exotic natural enemies and native natural enemies
- natural enemy dispersal rates
- impacts on EAB populations and ash survival or recovery
- effects on non-target species

At the conclusion of this first five years of the EAB biological control program, scientists will evaluate which natural enemies are most suitable for long-term mass production and area-wide release.

Contact: Ken Bloem, Biological Control Coordinator, 919-855-7407
email: Kenneth.Bloem@aphis.usda.gov

[1] Link to Environmental Assessment
http://www.regulations.gov/fdmspublic/component/main?main=DocketDetail&d=APHIS-2007-0060