

# PLANT INDUSTRIES DIVISION

*"The Basis of All Wealth is Agriculture"*



*Plant Industries Division combats a wide array of native and non-native plant pests and diseases through extensive surveillance, regulatory and control programs, many as part of federal cooperative agreements. The division is broken down into two main program sections: Agricultural Pest Survey and Forest Health Protection.*

- Surveyed state for exotic wood-boring wasps.
- Set emerald ash borer traps in 26 counties.

## **Plant Pest Regulatory Program (PPRP)**

The PPRP works to prevent the movement of plant pathogens on nursery stock produced in West Virginia and nursery product imported into the state. The program includes registration and annual inspection of all nurseries and nursery dealers and the enforcement of state plant quarantines and orders.

### **Accomplishments:**

- Registered 117 nurseries and 478 nursery dealerships.
- Conducted 172 nursery inspections and 46 nursery dealership inspections.
- Issued stop-sale orders on 62 pieces of nursery stock.
- Conducted surveys under a cooperative agreement with the USDA-APHIS-PPQ that allowed 729 lumber shipments, 7 log shipments and one commercial plant shipment to be certified for export from the U.S.
- Issued 51 phytosanitary certificates for interstate plant shipments.
- Visited 80 sites to investigate possible gypsy moth movement under the USDA-APHIS-PPQ-funded Gypsy Moth Slow the Spread Regulatory (STSR) Program.
- Set gypsy moth traps at 26 sites under state gypsy moth quarantine compliance agreements.



## **Agricultural Pest Survey Programs**

### **Cooperative Agricultural Pest Survey (CAPS) Program**

The CAPS program conducts surveys for insects, plant pathogens and injurious weeds in field crops in order to detect any newly introduced foreign plant pests and to monitor the severity of native agricultural pests. The program functions in a cooperative agreement with USDA-APHIS-PPQ. It supports export certification programs and contributes data to the National Agricultural Pest Information System's (NAPIS) computer database.

### **Accomplishments:**

- Established 11 sentinel plots in soybean fields and Kudzu patches and monitored regularly for soybean rust (SBR). Processed 7,000 soybean leaves and analyzed 200 suspect leaf samples. No SBR was detected.
- Sampled 45 acres of commercial potato fields for potato cyst nematode (PCN). All samples tested negative for PCN leading to enhanced marketability.
- Sampled wheat grain from 14 growers for karnal bunt. All samples tested negative leading to enhanced marketability.
- Performed field inspections for the national seed potato certification program.



### **Emerald Ash Borer (EAB) Regulatory Program**

The EAB Program, which operates as part of the PPRP, operates under a cooperative agreement with the USDA-APHIS-PPQ. Its mission is to prevent the artificial spread of the EAB through enforcement of state and federal EAB quarantines and the dissemination of information about EAB. The EAB regulatory officer conducted 105 site visits along with numerous educational public outreach activities.

### **The Gypsy Moth Slow the Spread (STS) Regulatory Program**

The STS program, also a part of the PPRP, operates under a cooperative agreement with the STS Foundation, funded through the USDA-APHIS-PPQ. This agreement funds an STS regulatory officer to investigate the movement of articles that pose a risk of spreading the gypsy moth into uninfested areas of the state and nation.

### **Black Fly Control Program**

The program significantly reduces the black fly population in southeastern West Virginia through an effectively timed and environmentally safe aerial spraying program. Suppression activities target problem areas of the New, Bluestone and Greenbrier Rivers.

#### **Accomplishments:**

- Supervised 22 black fly treatments between April and October.
- Conducted 83 aquatic invertebrate monitoring trips between March and October.
- Investigated black fly complaints in Greenbrier County.

### **Pest Identification Laboratory (PIL)**

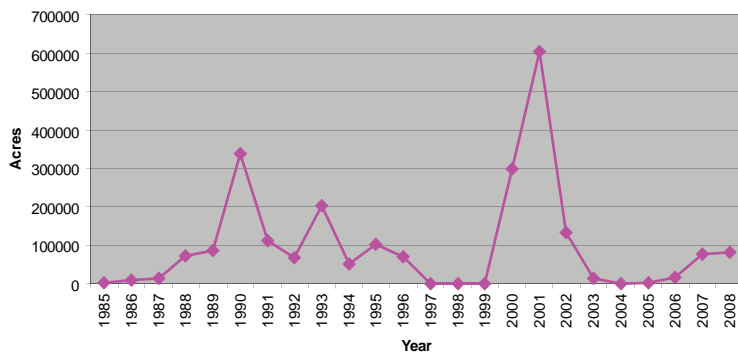
The PIL is a cooperative effort of the entomology and plant pathology staff. It complements the pest survey and detection efforts of the APS Unit by providing expertise in the identification of insects, plant diseases, weeds and other pests. The laboratory maintains permanent reference collections and record systems of insects, plant diseases and weeds. It also provides pest identification, information and control recommendations for private individuals, businesses and other government agencies.

#### **Accomplishments:**

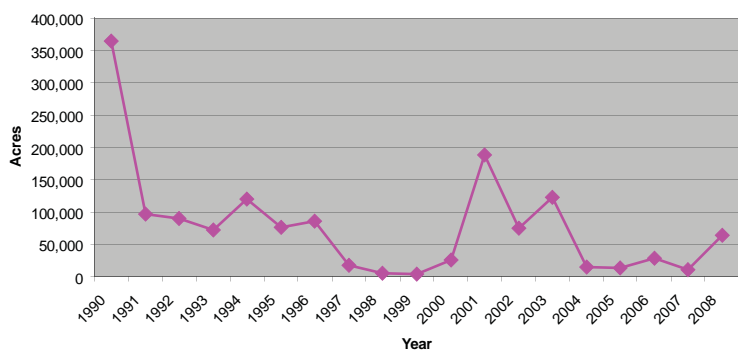
- Identified suspect target specimens from approximately 1,100 samples collected from the USDA-APHIS-PPQ cooperative survey program.
- Identified and confirmed a suspect larva from Fayette County as the emerald ash borer (EAB). This was the first record of EAB in West Virginia.
- Identified approximately 150 insect samples of the Cooperative Forest Health Protection Programs for the detection of exotic *Sirex* woodwasps. No targets have yet been found.
- Entered approximately 400 identified specimens into the Reference Insect Collection computerized data base, making a total of 129,028 identified specimen records as of the end of June.
- Handled 1,226 pest calls, 493 specimens, 185 literature requests, and provided 36 youth educational programs, 15 adult educational programs, and 14 media interviews on various pest-related problems.

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Gypsy Moth Defoliation Acres 1985-2008



Total Gypsy Moth Treatment Acres 1990 - 2008



## Forest Health Protection (FHP) Programs

### Gypsy Moth Program

The Gypsy Moth Program is, by far, the largest FHP program and is broken into two main functions. The Gypsy Moth Cooperative Suppression (GMCS) Program conducts the Cooperative State-County-Landowner (CSCL) spraying program in the infested area of the state. The Slow the Spread (STS) Program, as an added barrier, disrupts mating in moths in the transition zone between the leading edge of the main gypsy moth infestation and the uninfested zone.

### GMCS Accomplishments:

- Aerially surveyed approximately 4.75 million acres of state and private lands and mapped 81,308 acres of gypsy moth defoliation.
- Surveyed more than 365,801 acres during the fall of 2007 to determine what areas were at risk for gypsy moth defoliation in the spring of 2008.
- Treated 64,495 acres under the CSCL Program.

### STS Accomplishments:

- Trapped 57,323 male gypsy moths in 2008 compared to 69,574 male moths in 2007.
- Set 4,548 gypsy moth traps in 2008.

### GIS Section

The section provided computer systems operation and data management support, as well as map production for male gypsy moth detection surveys, gypsy moth and other forest defoliator surveys and forest pest suppression operations. The section also developed a method for providing aerial pilots detailed terrain information within treatment blocks to improve safety.

### Forest Insect Survey and Detection Program

- Conducted hemlock woolly adelgid (HWA) surveys detecting HWA in three new counties: Cabell, Mingo, and Wood.
- Conducted an emerald ash borer (EAB) visual survey at 800 sites in 55 counties, set 360 EAB traps.
- Conducted a survey for siricid woodwasps in 19 counties. Sent samples to the Carnegie Museum of Natural History for processing.
- Released the predatory beetle, *Sasajiscymnus tsugae*, at Hawk's Nest State Park, Cathedral State Park and Blackwater Falls State Park as part of a bio-control effort directed at HWA.
- Staff members were certified through USDA-APHIS-PPQ-CPHST to perform USDA-APHIS-PPQ validated diagnostic tests for *Phytophthora ramorum*.
- Participated in the 2008 Sudden Oak Death National Survey by surveying four streams in Fayette, Nicholas, Kanawha and Cabell Counties using *Rhododendron* leaves as bait. All the samples were negative for *Phytophthora ramorum*, but a number of other *Phytophthora* species were detected.
- Conducted a beech bark scale/disease resistance survey to locate sites with surviving, apparently disease-resistant trees.
- Conducted a bacterial leaf scorch (BLS) survey throughout the state. BLS was detected in five new counties (Berkeley, Morgan, Kanawha, Cabell, and Wood) and on five new hosts (sweet gum, red maple, elm, black oak, and pin oak). Prior to 2008, BLS had only been detected in Jefferson County on red oak.