



The Connecticut Agricultural Experiment Station

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CONNECTICUT

REPORT TO THE EASTERN PLANT BOARD - 2018

MYSTIC, CONNECTICUT

SUMMARY OF 2017 NURSERY INSPECTIONS, FOREST INSECT, AND PLANT PEST
SURVEYS

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### NURSERY INSPECTION AND CERTIFICATION

***REGISTERED NURSERIES.*** Two hundred nurseries were certified to conduct intra- and interstate business. There were 178 nursery inspections during the growing season.

***NURSERY INSECTS and DISEASES.*** The most important pests found in nurseries (in order of prevalence) were aphids on various trees and shrubs, thrips, red headed flea beetle, gypsy moth caterpillar, lily leaf beetle, and imported willow leaf beetle. The most important diseases found in nurseries (in order of prevalence) were various powdery mildews, cedar apple rust, *Miscanthus* blight, and various rusts on perennials.

***JAPANESE BEETLE CERTIFICATION.*** Three nurseries met requirements of the United States Japanese Beetle Harmonization Plan and shipped 3,911 plants to states that quarantine plants from Connecticut.

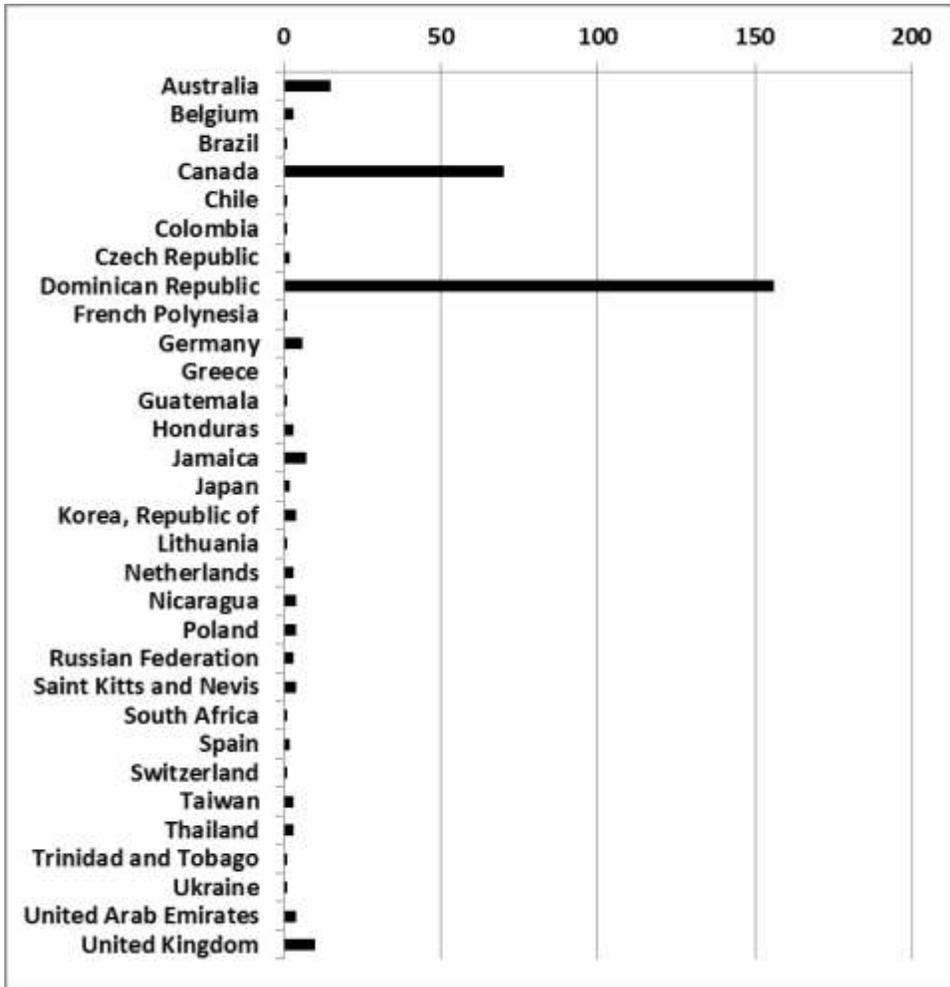
***NURSERY DEALER PERMITS.*** Nursery dealer permits were issued to 92 firms.

## EXPORT CERTIFICATION

*INTERNATIONAL.* Three hundred twenty phytosanitary inspection certificates were issued covering the shipment of the following plant materials to 31 destinations outside the United States. One hundred fifty six consignments were bound for the Dominican Republic (tobacco), seventy to Canada (ornamental plants), and fifteen to Australia (ground products).

| <u>Product</u>                                               | <u>Quantity</u> |
|--------------------------------------------------------------|-----------------|
| Apricot /walnut shells, mixed (ground, drums)                | 4               |
| Apricot/vegetable ivory, mixed (ground, drums)               | 21              |
| Bulbs & Tubers ( <i>Dahlia</i> & <i>Gladiolas</i> ) (# bags) | 111             |
| Bulbs & Tubers ( <i>Dahlia</i> & <i>Gladiolas</i> ) (kilos)  | 6               |
| Chinese Tree Peony (plants)                                  | 47              |
| Corms ( <i>Crocsmia</i> )                                    | 60              |
| Greenhouse plants                                            |                 |
| Plants                                                       | 42              |
| Nursery stock                                                |                 |
| Bare root stock                                              | 8               |
| Plants (balled and burlapped)                                | 60,591          |
| Perennials                                                   |                 |
| Bare root plants                                             | 987             |
| Cuttings                                                     | 400             |
| Seeds (bags)                                                 | 287             |
| Seeds (kilos)                                                | 77              |
| Tobacco                                                      |                 |
| Bales                                                        | 75,667          |
| Bundles                                                      | 58,492          |
| Cartons                                                      | 1,175           |
| Pounds                                                       | 5,866           |
| Vegetable ivory (ground, drums)                              | 8               |
| Walnut shells (bags)                                         | 128             |
| Walnut shells (boxes)                                        | 30              |
| Walnut shells (drums)                                        | 362             |

Destinations for out of country exports from CT.

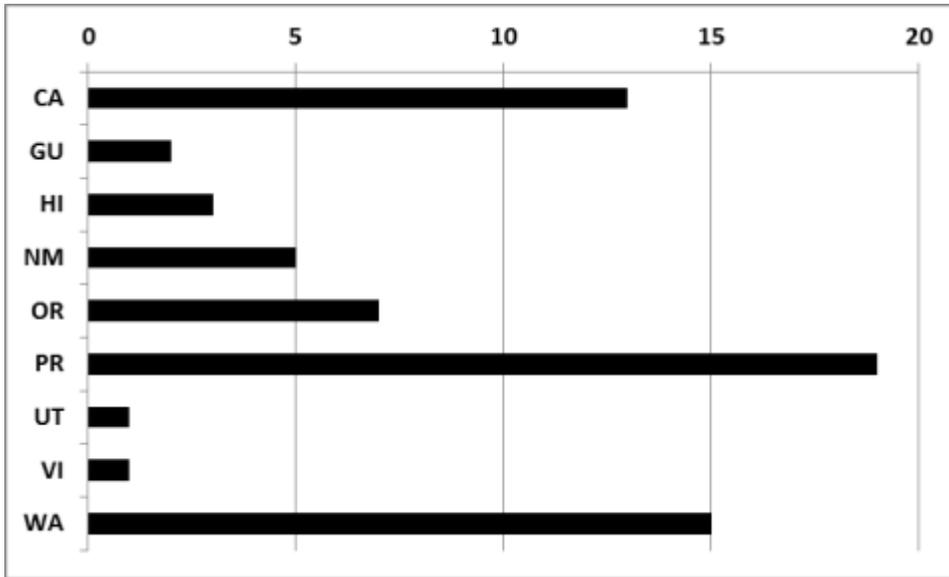


*HOUSEPLANT INSPECTIONS.* Three inspections were made for 21 individual plants to assist homeowners moving out of state.

*DOMESTIC.* Sixty six inspections were made to assist nurseries moving the following plants interstate, either to destinations in other states or to US Territories and Puerto Rico (9 listed destinations). Nineteen consignments were bound for Puerto Rico, fifteen to Washington, and thirteen to California.

| <u>Product</u>             | <u>Quantity</u> |
|----------------------------|-----------------|
| Nursery stock (containers) | 1,523           |
| (bare root plants)         | 851             |
| Greenhouse plants          | 1,522           |
| Perennials                 | 2,388           |
| Seed (# Bags)              | 66              |

Destinations for out of state export from CT, including US Territories and Puerto Rico.



#### OTHER PERMITS

*PERMITS TO MOVE LIVE PLANT PESTS, NOXIOUS WEEDS, AND SOIL.* In 2017, there were seventy six PPQ 526 Permits (Permit to move live plant pests, noxious weeds, and soil) approved in CT. There were five Controlled Import Permits issued. There were three Permits to Receive Soil issued. There were no new Post Entry Quarantine permits issued.

*BOXWOOD COMPLIANCE TO PENNSYLVANIA.* Four nurseries met requirements for shipment of boxwood nursery stock to Pennsylvania.

*NOTIFICATION OF SHIPMENTS OF P. ramorum HOSTS AND ASSOCIATED HOSTS.* There were 121 notifications of shipments of *P. ramorum* hosts and associated hosts, pursuant to 7 CFR 301.92, and 17 shipments that arrived without notification. These were discovered during trace-forward activities.

#### FOREST HEALTH

During the summer 2015, we established 40 permanent forest plots on state, Nature Conservancy, and municipal water company properties. In this short-term (5 year) survey, we will examine the death/replacement of trees due to emerald ash borer. Within each plot, 20 trees were tagged and will be evaluated for signs of EAB infestation, including branch and tip die back, woodpecker activity, and bark loss. We will measure the trees at Diameter at Breast Height (DBH) as a way to monitor their health. Plots were established in all counties of CT. Many of the ash trees in the plots are already dead, and most of the others are declining, due to EAB. In general, the forests are suffering from successive years of drought stress and gypsy moth defoliation, and are under threat due to development pressure.

#### INSECT AND DISEASE SURVEYS

*GYPSEY MOTH.* Due to drought conditions for most of 2017, the fungus that usually keeps gypsy moth larvae in check did not “kick in”, and there was considerable damage due to larval feeding. We observed defoliation due to gypsy moth on 1,175,004 acres, mostly in the eastern half of the state, which includes Middlesex, New London, Tolland, and Windham counties. In December 2017 through March 2018, a gypsy moth egg mass survey was conducted in 80-95% favorable host sites on a 7-mile grid (102 sites)

throughout Connecticut. Egg mass counts were very high in many locations, indicating a high potential for another outbreak in 2018. Other locations had many dead egg masses, indicating that there was some mortality due to parasitoids.

*HEMLOCK WOOLLY ADELGID and ELONGATE HEMLOCK SCALE.* These pests have been present in CT for many years, and continue to cause patchy damage and decline among the remaining population of hemlocks. Statewide in 2017, 46 acres were affected by HWA, and 1,855 acres were affected by EHS. Scale insects, such as elongate hemlock scale and circular scale, are increasing in some areas, and may be more of a factor in tree damage and mortality than HWA.

*EMERALD ASH BORER.* Emerald ash borer has been detected in all eight counties; the quarantine for this insect was extended statewide to encompass all of Connecticut. Detections and outreach efforts included monitoring of *Cerceris* colonies, trapping was suspended when the state became fully quarantined. During aerial survey, we mapped 10,318 acres defoliated by EAB, and expect acreage and mortality to increase in the coming years.

*SOUTHERN PINE BEETLE.* This insect was recently detected in CT, and damage estimates are still in the preliminary stage. The infestation appears to be widespread, however.

*CYNIPID GALL WASP.* Cynipid gall wasp was detected on the Bluff Point Coastal Reserve in New London County and adjoining areas in the town of Stonington in late 2014. The infestation has not been delimited.

*WHITE PINE NEEDLE DECLINE.* We recorded only 71 acres affected by white pine needle decline.

*LOCUST LEAF MINER.* We recorded 181 acres affected by locust leaf miner, detected by ground survey.

**APIARY INSPECTION. APIARY INSPECTION.** During the 2017 season Connecticut had over 642 registered beekeepers maintaining over 5,000 hives. In 2017, one thousand four hundred hives were inspected. Unofficial estimates indicate that over 5000 packages of Honey bees were imported into Connecticut for sales to new beekeepers and to replace losses. American foulbrood was detected in five hives; these were destroyed by burning. Colony inspection determined varroa mite infestation and the viral complex associated with varroa infestation as the primary reason for colony mortality. The USDA APHIS National Honey Bee survey for 2016 identified a varroa mite average of 3.95 per 100 bees for Connecticut beekeepers, second highest in the Northeast.

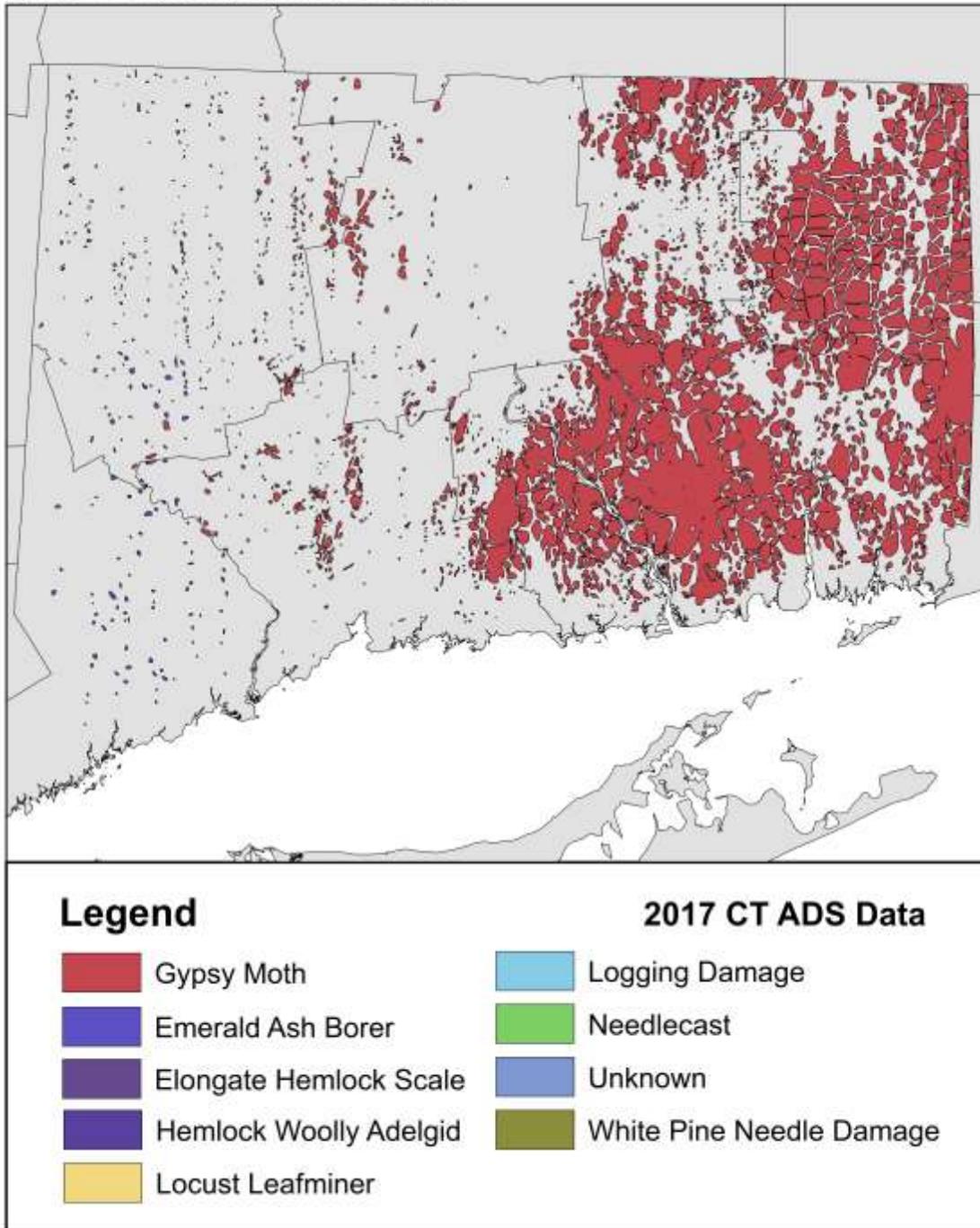
CT beekeepers continue to lose colonies overwinter in higher numbers; the Bee Informed Annual Loss report for CT in 2017 was 53.89 %; the winter loss was 49.83%. These losses are slightly lower than regional and nationwide trends. The viral pathogens that cause deformed wing virus (DWV), Israeli acute paralysis virus (IAPV), acute bee paralysis virus (ABPV), and even the varroa destructor virus (VDV) were detected in Connecticut as part of the USDA Honey Bee Pests and Diseases Survey. Due to high winter losses in 2017, local beekeepers continued to replace losses with package bees from southern states. Despite these challenges, beekeeping interest is still strong with over 400 new beekeepers being trained this winter. There were one hundred sixty Apiary Certificates of Health issued. Four certificates were issued for export out of CT, and over one hundred certificates for interstate movement of honey bees.

CT participated in the USDA APHIS National Honey Bee survey to document presence/absence of diseases and pests of honey bees, samples were taken from 192 colonies and a pesticide analysis was done on ten brood comb samples. Two of these samples showed high levels of tetramethrin, a pesticide used in mosquito control programs.

Thanks to all personnel involved in these studies:

Tia Blevins, Nursery Inspector; Zachary Brown, Seasonal Worker; Mark Creighton, Apiary Inspector; Katherine Dugas, CAPS State Survey Coordinator; Jeff Fengler, Nursery Inspector; Victoria Lynn Smith, Deputy State Entomologist.

## 2017 Connecticut ADS Data



Enjoy the artwork on this page.  
Thank you.