



The Connecticut Agricultural Experiment Station

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CONNECTICUT

REPORT TO THE EASTERN PLANT BOARD - 2017

MARTINSBURG, WEST VIRGINIA

SUMMARY OF 2016 NURSERY INSPECTIONS, FOREST INSECT/PLANT PEST SURVEYS

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### **NURSERY INSPECTION AND CERTIFICATION**

***REGISTERED NURSERIES.*** Two-hundred seventy one nurseries were certified to conduct intra- and interstate business. There were 500 nursery inspections during the growing season.

***NURSERY INSECTS and DISEASES.*** The most important diseases and pests found in nurseries (in order of prevalence) were aphids on various trees and shrubs, thrips, lily leaf beetle, imported willow leaf beetle, red headed flea beetle, boxwood leaf miner, and powdery mildews .

***JAPANESE BEETLE CERTIFICATION.*** Three nurseries met requirements of the United States Japanese Beetle Harmonization Plan and shipped 1,998 plants to states that quarantine plants from Connecticut.

***JAPANESE BEETLE CERTIFICATION TO CANADA.*** Eight Connecticut nurseries, which met the inspection requirements of the US/Canada Japanese Beetle Harmonization Plan, shipped 30,556 plants to Canada in 2016.

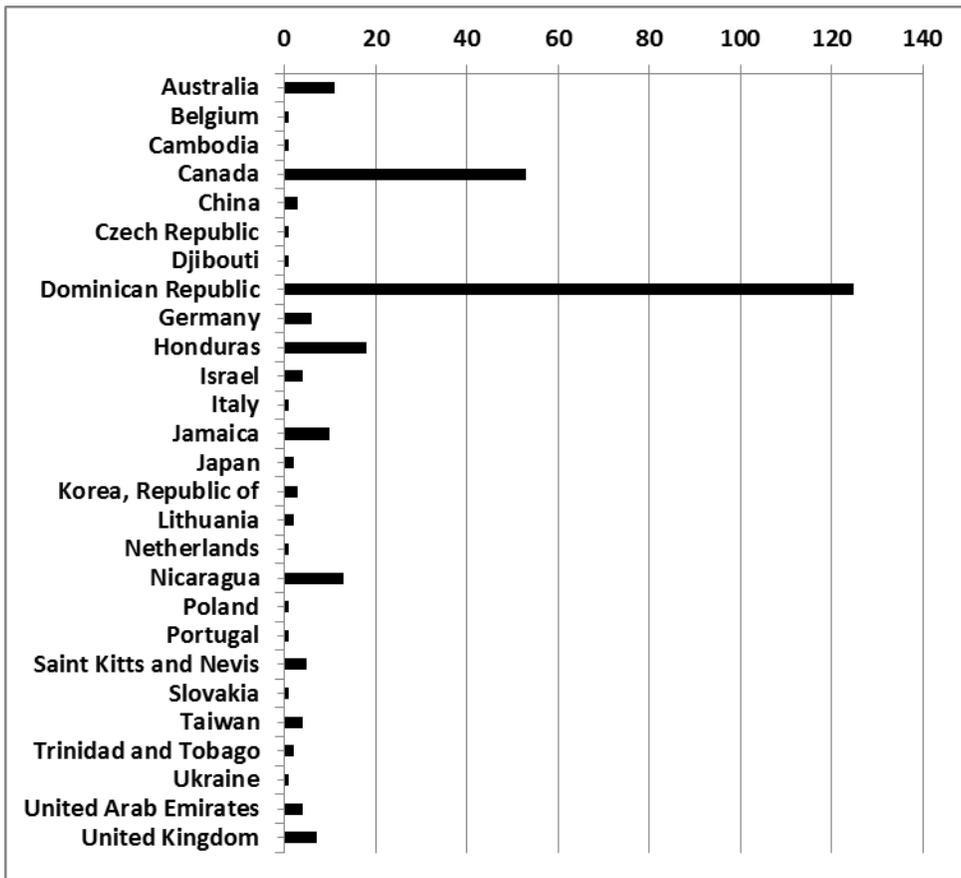
***NURSERY DEALER PERMITS.*** Nursery dealer permits were issued to 156 firms. One hundred twenty three of these companies operate individual outlets. The remaining businesses have more than one outlet each. In total, there were 479 outlets.

## EXPORT CERTIFICATION

*INTERNATIONAL.* Three hundred eight phytosanitary inspection certificates were issued covering the shipment of the following plant materials to 30 destinations outside the United States. One hundred twenty five consignments were bound for the Dominican Republic (tobacco), fifty three to Canada (ornamental plants), and eighteen to Honduras (tobacco).

| <u>Product</u>                                | <u>Quantity</u> |
|-----------------------------------------------|-----------------|
| Apples (cartons)                              | 4,000           |
| Apricot /walnut shells, mixed (ground, drums) | 4               |
| Bulbs & Tubers (Dahlia & Gladiolas) (# bags)  | 32              |
| Bulbs & Tubers (Dahlia & Gladiolas) (kilos)   | 8               |
| Chinese Tree Peony (plants)                   | 26              |
| Greenhouse plants                             |                 |
| Rhizomes                                      | 116             |
| Plants                                        | 58              |
| Nursery stock                                 |                 |
| Bare root stock                               | 2               |
| Plants (B and B)                              | 29,644          |
| Orchids (plants)                              | 6,392           |
| Pecan shells (ground, pounds)                 | 10              |
| Perennials                                    |                 |
| Bare root plants                              | 1,287           |
| Potted plants                                 | 350             |
| Seeds (bags)                                  | 145             |
| Seeds (kilos)                                 | 133             |
| Tobacco                                       |                 |
| Bales                                         | 68,802          |
| Bundles                                       | 56,002          |
| Cartons                                       | 9,922           |
| Pounds                                        | 3,850           |
| Vegetable ivory (ground, drums)               | 4               |
| Walnut shells (bags)                          | 88              |
| Walnut shells (drums)                         | 425             |

Destinations for out of country exports from CT.

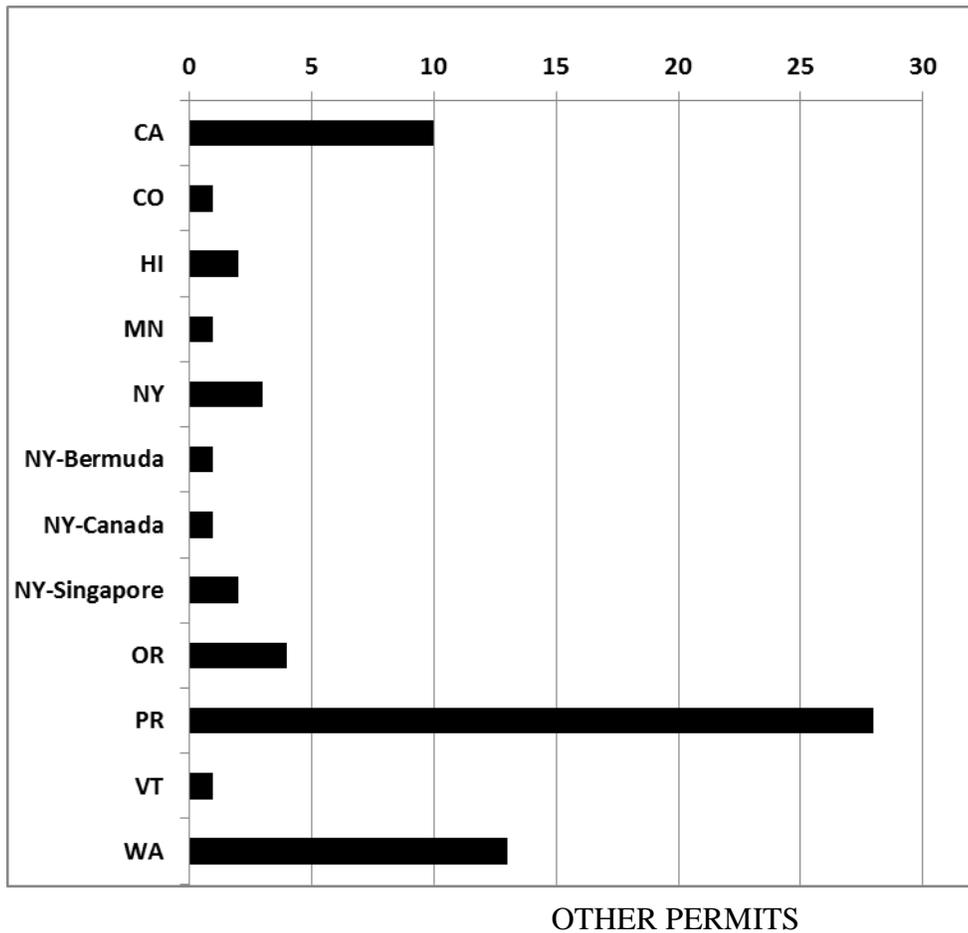


*HOUSEPLANT INSPECTIONS.* Eleven inspections were made for 186 individual plants to assist homeowners moving out of state.

*DOMESTIC.* Sixty seven inspections were made to assist nurseries moving the following plants interstate, either to destinations in other states, to the CITES port, or to US Territories and Puerto Rico (12 listed destinations). Twenty eight consignments were bound for Puerto Rico, thirteen to Washington, and ten to California.

| <u>Product</u>             | <u>Quantity</u> |
|----------------------------|-----------------|
| Nursery stock (containers) | 150             |
| (bare root plants)         | 1,000           |
| Greenhouse plants          | 1,059           |
| Seed (# Bags)              | 53              |
| Orchids                    | 22              |

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



*PERMITS TO MOVE LIVE PLANT PESTS, NOXIOUS WEEDS, AND SOIL.* In 2016, there were seventy four PPQ 526 Permits (Permit to move live plant pests, noxious weeds, and soil) approved in CT. There was one Controlled Import Permits issued. There was one permit for Post Entry Quarantine approved.

*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 141 notifications of shipments of *P. ramorum* hosts and associated hosts, pursuant to 7 CFR 301.92.

#### 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. In general, our forests remain healthy.

## INSECT AND DISEASE SURVEYS

*CHRYSANTHEMUM WHITE RUST*. In 2016 we inspected 10,000 plants for CWR, caused by *Puccinia horiana*. No positives were detected.

*GYPSY MOTH*. Due to drought conditions in spring and early summer of 2016, 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 204,167 acres, mostly in Middlesex, New Haven, and New London counties. In November and December 2016 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 2017.

*ASIAN LONGHORNED BEETLE*. We conducted 55 inspections of 4,453 trees in all counties of CT for presence or signs of ALB infestation.

*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 2016, 1,677 acres were affected by HWA, and 3,456 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 6,194 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.

*FOREST TENT CATERPILLAR*. Damage due to forest tent caterpillar was detected on 3,026 acres, in New London county, near the Rhode Island state line.

*WHITE PINE NEEDLE DECLINE*. We recorded only 802 acres affected by white pine needle decline.

*LOCUST LEAF MINER*. We recorded 243 acres affected by locust leaf miner, detected by ground survey.

*APIARY INSPECTION*. During the 2016 season Connecticut had 1,655 registered beekeepers maintaining 8,023 hives. In 2016, one thousand three hundred hives were inspected. Unofficial estimates indicate that there could be another 400 beekeepers/800 colonies that have yet to register. Unofficial estimates indicate that over 4000 packages of Honey bees were imported into Connecticut for sales to new beekeepers and to replace losses. American foulbrood was detected in three 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. CT beekeepers continue to

lose colonies overwinter in higher numbers; the Bee Informed Winter Loss report for CT in 2016 was 44.4 %; the winter loss was 39.5%. (An increase of 18%) These losses are slightly higher 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 rare chronic bee paralysis virus (CPBV) were detected in Connecticut as part of the USDA Honey Bee Pests and Diseases Survey. Due to high winter losses in 2016, local beekeepers struggled to replace losses with package bees from southern states. Despite these challenges, beekeeping interest is still strong with over 800 new beekeepers being trained this winter. There were one hundred sixty Apiary Certificates of Health issued. Six certificates were issued for export out of CT, and one hundred fifty four certificates for interstate movement of honey bees.

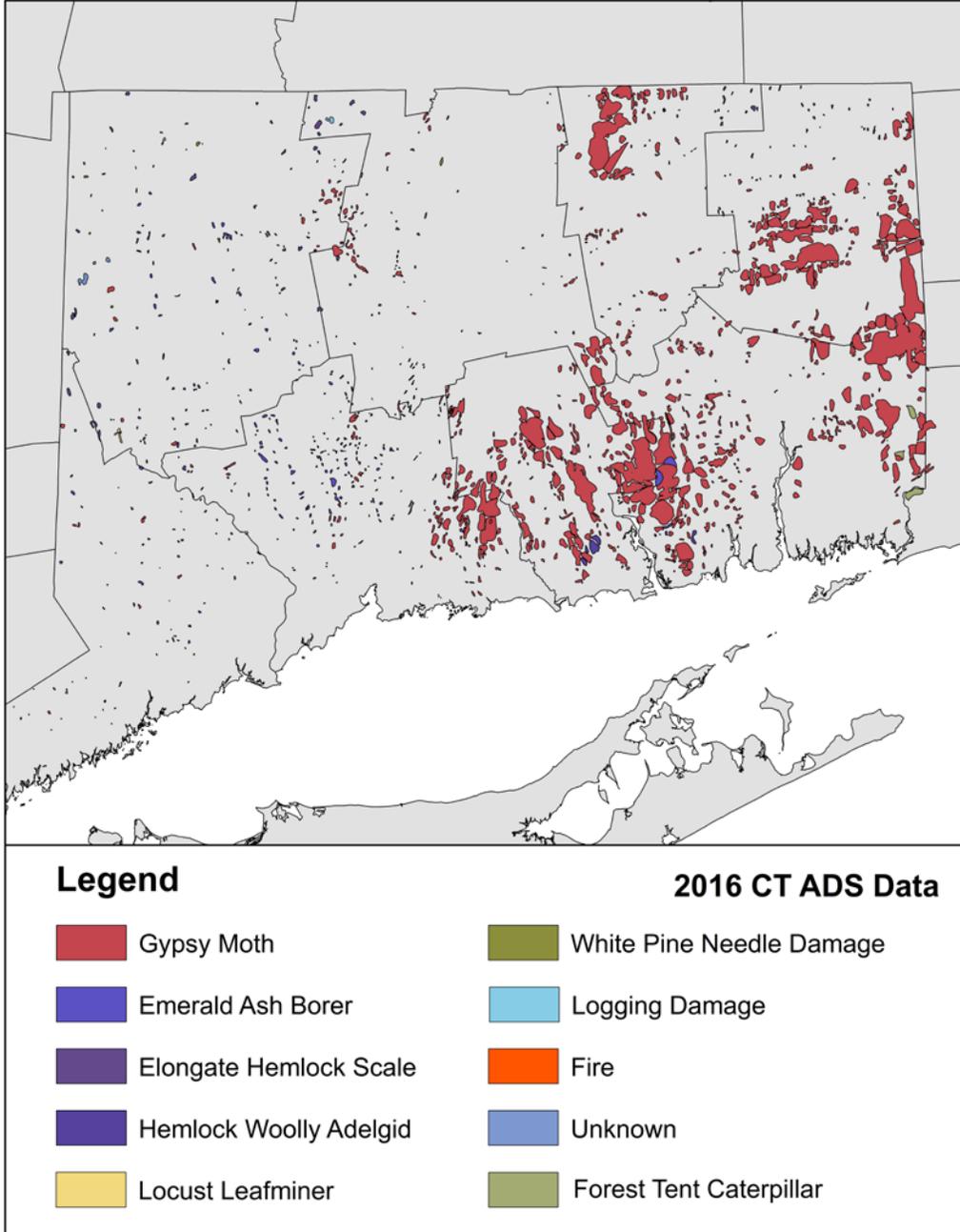
CT participated in the USDA APHIS National Honey Bee survey to document presence/absence of diseases and pests of honey bees. Samples taken from 192 colonies were submitted to the laboratory at the University of Maryland; results are pending.

Recommendations were made to the CT legislature by the State Entomologist for revisions to the state statutes regulating honey bees. The revisions would expand the inspection beyond contagious brood diseases to include insects, mites, or other parasitic organisms adversely affecting bees, or species or subspecies of bees, such as Africanized bees.

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; Steve Sandrey, Nursery Inspector (retired); Victoria Lynn Smith, Deputy State Entomologist; Peter Trenchard, Nursery Inspector (retired).

### 2016 Connecticut ADS Data



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(just like the Feds do).