



The Connecticut Agricultural Experiment Station

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CONNECTICUT

REPORT TO THE EASTERN PLANT BOARD - 2016

SAINT MICHAELS, MARYLAND

SUMMARY OF 2015 NURSERY INSPECTIONS, FOREST INSECT/PLANT PEST SURVEYS

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### **NURSERY INSPECTION AND CERTIFICATION**

Two-hundred seventy five nurseries were certified to conduct intra- and interstate business. There were 699 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, boxwood leaf miner, Rhododendron leaf miner, lacebug, thrips, imported willow leaf beetle, and lily leaf beetle.

***JAPANESE BEETLE CERTIFICATION.*** We observed treatments of three hundred eighty eight plants at two nurseries and issued phytosanitary certificates to comply with states that quarantine nursery stock from Connecticut because of the Japanese beetle, *Popillia japonica*.

Six nurseries met other requirements of the United States Japanese Beetle Harmonization Plan and shipped 53,003 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 26,112 plants to Canada in 2015.

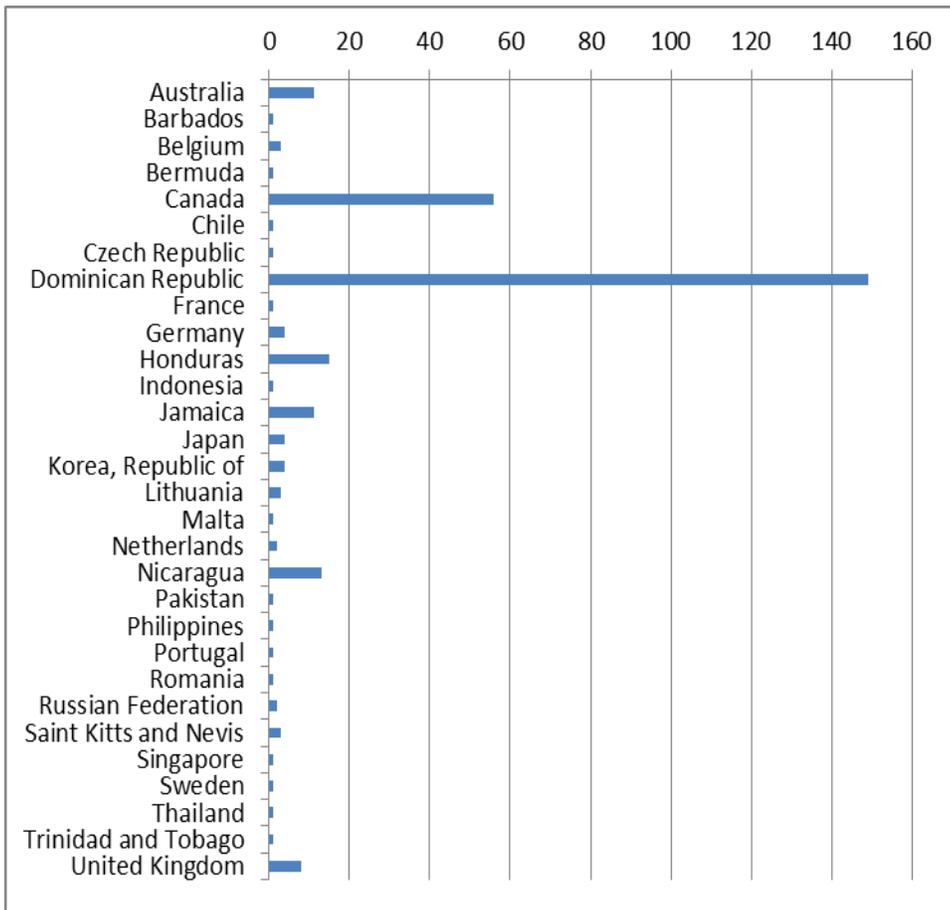
***NURSERY DEALER PERMITS.*** Nursery dealer permits were issued to 172 firms. One-hundred forty three of these companies operate individual outlets. The remaining businesses have more than one outlet each. In total, there were 612 outlets.

## EXPORT CERTIFICATION

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

| <u>Product</u>                               | <u>Quantity</u> |
|----------------------------------------------|-----------------|
| Bulbs                                        | 169             |
| Bulbs & Tubers (Dahlia & Gladiolas) (# Bags) | 192             |
| Bulbs & Tubers (Dahlia & Gladiolas) (Kilos)  | 7               |
| Chinese Tree Peony (plants)                  | 2               |
| Greenhouse plants                            |                 |
| Rhizomes                                     | 38              |
| Plants                                       | 371             |
| Nursery stock                                |                 |
| Unrooted cuttings                            | 4,000           |
| Plants (B and B)                             | 19,978          |
| Orchids (plants)                             | 2,922           |
| Perennials                                   |                 |
| Bare root plants                             | 1,568           |
| Potted plants                                | 17              |
| Seeds (bags)                                 | 242             |
| Seeds (kilos)                                | 44              |
| Tobacco                                      |                 |
| Bales                                        | 74,100          |
| Boxes                                        | 6,109           |
| Bundles                                      | 72,999          |
| Cartons                                      | 8,125           |
| Pounds                                       | 2,268           |
| Walnut shells (bags)                         | 176             |
| Walnut shells (boxes)                        | 1               |
| Walnut shells (cartons)                      | 2               |
| Walnut shells (drums)                        | 353             |

Destinations for out of country exports from CT.

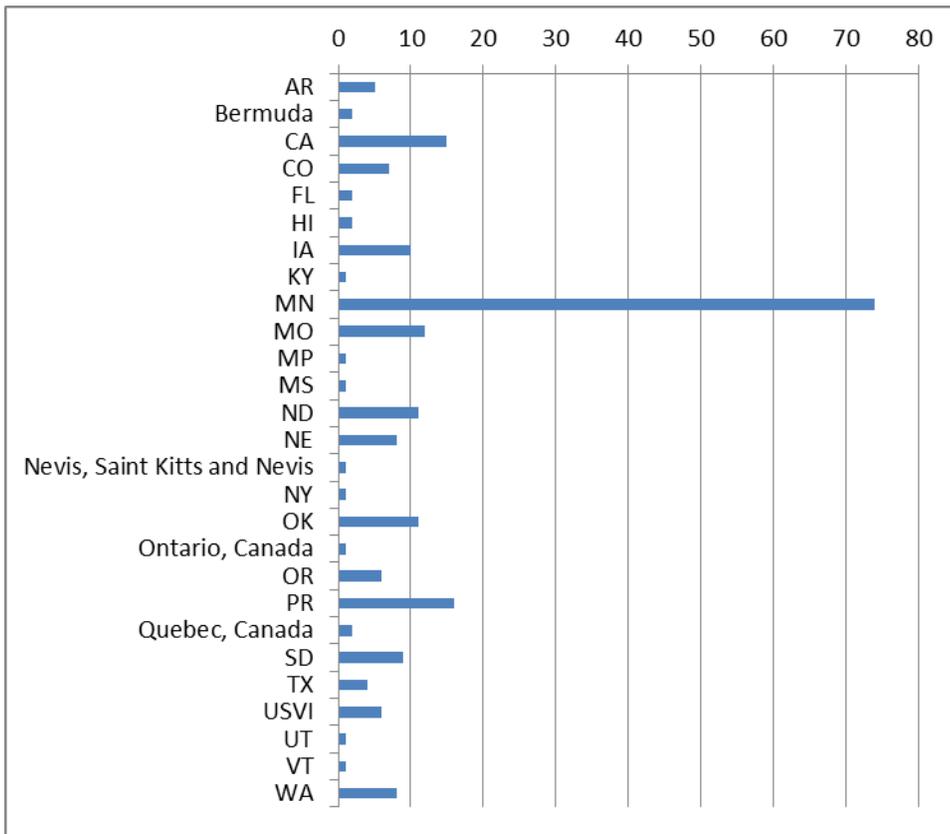


*HOUSEPLANT INSPECTIONS.* Five inspections were made for 311 individual plants to assist homeowners moving out of state.

*DOMESTIC.* Two hundred eighteen 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 (27 listed destinations). Seventy two consignments were bound for Minnesota, fifteen to California, and twelve to Missouri.

| <u>Product</u>             | <u>Quantity</u> |
|----------------------------|-----------------|
| Nursery stock (containers) | 50,374          |
| (bare root plants)         | 1,608           |
| Greenhouse plants          | 2,321           |
| Seed (# Bags)              | 33              |
| Orchids                    | 13              |

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 2015, there were seventy six PPQ 526 Permits (Permit to move live plant pests, noxious weeds, and soil) approved in CT. There were two PPQ 525 Permits (Permit to move soil) approved in CT. There were four Controlled Import Permits issued. There were three permits for Post Entry Quarantine approved.

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.

*ENVIRONMENTAL CONDITIONS.* Drought conditions in CT persisted for most of 2015. Drought stress was mapped on 2,367 acres of forested land, and sporadic brushfires have occurred, causing damage on 80 acres. Storm damage was also detected on 29 acres.

## INSECT AND DISEASE SURVEYS

*BOXWOOD BLIGHT*. There were one hundred twenty five inspections for boxwood blight. None was detected at any production nursery on plants originating in CT. Home owners continue to report boxwood blight on plants in landscapes. Efforts continue to educate landscapers about boxwood blight and its consequences.

*CHRYSANTHEMUM WHITE RUST*. In 2015 we inspected 164,837 plants for CWR, caused by *Puccinia horiana*. No positives were detected.

*GYPSY MOTH*. Due to drought conditions in spring of 2015, 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 175,273 acres, mostly in Middlesex, New Haven, and New London counties. Combined damage due to both gypsy moth and winter moth totaled 4,166 acres, mostly in southern New London County. In November and December 2015 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 2016.

*ASIAN LONGHORNED BEETLE*. We conducted 89 inspections of 7,390 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 2015, 6,060 acres were affected by HWA and 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. Detection efforts include trapping using purple panel traps and monitoring of *Cerceris* colonies. During aerial survey, we mapped 2,456 acres defoliated by EAB, and expect acreage and mortality to increase in the coming years.

*WINTER MOTH*. Damage due to feeding by winter moth larvae has been concentrated in coastal New London County, and continues to increase. Over 3,109 acres were affected in 2015. Parasitoids of winter moth have been released in this area, but their effectiveness in reducing populations has not been significant as yet; a lag time of up to 5 years is expected.

*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.

*ORANGE STRIPED OAK WORM*. Orange striped oak worm caused defoliation on 1,763 acres, mostly in New London County.

*ANTHRACNOSE DISEASES OF HARDWOODS*. Anthracnose diseases, caused by a number of foliar-infecting fungi, caused damage on 2,011 acres, scattered statewide.

*RED PINE SCALE*. Red pine scale caused damage on just 7.6 acres. Red pine is a very limited species in CT.

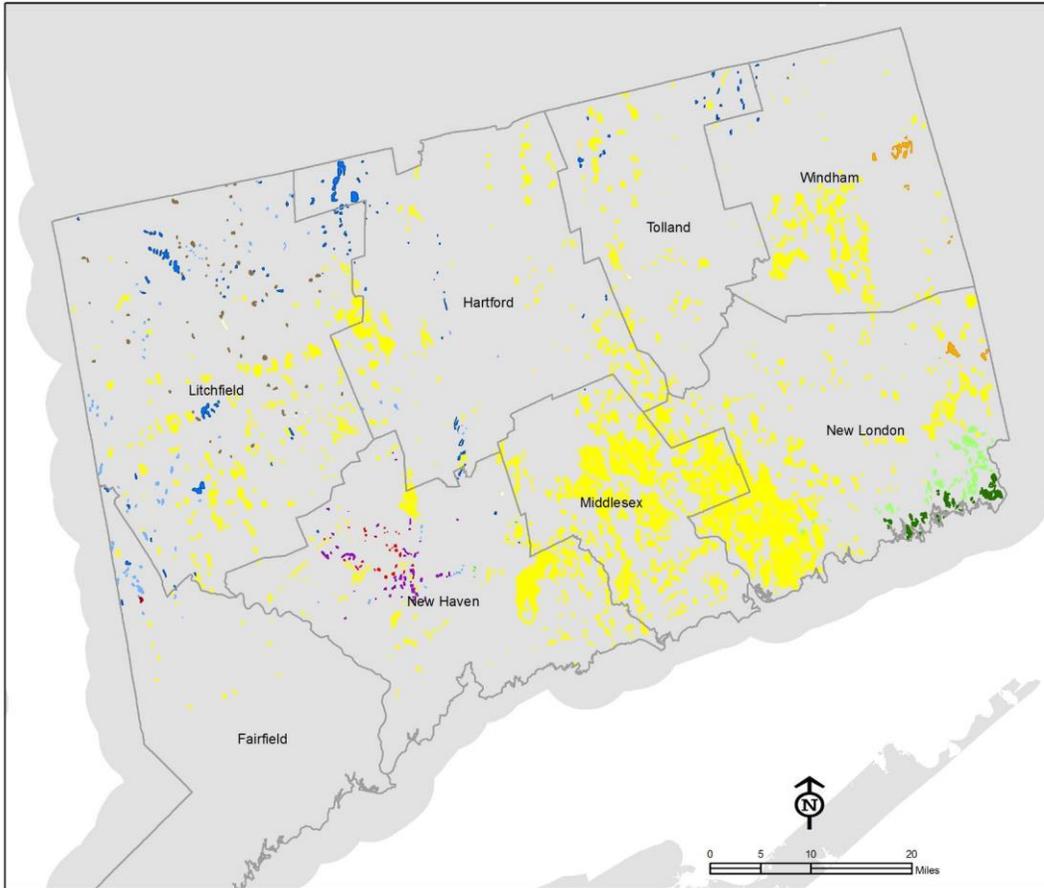
*CYNIPID GALL WASP*. Cynipid gall wasp was detected on the Bluff Point Coastal Reserve in New London County and adjoining areas in the town of Stonington in late 2014. The infestation has not been delimited.

**APIARY INSPECTION.** During the 2015 season Connecticut had one thousand three hundred eighty registered beekeepers maintaining 7,080 hives. In 2015, one thousand eighty nine 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 3000 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 2015 was 57.5 %. (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 2015, local beekeepers struggled to replace losses with package bees from southern states. Despite these challenges, beekeeping interest is still strong with over 900 new beekeepers being trained this winter. There were one hundred twenty Apiary Certificates of Health issued. Three certificates were issued for export out of CT, and one hundred seventeen certificates for interstate movement of honey 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; Victoria Lynn Smith, Deputy State Entomologist; Peter Trenchard, Nursery Inspector.

# 2015 Connecticut IDS Data



DRAFT

**Key**

**Legend**

- Defoliation from emerald ash borer on Ash
- Defoliation from gypsy moth and ash decline/yellows on OAK/HICKORY GROUP
- Discoloration from ash decline/yellows on Ash
- Defoliation from gypsy moth and winter moth on Mixed northern hardwoods
- Defoliation from gypsy moth on OAK/HICKORY GROUP
- Defoliation from winter moth on Mixed northern hardwoods
- Defoliation from orangestriped oakworm on Mixed northern hardwoods
- Discoloration from anthracnose on MAPLE/BEECH/BIRCH GROUP
- Discoloration from anthracnose on MAPLE/BEECH/BIRCH GROUP and elongate hemlock scale and hemlock woolly adelgid on eastern hemlock
- Discoloration from drought on OAK/HICKORY GROUP
- Discoloration from elongate hemlock scale and hemlock woolly adelgid on Hemlock
- Discoloration from hemlock woolly adelgid on Hemlock
- Discoloration from red pine scale on Red pine
- Main Stem Broken/Uprooted from wind-tornado/hurricane on Mixed northern hardwoods
- Mortality from emerald ash borer on Ash
- Mortality from human caused fire on OAK/HICKORY GROUP
- Flown

USDA Forest Service  
 Northeastern Area, State and Private Forestry  
 Forest Health Protection, Durham, NH.  
<http://www.na.fs.fed.us/rhp/index.shtml>

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 November 2015 (RL)

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