



## Agriculture and Markets

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Governor

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### Summary of FY 2015-16 Activities

#### **Plant Inspection and Licensing**

The Division of Plant Industry through the administration of Article 14 of the Agriculture and Markets Law is responsible for maintaining and safeguarding plant health in New York State. Through regulation and routine inspections of the horticultural industry including timber products and other agricultural crops, invasive plant pests and pathogens are kept in check. During the course of these inspections, inspectors look for a variety of different insect and disease problems, including Southern Bacterial Wilt, Boxwood Blight, Sudden Oak Death, and Late Blight of Tomatoes and Potatoes.

In addition to the already established pests, division staff also look for other pests or pathogens that are not known to exist within the state or country. Suspect material is routinely sampled and submitted for analysis. If the findings result in a discovery of a pest that is not known to exist, the material is either quarantined, treated and/or destroyed to safeguard other producers and associated industries.

Division inspectors also work with various industries to inspect outgoing shipments of plant material including lumber, logs, seed, cut Christmas trees, nursery stock, flowers, fruits, and vegetables. This allows New York State to maintain a clean bill of health, supporting the associated industries' ability to do business nationally and internationally.

#### ***Licensing***

There were 180,368 acres and 24,532,970.50 square feet of greenhouse engaged in the production of plant material. There were 3,242 nursery grower licenses active through 2015. During this same period 5,509 nursery dealers held current licenses.

#### ***Inspection***

The inspection activities conducted by our Horticultural Inspectors may be summarized as follows:

Nursery Inspections	2,494
Nursery Dealer Inspections	2,698
Shipment Inspections (incoming)	67
Shipment Inspections (outgoing domestic)	474
Shipment Inspections (outgoing foreign)	346

All rejected shipments were destroyed or returned to consignor. These shipments were rejected due to non-viable plants and/or insect/disease issues.

## **Plant Regulatory and Quarantine Programs**

The Division is responsible for four major quarantine programs. Two of these – Asian Longhorned Beetle and Plum Pox Virus - are also eradication efforts and involve significant effort in partnership with various state and federal agencies, municipalities and industry.

### ***Asian Longhorned Beetle Eradication***

#### Highlights

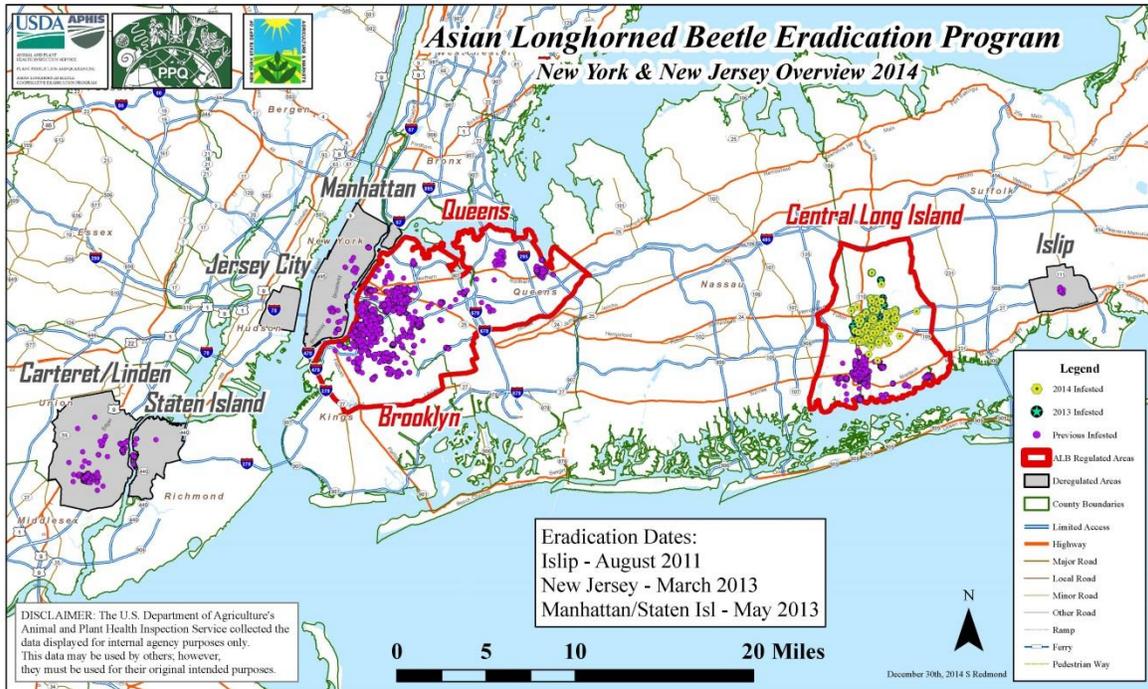
Survey in the Eastern Queens area of the New York City quarantine has been completed with the exception of a small number of no-access properties. Inspectors are working diligently to contact the property owners and arrange an inspection of their trees. Once done, the quarantine in Eastern Queens can be lifted, deregulating over 26 square miles.

#### Delimiting Survey and Detection Response

- As an ongoing response to detection of Asian Longhorned Beetle in New York, the areas under quarantine are surveyed. All properties must be accessed within the quarantine area and any host trees inspected to complete a cycle. The survey protocols require that three negative cycles must occur before an area can be considered free from infestation. In 2015, both ground and climbing staff visited a total of 72,384 properties and inspected 183,092 trees.
- Level 3 Survey – In order to insure no other areas of New York are harboring infestation, inspectors work outside the quarantine boundaries on a regular basis, to target and inspect businesses and areas considered at high risk for infestation. The inspectors visited campgrounds, importers, freight rail lines and industrial parks. They accessed 214 establishments and surveyed 2,508 host trees with no new introductions detected.
- Tree Removal and Detection – 113 infested trees were found in 2015 and 4,228 trees were identified as high risk. In all, 153 infested and 4,229 high risk trees were removed in 2015 including 40 infested and 1 high risk trees that were found in 2014. Since the first detection of ALB in Greenpoint, Brooklyn, a total of 7,071 infested and 16,649 high risk trees have been removed.

#### Outreach Activities

- The Asian Longhorned Beetle Program continued to place high priority on outreach, education, and training in order to bring awareness and understanding of this destructive pest to the public's attention.
  - 86 outreach events with information booths staffed
  - 63 on-site compliance trainings were provided; 208 individuals and 63 companies/organizations trained.



### Regulatory Activities

- The total area under regulation for ALB is 137 square miles.
- In order to effectively manage and control the movement of wood and insure proper disposal and destruction of host material, the program spends numerous hours training and educating green industry professionals. Once trained and willing to cooperate with the regulations, the companies are issued a compliance agreement where they will inspect all host wood for infestation, and properly dispose of it in an approved manner.
- 1,040 General Compliance Agreements and 17 Nursery/Garden Center Agreements are currently being monitored.
- 2,969 site inspections were made along with 865 vehicle inspections. 37 Regulated Material Certificates were issued for firewood inspections. 12 Quarantine Orders and 59 Limited Permits were issued to permit controlled movement.
- 3 violations were issued to two Garden Centers for missing quarantined nursery stock.

### Asian Longhorned Beetle Research Activities

Research efforts continue in New York, Massachusetts and Ohio, some conducted over several years. Much of the research has had a positive impact on ALB program activities and has assisted program managers in developing better survey and treatment methods.

- Researchers from the USDA-CPHST Otis Laboratory in Buzzards Bay, MA, have continued to sample significantly infested trees, and infested trees in outlying areas, with the utilization of GIS applications, dendrochronological methods, and ecological principles, to help reconstruct the establishment, growth and spread of ALB populations that are currently under eradication in New

York, Ohio, and Massachusetts. In New York, four infested trees were sampled in Amityville, four in Farmingdale, and two in Wyandanch. Although the dendrochronological analysis is not complete, current results indicate the initial infestation of an Amityville tree in 2011, and 2014 for four trees (2 Amityville, 2 Farmingdale). Seventeen infested trees were sampled in Massachusetts, and eighteen in Ohio. The resulting information assists eradication programs outline areas for survey, control, regulatory activities, and contributes to the development of predictive infestation models.

- A multi-state research project to determine the chipping standards needed to eliminate the risk of Asian Longhorned Beetle spread is currently under way. Researchers from the USDA-CPHST Otis Lab in Buzzards Bay, MA have collected ALB infested bolts of wood from the New York, Ohio and Massachusetts programs. Using standard industry wood chippers, the infested wood will be chipped and larva collected to determine the survival rate within various sizes of wood chips. The work with ALB infested wood will be used to confirm findings with surrogate insects in which it was shown that the chipping process is violent enough to kill larvae even if they are not actually cut by the blades. The New York program is presently using the Emerald Ash Borer (EAB) wood chip standard of 1" in 2 dimensions.

### ***Golden Nematode Containment Quarantine***

The Golden Nematode (*Globodera rostochiensis*) (GN) is a quarantined pest that has been discovered in potato fields on Long Island and in the Finger Lakes region in upstate New York. It is recognized throughout the temperate regions of the world as one of the most difficult of all crop pests to eradicate. It can drastically reduce yields on the farms where it exists, and if left uncontrolled, poses a threat for spread to other fields.

Were it not for an effective management plan, the unmitigated risk of spread could prohibit the interstate movement of all crops which could carry soil on them. For over sixty years, the Department and the United States Department of Agriculture have worked cooperatively to preserve the potato industry in New York and to prevent the spread of the nematode.

In order to prevent the spread of GN, vigilance needs to be maintained over mandated sanitation practices and the adherence of the grower to the resistant variety rotations. The Agriculture and Markets Law requires that any equipment leaving a regulated field be cleaned free of all soil prior to entering a non-regulated field and any grower wishing to plant potatoes in a regulated field must follow a four-year crop rotation scientifically designed to reduce the spread of GN cysts. Inspectors monitored grower activities to ensure that mandated sanitation practices were employed. In 2015:

- Inspectors sanitized 7,210 pieces of equipment and issued 48 certificates of disinfestation.
- USDA inspectors issued 1 phytosanitary certificate for potatoes leaving the country.
- Collected 171 potato leaf samples from 57 fields for DNA analysis to confirm variety planted.
- Three fields, through DNA analysis were found to have been planted out of the required rotation.
- The growers involved were notified of the potential violation on these fields.

On an annual basis the GN and PCN statewide soil survey is conducted by USDA with Division assistance. This survey is to determine if there are any active infestations both in regulated fields, fields likely to be



## ***Plum Pox Virus Quarantine & Eradication Program***

Plum Pox is a viral disease of stone fruit species that first appeared in the United States in Pennsylvania in October 1999 and initially in New York in July 2006. Plum Pox Virus (PPV) is vectored by aphids and affects a number of species in the *Prunus* family including peach, nectarine, apricot and plum. This disease is also spread through propagative material – namely budwood of infected material being grafted and grown on as planting stock.

The New York State Department of Agriculture in cooperation with the USDA and Cornell University is using a multi-tiered approach of survey, control, and education to eradicate PPV from New York. Division of Plant Industry personnel planned, coordinated and conducted the survey for the commercial stone fruit orchards, border survey and woodlots survey this past year.

The 2015 survey detected a plum pox virus infected tree in Ulster County. This is the first positive detection of PPV in the Hudson Valley where a new Regulated Area and Nursery Stock Regulated Area (NSRA) will be enforced. This positive tree was detected while conducting the Stone Fruit Commodity Survey.

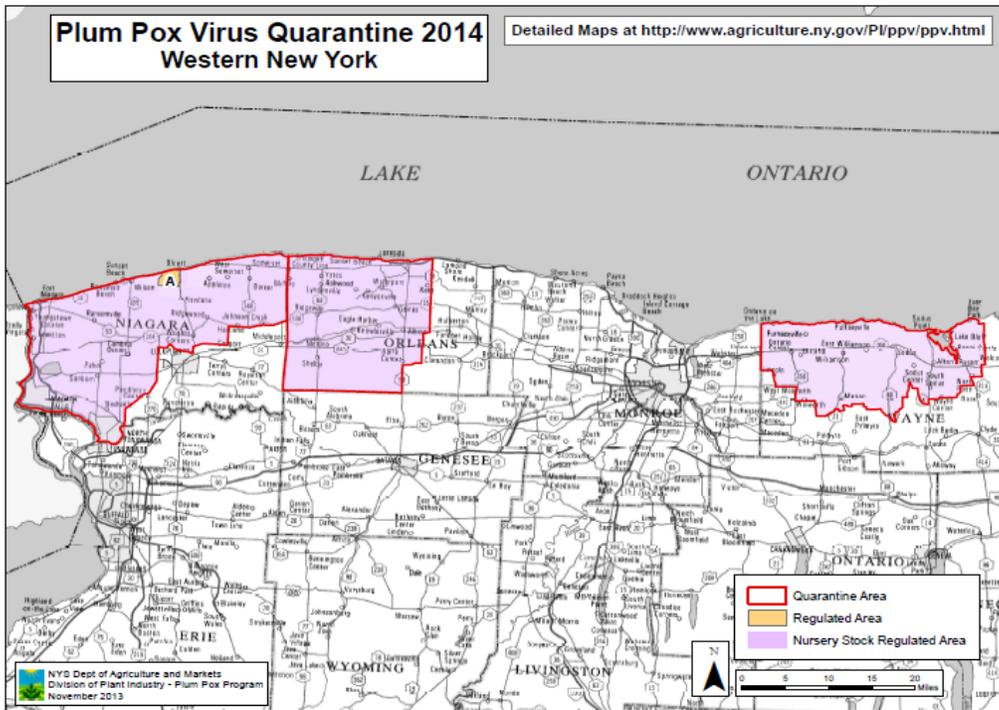
As part of the eradication survey, program staff surveyed 1,134 commercial stone fruit blocks totaling 1,037 acres in 3 counties for a total of 84,348 leaf samples collected. All samples tested negative using ELISA by the PPV program's designated lab.

A border survey was conducted for the 4th year in a row by NYSDAM personnel. This was an intense survey of wood lots and residential properties along the Niagara River. The target survey area started at Fort Niagara State Park and ran south along the Niagara River to the southern section of Artpark. The Niagara River separates Niagara County, New York and Ontario, Canada. Across the Niagara River within Ontario, Canada is a tender fruit growing region for Canada. The Plum Pox Virus is known to occur in this region and there is no longer an eradication program for PPV in Canada. The presence of the virus this close to the New York stone fruit growing region puts New York (and the United States) at risk, especially the Niagara County growers. Along the border, 2,600 acres were surveyed extensively for the presence of susceptible *Prunus*. A total of 2,078 samples were collected during the 2015 survey. All samples tested negative using ELISA by the designated lab.

Having the required six years of consecutive clean survey in Orleans & Wayne counties the Nursery Stock Regulated Areas within these two counties are pending deregulation.

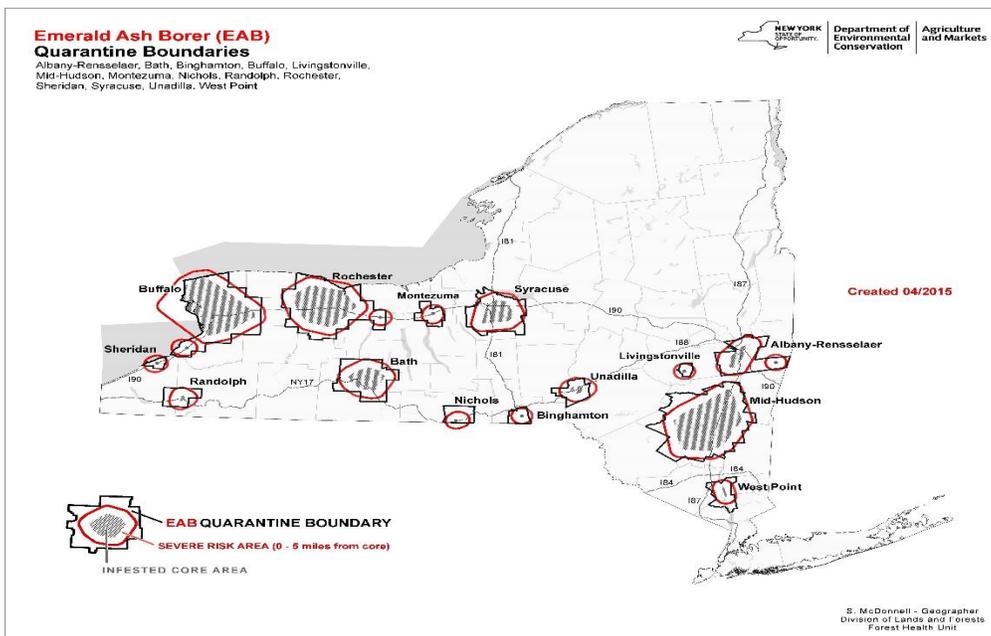
The Nursery Stock Regulated Area in Niagara County has been reduced and a propagation ban has been implemented.

The Plum Pox Virus Eradication program is on target to reach the goal of eradication within the foreseeable future. Cooperation from growers, land owners and the nursery industry has been critical to the success realized so far.



## EMERALD ASH BORER

In 2009 New York State was the 13<sup>th</sup> state to confirm the presence of Emerald Ash Borer in the United States. On July 23, 2009 quarantine was placed on Chautauqua and Cattaraugus Counties for Emerald Ash Borer. That quarantine has expanded many times over the years. In June of 2015, NYSDAM reversed course and scaled back the area under quarantine to focus only on the areas that were known to be infested plus a buffer of townships around those infestations. See map below:



The re-focusing and tightening of the quarantine is designed to increase protection for forests and communities outside the Restricted Zones by slowing the further spread of this pest to other parts of the State. There are an estimated 750 million ash trees in New York State (excluding the Adirondack and Catskill Forest Preserves), with ash species making up approximately seven percent of all trees in our forests. A spread of the infestation would have very adverse economic consequences to the nursery, forestry and wood products industries of the State, including lumber, paper, firewood and wood pellet manufacturers and wood-fired power plants, due to the destruction of the regulated articles (ash trees, logs and wood chips) upon which these industries depend. Tightening the quarantines and removing the movement restriction within the quarantine areas, also reduced the restrictions and associated costs on industry, arborists, utilities, municipalities and homeowners.

Additionally, the change in quarantine approach takes a more aggressive stance to provide protection for all impacted parties. Left unchecked, the spread of the infestation will result in significant economic, social and environmental impacts on communities, forest owners and homeowners suffering the loss of ash trees and the expenses associated with their removal, disposal and replacement at a rate faster than the potentially impacted industries and municipalities are prepared to handle. Tightening the quarantines reduces the pace of EAB spread thereby providing greater protection and time.

### ***Velvet longhorned beetle (Trichoferus campestris)***

In 2014, an adult velvet longhorned beetle was discovered in Westchester County, New York. Larval specimens were extracted from host wood collected in the area of initial discovery.

Velvet longhorned beetle, a native of East Asia, can be transported as larvae in solid wood packing material and has been detected at several ports of entry in the United States over the last decade. First detected in Utah in 2010, a population has been established near Salt Lake City and is being monitored and studied by the Utah Department of Agriculture and Food (UDAF) and the USDA.

In 2015, six blacklight traps were placed at sites in the vicinity of initial detection as well as nearby commercial transportation hubs. Five adults were collected from the two trap locations nearest the initial detection, a suburban residence and a municipal recycling facility handling tree debris. Ground survey activities were conducted in a ½ mile radius around the detection sites. No active infestation was identified with the visual surveys, however, suspicious trees were recorded for future observation and samples from several suspicious trees were collected for larval rearing and identification.

Presently, the potential threat to urban and woodland areas is undetermined. Increased detection and trapping activities are planned for 2016 in cooperation with the USDA to determine the extent and potential impact of the infestation.

### ***Japanese Beetle Certification***

In 1916 the Japanese Beetle (*Popillia japonica*) was introduced into the Northeast United States and has since spread throughout the State of New York and beyond. This infestation has resulted in many southern and western states enacting quarantines against any infested state (including New York) shipping plant material. To effectively manage this pest the United States Department of Agriculture and the National

Plant Board developed cooperatively the U.S. Domestic Japanese Beetle Harmonization Plan in 1998. As a requirement of this program all shipments of nursery stock or greenhouse material into Category 1 and 2 States must meet the requirements of the U.S. Domestic Japanese Beetle Harmonization Plan.

In 2010, New York State instituted a sticker program to meet the requirements for shipments of plant material to Category 1 and 2 States and comply with the protocols set forth under the Harmonization Plan. In 2015, seven greenhouse growers in New York State participated in the program and have a compliance agreement in place for the use of stickers to certify shipments grown under the conditions specified in the Harmonization Plan.

Additionally New York State has one nursery which participated in 2015 with the Nursery Accreditation Program for shipments to Category 2 States under the Harmonization plan protocols. The protocols set forth in the Nursery Accreditation Program were strictly adhered to for soil sampling procedures, documentation of field sampling results and the presence of Japanese Beetle grubs.

### ***Grape Certification***

The State's experience with Plum Pox Virus has clearly demonstrated the impact plant diseases can have on the plants and in turn the economy of New York State. New York has been working with grape nurseries in the state to reinstate our grape certification program. New York grape nurseries are the primary suppliers of grapevines to vineyards in the eastern half of the United States. Criteria for certification have been established through the collaboration with growers, Cornell University plant pathologists and the Division of Plant Industry. Nurseries will be establishing mother blocks for inclusion in this program in 2016. New York Horticultural Inspectors will be trained in spring and fall 2016 on inspection and sampling for the certification program. This work has been supported in part by USDA Farm Bill funding in conjunction with the National Clean Plant Network (NCPN).

New York has been active on the Grape Group of the National Clean Plant Network with representation from nurseries, vineyards, university experts and Margaret Kelly (Assistant Director) representing plant regulators. Working with the NCPN-Grape Group New York is working to have the criteria harmonize with other states and be universally accepted meeting North American Plant Protection Organization (NAPPO) standards.

### ***Apple Certification for Shipments to AZ and CA***

Certification was renewed with the states of Arizona and California for the Fresh Apple Master Permits authorizing the shipment of fresh apples commercially grown in New York during the 2015 growing season to their respective states. Twenty-two establishments handling sixteen brands of Apples within New York were approved for participation in the 2015 Fresh Apple certification program.

Additionally eleven New York establishments met the requirements in 2015 to ship under the Apple Gift Pack Certification program to Arizona and California.

## ***European Corn Borer Certification Program***

The European Corn Borer (ECB) was first reported in North America in 1917 in Massachusetts. Since its first introduction ECB has spread into New York and has continued to spread westward across North America. ECB feeds on corn along with a multitude of other field crops in North America. To meet the growing demand for fresh ears of corn destined for Texas and to provide regulatory oversight, in 2015 NYSDAM entered into a compliance agreement with a farm to meet the requirements of the Texas Administrative Code: European Corn Borer Quarantine for the shipment of fresh corn to that state. Currently one farm in Cayuga County is participating in this program with approximately 1.9 million ears of fresh ears of corn shipped in 2015.

## **Commodity Inspection, Sampling and Analysis**

### ***Seed Inspection, Sampling and Certification (A&M Law, Article 9)***

Farmers depend on seed purity, germination, trueness to variety and freedom from weed seeds to produce maximum crop yield and profitability. Each year, the Division receives a number of consumer complaints and inquiries regarding seed quality. Agriculture and Markets Law recognizes this fact and provides for the inspection, sampling and analysis of seed that is offered or exposed for sale in New York. The unchecked introduction of noxious weed seed is also a concern of importance.

The Division works closely with Cornell University's New York Seed Improvement Project to certify seed as New York State Certified. The designation of seed as certified indicates that it is of a known variety produced under strict standards to maintain varietal purity. Seed lots must also meet specified standards for other crop seeds, inert matter, weed seeds and germination.

In 2015, 568 seed samples were taken with 467 found in compliance to their labeling. 83% of the samples were found to be accurately labeled.

	Turf/Lawn Seed	Ag Seed	Flower Seed	Vegetable Seed
Samples Analyzed	172	362	1	33
Samples in compliance with labeling	141	295	0	31
Samples void/pending/TTV*	1	1	0	1
Samples with Violations	30	66	1	1

\* TTV/Trueness to Variety sample

Seed found in violation of its labeling in 2015:

- was relabeled with the New York State Seed Testing Laboratory analysis.
- pulled from distribution.
- the labeler may receive a penalty for distributing mislabeled seed.

## ***Fertilizer, Lime & Soil and Plant Inoculants (Article 10, 9A, 10A)***

Proper soil pH and crop nutrition is vital in maximizing crop yields. The guaranteed analysis of the chemical composition of fertilizer and liming products is critical for farmers in maximizing profitability and in their whole farm management efforts to minimize environmental impacts. Agriculture and Markets Law Articles 9A, 10, and 10A provide the statutory guidance for licensing, inspection, sampling and analysis to ensure the availability of high quality and properly labeled materials.

In 2015, 124 commercial fertilizer samples were obtained for analysis and comparison to their labeled guarantees. Seventy percent of the fertilizer products sampled were found to be compliant to their stated guarantees. In addition, 15 agricultural liming materials were also sampled for analysis.

<b>Fertilizer</b>	
Firms Licensed	524
Inspections Performed	651
Samples Taken	124
<b>Liming Materials</b>	
Lime Firms Licensed	74
Inspections Performed	329
Samples Taken	15
<b>Soil and Plant Inoculants</b>	
Firms Licensed	105
Inspections Performed	162

Notice of sample results were mailed to all distributors of fertilizer and lime products that were tested.

Fertilizer found in violation of its labeling in 2015:

- Was relabeled with NYSDAM Food Lab analysis, or
- Pulled from distribution, or
- Compensation by the labeler made to the purchaser(bulk sampling on the farm) for deficiency, or
- Referral to Counsels Office with penalty recommendation

## ***Ammonium Nitrate Inspection***

The potential of use of commercial fertilizers, particularly ammonium nitrate and anhydrous ammonia, in the production of weapons of mass destruction and in the illegal manufacture of drugs has heightened concern with respect to their regulation and onsite security. Any person or entity in New York State that sells, offers for sale, or otherwise makes available, ammonium nitrate or regulated ammonium nitrate materials is required to register annually with the Department. All purchasers must provide proper

identification and background information before purchasing ammonium nitrate or ammonium nitrate products. All sales records must be retained for a 2 year period and be available for inspection by NYSDAM or New York State Office of Homeland Security. Ammonium nitrate and ammonium nitrate materials must be stored in a secure location. Daily inspections by the establishment operators for attempted entry, vandalism and structural integrity are required. There are currently 9 establishments registered as ammonium nitrate retailers. Ammonium nitrate retailers in state are subject to quarterly inspections by NYS Horticultural Inspectors.

### ***Stop Sale Orders and Non-Compliance Issues***

235 Stop Sale Orders were issued on products/distributors at 89 facilities.

- Approximately 181 Stop Sale Orders were issued for seed found for sale past the expiration date.

### **Integrated Pest Management**

The mission of the New York State Integrated Pest Management (IPM) Program is to develop and deliver sustainable ways to manage pests that are cost-effective and pose minimal risks to human health and the environment. The program focuses on IPM strategies that address a wide range of plant and animal pests including arthropods, crop diseases, weeds and vertebrate pests through programs of implementation and development/research.

The IPM Program is critical to the development and implementation of economically and environmentally sustainable tactics for farmers to manage annually recurring insect, weed, disease and vertebrate pests, as well as new invasive species and those that have become more difficult to control due to development of resistance to pesticides.

The 2015/16 allocation for the Statewide Integrated Pest Management Program conducted through the New York State College of Agriculture and Life Sciences at Cornell totaled \$500,000. Cumulative appropriations for this publicly supported program have amounted to \$24,072,874 over a 30 year period since its inception in 1985.

During this period of sustained support, over 1,000 research and development, demonstration and implementation projects have been funded in the areas of fruit, vegetables, ornamentals and turf, and dairy/field crops. The emphasis of funding continues to be in the area of bio-intensive studies and implementation projects.

### **Invasive Species and Noxious Weeds**

On March 10<sup>th</sup>, 2015 NYSDAM and the Department of Environmental Conservation (DEC) enacted Part 575 Prohibited and Regulated Species to address the current trend nationwide of preventing the spread of invasive species. This is an ongoing cooperative effort between both agencies to control and reduce the spread of invasives within New York State's native habit. Outreach has been a key component in spreading the word on this new regulation in the form of brochures, mailings, workshop presentations and Nursery/Greenhouse/Dealer site inspections by NYSDAM Horticultural Inspector staff. A key component of NYSDAM's mission is to protect the native habit of New York State through

Nursery/Greenhouse/Dealers site inspection to prevent the introduction or spread of non-indigenous diseases, insects and plants. NYSDAM regulatory authority permits the Department to conduct site inspections at licensed establishments and to take the appropriate action when invasives are found in commercial trade. As a new regulation there has been a learning curve between state agencies, commercial establishments and the public with both negative and positive feedback to those affected.

### **NYSDAM 2015 Plant Inspection data for Invasive species compliance at licensed establishments**

Nursery dealers: 694 inspections conducted for Part 575 invasive species compliance.

- Found 39 dealers with Prohibited species for sale, requested removal of plants from sale.
- Found 138 dealers with improperly labeled Regulated species for sale, requested proper labeling of plants to bring into compliance.

Nursery growers: 903 inspections conducted for Part 575 invasive species compliance.

- Found 58 growers with Prohibited species for sale, requested removal of plants from sale.
- Found 261 growers with improperly labeled Regulated species for sale, requested proper labeling of plants to bring into compliance.

### ***Pest Survey***

The primary objective of the Cooperative Agricultural Pest Survey (CAPS) program is to establish and maintain a comprehensive network of cooperators and stakeholders to facilitate our mission and to safeguard American plant resources. NYSDAM is committed to survey and detection of exotic plant pests that may threaten the agriculture of New York State and the continental United States. NYSDAM pest detection objectives and goals parallel those identified in the 2015 National CAPS Guidelines emphasizing commodity surveys for the early pest detection of non-indigenous plant pests and confirming the presence or absence of plant pests impacting domestic and international movement of New York plants and plant products.

Our objective is the early detection of the following insect pests and pathogens in high-risk import nurseries/greenhouses and garden centers/retail outlets which are potentially harmful to New York agriculture/horticulture. These pests and pathogens are located within the Nursery/greenhouse and Retail garden center Commodity **(NRC)** Bundled Survey:

### ***Nursery/greenhouse and Retail garden center Commodity Survey (NRC):***

The 2015 Nursery/Retail Commodity Survey was conducted by 15 NYSDAM Horticultural Inspectors in three regions throughout New York State. This survey focused on detecting exotic terrestrial plant pests at wholesale and retail greenhouses, landscape nurseries, and retail outlets/garden centers. Surveys for target pests began January 2015. There are four target pests surveyed for using traps and lures: Golden Twin Spot Moth, Oak Ambrosia Beetle, Oak Processionary Moth, and Rosy Moth. There are six target pests surveyed for using visual survey methods: Boxwood Blight, Japanese Wax Scale, Late Blight, *P. ramorum* Blight (aka: Sudden Oak Death), Southern Bacterial Wilt, and Tremex Woodwasp. Suspect insect

targets collected were sent to the Insect Diagnostic Laboratory at Cornell University for identification. Suspect disease specimens collected were sent to the Northeast Plant Disease Diagnostic Lab at Cornell University. All surveys have concluded and traps have been removed.

New York CAPS Targets 2015 Summary

- *Cylindrocladium pseudonaviculatum* – Boxwood Blight
- *Ceroplastes japonicus* – Japanese Wax Scale
- *Phytophthora infestans* – Late Blight on Tomato
- *Phytophthora ramorum* – P.ramorum Blight (Sudden Oak Death)
- *Ralstonia solanacearum race3 biovar2* – Southern Bacterial Wilt
- *Tremex fuscicornis* – Tremex Woodwasp
- *Chrysodeixis chalcites* – Golden Twin Spot Moth
- *Platypus quercivorus* – Oak Ambrosia Beetle
- *Thaumetopoea processionea* – Oak Processionary Moth
- *Lymantria mathura* – Rosy Moth

**Summary of 2015 Annual Accomplishments** Through visual inspection of nursery stock at nurseries/greenhouses and garden centers/ retail outlets:

Federal Target Species	Survey Dates	Est. # Sites for 2015	Actual Sites	Est. # Plants Inspected	Actual Plants Inspected	Potential Collections	Specimens Collected	Positive identification
<b>Visual</b>								
Japanese Wax Scale, <i>C. japonicus</i>	Jun – Sept	150	527	150	304,669	150	18	0
Boxwood Blight, <i>C. pseudonaviculatum</i>	Mar – Nov	150	650	150	399,596	150	84	29
Late Blight on Tomato, <i>P. infestans</i>	Mar – July	150	678	150	3,694,605	150	1	0
P. ramorum Blight, <i>P. ramorum</i>	Mar – Aug	68	635	68	367,191	68	1	0
Southern Bacterial Wilt, <i>R. solanacearum</i>	Jan – Dec	150	857	150	1,956,977	150	7	0
Tremex Woodwasp <i>T. fuscicornis</i>	Jul – Sept	150	341	150	27,845	150	0	0
<b>Annual Totals:</b>	<b>Jan - Dec</b>	<b>818</b>	<b>3,688</b>	<b>818</b>	<b>6,750,883</b>	<b>818</b>	<b>111</b>	<b>29</b>

Through pheromone trapping in nursery stock at nurseries/greenhouses and garden centers/retail outlets:

Federal Target Species	Survey Dates	Est. # Sites for 2015	Actual Sites	Est. # Traps/Site Servicing	Actual Traps/Servicings	Potential Collections	Specimens Collected	Positive identification
<b>Trapping</b>								
Golden Twin Spot Moth <i>C. chalcites</i>	Mar – Aug	15	15	30/180	30/178	180	10	0
Oak Ambrosia Beetle <i>P. quercivorus</i>	Jun – Oct	15	16	30/180	30/182	180	3216	0
Oak Processionary Moth <i>T. processionea</i>	Jun – Oct	15	15	30/180	30/182	180	348	0
Rosy Moth <i>Lymantria mathura</i>	Jun – Oct	15	15	30/180	30/184	180	409	0
<b>Annual Totals:</b>	<b>Jan - Dec</b>	<b>60</b>	<b>61</b>	<b>120/720</b>	<b>120/735</b>	<b>720</b>	<b>3983</b>	<b>0</b>

## **2015 Farm Bill Survey Summary Report**

### ***Stone Fruit Commodity Survey***

A survey was conducted of stone fruit orchards outside the existing quarantine (Niagara, Orleans and Wayne Counties) for Plum Pox Virus (PPV). Counties were selected based on risk for having PPV looking ??? at distance from previous positive detections in adjacent New York counties and Ontario, Canada and rotating orchards within the Hudson Valley. 29,797 samples were collected from 17 counties (see chart) one sample tested positive.

County	Samples	Blocks	Acres
Albany	20	1	0.23
Cayuga	177	9	4.22
Clinton	168	1	2.19
Columbia	2,165	83	57.8
Dutchess	553	38	7.42
Greene	123	8	2.24
Monroe	2,508	82	112.78
Ontario	800	31	14.7
Orange	9,562	110	74.67
Rensselaer	135	2	2.17
Saratoga	225	12	1.87
Schuyler	850	18	13.14
Seneca	57	3	1.78
Tompkins	651	13	7.38
Ulster	10,718	269	109.61
Washington	51	4	1.13
Yates	1,034	20	28.84
<b>TOTALS</b>	<b>29,797</b>	<b>704</b>	<b>442.17</b>

A new Regulated and Quarantine area is in effect in the Hudson Valley due to the positive detection.

Trapping was conducted for the Plum Fruit Moth (*Grapholita funebrana*). 6 Wing traps with the appropriate lure were placed in 2 counties (Niagara & Orleans), traps were monitored throughout the season. Three hundred and twenty six (326) moth specimens were collected for determination. No specimens determined to be Plum Fruit Moth.

Trapping was conducted for the False Codling Moth (*Thaumatotibia Leucotreta*). 6 Wing traps with the appropriate lure were placed in 2 counties (Niagara & Orleans), traps were monitored throughout the season. One hundred and fifty seven (157) moth specimens were collected for determination. No specimens determined to be Plum Fruit Moth.

### ***Phytophthora ramorum National Nursery Survey***

A survey was conducted of nurseries that were determined to be high-risk based on host material each received from the west coast received directly or indirectly. The survey was conducted from May through August 2015 and consisted of water baiting in bodies of water and by using the bottle of bait method in addition to leaf sampling at high-risk nurseries across the state. A total of 140 samples were collected yielding no positive detections. Additionally, environs surveys were conducted around nurseries that had previous positive plants and water bodies. No positive detections were found within the environs survey.

### ***Grape Commodity Survey***

A survey was conducted of grape nurseries and vineyards in the grape growing regions of New York. Nurseries and vineyards were surveyed for:

- *Lobesia botrana* – European Grapevine Moth (GVM)
- *Adoxophyes orana* – Summer Fruit Tortrix (SFT)
- *Eupoecilia ambiguella* – European Grape Berry Moth (EGBM)
- *Spodoptera littoralis*- Egyptian Cottonworm (ECW)
- *Planococcus ficus* – Vine Mealybug (VMB)
- *Lycorma delicatula* - Spotted Lanternfly (SLF)
- Australian Grapevine Yellow
- Grapevine Red Blotch associated Virus (GRBaV)
- Flavescence doree
- 

None of these pests were found.

## ***Orchard Commodity Survey***

A survey was conducted of apple and stone fruit orchards for:

- *Adoxophyes orana* – Summer Fruit Tortrix Moth (SFT)
- *Archips xylosteanus* – Variegated Golden Tortrix (VGT)
- *Enarmonia formosana* – Cherry Bark Tortrix (CBT)
- *Epiphyas postvittana* –Light Brown Apple Moth (LBM)
- *Lycorma delicatula* - Spotted Lanternfly (SLF)
- *Candidatus Phytoplasma mali* – Apple Proliferation Phytoplasma (APP)
- *Erwinia amylovora* – Streptomycin resistant Fire Blight (SmR Ea)
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None of these pests were found.

## ***Forest Pest Outreach and Survey***

Contracts were initiated with Cornell Cooperative Extensions of Chautauqua, and a local media company to provide assistance to the Department with the 2015 Forests Pests Outreach and Survey Project (FPOSP) in New York to meet the following goals and objectives:

- a) Educated public and private individuals and groups through numerous outreach events, on the importance of Asian Longhorned Beetle (ALB), Emerald Ash Borer (EAB) and other forest pests of concern to the State and how to prevent their spread, as well as how to identify adult ALB and EAB signs/symptoms of infestation and what time of year to look for these insects;
- b) During the months of July and August CCE of Chautauqua County set up and staffed two Forest Pest Outreach Booths that targeted campers and out of state travelers in order to amplify the Don't Move Firewood message.
- c) Working with The Pancoast Concern, a Victor, New York media company, the Forest Pest Outreach and Survey Project created ads for the Rochester, Schenectady and Long Island areas. The eight ads were timed to the emergence of EAB and ALB. In addition to the ads, the contractor issued a press release to the local newspapers, news talk radio stations and network television stations that coincided with the emergence of EAB.
- d) In order to educate travelers about ALB and EAB, NYSDAM staff conducted two NYS Thruway outreach events in June and July. The Don't Move Firewood message was featured prominently in their handouts and message.
- e) In August, New York State Inspectors staffed a Forest Pest booth at the NY State Fair where an estimated 100,000 visitors passed through the Taste of New York tent. They also staffed a booth during Empire Farms Days in Seneca Falls, NY with an estimated attendance of 65,000 visitors.



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Funding for the FOSP initiative was secured from the 2014-15 Farm Bill and provided through a cooperative agreement with USDA/APHIS/PPQ.

### **Apiary Inspection and Honey Bee Health**

NYS DAM has had a successful year with three seasonal apiary inspectors. The programs they were involved in were as follows:

#### ***Certification***

The inspection and verification of bee diseases is to permit bee operations to travel to other states apparently free of American Foul Brood (AFB) bee disease.

Certification of colonies was done during the active brood production period of 2015. The inspection results are as follows:

- 59 beekeepers entered NYS with approximately 43,815 colonies and 4,535 nucs. 71% of these beekeepers arrived with a valid health certificate from another state
- 49 beekeepers exited the state with 40,337 colonies and no recorded nucs.
- 43 beekeepers had been certified by NYS apiary inspection or 88%. The balance (12%) traveled on their Florida certificate.
- Of the 40,337 colonies exiting NYS, approximately 11% (4,308 colonies) were examined for American Foulbrood, mite levels and Nosema disease. Incidence of Nosema disease went from 13% above the economic level in June to 67% in October.
- American foulbrood (AFB) level was at 0.001%. Four colonies were positive for AFB in 2015.
- The Varroa mite levels continued to decrease in the percent above the economic level.
- Nosema disease levels decreased for four of the five months of sampling.
- Approximately 92% of the colonies that entered New York State in 2015, exited the state by the end of the year. In previous years this figure is roughly 75%. This increase in colonies exiting the state usually indicates that a large NYS honey crop was produced and that colonies were stronger and healthier to exit the state in the fall.

## ***National Honey Bee Survey (NHBS)***

New York continued to participate in USDA's National Honey Bee Survey in 2015 with partial funding from USDA Farm Bill. Over the past 6 years this survey work has created a baseline of pest and pathogen levels in the U.S. for honey bees. Four years of pollen samples were taken and a report on pesticide findings from ten beekeepers for each of the four years was done as well as a summary report.

In the 2015 survey, eight colonies per apiary were sampled, from 24 apiaries. Samples were analyzed for seven viruses, *Nosema* disease (a parasitic fungal disease), and three parasitic mites, including a new mite not known to be present in the U.S. called *Tropilaelaps*. All sample collections for the NHBS were completed by August 2015. Results of these pests, diseases and pesticides have been received from the USDA Federal bee lab, and will be tabulated in 2016.

## ***Honey Bee Health Program (HBHP)***

This relatively new NYSDAM program assists beekeepers by closely monitoring varroa mite levels and the fungus disease *Nosema* as these are harmful to commercial operations. The establishment of Best Bee Management Practices (BBMP) is important in the reduction of yearly colony losses within commercial operations. The result is stronger colonies and additional colonies to pollinate the many U.S. agricultural crops. The purpose of this program is to find solutions to reduce participant's colony losses, which have been 50% to 80% for the past eight years. This is an ongoing program to find solutions to beekeepers' bee issues.

This year's program included commercial beekeepers that had approximately 43,000 colonies. Total colonies inspected were 4,308 colonies. The average varroa mites per bees averaged 4.33 for the five month period of sampling.

New information has come to light for 2014's *Nosema* disease results. The end result is *Nosema* disease levels dropped substantially, with large seasonal honey flows from basswood honey and goldenrod honey. Result is less *Nosema* disease in the winter months which increases resilience to the stress brought on by inter conditions.

## ***Pesticide Assistance***

NYSDAM is assisting the Department of Environmental Conservation (DEC) with collecting bee samples for pesticide testing. The apiary inspectors determine if the colonies have pesticide issues. The dying and dead bee sample is collected and turned over to DEC so they can determine through their own lab if and what pesticide has killed the bees.

## ***Education/Outreach***

This past year the Apiculturist has attended meetings and has given presentations and fielded phone calls from concerned beekeepers. This includes:

- Presented at Canandaigua, Western NY, Steuben County, and other local bee club meetings and presented at the state beekeepers organization, Empire State Honey Producers' Association (ESHPA).
- Coordinated three meetings of the Apiary Industry Advisory Committee for 2015.
- Pollination Protection Plan (PPP) meetings in August, September and October held by the NYS Task Force made up of DEC and NYSDAM. Final plan will be presented after the first quarter of 2016.

### ***Winter Loss***

Participation in the Bee Informed Partnership National Winter Loss and Management Survey. This survey continues the effort to quantify the colony losses suffered by U.S. beekeepers over the winter season. It is a partnership with USDA-ARS.

Results are summarized as follows:

- Over all the yearly colony loss for NYS was 54% .
- The surrounding Great Lakes states had a range from 8% to 62% for their average yearly losses for 2015.
- These percent's are based on winter and summer loss and summer losses are now larger than winter losses.

The 2014-2015 abundance of bee forage and plentiful honey crops have resulted in a greater percentage of bee colonies having a larger fall bee population of "winter bees" that live over 6 months. The result is a smaller winter loss occurs. The addition of lower varroa levels in the spring of 2015 also helps the colonies overwinter better resulting in a lower winter loss level.

### ***Cornell Research***

The department is assisting Cornell with the development of a research project on honey bees in NYS. This project is based on the **Analysis of Ten Bee Operations** done by the Department of Agriculture and Markets in 2013.

### **Staffing**

The Division's staff levels are currently as follows: 36 permanent field staff, 36 temporary positions supporting ALB eradication, 19 temporary positions support PPV eradication, 4 temporary positions supporting horticultural services, and 3 seasonal apiary inspectors. The Division's management and support staff number 7 permanent positions with 2 temporary staff.