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**New York State Legislature
Assembly Committee on Environmental Conservation**

**Invasive Species Testimony to the
NYS Assembly Committee on Environmental Conservation
September 13, 2011**

Good morning Chairman Sweeney and other members of the Assembly Environmental Conservation Committee. My name is Bill Ketzner, Director of Intergovernmental Affairs for the Department of Agriculture and Markets (NYSDAM). With me today is Kevin S. King, the Department's Director of Plant Industry. His responsibilities include managing the Department's plant protection and quarantine programs, which have long dealt with various invasive pests and pathogens. He is also Commissioner Aubertine's representative on the Invasive Species Coordinating Council, serving as co-chair in that capacity with Assistant Commissioner Amato.

On behalf of Commissioner Aubertine, we are pleased to provide comments today.

Agricultural Perspective on Invasive Species

We live in a dynamic and changing world. Since the receding of the Ice Age glaciers, the natural environment of North America and New York has evolved and changed. Some of that change has been natural while other aspects are human-sponsored. Regardless of the source, introductions of species from their original environs to areas where they are no longer considered native have been taking place for centuries.

Many of the early introductions to North America and New York were done intentionally for what were perceived to be beneficial purposes. Exotic plants and flowers are the cornerstone of the floral and landscape industries and bring us great delight and enjoyment in our homes and home landscapes – indeed, our horticulture industry's economic contribution to agriculture ranks second only to dairy in New York. Many insects and plants have been "naturalized" here with significant benefits to our economy and lifestyle. Consider the Italian Honeybee, which helps assure the availability of fruits and vegetables. Or Timothy – a vital pasture grass that supports livestock production. How about the European earthworm was once exotic to our North American environment and is now naturalized with significant benefit.

Unfortunately, the track record of intentional human introductions is not all positive. Multiflora Rose was once prized as a hedge and natural fence, but it is now a significant problem in many farm fields. Autumn Olive, once considered beneficial for mine reclamation and wildlife habitat has come to be viewed as “invasive” and unwanted in many settings.

What is different today is that the rate of change and introductions of exotic and invasive species has increased significantly. The invasives “problem” is expanding rapidly because of many new pathways that have been created by human activities. They are brought into the country and released intentionally, or they are moved and released as an unintentional byproduct of cultivation, commerce, tourism, or travel. Many species enter the United States each year in cargo, mail, and passenger baggage or as contaminants of commodities. Agricultural produce, nursery stock, cut flowers, and timber can harbor insects, disease-causing organisms, slugs, and snails. These pests can also hitchhike on containers, crates, or pallets. Weeds continue to enter the United States as seed contaminants.

Global trade, in particular, has increased the opportunities for insects, plants, animals and diseases to cross geographic boundaries like never before and the potential for invasive species introduction, establishment and dispersal within the state is high. New York State is a major point of entry for passengers, cargo and mail entering the United States. With a population of over 19 million people, our state is served by 13 airports, 6 shipping ports and 800 miles of intrastate canal systems. It shares an international border with Canada 450 miles in length, including 85 miles of contiguous land and 17 border crossings. The Peace Bridge and Champlain crossing monitor 4 million passenger vehicles and 1.1 million commercial trucks annually. Interstate roadways span more than 113,252 miles across the state’s 49,579 square miles. Three dozen freight railroads haul 16% of the Nation’s cross border trade over 83,000 route miles. More than 70 million tons of freight is transported annually in over 1.7 million carloads. With statistics like these, it is easy to see the breadth of the challenges before the Invasive Species Council.

NYSDAM’s Role in Invasive Species Prevention, Detection and Response

Preventing the introduction of unwanted plants, animals, insects and diseases has long been a key priority for NYSDAM and a major focus of the Department’s Plant and Animal Industry programs. To accomplish this, NYSDAM:

- Partners with the USDA Animal and Plant Health Inspection Service (APHIS), the federal Department of Homeland Security (DHS), the National Plant Board, state agencies, municipalities and others to prevent the introduction of agricultural pests and diseases into New York;
- Develops quarantine policies and regulatory requirements for agricultural commodities and plants;
- Develops and administers requirements, consistent with national protocols, for the safe import and export of agricultural products;
- Monitors and surveys throughout the State for pests and diseases;
- Prevents, detects, manages, and if possible, eradicates foreign pests and diseases;
- Collects and analyzes pest data to identify and evaluate pathways for the introduction and movement of invasive plant pests and weeds.

○ **Prevention**

All 50 states have recognized the need to ensure responsible plant material commerce, which is safeguarded by an extensive system of inspection and detection that literally weeds out diseased and infested materials and limits their spread within the United States. This system is administered through the regulatory authority of the various state departments of agriculture. Coordination is provided through the National Plant Board in partnership with USDA's Animal and Plant Health Inspection Service (APHIS).

The Department registers all plant growers and dealers; there are currently about 7,000 registered in New York, each subject to inspection. Shipments of rooted plant material are required to be inspected and free from insects and disease prior to shipment outside of our State. We recognize other state inspections in return and allow shipments of material into New York that are similarly certified. Special permitting and quarantine standards exist for materials that pose a particular risk and similar protocols are employed in the movement of livestock and animals.

○ **Pest Surveys**

The Department conducts regular pest surveys looking for invasives that may find their way into New York. These surveys are targeted to nurseries, greenhouses, retail garden centers and select crops. Surveyed pests are selected because if introduced into the state they could cause significant economic damage. The specific criteria used include determining whether the host is present, the climate is conducive to pest establishment, and the likelihood of introduction given the circumstances.

Thus far this survey effort has resulted in almost 6 million plants being inspected and over 600 suspect samples being submitted for diagnosis. It is significant that only 6 samples – all for Hemlock Woolly Adelgid – were positive for these actual pests. These were first-time detections of this hemlock pest in Broome, Chemung and Rensselaer Counties.

Significant survey efforts to highlight are:

- Almost 3 million tomato plants primarily at greenhouses, but also at retailers, were inspected for Late Blight;
- 1.6 million geraniums were inspected for Southern Bacterial Wilt;
- Over 25,000 southern-grown plants were examined for imported Fire Ant;
- Nursery stock was inspected for Asian Longhorned Beetle and 39 upstate suspect sightings were investigated, and
- Over 4,000 suspect moths were collected in 540 traps deployed. None of these moths were determined to be significant new pests.

Early detection of potential new pests – such as the Asian Longhorned Beetle – is critical to their successful eradication. These surveys strive to detect pests before they become established and thus far more difficult to destroy.

- **Quarantine and Eradication Responses**

The Department plays an important role in addressing invasions of unwanted insects and diseases. Currently the Department is involved in four major quarantine actions that are responses to invasive insects and diseases. Two of these actions are eradication initiatives (Asian Longhorned Beetle, Plum Pox Virus), one a containment initiative (Golden Nematode) and the last a “slow the spread” initiative (Emerald Ash Borer). Each has different objectives and measurements for success.

The Asian Longhorned Beetle – This pest was introduced in the Greenpoint section of Brooklyn in 1996. Native to Asia, the beetle was introduced in solid wood packaging material. It is a particularly serious threat, because it destroys many species of hardwood trees, including maple, ash, birch, elm, horse chestnut, poplar and willow. Its presence jeopardizes our forest products, maple, nursery and tourism industries and has significant implications for our suburban and urban parks and street trees.

The eradication strategy integrates programs of survey and detection, control (treatment and removal) and public awareness (education and outreach). Since the inception of the program, more than 18,000 infested and high-risk trees have been cut, chipped, transported and incinerated to contain and suppress the population of this pest. In order to prevent the spread of Asian Longhorned Beetle to areas not under quarantine, the Department oversees a regulatory program to control movement of host wood through education and cooperation. Program staff works closely with nursery, landscape and tree removal companies to ensure proper handling of host wood. In 2010, 1054 companies received training from the Department and subsequently entered into compliance agreements.

We are pleased to report a significant milestone was reached last month in removing the Islip area on Long Island from the quarantine after 11 years of tree removals, treatments and intensive survey. Islip marks the third successful eradication in the nation, joining Chicago, Illinois, and Hudson County, New Jersey. Currently, portions of Manhattan, Staten Island and Middlesex and Union Counties (New Jersey) are undergoing a survey process that, if successful, will eventually declare them ALB-free in 2012 (Manhattan) and 2014 (Staten Island and New Jersey). While this is welcome news, the target date for the successful eradication of this pest from New York is 2033 – 22 years away! Program goals and objectives are dependent upon a sustained effort on behalf of all partners as well as consistent survey data.

Plum Pox Virus (PPV) – In 1999, this PPV was discovered in an orchard in Pennsylvania. In 2000, several orchards in Ontario, Canada just across the river from Niagara Falls were found infected. This is an invasive virus from Europe that infects stone fruits (peaches, plums and nectarines) and causes not only diagnostic symptoms on leaves and fruits, resulting in reductions in grade, but eventually debilitates the tree, reducing its’ useful life.

In 2006, PPV was detected in New York. A quarantine (Part 140) was issued and subsequently amended, most recently in March 2011. Nursery stock and peach orchards in the identified quarantine areas are restricted from movement and new plantings. The regulated areas are in Niagara, Orleans and Wayne counties.

With the successful eradication of PPV from Pennsylvania in 2009, New York is the last remaining state to have a known presence of PPV in the nation. Our efforts are focused on complete eradication of this disease. Grower cooperation and support is essential to achieving this result. Not all infected plants display symptoms of the disease, making it a challenge to locate virus-laden trees.

Locating the virus requires intensive grid-base survey with lab testing of leaf material to determine the presence of the virus. A positive test is confirmed through a separate lab procedure. The presence of a positive has severe consequences for orchard growers as all trees within 50 meters of the positive must be destroyed.

To offset the economic losses, assure grower cooperation, and achieve eradication, the Department receives a combination of Federal (85 percent) and State (15 percent) funds based on a formula established by USDA APHIS that looks at costs of destruction and crop loss.

The Golden Nematode (GN) – This destructive, microscopic pest poses a serious threat to the State's potato industry and other soil-bearing crops attributable to its global status as a pest of regulatory significance. It is a European pest that was introduced onto Long Island by equipment returning from the war effort in the 1940s. It is extremely small in size and because of its biology the nematode is virtually impossible to eradicate. New York is the only state in the U.S. which has a certifiable incidence of this pest. For more than 70 years, the Federal State cooperative program has successfully contained the GN infestations within the state.

The ability of the state to contain the GN is of great importance to the United States in terms of its agricultural exports. In 2009, 16,500 acres of potatoes were harvested with a cash value to farmers in excess of \$61 million. Nationally, the combined annual farm-gate production value of the principal host crops is over \$5 billion. The inclusion of other soil bearing commodities that could come under regulation, such as nursery and ornamentals, sod, onions, beets, etc. would increase this figure at least threefold. The principal area of GN infestation is Long Island with smaller, localized infestations in six upstate counties: Cayuga, Livingston, Steuben, Wayne, Seneca and Orleans. Statewide, there are 365 fields comprised of almost 6,000 acres regulated for golden nematode.

The control of GN is achieved through the use of crop rotations incorporating potato varieties bred for resistance to the pest and non-host crops in a four-year sequence developed and approved by USDA's Agricultural Research Service (ARS), USDA-APHIS, Cornell University and the Department. When implemented, the approved rotation successfully suppresses GN populations below the known level of spread.

To further mitigate the risk of this soil-borne pest spreading within the state, sanitation regulations require that conveyances, equipment and produce from regulated fields be cleaned and free of any soil that could contain cysts (eggs) that could be unintentionally transported to other fields. Crop rotation and sanitation practices significantly reduce the risk of spread.

Soil surveys were conducted in 26 counties across the state in 2010. 5,094 soil samples were collected from 1,631 acres. There were no new detections of golden nematode in 2010. Division of Plant Industry staff monitor resistant variety use on regulated land by collecting potato leaf samples for DNA analysis. Samples of leaves are collected from regulated fields to verify compliance with the rotation mandated through state regulation.

Emerald Ash Borer (EAB) – This exotic insect was first reported in Michigan in 2002. It has since been reported in fifteen states and 3 provinces of Canada. On June 16, 2009, the Emerald Ash Borer was identified in Cattaraugus County – the first known infestation in New York State. Additional detections have since been confirmed in six separate counties (Monroe, Genesee, Livingston, Steuben,

Ulster and Greene) during July and August, 2010. Further detections were found in 2011 in Erie, Monroe and Orange County.

In response to the initial Cattaraugus infestation, the Department enacted a quarantine (Part 141 Control of the Emerald Ash Borer) to prevent the movement of regulated articles that could accelerate the spread of this pest. That quarantine now covers 19 counties in two separate quarantine areas.

Given the continuing advance of EAB across the state and the economic implications of the quarantine, the Department has held numerous meetings with key stakeholders including environmental groups, forest products manufacturers, nursery and landscape businesses, local government, forest landowners and maple producers. Plant Industry Inspectors annually issue hundreds of compliance agreements to allow economic movement of nursery stock, ash logs, lumber, mulch and firewood. Enforcement actions have included roadside inspections for these materials and additional compliance agreements, warnings and the redirection of at least one log truck hauling regulated material from Ohio in violation of the quarantine.

This is a voracious, fast-moving and high-profile pest – therefore significant efforts are being made to slow its spread by human movement. The Department of Environmental Conservation and USDA Forest Service are piloting a management approach that uses tree removals with a goal of population control. At this time, however, there is no known control for EAB. EAB continues to spread despite the restrictions on human activities.

- **Seed Inspection for Invasive Weeds**

NYSDAM further controls the introduction of unwanted, noxious and invasive weeds through the testing and inspection of seed used by farmers. NYSDAM Horticultural Inspectors pull seed samples throughout the growing season and those samples are tested for their purity, germination and the presence of invasive and noxious weeds. In 2010, seven hundred twenty (720) samples were taken with 75% found to be accurately labeled. Given the rate of violation the Department is targeting eight-hundred fifty (850) samples in 2011.

- **Clean Stock Initiative**

With our partners at the New York State Agricultural Experiment Station in Geneva, New York, the Department has pursued a Clean Stock initiative under the auspices of the Invasive Species Council. This initiative focuses on virus indexing and testing for grapes, fruit trees and small fruits and provides these industries with “clean” plant material that is free from viruses, insects and diseases and helps minimize the risk of accidental introduction of unwanted invasive pests and the corresponding expensive responses that come with such problems.

Closing Thoughts

The Invasive Species Council has been very active over the last 18 months. The discussions among the represented agencies have been very productive. The forum itself is helping to provide a level of cooperation and discourse that is serving New York well. We are seeing a high level of cooperative effort and focused allocation of resources that is guiding our agencies away from “reinventing” the wheel. The iMap Invasives database, created through EPF funding, is providing a comprehensive and workable database of invasives. Agencies are seeing value in this tool and report a cost savings and degree of coordination that may not have otherwise taken place.

As we work in concert with NYSDEC and other Council partners to manage the multiple challenges presented by invasive species, we certainly welcome the thoughts and guidance from members of the Legislature as well. Thank you for the opportunity to testify before you today. We are happy to answer any questions you may have.