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Shipping Plants: Beware of Quarantine Pests and Diseases

Greenhouse growers have a lot to juggle during the busy spring production season: crop scheduling, plant health, employee management, logistics, and ship dates. However, there is another challenge lurking: plants being shipped between counties, states, and even countries need to follow federal and state quarantine regulations. Why do these regulations exist? The U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine Program (USDA APHIS PPQ) and the plant health agencies in each of the 50 states, regulate the shipments of plants in order to minimize the spread of harmful insects, diseases, and other pests to new geographic regions.

Spotted Lanternfly: An Example of a Quarantine Pest

One invasive pest that is relatively new in the United States is the spotted lanternfly, which is not only a threat to the green industry but to all of agriculture. Spotted lanternfly is an invasive plant hopper native to Asia, that feeds on woody ornamentals as well as other commercially-important agricultural crops including: grapes, apples, hops, and hardwood trees (Figure 1). Spotted lanternfly has been flagged as a large threat to the greenhouse, nursery, and agriculture industries because the infestations can cause extensive damage to ornamentals from honeydew and sooty mold (Figure 2).

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Figure 1. Spotted lanternfly adult. Photo by Lawrence Barringer, Pennsylvania Dept. of Agriculture, Bugwood.org.

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Unfortunately, the spotted lanternfly is an excellent hitchhiker. Spotted lanternfly egg masses are often laid on items that are stored outdoors for long periods of time. Those items in the green industry include: carts, pallets, plastic containers, bales of substrate, loads of fertilizer, hardscaping materials, and vehicles. [Deny the spotted lanternfly](#) was published on the MSU Extension website in October of 2019 and details actions that greenhouse and nursery growers can do to prevent the spread of spotted lanternfly, especially for those that have plants coming from or passing through the quarantine zones in the affected east coast states.



Figure 2. Spotted lanternflies excrete honeydew which promotes sooty mold growth. Photo by USDA APHIS (Lance Cheung).

In the case of the spotted lanternfly, there are both **interior** and **exterior** quarantines for spotted lanternfly. What is the difference between interior and exterior quarantines? Interior quarantines are those that regulate movement of susceptible plant species out of and between infested counties or those that have known populations of the pest. Exterior quarantines are those that regulate shipments of product from an infested region to a non-infested region. For example, the state of New York has external quarantines for product coming in from infested counties in Pennsylvania, Delaware, Virginia, and West Virginia (Figure 3). Those same infested counties also have internal state quarantines to prevent movement of the pest to additional sites in the county.

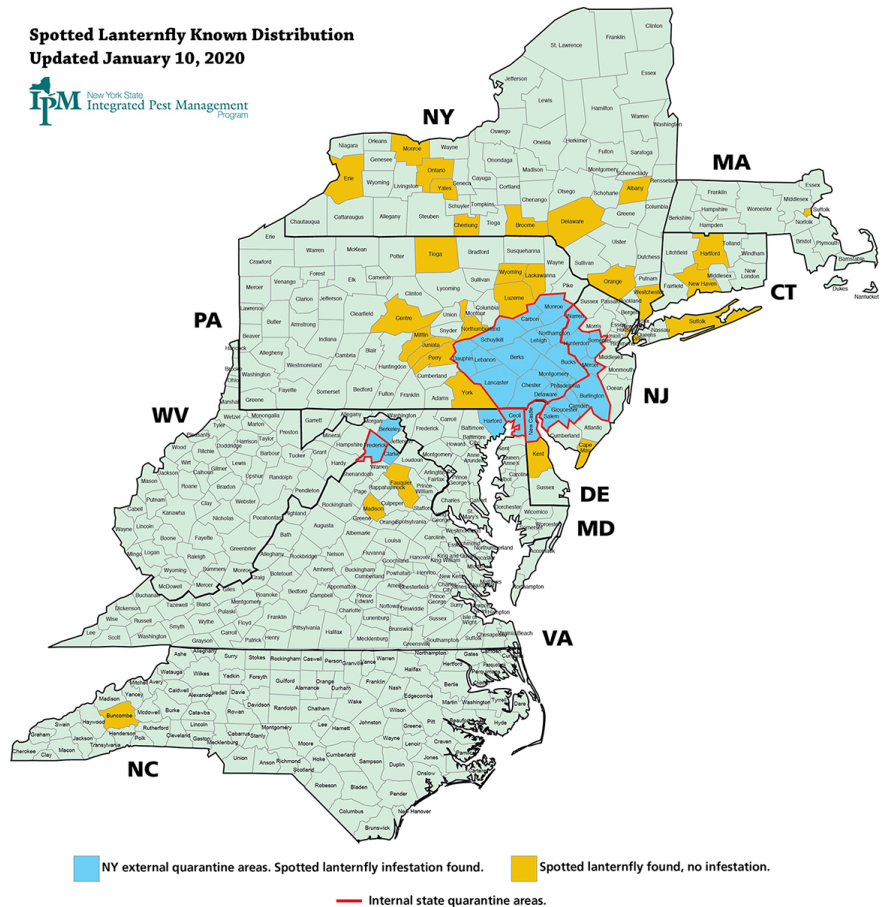


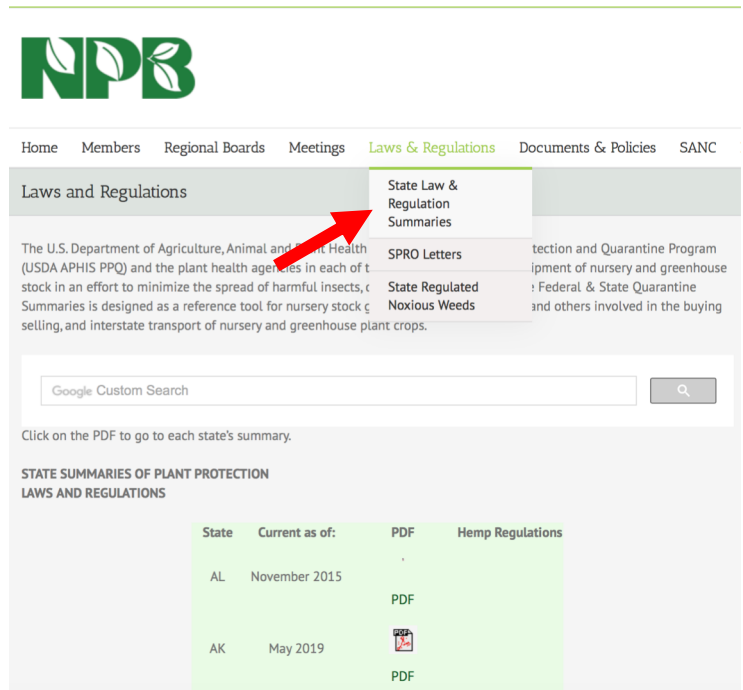
Figure 3. Exterior and interior quarantine zones for spotted lanternfly from the state of New York.

Resources on State Quarantines

As the sales and logistics departments for greenhouse businesses gear up for their spring shipping season, managers should know about a resource that is helpful in identifying quarantine zones on the [National Plant Board website](#). On the website, there is a list of the [Federal & State Quarantine Summaries](#) which lists each state's points of contact in their Departments of Agriculture, prohibited and restricted plants and noxious weeds, lists of cleanliness programs, and quarantines in effect (Figure 4). The state summaries are designed as a reference tool for nursery stock growers, brokers, purchasers, and others involved in the buying selling, and interstate transport of nursery and greenhouse plant crops.

In addition to the state-by-state descriptions of laws and regulations, there are [State Plant Regulatory Official \(SPRO\) letters](#) that describe new detections, infestations, and quarantine zones for the most concerning pests and diseases. On the website, you can find information regarding:

- Asian Longhorned Beetle
- Citrus (Psyllid, Black Spot, Canker, etc.)
- Emerald Ash Borer
- European Grapevine Moth
- Fruit Flies
- Gypsy Moth
- Imported Fire Ant
- Light Brown Apple Moth
- *Phytophthora ramorum*
- Pine shoot beetle



The screenshot shows the National Plant Board website. The navigation bar includes links for Home, Members, Regional Boards, Meetings, Laws & Regulations, Documents & Policies, and SANC. The 'Laws and Regulations' section is active, and a red arrow points to the 'State Law & Regulation Summaries' link. Below this, there is a search bar and a table of state summaries. The table has columns for State, Current as of, PDF, and Hemp Regulations. The table lists summaries for AL (November 2015) and AK (May 2019).

State	Current as of:	PDF	Hemp Regulations
AL	November 2015	PDF	
AK	May 2019	PDF	

Figure 4. The Laws and Regulations portion of the National Plant Board website contains lists of state-by-state quarantine pests and restrictions.

For example, you can find the letter describing the detection of ramorum blight (*Phytophthora ramorum*; causing sudden oak death) on more than 50 rhododendron plants within Indiana during mid-July of 2019. It describes how the plants were detected, their origin, and the 'trace forwards' - or where the plants from the infected nursery went upon sale. Regulators within Departments of Agriculture in each state do their best to 'trace-back' and 'trace-forward' infested plants in hopes of destroying all infested plant material prior to the disease becoming established in a new area. It serves as a resource when greenhouse businesses find out that there is a new regulation or cleanliness program with which they need to comply.

There are also federal noxious weed and aquatic weed lists under the 'Laws and Regulations' section of the National Plant Board website.

The federal noxious weed list contains: aquatic, parasitic, and terrestrial weeds that are regulated. When selling perennials and nursery stock, the plants can be quarantined if they contain any of the noxious weeds. None of these noxious weeds are common in greenhouse or nursery container production. Some of these noxious weeds, such as wild oat, are common in the field-grown agronomic crop production systems. However, dodder (*Cuscuta* spp.) - a plant parasitic weed - has been reported in greenhouse production. This spaghetti-like orange weed is highlighted in the previous [e-GRO Alert 3.29, "Dodder"](#) from 2014.

Finally, growers can also find resources on the [Japanese Beetle Harmonization Plan \(JBHP\)](#) on the National Plant Board website. This agreement between the National Plant Board and USDA functions similar to a set of regulations for preventing the spread of Japanese beetle in the United States. States can be considered in the JBHP categories 1 through 4, based on the current level of infestation. The JBHP is located under the Documents and Policies tab.

As always, growers should do their best to practice excellent sanitation prior to and during the growing season. Scout your crops regularly and familiarize yourself with pests and diseases that are emerging threats in your state. When growing perennials or nursery stock, including chrysanthemums, your state plant inspector will look for signs and symptoms of quarantine pests and diseases in order to prevent the spread of some nasty plant problems.



Figure 5. Dodder, a plant parasitic weed, has been reported on greenhouse plants and is on the federal noxious weed list. Photo: Brian Whipker.

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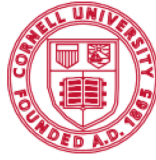
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