North Dakota Nursery News

A Newsletter of Information Relevant to the North Dakota Nursery Industry
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North Dakota Gypsy Moth Survey Traps 1 Adult Moth

For the second consecutive year one adult moth was caught during the summer trapping survey. While last year's catch was located in Jamestown, this year's catch was located in Theodore Roosevelt National Park. Both of these catches were located in campground areas, suggesting that the moths most likely traveled with vacationers as they moved from infested areas of the United States to North Dakota. The hitchhiking moth most likely traveled as eggs, larva, or pupae on a car, camper or camping gear. An intensive survey in 1998, around Jamestown where the 1997 moth was caught, revealed no further catches. The same kind of intensive survey will take place in Billings county next year.

In recent years, breaches in the gypsy moth quarantine have occurred, such as in 1997 when Minnesota agricultural inspectors found egg masses on forty-two uncertified Colorado spruce illegally transported into Minnesota from quarantine areas in Michigan. Minnesota has had multiple trap catches of adult moths, however, no confirmed infestations have been reported.

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Asian Long-Horned Beetle Invades Chicago.

The Asian Long-Horned Beetle *(Anoplophora glabripennis),* is a wood boring insect native to China that was detected in New York in August of 1996. Since we first alerted you to the Asian Long-Horned Beetle in the spring 1997 issue, the beetle has been found infesting trees in the Chicago area. Eradication and quarantine programs are underway in both cities. The potential geographic range of this exotic beetle is not known. Survey methods continue to be visual, but with the development of pheromone attractants will come a better method of survey and a good idea of its location and spread.

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Adult Asian Long-Horned Beetle *(Anoplophora glabripennis)* beetles are 1" to 1 ¼ " in length , antennae are black and white striped and longer than their body.

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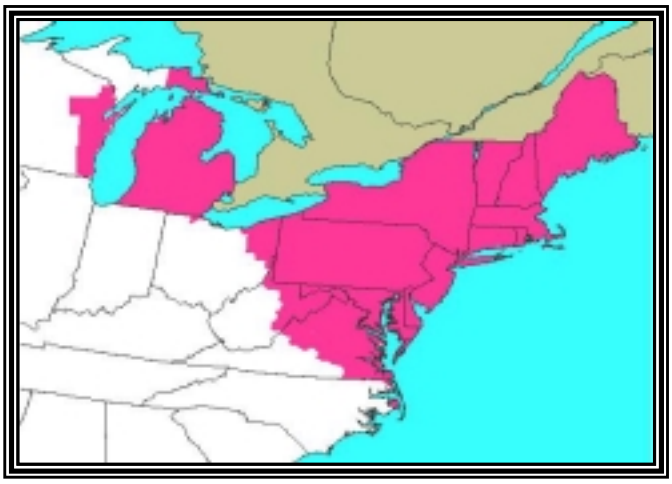

United States Gypsy Moth Quarantine area

The leading edge of the gypsy moth quarantine has been extended into Wisconsin. Since the beginning of the year 13 Wisconsin counties were updated to quarantine status. The Great Lakes had been acting as a barrier to the westward spread of the gypsy moth, however now that this barrier has been breached, westward movement is occurring naturally. This movement can be slowed with survey and treatment along the leading edge of advancement. The efforts of citizens and businesses can also limit the spread of gypsy moth by 1) avoiding transporting plant material from quarantine areas unless officially inspected, 2) avoiding transporting firewood from infested areas, 3) inspecting all outdoor equipment if moving from an infested state.

The expansion of the gypsy moth quarantine area, increased trap catches in other states, prior history of quarantine violations and detection of gypsy moth life stages on imported nursery stock all reinforce the importance of proper certification, and the importance of inspecting nursery stock for egg masses upon arrival into the nursery.

Adult Female Moth Laying Eggs

Gypsy Moth Caterpillar

Egg masses are most often found on the trunk of trees, particularly young spruce trees. Dealers should also keep their eyes open for gypsy moth caterpillars that may develop later in the season. ♣

The Truth About Spruce Spider Mites

This past summer, the spruce spider mite got the jump on some spruce growers, particularly in the western half of the state. Spider mites are often believed to be a pest of hot-dry summers. While this is true for the two-spotted mite which affects a variety of deciduous trees and shrubs, populations of the spruce spider mite increase to damaging levels under cooler conditions in May and June. Damage symptoms are most pronounced when the plants are subjected to hot dry weather.

Spruce spider mites over-winter as small red eggs on the stems. They hatch early in the growing season and the young mites begin feeding on older needles and gradually move to younger shoots. Populations can increase rapidly and cause considerable needle damage. Damage results from the mites sucking juices from the needles. Needles appear stippled and are permanently damaged giving the tree an unsightly appearance for several years. During the heat of the summer mites become dormant and treatment is of little value. It may actually be counterproductive, as these treatments are likely to kill beneficial predators.

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Grower Reminders

1. Avoid planting Soybean Cyst Nematode hosts (ie. edible and dry beans) in nursery growing areas.
2. Growers who export nursery stock out of state are encouraged to ask their nursery inspector about any special restrictions that may apply.

Yellow Starthistle
A New Weed Threat to ND

Yellow Starthistle

A new weed threat was detected in several CRP fields in Kidder County in August of 1998. Although several yellow starthistle plants have been found in North Dakota over the past couple decades, these are the first reports documenting hundred of plants infesting entire fields.

Yellow starthistle is a winter-hardy annual that germinates in the fall, bolts in the following spring and completes development by the fall. Very sharp spines develop on the buds reaching a length of two inches. Plants can reach up to four feet tall and contain over 100 flower heads.

In other states it occurs primarily on arid to semiarid rangeland, abandoned cropland, CRP and irrigated pastures. It is very competitive and forms solid stands that drastically reduce forage production and grazing capacity. It poisons horses resulting in a condition known as chewing disease where the muscles of the lips, face and tongue become stiff and swollen. Legs become stiff and tremble and brain damage results. Severely affected animals eventually die of thirst and starvation.

Infestations of yellow starthistle should be reported to your county weed control officer or to John Leppert at the North Dakota Department of Agriculture (800-242-7535).

♣

Asian Long-Horned Beetle ***continued from page 1***

This beetle is extremely destructive to trees and considered to be a serious threat to U.S. forest resources. Unlike many pests that attack stressed trees, this beetle attacks healthy trees.

The Asian long-horned beetle has not been reported in North Dakota, however if it were, there are many trees in North Dakota which it favors, including: maple *(Acer spp),* elm *(Ulmus spp.),* boxelder *(Acer negundo)*, Birch *(Betula spp.)*, and poplar and willow *(Populus and Salix spp.)*.

The white worm-like larva bore into the trunk of the tree and large branches causing heavy sap flow from wounds, and large sawdust accumulations at the base of the tree. Beetles leave round exit holes that are three-eights of an inch or larger. The natural dispersal of this beetle may be very limited as the species appears to be a very weak flier. Secondary spread through the movement of infested trees, trunks, and limbs is of major concern.

There are no control measures currently available for this insect. The beetles are resistant to pesticides and larva burrow deep, feeding on the heartwood of mature trees, which makes them hard to reach with insecticides. Currently management strategies involve quarantine, removal of the infested trees during the months of limited beetle activity, and destruction of wood by chipping and or burning.

If you suspect you have found an Asian long-horned beetle immediately contact The ND Department of Agriculture at (701) 239-7295 in Fargo, or (701) 328-4567 in Bismarck. ♣

Life stages of Asian Long-Horned Beetle

Japanese Beetle Harmonization Plan Adopted by Plant Board

A Domestic Japanese Beetle harmonization plan was approved by the National Plant Board in August of 1998. This voluntary plan defines the shipping requirements and certification protocols for nursery stock shipments moving between states to prevent the movement of Japanese beetle. Infested states and states that have not conducted surveys to demonstrate their Japanese Beetle status are required to meet certain certification standards.

Japanese beetle is a non-native leaf feeding beetle related to the common June Beetle that affects numerous trees and shrubs. The adult beetle is less than ½ inch long and has a metalic –green body and bronze-colored outer wings. The larvae, or grubs, are found in the soil where they feed on the roots of grasses and other weeds. They may be found in the rootball of B&B or container material. Bareroot nursery stock poses no risk.

Japanese beetle is a well-known pest in many midwestern states but has never been detected in North Dakota. Nearest infestations to North Dakota occur in six counties around the Minneapolis-St. Paul metropolitan area. A trapping survey conducted this past summer did not detect any Japanese beetle in North Dakota.

According to the harmonization plan, North Dakota and all our neighboring states are classified as category 2 states. This means that out-of-state nurseries from infested states that ship nursery stock into North Dakota are required satisfy certain certification requirements to prevent movement of Japanese beetles. ♣

Adult Japanese Beetle

Japanese Beetle Larva

Spider Mites ***continued from page 2***

While webbing along the shoots is characteristic of a spruce spider mite problem, the mites may have already done their damage and populations may have already declined. Sometimes populations rebound during late summer but it is more common for damage to have been done earlier in the year.

Begin monitoring for spruce spider mites in May and early June. The easiest and most common way to monitor for mites is to tap branches onto a white piece of paper. The mites will appear as numerous small mobile specks. A pair of heavy gloves is recommended when sampling Colorado spruce. In northcentral and northwestern North Dakota, keep an eye open for yellow headed spruce sawfly as this insect has also caused serious damage.

Spraying with a forceful stream of water may effectively dislodge mites from small numbers of landscape trees. In nursery situations, a good miticide is generally required. With many miticides a second treatment may be necessary because eggs may be unaffected. Follow label directions. ♣

Woody Plant - Insect and Disease Management Guide

The Insect & Disease Management Guide for Woody Plants will be available from the NDSU Extension Service by April 1999. This guide will include information about various management alternatives for dealing with pests and diseases of trees and shrubs. In addition, it will include a key for diagnosing tree problems and a host index to speed up access to management information. The guide is expected to be free to the public and will be available through county extension offices and the NDSU Agriculture Communications Distribution Center.

Diagnosing Tree Problems:

A Workshop for Natural Resource Professionals.

The workshop is intended for natural resource professionals who encounter tree problems during their daily activities. The information provided will help them identify tree problems, make recommendations, and implement practices to reduce or eliminate those problems.

This workshop is being sponsored by the NDSU Extension Service and the ND Forest Service, and is scheduled for March 30, 1999, and will run from 9:00am to 4:00pm. It will be held at the Heritage Center, in Bismarck, ND. The cost of workshop is $25.00. To guarantee a seat you need to pre-register by Feb 15, 1999.

For further information about this workshop contact, Marcus Jackson at (701) 231-8478.

Publications for your Reference Library

Several NDSU Extension publications are available to provide assistance with pest control in tree plantings and advice on managing weed problems. The publications currently available are:

1. Disease Management Recommendations for Tree and Shrubs . 1995. **(PP-1100)**
2. Diseases of Trees and Shrubs: a Color Diagnostic Guide. 1994. **(PP-1082)**
3. Disease and Related Problems of Evergreens. 1995. **(PP789)**
4. Deciduous Tree Diseases. 1995. **(PP697)**
5. Weed Control in Tree Plantings.1995. **(W-1097)**
6. Integrated Management of Leafy Spurge. 1995. **(W-866)**
7. Leafy Spurge Identification and Control. 1999. **(W-765)**
8. Perennial and Biennial Thistle Control. 1995. **(W-799)**
9. Identification and Control of Field Bindweed. 1992. **(W-802)**
10. Common Insects of Trees and Shrubs. 1995. **(E-296)**

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