

Best Management Practices

Avoiding Invasive Insect Pests and Diseases in Christmas Trees

Wisconsin Department of Agriculture, Trade and Consumer Protection – Bureau of Plant Industry



Wisconsin is one of the top 5 Christmas tree-producing states in the nation. In order to protect your industry, you need to be aware of forest insect pests and diseases, including how they spread, how they can affect your trees, and how to reduce the risks. These best management practices, or BMPs, will help keep your Christmas trees healthy and thriving.



Buying seedlings

Buy seedlings from reputable growers who take actions to prevent the spread of insects and diseases, such as elongate hemlock scale, gypsy moth, and pine shoot beetle.

- Make sure seedling shipments comply with rules for shipping plant material into or within Wisconsin.
- Know the quarantine status of pests in states where you purchase seedlings. Request certification to ensure plants have been inspected prior to shipping.
- Inspect incoming stock closely for signs of infestation or damage. In particular, scout for invasive insects or diseases that are not known to occur in Wisconsin.
- If you find an unknown insect or disease on incoming plant material, isolate it and contact your local nursery inspector.
- Select tree species that are suitable to your site conditions.
- Plant trees promptly to prevent undue seedling stress.
- Ensure that roots are properly positioned to avoid J-rooting.
- Scout throughout the season to identify pest issues as they arise. Treat at the appropriate time, with pesticides labeled for the pest and plant.
- Control weeds and grass between trees to maintain air flow and reduce opportunities for fungal pathogens to get established.
- Sterilize shearing tools often and avoid shearing trees when needles are wet to reduce the chance of spreading disease between trees.
- Be aware that tree dieback may be due to root rot pathogens, like *Phytophthora*, *Armillaria*, or *Heterobasidion annosum*.
- Train staff to identify introduced invasive insects to avoid spreading these pests.

~ **Gypsy moth** larva can defoliate hundreds of species of trees and shrubs causing stress that can lead to loss of vigor, secondary infestations and mortality. Learn to identify gypsy moth life stages and make sure shipped trees are free of buff-colored egg masses. DATCP will provide gypsy moth identification training upon request.

Receiving trees in spring

Reducing susceptibility to diseases and pests

The growing season

Above Images (from top to bottom):
Gypsy Moth, DATCP Christmas Tree Program

Hemlock Scale, E. Richard Hoebeke,
Cornell University, Bugwood.org;

Spotted Lanternfly, Lawrence
Barringer, Pennsylvania Dept. of
Ag, Bugwood.org

Shipping and selling trees

- ~ **Elongate hemlock scale (EHS)** is an oval brown or white scale found on the undersides of hemlock, fir or spruce needles. It has been introduced into 16 states, including Michigan and North Carolina. Difficult to control, this pest causes yellowing and needle loss.
- ~ **Spotted Lanternfly (SLF)** is a red, black and white plant hopper native to Asia, recently found in Pennsylvania and other eastern states. SLF feeds on over 65 plant species including apple, willow, oak, and walnut. SLF lays its mud-like egg masses on any surface in fall, risking spread to new areas. SLF egg masses have been found on Christmas tree branches and evergreen nursery stock.

- Contact your local nursery inspector about hard to identify insect or disease issues.
- Make sure you have the proper shipping paperwork. Shipping trees out-of-state or out of the gypsy moth quarantine requires a compliance agreement with the USDA-APHIS. Including a plant health certificate, or PHC, with tree shipments can also facilitate interstate shipping.
- Familiarize yourself with other states' plant and pest movement regulations summarized on the National Plant Board website.
- Keep shipping paperwork with the trees. Maintain shipping records for incoming and outgoing trees, in case a problem arises.
- Do not sell trees that are infested with pests or diseases.
- Be aware that other holiday articles, like wreaths and roping, can also be a vector for harmful forest pests.

Resources

- DATCP Christmas tree program coordinator Brooke Sanneh, (608) 235-7861, brooke.sanneh@wisconsin.gov
- USDA APHIS Plant Health Safeguarding Specialists (contact for compliance agreements)
 - ~ Nick Zebro, (715) 241-5245, Nick.I.Zebro@usda.gov
 - ~ Ellen Natzke, (608) 286-3610, Ellen.M.Natzke@usda.gov
 - ~ G. Dave Hutton, (608) 286-3605, Dave.Hutton@usda.gov
- DATCP nursery inspectors
<https://datcp.wi.gov/Documents/NurseryInspTerritories.pdf>
- USDA Forest Service Christmas Tree Pest Manual
<https://www.fs.usda.gov/naspf/> ~ Search for Christmas Tree Pest Manual
- National Plant Board, State Regulatory Summaries
<http://nationalplantboard.org/laws-and-regulations/>
- Elongate hemlock scale facts plantpests.wi.gov
- Gypsy moth facts gypsymoth.wi.gov
- Spotted Lanternfly facts slf.wi.gov
- Phytophthora root rot
<https://hort.uwex.edu/articles/phytophthora-root-rot-of-christmas-trees/>



Wisconsin Department of Agriculture, Trade and Consumer Protection
Division of Agricultural Resource Management
2811 Agriculture Drive, P.O. Box 8911, Madison, WI 53708-8911
<https://datcp.wi.gov>