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JAPANESE BEETLE TREATMENTS FOR SHIPPING



Now is a good time to prepare for Japanese Beetle soil surface treatments by calibrating your sprayer(s). If shipping field-grown trees to Category 2 states (see map at left) as categorized by the Japanese Beetle Harmonization Plan (JBHP), they need to be treated with an approved insecticide. A soil surface spray prior to harvesting/digging plants is easier than dipping root balls in insecticide after digging, which the JBHP requires. Soil surface sprays are done May through July.

Some insecticides containing the neonicotinoid active ingredients imidacloprid (Marathon®, Discus®, Mallet®, Mantra®) and thiamethoxam (Flagship®) are approved for soil surface applications, as well as chlorantraniliprole (Acelepryn®).

Contact your TN Dept. of Ag. inspector for compliance details. Contact Mark Halcomb for assistance in sprayer calibration.

For more info on the JBHP, visit the National Plant Board's site: <u>https://www.nationalplantboard.org/japanese_</u> <u>beetle-harmonization-plan.html</u>

JAPANESE MAPLE SCALE (JMS)

- Crawlers become active the first week of May, and mid-May is a good time to apply contact sprays
- Current recommended management: treat through May with pyriproxyfen (Fulcrum, etc.) to target crawlers, which is the most vulnerable stage to treat



<u>More Info on</u> <u>Herbicide</u> <u>Damage</u> (link)



<u>UT Factsheet</u> OR



< Adult moth of Arborvitae leafminer on Thuja cultivar. Photo: Kaitlin Barrios

ARBORVITAE LEAFMINER

The Arborvitae leafminer feeds on Arborvitae aka Eastern or Northern white cedar (<u>Thuja</u> spp.). The North American-native moth lays its eggs in the spring on leaves (scales). Soon after eggs hatch, the larvae burrow into the leaf and feed on its interior, causing leaf browning and tissue death.

<u>Management</u>: Best to time insecticide application during egg laying and hatching. Once larvae are inside leaf tissue (where most of their life is spent), they are harder to treat. Use an insecticide labeled for moth

leafminers, such as the insect growth regulators: Dimilin (diflubenzuron) or Pedestal (novaluron).

HERBICIDE DRIFT DAMAGE

Nursery crops are commonly close to pastures and row crop (corn, soybeans, etc.) fields. When sprays of post-emergence herbicides (2,4-D, dicamba, paraquat, etc.) drift or volatilize from these areas, nursery crops are damaged. There are several causes of herbicide drift damage such as unfavorable weather conditions and off-label applications. Although trees and shrubs may not be killed, crops may be unsalable or delay harvest 1-2 years.



Photo credit: Anthony Witcher

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<u>Herbicide Drift Damage (continued)</u>

- Communicate with neighboring land owners of the sensitivity of your crops (prior to damage)
- Sign-up with a herbicide drift online registry tool (driftwatch.org) to identify your field locations to herbicide applicators
- Routinely inspect your plants to quickly detect any potential damage
- Document suspected damage via photos, videos and notes
- Install a weather station near your fields. Weather stations under \$200 connect via Wi-Fi and upload data to online servers (Ex: Weather Undergound); suggested brands: Ambient Weather, AcuRite, and Logia.
- Contact Tennessee Dept. of Ag. (TDA)'s Pesticide Section to report and complete a <u>Pesticide Investigation</u> Request Form (link). They will collect plant samples to verify herbicide presence. The quicker the damage is detected and reported, the more likely TDA will be able to assist.
- For more info or assistance on herbicide drift damage, contact Dr. Anthony Witcher (awitcher@tnstate.edu)



TSU's Otis L. Floyd Nursery



https://www.tnstate.edu/ <u>agriculture/nrc/</u>



TSU-20-00189(B)-12b-61065