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University of Kentucky College of Agriculture, Food and Environment *Cooperative Extension Service*



Hickman County Agriculture and Natural Resources Newsletter

FEBRUARY 2023

Cooperative Extension Service

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LEXINGTON, KY 40546

Winter Woes on Woody Landscape Plants: Winter Drying

Posted on February 7, 2023

The UK Plant Disease Diagnostic Laboratory (PDDL) has received many broadleaf and needled evergreen samples with discolored foliage recently. Despite relatively mild weather during much of the winter thus far, extremely low temperatures, low humidity, and strong winds during the third week of December 2022 resulted in a range of winter injury symptoms in landscape plants. Furthermore, other environmental and cultural stress factors preceded the severe weather in many cases and have contributed to the extent of damage visible now.

Symptoms

Since the beginning of January, most of the samples with winter injury that have arrived in the PDDL have shown symptoms of winter drying. On broadleaf evergreens (boxwood, cherrylaurel, holly, magnolia, rhododendron, etc.) symptoms typically include marginal leaf scorch, irregular spotting, complete browning of the leaves, and occasionally extensive leaf drop. Conifer (arborvitae, Leyland cypress, Cryptomeria, juniper, etc.) symptoms include pale, bronze or brown needles or needle tips, particularly on the exterior foliage and branch tips. Symptoms are often more noticeable on the wind-exposed side of affected plants.



Figure 1: Taxus shrubs along an exposed border show needle discoloration from winter drying (Photo: Julie Beale, UK).



Figure 2: Severe leaf burn on windward side of boxwood (Photo: Julie Beale, UK)

Causes of Winter Injury

Unlike their deciduous counterparts, "evergreen" plants retain foliage year-round. Even during winter months when active growth is not occurring, water is still lost through the leaves and needles of these plant species via transpiration, although more slowly than during times of active growth. Environmental and cultural factors that affect overall moisture availability in plants increase the likelihood of winter drying symptoms, including:

Areas where soil is frozen, limiting, or preventing water uptake by roots. Low moisture retained in leaves/needles due to drought (i.e., late summer and fall 2022). Sunny winter days with wind and low humidity which increase transpiration rates. Inadequate root systems from recent transplanting (within 3-4 years), a restricted root zone (due to nearby sidewalk, driveway, or building) or mechanical injury to roots. Plants or sections of plants in a protected area (i.e., along a warm brick wall) that have not completely hardened off.

Management of Winter Injury Symptoms

Resisting the urge to promptly remove the damaged plant material may be difficult, but for the next several weeks, patience is key. Often the foliage is damaged, but the stems and buds are still viable and will produce new healthy growth in spring. A "wait and see" approach is often best when dealing with winter-injured plants. When new growth begins to emerge in spring, it will be clear which symptoms are "cosmetic" and which symptoms indicate significant plant damage.

To help reduce the risk of winter drying in the future, good general plant care practices, such as watering during periods of drought and applying mulch, are beneficial. Supply adequate irrigation to broadleaf evergreen and conifer plants, especially late in the growing season so that plants have sufficient moisture during the winter months. Fertilizer is not typically recommended as this can encourage succulent top growth that is easily damaged in winter. If fertilizer must be applied, a fall application is best, since spring fertilization may promote more new growth than roots can support during summer droughts. Locate sensitive plants in sheltered locations. If severe cold and wind is predicted, protect plants that are prone to winter drying and located in exposed sites with temporary fencing to block the wind or a light covering of burlap or fabric (e.g., old bed sheets). Wetting the fabric before windy weather will allow the covering to freeze, increasing wind protection.

By Julie Beale, Plant Disease Diagnostician, and Sara Long, Plant Diagnostic Assistant

Review of this article by Dr. Bill Fountain, UK Extension Horticulture Specialist Emeritus, is gratefully acknowledged.

Use Winter to for Preventive Maintenance on Your Sprayers

As winter begins to wind down, we need to get our equipment ready for the coming growing season. When it is time to begin spraying and planting, we don't want to spend precious time to fix and repair equipment. It is during this down time when we should do some routine maintenance on our sprayers. Spray equipment in poor repair can lead to poor application which will cost you money.

Look for Leaks

Before your start, put on a pair of gloves to protect yourself from pesticide residues. Begin by filling your sprayer with clean water, but before you engage the pump, look for leaks from around the pump, hoses, strainers, and nozzles. Pay particular attention to the hoses, as these often show signs of wear sooner than other more durable parts. Besides obvious leaks from hoses, inspect hoses for cracking and signs of dry rot as these can burst when pressurized. Places where hoses might crimp with folding booms are prone to cracking as hoses age. Engage the pump and look again for leaks. Check the pressure gauge and test the cutoff valves to be sure they are working.



Figure 1. Crimps in hoses may lead to cracking.



Figure 2. Check strainers regularly and clean or replace them as needed.

Scrutinize Strainers

The job of strainers is to keep gunk from reaching and plugging nozzles. With just routine use there can be significant debris buildup with the inline strainer from the tank or the individual strainers in front of each nozzle. Sometimes these can be cleaned with a soft brush, other times they need to be replaced.

Next, the Nozzles

All nozzles wear over time. This leads to increasing and irregular flow rate from nozzles and poor spray patterns. In place of uniform applications across a field, there may be streaks due to places of over and under applications. While some nozzles materials, such as ceramics and stainless steel, may be more resistant to wear, all nozzles will show signs of wear eventually. Sprays containing abrasive materials such as wettable powders and flowables cause more wear to nozzles. Before conducting a catch test, be sure each of the nozzles are of the exact same type and are not mismatched. Start your sprayer with the clean water and observe the pattern from each of the nozzles, look for streaks and clogs. The pattern from each nozzle should be the same. Run a 30-second or 1-minute catch test for each nozzle, output from each nozzle should be within 5% of the average output from all nozzles. Nozzles that are worn or cannot be unclogged need to be replaced and the catch test repeated.

Regularly Recalibrate

Now that your sprayer is working properly, it needs to be recalibrated. As new strainers and nozzles can change the spray output. Calibration should be done at a minimum once a year, but for those that use a sprayer more frequent or after changing to different nozzles (going from flat fan to hollow cone for example) recalibration must be done more often. For instructions for calibrating a sprayer are in the <u>Record-keeping Manual for Private Pesticide Applicators</u>.



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Critical time to Begin Sampling for Alfalfa Weevil

Posted on February 21, 2023

The University of Kentucky Ag Weather Center's degree day model for alfalfa weevil indicates that many counties in Kentucky are likely to exceed the 190 Degree Days (DD) used as a starting point to begin scouting by early to mid-March. Once temperature accumulations reach 190 DD, growers are advised to look at their alfalfa fields and begin their alfalfa weevil larval counts. So far, degree day accumulations for this year are trending close to average for the last 10 years.



Count from 01/01/2023, end in 02/20/2023

Figure 1. When degree day totals reach 190 Degree Days, it is time to begin scouting for alfalfa weevil larvae. Scouting continues at least on a weekly schedule until regrowth after the first cutting. Treat the DD totals for the counties as estimates.

Fall-laid alfalfa weevil eggs are the first to hatch in the spring. These eggs hatch earlier than those laid in the spring, and 190 DD approximates when first leaf feeding damage becomes noticeable. Temperature extremes during the winter help to limit the survival of alfalfa weevil eggs that were laid in stems in the fall. Damage by the young larvae will first appear as tiny pin holes in the leaves.

Scouting & Thresholds

To scout for alfalfa weevil, use the stem sampling method. While walking in a "U" or "Z" pattern through a field, collect 30 alfalfa stems; carefully cup the top of each stem in one hand and break off the crown with your other hand, then place it bud-end downward in a plastic bucket. Be sure your

samples are at least 20 feet from the edge of a field so that they are representative of the entire interior of a field.

If the field is close to harvest, harvest can be an alternative to spraying, but producers need to watch for damage to the regrowth. There are similar scouting tables for regrowth after the first cutting.

Alfalfa Weevil Larvae Thresholds for Spraying 190 to 225 Degree Days (Check your degree days)

Average stem height (inches)	Number of alfalfa weevil larvae on 30 stems
2	27
4	67
6	100
8	130

Alfalfa Weevil Larvae Thresholds for Spraying 226 to 275 Degree Days

Average stem height (inches)	Number of alfalfa weevil larvae on 30 stems
2	15
4	19
6	20

For degree day accumulations above 275, use the economic threshold tables in ENTFACT 127 or ENT-17 to determine the need to spray the field for alfalfa weevil.

Avoid Pesticide Resistance

If you need to treat for alfalfa weevil larvae, keep in mind that insecticide resistance has been an issue in some areas. The best strategy to manage resistance is to use an insecticide only when necessary and to rotate modes of action each year. For many other pests I would recommend rotating more often, but alfalfa weevil has only one generation per year. To rotate modes of action, select insecticides that have a different IRAC group number on the label.

By Ric Bessin, Entomology Extension Specialist

UPCOMING EVENTS

- Feb 21, 2023Open House at UK Research and Education Center
- Feb 23, 2023 KATS In-depth Mode of Action
- March 8, 2023 IPM Training School
- March 9, 2023 KATS Soil Fertility and Assessment
- March 9-11, 2023 National Commodity Classic Orlando FL
- May 09, 2023 UK Wheat Field Day
- May 18, 2023 KATS Crop Scouting Clinic
- June 7-8, 2023 KATS Drone Pilot Certification Prep Course
- June 29, 2023 Pest Management Field Day Princeton (IPM-Grain Crops)
- July 13, 2023 KATS Spray Clinic
- Jul 25, 2023 UK Corn, Soybean and Tobacco Field Day

For more information, call the Hickman County Extension office at 270-653-2231

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Sweet & Spicy Butternut Squash

2 medium butternut	1⁄4 teaspoon kosher salt	1 teaspoon ground
squash	1⁄4 teaspoon cayenne	cinnamon
1 tablespoon olive oil	pepper	1⁄4 cup honey

Preheat oven to 450 degrees F. Wash squash and **pierce** the skin of each with a fork in several places. Place both squash in a microwave oven. **Cook** on high setting for 4-5 minutes. **Place** squash on a cutting board and cut 1/2 inch off both ends. Cut squash in half lengthwise and remove seeds and pulp. Peel off the skin using a sharp vegetable peeler. Cut the squash into 1/2 inch cubes. Place the squash cubes in a large mixing bowl. Add olive oil, kosher salt, cayenne pepper and cinnamon. **Toss** to coat.

Spread the seasoned squash cubes on a greased baking sheet. Roast for 40 minutes or until fork tender, turning after 20 minutes. Remove from oven and let sit for 5 minutes. Warm honey in a microwavable dish and **drizzle** over the squash.

Yield: 12, 1/2 cup servings

Nutritional Analysis:

60 calories, 1 g fat, 0 g saturated fat, 0 mg cholesterol, 50 mg sodium, 14 g carbohydrate, 2 g fiber, 7 g sugar, 1 g protein.

Kentucky Winter Squas

SEASON: August through October. NUTRITION FACTS: Winter squash, which includes acorn squash, butternut squash, pumpkin, and other varieties, is low in fat and sodium and an excellent source of vitamin A and fiber.

SELECTION: Winter squash should be heavy for its size with a hard, tough rind that is free of blemishes or soft spots.

STORAGE: Store it in a cool, dry place and use it within 1 month. PREPARATION:

To steam: Wash, peel, and remove seeds. Cut squash into 2-inch cubes or quarter, leaving rind on (it will remove easily after cooking). Bring 1 inch of water to a boil in a saucepan and place squash on a rack or basket in the pan. Do not immerse it in water. Cover the pan tightly and

steam the squash 30-40 minutes or until tender

To microwave: Wash squash and cut it lengthwise. Place it in a baking dish and cover the dish with plastic wrap. Microwave until tender, using these auidelines:

- Acorn squash: 1/2 squash, 5-8 minutes; 1 squash, 8¹/₂-11¹/₂ minutes.
- Butternut squash: 2 pieces, 3-4¹/₂ minutes
- Hubbard squash: (¹/₂-pound pieces) 2 pieces, 461/2 minutes.

To bake: Wash squash and cut it lengthwise. Smaller squash can be cut in half; larger squash should be cut into portions. Remove seeds and place squash in a baking dish. Bake at 400°F for 1 hour or until tender. Seeds can be toasted at 350°F for 20 minutes.

KENTUCKY WINTER SQUASH Kentucky Proud Project

County Extension Agents for Family and Consumer Sciences University of Kentucky, Dietetics and Human Nutrition students November 2017

Source: www.fruitsandveggiesmatter.gov

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