

Preparing the Lawn for a Potential Drought

It is always difficult to predict the summer weather, but with precipitation 11 or more inches below normal over the last year, it is conceivable that water shortages and irrigation restrictions could occur. Following are a couple common questions and answers to consider when preparing turf for a drought.

How long will turf survive without water?

Generally, turf can survive five to eight weeks of dry conditions without substantial thinning or death. However, poor soils, traffic, excess heat, low mowing and/or scalping and improper fertility (too much nitrogen fertilizer in spring, not enough in fall) reduces the survivability of turf during drought. Turf species will also affect drought survival, with warm-season grasses like zoysia and buffalograss surviving the longest without water, followed by the cool-season

grasses tall fescue, fine fescue, Kentucky bluegrass and perennial ryegrass in that order.

What can be done NOW to improve drought tolerance or the turf?

Mowing. Mow as often as needed (remove no more than one-third of the total blade length) and at the upper end of the optimum range of mowing heights for the particular species. Frequent mowing reduces scalping. Scalping depletes energy reserves in the plant, reducing its ability to withstand and/or recover from drought stress.

Fertility. Heavy spring nitrogen fertilizer applications increase shoot growth at the expense of root growth and will also deplete energy reserves. If you must fertilize, use low rates of nitrogen (0.5-0.75 pounds Nitrogen per 100 square feet) every four to eight weeks as needed to maintain health of the turf while limiting growth surges. Slow release Nitrogen

sources will also limit growth surges. Though potassium is thought by some to encourage drought tolerance, it is not well documented and thus don't overdo potassium fertilization.

Irrigation. Water deeply and infrequently, keeping the soil as dry as possible. Water thoroughly to wet the soil to the depth of the root zone and then don't water again until areas of the turf turn a slight bluish-gray. Not only will this tend to encourage deeper rooting, it will also keep shoot growth at a minimum, and conserving energy reserves. Water early in the morning (between 4 and 9 am) and avoid watering during the heat of the day because much of the water is lost to evaporation.

Aerification. Consider aggressive aerification to reduce soil compaction and improve rooting. Use the largest available hollow tines (not solid tines) and punch between 20 and 40 holes per square foot. (DJ)

Take Measures to Control Sphaeropsis Tip Blight

Sphaeropsis tip blight is a common serious disease on Austrian, ponderosa and mugo pine in Nebraska, and occurs less destructively on Scots pine. It is caused by the fungus *Sphaeropsis sapinea*. Symptoms range from tip blight, cankers on branches or trunk, death of cones and blight of seedlings. Tip blight occurs when the fungus infects buds or shoots. Stunted, brown shoot tips with short needles result. Tissues are often resin-soaked. In the fall, small black fruiting structures of the fungus can be seen on needle bases. The annual death of buds and shoots causes trees to decline gradually from the bottom branches upward. The fungus may also penetrate young stems and cause cankers which eventually girdle and kill branches. Fungal spores are spread during wet weather from



The most conspicuous symptoms of *Sphaeropsis tip blight* are stunted new shoots with short, brown needles.

early spring until fall. Infected cones serve as a source of spores.

Control Methods

- Avoid planting Austrian pine.
- Promote good air circulation by adequate spacing and weed control.
- Trees may be pruned to improve their appearance, but this does not control the disease.
- Spray chlorothalonil, Bordeaux



Small, black fruiting bodies called pycnidia, in which *S. sapinea* spores develop, form on scales of second-year seed cones

mixture or other appropriately labeled copper fungicides at bud swell, then repeat twice at intervals of 10-14 days.

For further information on Sphaeropsis tip blight, check the Web site at lancaster.unl.edu. (DJ)

Watch for Pine Sawfly Damage

Now is the time to begin watching pine trees for feeding damage by clusters of European pine sawfly larvae. These gray-green larvae with the shiny-black, beady heads are common on mugo, Scots and red pine and may be found on other pine species as well (white and Austrian pines are usually only



European pine sawfly larvae

attacked if interplanted with the more susceptible species). The phenological indicator plants and their stage of development that coincide with the onset of European pine sawfly egg hatch and presence of small larvae are:

- Serviceberry in bloom
- Redbud beginning bloom

- Purpleleaf sand cherry in bloom

Sawfly control is not difficult when the larvae are detected early. Mechanical control by pruning cluster-containing twigs from the tree is possible. Vigorous shaking to dislodge the larvae and raking them up from the ground for discarding is also a possibility. Spot-spray treatment of infested trees can be done for control. Sevin, Diazinon and horticultural oil (at the "summer rate") are suggested choices. Read and follow label directions. (DJ)

Urban Agriculture



Needle Cast on Spruce

Rhizosphaera needle cast on blue spruce, caused by the fungus *Rhizosphaera kalkhoffii*, is the most common plant disease of Colorado spruce. This disease typically causes second-year needles to turn a purple-brown color and fall from the tree. Small black fruiting structures of the fungus can be seen in the small, pore-like openings of infected needles. These fruiting bodies appear in rows along the length of the needle. A hand lens or magnifying glass is helpful in viewing these structures.

Symptoms most commonly start on the lower branches of the tree and work upward. The symptoms, however, may first appear and spread on one side of the tree. Trees of any age may be affected, especially those that are stressed. The fungus can overwinter in infected needles. In the spring spores are released during wet weather and infect newly emerging needles.

If the disease is present, control consists of using a fungicide in the spring to protect these newly emerging needles. The tree should be sprayed with a product such as chlorothalonil (trade name Daconil 2787) or Bordeaux mixture in the last two weeks of May and again four to



Rhizosphaera needle cast symptoms usually start on the lower branches.

six weeks later. Good coverage and correct timing of the applications are important. Be sure to read the label for rates.

Other control measures include proper tree spacing and weed control to promote good air circulation, improving tree vigor through mulching and watering when needed, avoiding shearing trees when the foliage is wet, inspecting trees for disease before planting and avoiding planting susceptible trees next to infected trees. (DJ)

Free Composting Workshops

Grass and leaves are banned from the Lincoln Landfill from April 1 through Nov. 30 each year. Composting is a simple, practical and convenient way to transform yard wastes into a resource. By maintaining a compost pile or bin in your backyard, you can speed up nature's process of decomposition to create usable compost within a few months. Compost can then be used to improve soil structure and return vital nutrients to the soil.

Learn how to successfully compost by attending free composting workshops or demonstrations sponsored by the City of Lincoln Recycling Office and UNL Cooperative Extension in Lancaster County. Attendees will receive a free compost bin or composting thermometer.

Composting Workshops (7-8 p.m.)

- April 15 — Belmont Recreation Ctr, 1234 Judson St.
- April 17 — Calvert Recreation Ctr, 4500 Stockwell St.
- April 22 — Easterday Recreation Ctr, 6130 Adams St.
- April 24 — Irving Recreation Ctr, 2010 Van Dorn St.

Compositing Demonstrations

From May to October, composting workshops with hands-on demonstrations will be presented the third Saturday of each month at 8:30 a.m. at the City Yard Waste Composting Demonstration Site, 50th and Colby.

For more information, call UNL Cooperative Extension in Lancaster County at 441-7180.