Helping Your Customers Manage Weedy Grasses

I hate crabgrass!” is a common lament I’ve heard from residents during my 35 years of experience as a UCCE Weed Science Farm Advisor; as a retail store employee, you probably hear the same. However, four out of five times, the weed people are actually referring to is not crabgrass, but bermudagrass or dallisgrass. So why does knowing the name of the weed matter? It doesn’t—unless you are trying to help your customer control it!

Crabgrass

There are two annual weed species of crabgrass: large crabgrass and smooth crabgrass. Large crabgrass, sometimes called hairy crabgrass (*Digitaria sanguinalis*), has leaves that usually appear grey with a hairy upper surface (Figure 1). If unmowed, the leaf sheath can grow upright to a height of 2 feet. Large crabgrass is commonly found in gardens and landscape areas.

Smooth crabgrass (*D. ischaemum*), is usually light green in color (Figure 2) and as the name indicates, it appears smooth. The leaves do have some hairs, but they are not as prominent as those found on large crabgrass. Left unmowed, smooth crabgrass can grow to a height of 6 inches tall. It first appears in open areas in the lawn such as the edges or areas cut around sprinklers. Each winter (as early as January in Southern California and late February in the North), very small, light green single leaves begin growing flat on the ground, often in turf areas.

While annual crabgrasses can be a problem, they pale in comparison to the perennial weeds bermudagrass and dallisgrass. Learn more about crabgrasses in the UC IPM Pest Notes: Crabgrass. See the resource box at the end of the article.

Bermudagrass

Bermudagrass (*Cynodon dactylon*), is a low-growing, wiry perennial that has two types of shoots: stolons that grow above ground (Figure 3), and rhizomes that grow below ground. Stolons and rhizomes are capable of rooting in soil and creating new plants as they grow out from the original plant. They can also grow when they are cut and left on moist soil. Although bermudagrass can spread by seed, it usually spreads in lawns and gardens by stolon. Common bermudagrass and hybrid varieties can be used as a lawn in some areas of the state. In this article, we are talking strictly about bermudagrass as a weed.

...continued on page 2
Integrated Pest Management (IPM) programs focus on long-term prevention of pests or their damage through a combination of techniques including resistant plant varieties, biological control, physical or mechanical control, and modification of gardening and home maintenance practices to reduce conditions favorable for pests. Pesticides are part of IPM programs but are used only when needed. Products are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment.

**Weedy Grasses**

Bermudagrass is hard to pull out and is very tolerant of both drought and mowing. The seed heads look very similar to those of crabgrass (Figure 4). Unlike the other two weeds discussed, bermudagrass can be very invasive in lawns and gardens. Learn more about bermudagrass in the UC IPM Pest Notes: *Bermudagrass* mentioned at the end of the article.

**Dallisgrass**

Dallisgrass (*Paspalum dilatatum*) is a coarse-textured perennial that grows in a clump (Figure 5). It slowly increases in diameter as its shallow, underground rhizomes grow outward. The rhizomes have short internodes (the length of stem between the joints) that look like concentric rings on its surface and resemble grubs or worms (Figure 6).

Dallisgrass is a problem in many areas because it is adapted to inconsistent irrigation and fairly close mowing; the seed heads grow almost parallel to the ground and are often missed by lawn mowers. Learn more about dallisgrass in the UC IPM Pest Notes: *Dallisgrass*.

**How do you tell them apart?**

Dallisgrass is easy to distinguish from crabgrass and bermudagrass because it grows in clumps, is green year-round, the stems are flat, and the flower heads droop rather than appearing as upright, fingerlike spikes. As mentioned already, crabgrass and bermudagrass have similar fingerlike flower heads but crabgrass has wider leaves than bermudagrass. The stems of large crabgrass are often purple. Bermudagrass grows in long, wiry, trailing stems with leaves that are generally smooth and pointed, and a conspicuous ring of white hairs at the junction of the blade and sheath.

**How are these weeds controlled?**

Because crabgrass are annual plants, reducing the amount of shallow irrigation helps reduce their germination and growth. In gardens, use drip irrigation, which works best when buried. In lawns, replace short, daily watering with fewer but longer (deep) irrigations. This allows the top to dry out, and encourages the deep-rooted perennial lawn species growth. To manage crabgrass, recommend that your customer raise the height of their mower; this has been shown to make lawn more competitive.

Although raising the mowing height helps slow bermudagrass growth, changing irrigation practices will not discourage, and may in fact encourage both dallisgrass and bermudagrass once they are established. Because of their perennial structures, these plants must be removed either physically or chemically. Bermudagrass can also be controlled in the garden by drying it out for an extended period or by using soil solarization.

Finally, many people use “crabgrass weed and feed” for weed control. This product is a combination of lawn fertilizer and preemergence herbicide. If applied before crabgrass emerges in your lawn, it can be very effective. However, if the weeds are bermudagrass or dallisgrass, the preemergence herbicide may control some of the emerging seedlings but will not control (and may actually increase) the infestation of these two weeds.

Proper identification and knowledge of weed biology, such as germination time and life cycle, is the first step in any effective weed management attempts.

—John Roncoroni, UC Cooperative Extension Napa County, jaroncoroni@ucanr.edu

**Resources:**

For help identifying weeds, visit the UC IPM Weed Gallery at http://ipm.ucanr.edu/IPM/PMG/weeds_intro.html.

To see specific management information, see each of the Pest Notes entitled *Bermudagrass*, *Crabgrass*, and *Dallisgrass* on the UC IPM website at ipm.ucanr.edu/IPM/PMG/PESTNOTES.
Landscape Tree Damage: It’s Not Always a Pest Issue

Most disorders impacting landscape trees result from abiotic (non-living) disorders rather than attacks from biotic (living) pest organisms like plant pathogens, insects, and vertebrates. Damage caused by abiotic and biotic disorders can appear similar, making diagnosis of your customers’ plant problems difficult at times. For example, a customer may ask about discolored leaves on a *Ficus nitida* tree: this could be due to drought stress, a fungus, or a nutrient toxicity or deficiency.

In some cases, biotic injury may be obvious and abiotic disorders can be ruled out. For instance, many insects and diseases are often restricted to a single plant species, and will not affect multiple plant species in the area.

To determine if damage is the result of an abiotic disorder, tell customers to look at the landscape as a whole. Are symptoms exhibited by a single plant species or a wide array of species? Usually, uniform damage to multiple species within a limited area of the landscape signifies one or more abiotic factors are to blame.

Below are several common landscape disorders encountered around home landscapes and ways to prevent them or remedy problems once they occur.

**Too Little or Too Much Water**

Providing inadequate water can adversely impact plants until they are established, even drought resistant species. Outbreaks of insect pests, such as certain bark beetles, can quickly infest stressed, water-deficient trees. Because drought-stressed trees cannot recover from wounds as quickly as healthy trees, pathogens causing several canker diseases are often common during and just after drought.

However, many established landscape plants suffer from too much water rather than not enough water (Figure 1). As woody plants age, they prefer to be irrigated more deeply and less often than when initially planted.

**Heat Stress**

Heat stress often occurs when a tree is planted in a climate zone with higher summer temperatures than those to which the tree is adapted. Over time, high air and soil temperatures can lead to irreversible damage. In some cases, trees well adapted to inland or desert climates can become stressed and die under temperatures they would normally endure if a water deficit develops.

Access the American Horticultural Society (AHS) heat zone map information (based on the number of days with temperatures above 86°F) to find the heat zone in your area. Many nurseries now include this information on plant tags.

**Mechanical Injury**

Mechanical injury, like damage from tight, unremoved staking ties (Figure 2), can extend into the vascular system of plants, cutting off the flow of water and nutrients. Early symptoms include wilting, stunting, and general decline. Bark can also be damaged from mowers and weed trimmers. Advise customers to avoid trunk injury since damaged bark cannot be repaired.

**Salt Build-up from Overfertilization or Recycled Water**

Excessive applications of fertilizers and irrigation with water high in certain ions can result in salt toxicity. Damage appears as marginal leaf browning, leaf scorch, stunting, or chlorosis (Figure 3). Another visual sign of salt build-up is...continued on page 4
Landscape Tree Damage
...continued from p. 3

the presence of a white or black crust on the soil surface. Salt damage can result in injury and even death, of sensitive plants. Trees do not require nutrients immediately after transplanting because they store food reserves in roots.

With landscapes increasingly being irrigated with recycled water, leaching needs to be a routine component of maintenance. Saline soils can be remedied by leaching salts below the root zone with large amounts of fresh water (the original source of saline water cannot be used for this). In some cases, when the irrigation water is more saline than most plants will tolerate, less sensitive species should be selected.

Help your customers prevent abiotic disorders by selecting healthy plants well suited to the climate and microclimate, incorporating recommended planting techniques, providing a soil environment that optimizes healthy root systems, and implementing sound cultural management practices (such as irrigation, fertilization, pruning, and aeration).

—Janet Hartin, Environmental Horticulture Advisor, UC Cooperative Extension, San Bernardino, Riverside, and Los Angeles counties; jshartin@ucanr.edu

This article was modified from a previously published article from the Winter 2017 issue of UC IPM’s Green Bulletin (Vol. 7, No. 2).

For more comprehensive information about abiotic issues, refer to the UC ANR publication, Abiotic Disorders of Landscape Plants: A Diagnostic Guide anrcatalog.ucanr.edu.

Figure 3. Chlorotic leaves with necrotic margins and tips, especially severe on older foliage of European hackberry, Celtis australis, due to root exposure to excess salinity (sodium).

Always read and carefully follow all precautions and safety instructions provided on the pesticide container label, as well as any other regulations regarding the use of pesticides.

Not following label directions, even if they conflict with information provided herein, is a violation of state and federal law. No endorsements of named products are intended, nor is criticism implied of products not mentioned.

Revised Pest Notes

Dandelion, newly revised in January, offers nonchemical and chemical management solutions and full-color illustrations for this common weed. It’s available online and as a printable PDF at ipm.ucanr.edu/PMG/PESTNOTES/pn7469.html.

Redhumped Caterpillar was updated in December. It describes this tree pest, its life cycle, and natural enemies, as well as management practices. Find the Pest Notes online at ipm.ucanr.edu/PMG/PESTNOTES/pn7474.html.

To access these and almost 170 other titles, visit UC IPM’s Pest Notes Web page, ipm.ucanr.edu/PMG/PESTNOTES.

University of California Statewide Integrated Pest Management Program
2801 Second Street
Davis, CA 95618-7774
Editor: K. Windbiel-Rojas
Production: B. Messenger-Sikes
E-mail: UCIPMretail@ucanr.edu
Online: ipm.ucanr.edu/RETAIL

Produced by the University of California Statewide IPM Program with partial funding from the USDA NIFA CPPM Extension Implementation Program.

For more information about managing pests, contact your University of California Cooperative Extension office, or visit the UC IPM website at ipm.ucanr.edu.