Dealing with Drought Affected Lawns – August 2012

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With the drought abating in many parts of the state, we've seen lawns begin to green up[1]. However, after the severe stretch of drought, nearly every lawn is expected to have some areas where the grass has died. These dead patches were likely undesirable species of grass, areas with very poor soil underneath, or weakened by another stress before or during the drought.

Dead patches of grass take on a grayish, black coloration to the yellow or brown tissue and feel soft at the soil surface (Figure 1). Re-establishing some of these dead areas will be necessary in the fall. I recommend waiting until at least September 1st to begin the renovation process for a few reasons. First, Kentucky bluegrass has underground stems called rhizomes which can regenerate new plants. If you have a dead patch of lawn now, it is likely that the size of the dead area will be substantially smaller (or even gone) by September (Figures 2 and 3) as the bluegrass spreads to fill the voids. Second, September is the best time to establish new lawns from seed because the temperature and moisture stress is often lower and most weeds are no long germinating. Do not wait later than mid-September to begin renovation, as this may not be enough time for the seedlings to become strong enough to survive the winter. Sodding can be done successfully any time before the soil freezes.

Choosing the best grass

Kentucky bluegrass is the most common lawn grass in Wisconsin and an excellent choice for re-planting dead areas. Kentucky bluegrass is likely the best option for drought tolerance. It will turn brown faster than most other species, but can remain alive in that state for up to 60 days. In addition, it has underground stems which have the potential to generate new grass plants and fill in dead spots. Kentucky bluegrass is fairly difficult to establish from seed because it takes up to three weeks to germinate. To avoid the chance of an unsuccessful establishment by seed, sodding is a great option.

Tall fescue has potential to become a useful lawn grass in Wisconsin. It will not tolerate poorly drained areas where ice accumulates in the winter. However, it can retain a green color longer than any other lawn grass. That said, when tall fescue loses its green color it does not have much time left and requires irrigation for survival. Another drawback of tall fescue its relatively wide leaf blade, which will look like a weed if planted in patches into an already established lawn. If tall fescue is desired, it should be planted or sodded across the entire lawn, and not used to fill in patches.

[1] When in true dormancy, can take up to two weeks to green back up, but grass that wasn't completely dormant will green up in a few days.

Fine fescue (including red fescue, hard fescue, sheeps fescue, and Chewings fescue) – these closely related species have a strong reputation for being drought tolerant, however, this grass has a tendency to form thatch, which results in the growing point (or crown) rising above the soil surface. When this happens, fine fescue has a poor chance of surviving an extended period of dry weather. I have seen more dead fine fescue because of this year's drought than any other turf type (Figures 3 and 4). Because of these observations, *I do not recommend planting fine fescue in areas that were killed by the drought. This is a dramatic departure from previous recommendations, but based on things I have seen over the past few weeks.* Fine fescue remains a good choice for turf professionals who can control and manage the thatch production associated with these grasses. It is also a good a good choice for heavily shaded sites.

Perennial ryegrass is an almost ubiquitous component of many lawn seed blends. It has poor cold tolerance and not well adapted to drought conditions. It is included in mixtures because it germinates in less than a week and provides a fast green cover. I recommend avoiding planting perennial ryegrass or keeping it a minor component (<15%) of a seed blend.

Annual ryegrass is another common component of (usually inexpensive) lawn seed mixtures. It is selected for its rapid establishment and vigorous growth. However, it has poor cold tolerance. Do not plant annual ryegrass, as it is unlikely to survive the winter.

Seed or sod? Seeding will cost less, but has a smaller success rate and takes a great deal more labor and care for success. If you have time (up to four weeks) and ability to care for newly seeded grass, purchasing seed is the way to go. If your time and ability are limited, sod is a great choice. Sod can be placed anytime when the ground is not frozen. However, regardless of renovation method, proper soil preparation is key. Check out Lawn Establishment and Renovation (UWEX Publication A3434) at the UW-Extension Learning Store for information on how to increase the chances of a successful lawn renovation.

Caring for the living portions of the lawn

Weed control and fertilization in September and early October will be key practices to speed and encourage the recovery of your lawn (Figure 5). Fertilizing and controlling weeds in the heat of the summer can sometime cause even more damage, so make sure you wait until cooler conditions arrive when the grass is under less stress. Some lawn care providers use slow release forms of fertilizers that are appropriate for application in hot weather, but consumer fertilizers will work best when applied in September and October. For more information on best practices for lawn maintenance, check out Lawn Maintenance (UWEX Publication A3435) in the Learning Store.

Photos from lawns affected by the 2012 Drought

Figure 1. Dead grass usually takes on a grayish black appearance and is very soft and “mushy” to the touch.

Figure 2. This large brown patch of grass is mostly dead, but there are many single plants of Kentucky bluegrass interspersed throughout it. Expansion of these small plant and expansion of surrounding Kentucky bluegrass into the dead area is expected to dramatically shrink the size of this area by September, although it is likely some of this area will need to be re-seeded or sodded.

Figure 3. This lawn has a large amount of dead grass, most of which was fine fescue. The area that will need to be re-seeded or sodded is expected to be much smaller by September as the living grasses fill in.

Figure 4. Of all the turf types, fine fescue surprised me the most with its poor survivability. Fine fescues are considered more drought tolerant than Kentucky bluegrass in all the textbooks. However, the majority of non-irrigated fine fescue areas I've seen are dead. If fine fescue is planted along with Kentucky bluegrass, this is not a major issue as the bluegrass will fill in; but major renovation will be required of areas where fine fescues were the only species. I've noticed the areas where fine fescue has survived are those where no thatch exists and the crowns are underneath the soil surface. Because fine fescues have a tendency to form thatch, these grasses should not be planted unless thatch can be prevented – which is not an easy task for a non-professional turf manager. This lawn will likely need to

be completely renovated because the living grass is not Kentucky bluegrass and will not fill in the vacancies left by the dead grass.

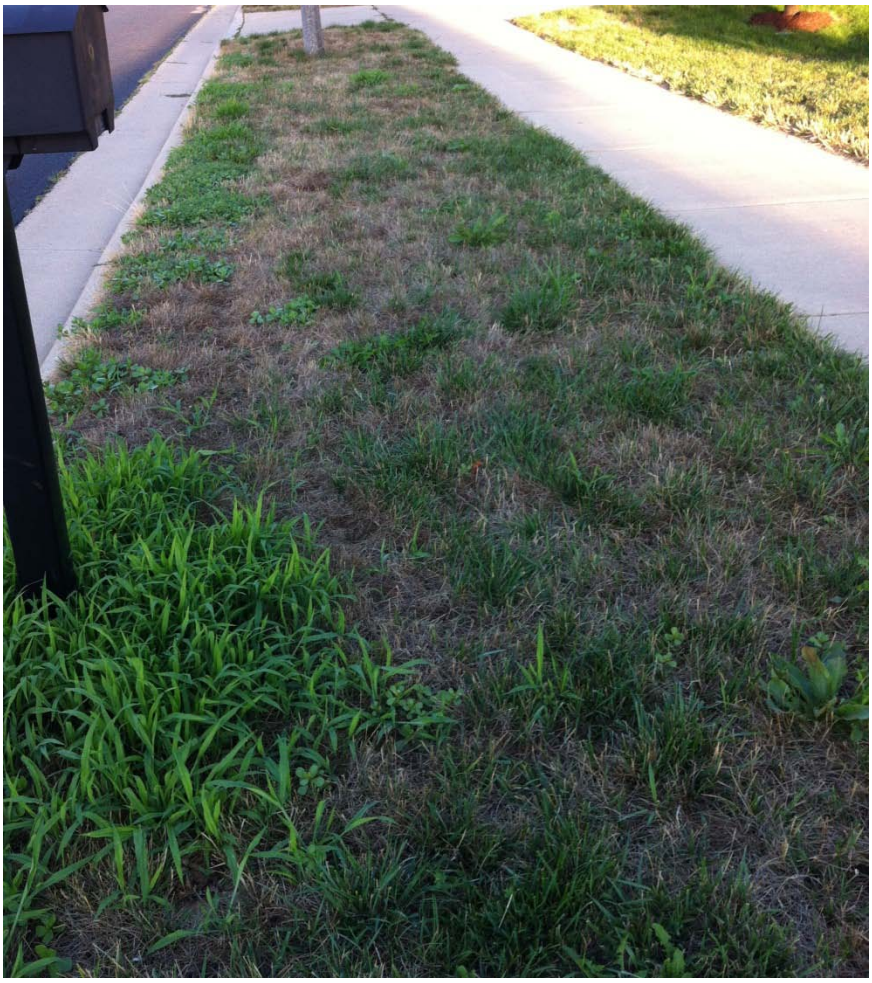

Figure 5. Unfortunately, weeds can also fill in the voids where grass has been killed. In this case, the grass did not survive the drought because of the shallow, rocky soil from the construction of the road and sidewalk. Note the vigorously growing crabgrass near the mailbox. The lawn on the house side of the sidewalk (where the soil is better) is in good shape. Weed control will be a key factor in helping the living grass bounce back and fill in the majority of this area. In this case, renovation may not be required aside from controlling the weeds and fertilizing in September and possibly October to encourage the living Kentucky bluegrass to fill in.

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