RESPONDING TO LAWN WEED MANAGEMENT QUESTIONS

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Weeds are the number one pest problem in home lawns. The most important message to convey to homeowners seeking to reduce weed problems is to emphasize that weeds are a result of poor lawn management. Occasionally the wrong turfgrass species is being grown: homeowners with serious lawn problems should first consult UW Extension bulletin “Lawn Establishment and Renovation, Publication No. A3434” to make sure they are using the correct grass for the site. Local county extension agents can help them identify the grass type(s).

Good lawn management requires three cultural practices: proper mowing, fertilization, and irrigation. Mowing at the correct height and frequency actually stimulates growth and produces a thicker lawn which prevents weeds from getting established. Most lawns should be mowed between two and three inch height. Any given mowing should adhere to the 1/3 Rule: never remove more than 1/3 the height of the leaf at any mowing. Thus, a lawn which is 3 inches tall should not be mowed shorter than 2 inches. Mowing frequency will depend on the growing conditions: more often in spring, perhaps two to three times a week; in summer and fall once weekly is usually sufficient. Most lawns should be fertilized three or four times annually with about 1 lb nitrogen per thousand square feet each time. Suggest the “Holiday Schedule” for convenience: Memorial Day, July 4, Labor Day, and Halloween. The July 4 fertilization should be skipped if the turf is dormant due to heat and/or drought. Many homeowners choose to not or are prohibited by local ordinance from water their lawns during drought periods. Since water is required for turf growth and cooling, turf leaves may turn brown and dry during prolonged droughts. The thin turf allows weeds which have low water requirements to gain a toehold.

The rest of the document covers answers to some of the most common questions I get about home lawns.

I sprayed my weeds last year so why are they back this year?

There are several answers to this question. First, ask what type of product was used to control the weeds. Homeowners sometimes use broadleaf herbicides on grassy weeds. Second, ask when the product was applied and what the environmental conditions were like. Herbicides applied during summer drought or shortly before a major thunderstorm may not be absorbed sufficiently to kill weeds. Thirdly, ask the rate that was used. Failure to use the rate and carrier volume specified on the label results in poor control. Fourthly, you may want to ask the age of the product and the conditions under which it was stored. Pesticides lose efficacy with age, especially if subjected to freeze/thaw and damp conditions. Fifthly, ask about the general site, turf cover, and turf management practices. Poor quality lawns which are treated with herbicide easily allows weeds to redevelop unless good management practices are used and the correct grass species for the site is present.

Last year my lawn was practically weed-free, this year its full of dandelions ---where did they come from?

Many weeds reproduce from seeds. Weed seeds may live for years and soils are full of many types of weed seeds. Any time a gap occurs in the turf, the opportunity exists for a weed seed to germinate. I’ve seen lawns that had no dandelions in them during May have countless dandelions by August.
I’ve got creeping bentgrass in my yard. Did it get there because my husband cleans his shoes off in the yard after golfing?

Creeping bentgrass and several other problem weeds such as quackgrass reproduce by vegetative structures such as stolons (bentgrass) or rhizomes (quackgrass). Stolons are aboveground lateral stems, rhizomes exist underground. While its possible for a stolon to be carried from one place to another where it can develop into a mature plant, golf shoes and clubs generally do not provide sufficient crevices for large enough pieces of stolons to be transported. Bentgrass often comes in with poor quality turf seed which was not subjected to strict quality control used with certified seed production. Bentgrass patches may even seemingly appear suddenly in old lawns: in these cases, the bentgrass was likely there all along, just as a smaller, less noticeable plant which grew when some type of injury or stress reduced the desirable grass. Quackgrass often gets into home lawns when topsoil is added.

How do I get rid of perennial grassy weeds such as bentgrass or quackgrass?

There is no herbicide available which will selectively remove these types of grasses. The best solution is to apply glyphosate herbicide (e.g., Roundup) during periods of active grass growth (spring and/or fall). For bentgrass, apply the herbicide about one foot past the visible patch in order to kill stolons which may be spreading outside the visible patch. Quackgrass is more difficult to control as the underground rhizomes cannot be directly killed by the herbicide, only the aboveground leaves can be sprayed. and may entail killing large portions of the yard. Unlike bentgrass, quackgrass does not form discrete patches. Large portions of the yard may need to be treated, two to three times, with several weeks between each application to allow new growth from the rhizomes as glyphosate can only be absorbed through green leaf tissue. Thus, quackgrass control may be a summer-long project, starting with applications in the spring and concluding with reseeding the lawn in the fall.

I don’t know if I have crabgrass or quackgrass in my yard. How do I tell the difference?

Crabgrass has numerous wide, soft leaves coming from a central point. Look closely and the leaves and/or stem will have small hairs. Crabgrass plants may be fairly easily plucked from the ground with the entire root system attached. Quackgrass plant leaves and stems are smooth and the entire plant system cannot be pulled from the ground.

If I have crabgrass, what do I use to control it and when should it be applied?

Pre-emergent herbicides are most effective for homeowners to control crabgrass. Many types exist on the market: have them look for a brand name that advertises “annual grass killer” or “controls crabgrass”. More saavy homeowners can be instructed to look for products which contain one or more of the following active ingredients: benefin, trifluralin, oryzalin, pendimethalin, or prodiamine. Other compounds exist but these are some of the most traditional and widespread ingredients.

Crabgrass preventer must be applied BEFORE crabgrass germinates. In other words, if crabgrass has been a problem in one of the last three years, assume the seeds are in the soil and it will come back. Early to late April is usually sufficient though depending on the location crabgrass seed may germinate any time from late March (south-facing slopes in southeastern WI) to late May/early June (northern WI). Most products are effective for 60-120+ days. Tell the homeowners to follow the directions on the label, which, depending on the product, will usually
instruct the user to irrigate the lawn after application to move the herbicide into the upper soil layer. This creates a barrier to prevent crabgrass seedlings.

**How do I control creeping Charlie, wild violet, and other broadleaf weed species?**

Many broadleaf weeds are easily controlled with any off-the-shelf liquid broadleaf herbicide. These contain one or more of the following active ingredients: 2,4-D, MCPP (mecoprop), MCPA, dicamba, and/or triclopyr. A given product may often contain more than one active ingredient because some work better on particular weed species. Creeping Charlie, AKA ground ivy (*Glechoma hederacea*), and wild violet are often more difficult to eliminate than weeds such as clover. Creeping Charlie spreads by creeping stolons and a single application of herbicide may not get enough active ingredient into the stolons to kill the entire plant. Thus, a couple months after application the stolons have produced new leaves. Wild violet has a thick waxy layer on the leaves which inhibit herbicide absorption and a thick growing point which “dilutes” the herbicide, allowing part of the plant to survive. With these and other hard to control broadleaf weeds, the standard herbicide products will work if they are applied at the correct rate and time. **Hard-to-control perennial broadleaf weeds should be treated in the fall for best results.** Not only is the herbicide most likely to be absorbed and transported to the growing point at this time of year, but if the plant survives it does so in a weakened condition and may fail to survive the winter. Any survivors may be re-treated in the spring when they are in bloom, another time when weeds are particularly susceptible to herbicide. An added benefit of autumn applications is that there is less risk of overspray affecting any garden or annual ornamental plants. If available, use an ester formulation of the active ingredients rather than a salt-based or amine form for hard-to-control broadleaf weeds. The formulation is usually indicated on the label under “active ingredients”.

**What about Weed n Feeds?**

Weed and feed products are a combination of fertilizer plus herbicide. Most sold to homeowners are in granular forms and contain 1% or less herbicide. Two main types exist: pre-emergent and post-emergent. Pre-emergent products are primarily meant for crabgrass and can be just as effective as a stand-alone herbicide. The problem is that the fertilizer stimulates an already high spring growth, resulting in more mowing and potentially a weaker turf root system. Post-emergent products are primarily intended for broadleaf weed control and need to be applied to wet foliage so the prills “stick” to the weed leaves long enough for the herbicide to be absorbed. In reality, most of the prills fall off the leaves too quickly for the herbicide to be effective. Products made with ester formulations of the herbicide tend to work better because the herbicide may be absorbed as it volatilizes off the prills even if they’ve fallen to the ground, which is then absorbed by weed leaves.

**I want to use a non-toxic herbicide. What can I use?**

Realize first and foremost that the Environmental Protection Agency has strict rules regarding pesticide registration. Years of testing are required before a pesticide can be sold and used commercially. Many household compounds such as aspirin could not become registered herbicides (it can cause stomach bleeding). Table salt has similar toxicity to the post-emergent herbicides 2,4-D, MCPP, and dicamba. Contrary to many media reports, 2,4-D has not been shown to cause cancer.

If a natural product is desired, corn gluten meal offers the only serious potential I’ve yet seen. Corn gluten meal is a natural by-product of the wet milling process of corn. Special peptides (some pieces of proteins) are released into the soil which stop seed germination similarly to
conventional pre-emergent herbicides. Timing is critical as it must be applied just prior to weed emergence, e.g., < 14 days. Corn gluten meal is ineffective against existing weeds. It is sold retail under a variety of trade names such as WOW!, Gardens Alive, and others names. Inexpensive corn gluten meal may be purchased from some co-ops or grain elevators, but the bagged commercial products are more user friendly. Be aware that some of the apparent activity may be due to the 10% nitrogen content, particularly when it is used in areas that are not sufficiently fertilized. To date, corn gluten meal offers the most promise of any natural product for weed control especially if a commercial process is developed to produce a concentrated form of the active peptides (proteins).