

CMG GardenNotes #356

Worksheet ANSWERS: Weed Management

SCENARIO 1: Ready to Clean Up & Grow I just moved to Colorado and into a house where the raised vegetable beds and pathways are full of weeds. How should I clean this up so I can start planting this year – or to get ready for next year? • What questions might you ask? • What resources could you use as a CMG? • What science-based recommendations could you give?

- 1. What questions would you ask this client?
 - Is their goal to plant a vegetable garden THIS SEASON? Or to get ready for next year?
 - What are their preferences for using herbicides? Are they OK with using a synthetic product like glyphosate (Roundup)? Is their preference to use only "natural/organic" herbicides (horticultural vinegar, herbicidal soaps, botanical products)? Or do they prefer to use no herbicides at all?

REMEMBER: It's not your role to convince/lecture/bully the client that they should or shouldn't use glyphosate (because you love or hate it), that they should ONLY utilize pulling/hoeing/sheet mulching (because that's how YOU may do it), or that they should use your special weed spray mix of vinegar, soap, and salt that you found on the internet. (Even if it works for you, you – as a representative of CSU Extension – may NOT make this recommendation!) Your role is to provide legal, research-based options to our clients – providing sufficient information to allow THEM to make their own decision.

 Are they familiar with the concept of mulching for weed management? Many people are not!

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- 2. What resources will you use to research?
 - Vegetable Garden Weed Management (not an official Fact Sheet or CMG GardenNote).
 - Natural Herbicides for Landscape Weed Management (not an official Fact Sheet or CMG GardenNote).
- 3. What recommendations might you provide?
 - Spray PATHS between raised beds (hard to see in the above slide of Scenario 1)
 with glyphosate or a burndown natural or organic product (horticultural vinegar or
 20% acetic acid, or clove or citrus oil products, etc.) and cover paths with mulch
 (four to six inches deep).
 - If the TALL weeds are annuals (in this case it was marestail, aka horseweed, aka Conyza canadensis), CUT them off at the base, just at the soil surface. They will not grow back, and you do not disturb the soil (the weed seed bank) by pulling them. Also, leaving the root system in the soil adds organic matter. However, if they are perennials (thistle, bindweed), cutting them off once is futile. BEST to apply glyphosate/Roundup (but nothing with "extended control" or "ground clear" on the label). Glyphosate alone will not have any soil residual and will provide a good level of perennial weed control with a single application (NOT total control, but WAY better than spraying them with a horticultural vinegar or oil-based burndown organic product). If they do not want to apply glyphosate, then multiple, (three to six times, whenever they grow back) repeated applications of the natural products can eventually kill the tough perennial weeds.
 - Other options include solarizing the raised beds, and thick sheet mulching, though both of these are not likely to control bindweed well, as it will escape around the edges of the raised beds.
 - Depending on the time of the year, they could then plant into the beds (plant into the dead weeds...leaving them as mulch, or remove dead weeds, plant, then mulch around plants or between rows. The key is to prevent NEW WEEDS from coming up and taking over again.
 - The two major keys to successful weed management anywhere are: 1) break the life cycle of the plant (keep it from reproducing), and 2) provide competition (shading by plants, and MULCH).



SCENARIO 1, Part 2

This is a real-life follow-up on the garden shown in the first slide. This garden was at my parent's house (in Illinois) the other year. My mom passed away that March, and I went back in June to clean out the house to get it ready to sell. The first photo was of the vegetable garden on day one. I cut tall horseweed at ground level with pruners, left all of the dill volunteers, and sprayed the purslane, chickweed, lambsquarter, and annual bluegrass growing in the raised beds with glyphosate. Sprayed the paths with glyphosate, followed by a DEEP (four to six inches) layer of bark chip mulch. The picture above (slide called Scenario 1 Part 2) was taken the next morning. Looks much better!

So what is the take-home lesson here?

While it might look hopelessly bad to clients, they CAN turn a really weedy garden area/raised bed area around in a day or so with some hard work. Helps immensely to use glyphosate if they are not opposed to it. This would not have worked as well if I had to use a burndown herbicide. I don't mind using them, but you MUST reapply them three to six times, depending on weed species. Since I was leaving in a few days, I didn't have the luxury of being able to make repeat applications.

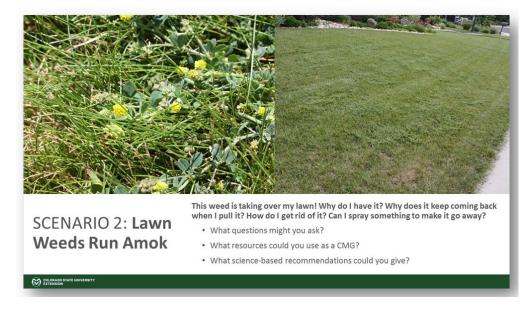
I returned in November that same year to do some final cleaning. I cut back the dead dill plants in the raised beds, but really didn't do anything else. The picture below is what it looked like four and a half months later. The mulch was still working quite well in the paths. There was a lot of winter annual weed growth (annual bluegrass, chickweed, henbit) in the raised beds, but they weren't too bad.

The two big takeaways:

- 1) Thick mulch works really well!
- 2) Avoid stirring up the weed seed bank by CUTTING off weeds and leaving their roots in the soil instead of pulling them. You'll get much less re-growth of weeds.



ANSWERS Worksheet: Weed Management 356-3



- 1. What questions would you ask this client?
 - If you can get one, a live sample of the weed(s) for identification.
 - If a sample is not possible, a close-up photo of the weed(s) in question.
 - How do they mow (height, frequency, clippings)? When do they fertilize? How do
 they water (how long, frequency, and types of sprinkler heads so you know if run
 times are adequate).
 - Do they have preferences regarding pesticide (herbicide) use on their lawn?
- 2. What resources will you use to research?
 - U. Missouri Weed ID website
 - CMG Garden Notes #552, Broadleaf Weed Control in Lawns
 - CMG GardenNote #353, Weed Associations with Specific Environments and Cultural Conditions

(Otherwise called *Indicator Weeds*.) After identification, what is favoring the growth of the weeds in their lawn?

- 3. What recommendations might you provide?
 - Change mowing practices, fertilization, irrigation whatever is "wrong" with their cultural practices that might be weakening the turf and encouraging the weeds.
 - If they are not opposed to the use of synthetic herbicides in their lawn, suggest the appropriate broad spectrum broadleaf herbicide (labeled for use on their lawn type), OR suggest that they hire a professional applicator to make the herbicide application to the lawn.
 - Emphasize that simply applying a herbicide and not correcting cultural/management problems is unlikely to control weeds, long-term, successfully.

In this example, the weed is black medic (Medicago lupulina). This is a legume, so lack of fertilization in lawns will encourage its growth. The homeowner in this case had not fertilized for years, was removing grass clippings (which removed even more N from the lawn system), and they mowed very short. Correcting the fertilization, mowing height, and returning clippings will make the lawn denser. This will not eliminate all of the black medic but will prevent it from become worse. An herbicide application could THEN be used to hasten the elimination of the black medic. But just applying a herbicide would be a temporary fix.



- 1. What questions would you ask this client?
 - First, it is important for you to know (and relate this to the client), that CSU Extension has no regulatory power or mission. We provide education, not regulation.
 - Have they talked to their neighbors (or the landlord, if it is a rental property) about the weeds?
- 2. What resources will you use to research?
 - Your local county weed office (every county has one). County weed programs for every CO county are listed
 - Colorado Department of Agriculture County Weed Programs
 - State Dept. of Agriculture Noxious Weed website is a good source of information on weeds
- 3. What recommendations might you provide?
 - Provide the client with contact information for the county weed office.
 - If the client does not want to interact with the neighbor about the weeds, the county (or city) can visit with them to develop a weed management program (which may entail nothing more than mowing, depending on the species of weeds in the lawn).



- 1. What questions would you ask this client?
 - Have they (or a close neighbor) removed a tree recently? (This is what happened in this case, a crabapple was removed, which stimulated suckering from the roots left behind).
 - Identify the source of the seedlings or suckers. Aspen, cottonwood, and crabapple are frequent sources of suckers. Maples, elm, and oaks are common sources of seedlings.
 - It is important to know if these are suckers (possibly attached to a desirable tree), or seedlings, especially if herbicides will be used to control them.
- 2. What resources will you use to research?

 <u>CMG Garden Notes #552, Broadleaf Weed Control in Lawns</u> (because tree seedlings can be treated as broadleaf weeds)
- 3. What recommendations might you provide?
 - If seedlings, most will succumb to mowing; use of a broadleaf herbicide safe for lawn use can aid in control.
 - If suckers from a tree that has been removed, treat with a broadleaf herbicide safe for lawns.
 - If suckers come from a desirable tree in the client's yard, or a neighbor's yard, it is better (safer for the tree) to remove suckers manually (cutting them out with a knife, spade, or shovel).