



# Training Guide:

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# Weed Management

## SETTING UP

### Materials needed:

- ☐ This Training Guide
- ☐ PowerPoint: "Weeds Training Class Review"
- ☐ Printed Worksheet (GN356) for small group work or individual review/notes.




*NOTE: Work with Tony Koski ahead of time to determine who will facilitate these activities – he may be able to coordinate his own review following or before Weed Management course.*

### ACTIVITY:

## WEED MANAGEMENT LAB

Time: 35 minutes

1. Load PowerPoint and hand out GN356 Worksheets to all students.
2. Give students 10 minutes to discuss and answer questions in small groups.
3. Bring class back together and review as a large group utilizing PowerPoint.
4. Ask for answers, thoughts, responses from the large group.
5. Offer suggestions/clarifications based on the answers in this guide.

		
Team up in small groups and review the four common weed scenarios.	Discuss each and determine potential response as a CMG.	Facilitator will review each scenario and ask for thoughts from groups.

## 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?



### Questions to ask:

- 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 use pulling/hoeing/sheet mulching (because that's how YOU 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 aren't!

### Resources for research:

- Vegetable Garden Weed Management (not an official fact sheet or CMG note)
- Natural Herbicides for Landscape Weed Management (not an official fact sheet or CMG note)

### Recommendations:

- Spray PATHS between raised beds (hard to see here) with glyphosate or a burndown natural/organic product (horticultural vinegar/20% acetic acid, clove/citrus oil product, etc) and cover paths with bark chip mulch (4-6 inches deep).

- If the TALL weeds are annuals (in this case it was marestail, aka horseweed), CUT them off at the base, just at the soil surface. They won't grow back, and you don't 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 "Groundclear" 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 hort vinegar or oil-based burndown organic product). If they don't want to apply glyphosate, then multiple, repeat (3-6 times, whenever they grow back) 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. My experience with solarizing raised beds for bindweed control is that it doesn't work well for bindweed.
- 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 2 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: Ready to Clean Up & Grow Part 2

I just moved to Colorado and into a house where the raised vegetable beds are full of weeds. How should I clean this up so I can start planting **WITHOUT USING HERBICIDES**?

- What questions might you ask?
- What resources could you use as a CMG?
- What science-based recommendations could you give?



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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) this past year. My mom passed away in 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 1. 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 (4-6 inches) layer of bark chip mulch. The picture above was taken the next morning. Looks much better!

### So what's the take-home lesson here?

While it might look hopelessly bad to clients, they CAN turn a really weedy garden area/raised beds around in a day or so – with some hard work. Helps immensely to use glyphosate, if they aren't opposed to it. This wouldn't have worked as well if I had to use a burndown herbicide. I don't mind using them, but you **MUST** reapply them 3-6 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.

Oh...was back in November 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 – 4 ½ 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.







**SCENARIO 2: Lawn Weeds Run Amok**

This weed is taking over my lawn! Why do I have it? Why does it keep coming back when I pull it? How do I get rid of it? Can I spray something to make it go away?

- What questions might you ask?
- What resources could you use as a CMG?
- What science-based recommendations could you give?

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#### Questions to ask:

- If you can get one, a live sample of the weed(s) for identification.
- If a sample isn't 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?

#### Resources for research:

- U. Missouri Weed ID website <https://weedid.missouri.edu/>
- CMG Garden Notes 552 Broadleaf Weeds <https://cmg.extension.colostate.edu/Gardennotes/552.pdf>
- Indicator Weeds (after identification, what is favoring the growth of the weeds in their lawn?) CMG GardenNote 353 <https://cmg.extension.colostate.edu/Gardennotes/353.pdf>

#### Recommendations:

- Change mowing practices, fertilization, irrigation – whatever is “wrong” with their cultural practices that might be weakening the turf and encouraging the weeds
- If they aren't 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 (long-term) control weeds 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 hadn't 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 won't 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.



## SCENARIO 3: Concerned Citizen or Nosey Neighbor?

My neighbor has tall, noxious weeds going to seed. What can CSUE do about this problem? What can I do?

- What questions might you ask?
- What resources could you use as a CMG?
- What science-based recommendations could you give?



### Questions to ask:

- First, it's 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 a rental property) about the weeds?

### Resources for research:

Your local county weed office (every county has one)

County weed programs for every CO county are listed here:

<https://www.colorado.gov/pacific/agconservation/county-weed-programs>

State Dept. of Agriculture Noxious Weed website is a good source of information on weeds

<https://www.colorado.gov/pacific/agconservation/noxiousweeds>

### Recommendations:

- Provide the client with contact information for the county weed office.
- If the client doesn't want to interact with the neighbor about the weeds, the county (or city) can visit with them about developing a weed management program (which may entail nothing more than mowing – depending on the species of weeds in the lawn)



## SCENARIO 4: Suckers, Saplings, & Seedlings... Oh My!

I've got little trees popping up all over my landscape. Where are they coming from, and what can I do to get rid of them? Is there something I can spray to control them?

- What questions would you ask this client?
- What resources will you use to research options?
- What recommendations might you provide?



### Questions to ask:

- 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, crabapple are frequent sources of suckers. Maples, elm, oaks are common sources of seedlings.
- It's important to know if these are suckers (possibly attached to a desirable tree), or seedlings – especially if herbicides will be used to control them.

### Resources for research:

- CMG Garden Notes 552 Broadleaf Weeds (because tree seedlings can be treated as broadleaf weeds) <https://cmg.extension.colostate.edu/Gardennotes/552.pdf>

### Recommendations:

- 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 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 out with a knife, spade, or shovel).