



A Weed by Any Other Name, Part 2 Methods of Last Resort

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To paraphrase the old saying, if it weren't for crab grass I'd have no grass at all. Not that I'm a big grass fan to begin with

Slowly but surely we are reducing the square footage in our landscape that is devoted to turf grass, but I can't help being amused at the irony of the situation. The only place grass appears to thrive is where it's not wanted: between the joints in the sidewalk and the bricks in my patio; in my flower, herb and vegetable beds, notwithstanding the four inches of mulch; popping up in pots and hanging baskets (?!).

We've got a embarrassment of weeds, and not just the native plants I find amusing such as henbit, oxalis and lambsquarter, to name a few. You probably have some weeds, too.

Like other plants, weeds are usually either annuals or perennials and are generally classified as either narrow leaf (grassy) or broadleaf. Crabgrass is an example of a narrow leaf weed; dandelion is one of the most common broadleaf weeds. For your reference, the National Gardening Association has an on-line pictorial guide to weeds at [The Weed Library](#).



As mentioned previously, our goal is to have such a healthy stand of desired plants that they choke out the weeds, or to use barriers such as mulch or weed-cloth to prevent weed seeds from germinating, or to physically remove – by pulling or digging – these flora intruders. When these methods fail, a lot of folks turn to herbicides for help. Herbicides are any chemical compounds used to destroy or prevent normal plant growth. The federal government classifies herbicides as “pesticides marketed specifically for killing or inhibiting the growth of weeds or undesirable vegetation.”

One of the most common broad leaf weeds, dandelions are fine in salads, not so good in the yard. This one is trying to pass itself off as a flower.

Herbicides can be commercially available chemical compounds or natural/organic mixtures. Ortho is one company that makes a wide range of commercial herbicides. Organic herbicides include some spices (oil of cinnamon), vinegar (in acidic solutions of 5 – 20 percent), sodium bicarbonate (a.k.a. baking soda), wheat flour and black walnut leaves (they contain an organic compound called Juglone).

Beginning in 1945, the use of chemical herbicides has become the most common weed control practice in many farming areas of the world. Since the use of chemicals for weed control is almost as old as agriculture – Theophrastus, in 300 B.C., mentioned killing trees by pouring olive oil on their roots – what's the significance of 1945? That was the year the American Chemical Paint Company was awarded a patent for 2,4-Dichlorophenoxyacetic Acid (2,4-D) for use as a weed killer.

There are two general categories of weed killers: nonselective and selective. As the names indicate, nonselective herbicides are toxic to a wide range of plants, while selective herbicides target specific plant species.

Roundup (active ingredient is glyphosate) is an example of a commercial nonselective herbicide. It kills pretty much everything it contacts.

2,4-D is an example of a selective herbicide. It is used to control broad-leaf plants such as dandelion, goldenrod, henbit, mustard, plantains, ragweed, thistles and other susceptible broadleaf weeds. A highly selective systemic herbicide, 2,4-D was one of several chemicals used in the herbicide blend known as Agent Orange that was used as a defoliant in the late 1960s by the U.S. military in Vietnam.

In addition to selective and non-selective, herbicides are also defined as either post-emergent or pre-emergent. Post-emergent herbicides are applied to weeds that are already growing. They kill the plants by impeding photosynthesis or by inhibiting growth. Generally used to control specific broadleaf weeds, they don't kill grasses or other weeds. Too, most home-use post-emergents are systemic, which means they are absorbed by the plant's foliage or roots and then translocated (or move through the plant's system) to kill the whole thing. Contact herbicides are also post-emergents, but they only kill those parts of the plant they touch. Again, Roundup is a systemic post-emergent, while horticultural grade vinegar (20 percent acidity) is a contact post-emergent. (More about horticultural vinegar later.)

Pre-emergent herbicides are mixed into the soil of an area to be treated. They create a chemical film on the soil that kills germinating seeds and small seedlings. Barricade (active ingredient Prodiamine) and Balan (active ingredient Benefin) are trade names of two commercial pre-emergents, while corn gluten meal (a by-product of corn milling) is an example of a natural pre-emergent. Concern Weed Prevention Plus is a commercially available version of corn gluten.

Most over-the-counter herbicides claim to be biodegradable when used correctly. Glyphosate in Roundup, for example, is broken down by microorganisms and does not remain in the soil. Yet, even with the “safest” weed killers there remains the possibility of some toxic reaction from skin exposure or inhalation before they have had a chance to break down chemically.

Concern Fast Acting Weed Killer is a non-selective post-emergent and was the first natural herbicide sold commercially. Made from ammoniated soap of fatty acids, it meets Integrated Pest Management (IPM) requirements that call for the herbicide to have low soil mobility, be biodegradable and non-toxic to people and pets, yet it carries a low to medium risk of skin inflammation. BurnOut Weed & Grass Killer is a non-selective natural herbicide made from clove oil, lemon juice and horticultural grade vinegar. Like the Concern products, it too meets IPM requirements, but it carries a very high risk of acute skin and eye irritation or inhalation danger.

Bottom line: play it smart when using any lawn chemical. Use them wisely and sparingly, only when and where needed; follow all manufacturers directions and safety precautions; then get to work on improving your garden environment so you won't need them again . . . or at least as much.