

Herbicides are an option but should be used as a last resort. Contact herbicides affect only the portion of the plant to which they are applied, while systemic herbicides enter the vascular system and travel throughout the plant. Broad spectrum (non-selective) herbicides kill a wide variety of plants while targeted (selective) herbicides affect a smaller range of plants. Herbicides also vary in their persistence in the soil - some lose potency quickly while others may persist for years - be sure you know what you're getting. Spot treat rather than broadcasting over a large area and be careful when using around desirable plants. Systemic herbicides may be more effective in fall when plants are transporting nutrients to the roots for winter storage.

Safety

When using herbicides, always read and follow all label directions. Wear protective clothing - eye protection, shoes, long pants and sleeves, hats, gloves, etc.

Also use caution and wear protective clothing when mechanically removing plants. Some contain stickers and barbs or substances that can irritate or burn skin and eyes. Many of these are members of the carrot family - wild and cow parsnips and giant hogweed cause blisters, especially when skin is exposed to sunlight. Poison hemlock is more likely to cause problems through ingestion, but may also be absorbed through the skin. Then there's always poison ivy. Nettle can cause stinging and occasionally welts. Thistles, wild roses, and brambles can poke you and become infected. You don't always know what you're getting into, especially in dense weed patches or unfamiliar locations, so it's better to be safe than sorry.

A Few Common Weeds

Although you will find all these listed as weeds somewhere, some consider them valuable plants.

Winter Annuals

Annual Bluegrass	Bedstraw
Common Chickweed	Common Mallow
Henbit	Horseweed
Prickly Lettuce	Purple Deadnettle
Wild Mustard	

Summer Annuals - Broadleaf

Annual Fleabane	Asiatic Dayflower
Black Medic	Common Cocklebur
Common Purslane	Knotweed
Lambsquarter	Prostrate Spurge
Pigweed	Ragweed
Smartweed	Spurge

Summer Annuals - Grassy

Barnyardgrass	Crabgrass
Foxtail	Goosegrass

Biennials

Common Burdock	Garlic Mustard
Mullein	Poison Hemlock
Spotted Knapweed	Wild Parsnip
Thistle (Musk, Bull, Field)	
Wild Carrot (Queen Anne's Lace)	

Perennials - Reproduce Mainly by Seed

White Heath Aster	Birdsfoot Trefoil
Buttonweed	Chicory
Dandelion	Dock
Plantain	Pokeweed
Wild Violet	

Perennials - Creeping or Rhizomatous

Bindweed	Canada Goldenrod
Canada Thistle	Ground Ivy
Mouse-ear Chickweed	Virginia Creeper
White Clover	Wild Grape
Woodsorrel	

Perennials - Tubers & Bulbs

Nutsedge	Wild Garlic
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Perennials - Cool Season Grass

Creeping Bentgrass	Quackgrass
Orchardgrass	Rough Bluegrass
Tall Fescue	

Perennials - Warm Season Grass

Burmudagrass	Nimblewill
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For more information on gardening please visit:
<http://web.extension.illinois.edu/state/horticulture/index.php>

or
 call University of Illinois Extension
 Knox County
 309-342-5108

Other information brochures can be find online at <http://web.extension.illinois.edu/hkmw/>

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Weeds: Plants in the Wrong Place



Garden Tips

from
 Knox County
 Master Gardeners



What is a Weed?

There is no scientific or legal definition of a weed (except for noxious weed and exotic weed laws - see the [Invasive Plants](#) brochure). A weed is simply a plant that is growing where it is not wanted. What is considered a weed depends on the situation and personal preferences. There are a number of plants that are commonly considered weeds - they have more undesirable qualities than redeeming qualities. But a rose growing in a tomato patch could also be considered a weed. And just because a plant has "weed" in its name does not necessarily make it undesirable. Many farmers consider milkweed growing in crops undesirable, but the monarch butterfly cannot reproduce and survive without milkweed.

Many plants are considered weeds because they outcompete desirable plants for resources such as light, moisture, nutrients, and space. They may germinate quickly and easily, begin growth earlier in the season than other plants, grow quickly, or thrive in adverse conditions. They can reduce crop yield, make our landscapes look messy, and crowd out native plants. Weeds may harbor harmful insects and diseases, and cause allergies and skin irritations in susceptible individuals.

But weeds aren't all bad. They can provide food and habitat for wildlife, help control erosion, add organic matter to the soil, and contribute to genetic diversity. They may attract beneficial insects and can serve as trap plants to draw pests away from desirable plants. Many valuable native plants are considered weeds by many. And some weeds are edible or ornamental. You might want to consider leaving some if they are in an out-of-the-way spot and aren't causing any harm.

Types of Weeds

Weeds are often classified by their life cycle, as perennials, biennials, or summer or winter annuals. These differences are not always clearly defined - the same plant may act differently under different conditions. They are also distinguished by whether they are grassy (monocots) or broadleaf (dicots).

Annuals grow for one season, flower, set seed, and die. The original plant will not come back the following year but new plants may grow from seed that falls to the ground.

Winter or cool-season annuals germinate in fall or early spring when soil temperatures are cool. Some flower and die in early spring while others continue growing all summer. Summer or warm-season annuals germinate in late spring or early summer when soil temperatures warm. Perennial grasses can also be classified as cool and warm season.

Biennials produce a rosette of leaves the first year, and flower, produce seeds, and die the second year.

Perennials have underground structures (roots, rhizomes, tubers, bulbs, etc) that persist from year to year, making them more difficult to control. Simple perennials produce new plants only from seed. Others can also reproduce vegetatively from pieces of the plant.

Identifying Weeds

While it's not strictly necessary to identify weeds unless chemicals will be used to control them, knowing how the plant grows can help you choose the best method and time for control. And knowing the plant and its characteristics may help decide how much of a threat it is and how aggressively (if at all) it needs to be controlled.

The best way to identify weeds is by comparing your plant to photographs of weeds at various stages of their life cycle. Two booklets available through the University of Illinois Extension are [Identifying Weeds in Midwestern Turf and Landscapes](#) and [Identifying Turf and Weedy Grasses of the Northern United States](#). Apps and tools are available to help identify weeds, including ones from [Missouri](#) and [Wisconsin](#) Extensions. The [Purdue Weed of the Month](#) site includes good pictures of a limited number of weeds. The Missouri Botanical Garden has good descriptions of [winter](#) and [summer](#) annuals on their website. Look for more information at other Midwestern Extension and University sites.

Controlling Weeds

You will never get rid of all the weeds on your property. Underground structures are almost

impossible to remove completely. Seeds are present in the soil and new seeds are always being carried to your property by wind, water, wildlife, and other methods. Think in terms of managing the weeds rather than eradicating them. Decide what you can live with and, instead of trying to remove every last weed, spend some time enjoying your garden!

Don't automatically remove every plant you don't recognize. Many desirable plants can be mistaken for weeds when young. If you're not sure, wait a while and see what it does - just don't let it go to seed. But if you're sure it's a weed get it early - it will be easier to remove with less damage to desirable plants.

Give desirable plants the best advantage by choosing plants appropriate to the location and giving them the best possible growing conditions. When preparing a new garden bed take a little time to remove as many weeds as possible. Tilling and then repeated shallow cultivation or herbicide use will help deplete the weed seedbank. Water and fertilize only desirable plants to avoid giving nearby weeds any extra help.

Weeds will take hold in any patch of bare ground. Cover soil with good quality organic mulch. Non-biodegradable weed barriers (plastic or fabric) can be helpful in some situations but can cause problems and more work in the long term. Space plants close together to help crowd out weeds and use wide-row planting in vegetable gardens.

Controlling Seeds

Almost all weeds can reproduce by seed so it's important not to let any go to seed, whether annual or perennial. Seeds can remain viable in the soil for up to 70 years or more - this is referred to as the weed seedbank. Only seeds near the soil surface receive the light and other conditions necessary for germination.

Reducing deep tilling and other soil disturbance will help prevent new weed seeds from being brought to the surface. Shallow cultivation (<1"), burning, mowing, and herbicides all reduce soil disturbance. Mulch will help prevent weed seed germination.

Pre-emergence herbicides can be used to control seedlings. They are best applied 10-14 days

before expected germination and remain effective for 6-12 weeks. You may need to reapply to control weeds with different germination times. The herbicide requires rainfall or watering to activate. Just be aware that these will control all seedlings, so avoid if you will be planting seed or want desirable plants to reseed.

Removing Plants & Roots

Mechanical removal includes pulling, cultivation, and cutting or mowing. Plants are pulled more easily when soil is moist. It's important when pulling perennial weeds to get as much of the root as possible but also try to disturb the soil as little as possible to avoid bringing weed seeds to the surface.

Shallow cultivation works best for most annual weeds. Use a scuffle or onion hoe (with shallow blade) to just scrape the soil surface. Long handled tools are easier on the body. Repeated shallow tilling, cutting, or mowing may also help control many perennial weeds by forcing the plant to draw on its reserves to regrow, eventually weakening it. Mowing plants with seedheads can spread seeds to other areas.

Be careful when disposing of removed weeds. Don't add to compost if they contain flowers or seedheads, or if they have been treated with herbicide. Plants that spread vegetatively should not be placed where they can take root. Clean under mower to avoid spreading seeds when you move to a new area. Small weeds without seedheads can be left on the soil surface.

Mowing and tilling may be less effective on creeping perennials that spread vegetatively. In some cases, any piece of the plant left in the soil or dropped elsewhere can develop into a new plant. In these cases careful pulling or an herbicide may be the best choice. Mowing is also ineffective on grassy weeds.

The best way to control weeds in lawns is to encourage vigorous turf to choke out the weeds. Fertilize and provide adequate water, and don't mow too short. Be patient - it may take some time. In the meantime, you can pull or spot treat weeds with a broadleaf herbicide. Use caution around trees - the herbicide may affect them too. Also, beware of inexpensive grass seed - it may contain undesirable varieties.