Weeds and your garden

The dreaded weed...
A weed is any plant you don’t want in your garden or landscape. It might be welcomed by another gardener, but to you it’s a pest. You can learn to recognize weeds that thrive under many conditions and compete with neighboring plants. Managing weeds in your garden or landscape does not have to be back-breaking and tedious. Start by removing as many weeds as possible, prevent new weeds from getting established in your garden, and, when weeds arrive, dig in!

Prepare garden beds carefully
Prepare your garden or landscape beds in ways that prevent weed growth.

New beds
If you’re creating a new bed on top of established turf, try a method that is easy but requires patience. Lay down two or more thicknesses of heavy cardboard or 10–20 thicknesses of newspaper (or less) before you plant, till the top 3 inches again to prevent weeds from getting established through the bed; those that do will be weakened by the effort. (Alternatively, you can yank up the turf, shake out and reserve the soil, and compost the grass.)

Now pile organic matter onto the paper. Put the coarsest on the bottom. For the top few inches, use compost mixed with topsoil. In weedy areas, the deeper the bed, the better! You can plant into this bed, or better yet, sow a cover crop and use the bed next year.

Established beds
If you’re preparing an established bed for planting, decide if more than 30 percent of the garden is covered with weeds. If so, you need to remove perennials and prepare the bed like a new one. If weeds are scattered, dig out the toughest root systems by loosening and removing the entire root. Pull by hand the medium-sized weeds that will cooperate. Then till.

Start with tidy garden beds, prevent new arrivals, and when weeds happen, dig in!
Fall renovation
In the fall, till or loosen the top 7 inches of beds with a shovel. Incorporate soil amendments, such as compost. Two weeks later, rake the surface to defeat any weed seedlings.

Watch out for weed sources
Weed seeds drift in on breezes or are transferred by animals from nearby weedy areas. Keeping sites adjacent to your landscape fairly tidy will reduce the number of weed arrivals.

One-year weeds? Or two? What to do.
The life cycles of weeds differ, and you should tailor your weed-management strategies to fit. Annuals complete their life cycles in a year and reproduce by seed. Summer annuals, such as redroot pigweed and ragweed, complete their life cycles during the growing season. Winter annuals, such as shepherd’s purse, can overwinter as seedlings and flower the following spring. To decrease these weeds, pull them (it’s often difficult if roots stay in the soil); apply alternating growth regulators (versus straight down), use landscape fabric that allows water—but not light—to penetrate. Certain synthetic fabrics can be expensive and difficult to install and remove, especially once weeds have rooted into them or sunlight has degraded them. They also separate the decomposing mulch from the soil organisms. Some gardeners place chopped leaves or other organic material under the plastic. Once the plastic is removed, the soil generally has better tilth, or texture, from the activity of soil organisms and the decomposition of organic matter.

Field bindweed—a perennial with deep underground rhizomes, spreads by rooting or soil disturbance. Flower resembles a small, white, furry ball. Can damage garden plants by turning around them.

You can inherit such perennial pests as bindweed and yellow nutsedge in root balls of transplants. Take these into established flowers when you bring plants into your garden. Water in the landscape, such as streams or ponds, can promote the growth of grasses, sedges, and other weeds. By staying vigilant, you can prevent these sites from creating problems for the rest of your landscape.

Some areas are so overgrown with large, established weeds that pulling them isn’t feasible. Before you mow or till them under, however, identify them. The rhizomes and tap roots of some perennials can create thousands of sprouts if you chop them and leave them in the soil. To manage these weeds, you’ll need to repeatedly mow, dig, or mulch following the edge of adjacent plants; use a shovel. Incorporate soil amendments, such as compost. To reduce the number of weed arrivals.

Annuals
Growing woodruff or violets has shown little effect on leafy spurge. Produce small capsules that can remain viable for years.

Perennials
Silvery nutsedge has triangular stems and leaves. Reproduces by underground tubers that can remain viable for years.

Advantages of living stones and mulches
The leaves of living plants prevent light from reaching the soil. Try wide-canopy plants—such as closely planted broccoli—or dense ground covers (for example, woodruff or drifts of daylilies or hostas).

Cover crops or “living mulches,” such as clover, have many benefits. Some interfere chemically with weed growth; sorghum sudangrass, winter rye, and fescues, for example, excrete substances from their roots and shoots that suppress weeds. Many gardeners recommend a season or more of cover crops to minimize weeds in newly planted sites. A dense canopy of buckwheat blocks weeds and is pretty, too. Tilling under cover crops also increases the organic matter content of the soil.

Organic mulch
A 4-inch thick layer of shredded bark, straw, leaves, wood chips, or several other organic choices can prevent seeds from germinating. You might also consider laying down sheets of newspaper beforehand.

Plastic or black landscape fabric
You can lay black plastic or landscape fabric around established flowers when you bring plants into your garden. Water in the landscape, such as streams or ponds, can promote the growth of grasses, sedges, and other weeds. By staying vigilant, you can prevent these sites from creating problems for the rest of your landscape.

Preparing beds with plants and mulch
You can prevent light from reaching weeds for a season, while your plants get established—or, in severe weed problems, for a year or more. You can prevent light from reaching weeds for a season, while your plants get established—or, in severe weed problems, for a year or more.

Balanced weed management
IPM—or integrated pest management—means balancing your hopes for a weed-free garden with society’s need for a healthy environment. People who practice IPM consider many sustainable strategies that work together to keep pests in check. Once you’ve educated yourself about the options, the standards you set and the methods you use are your choice.

A word about herbicides
As shown in this brochure, it’s possible to manage weeds without herbicides. If you do decide to use herbicides, consult the Cornell Guidelines in the Resource section and consider the following:

• Effectiveness. Are weeds at the right growth stage? Most herbicides are designed to work within a specific time frame. For example, preemergence products are effective only before germination, not on established weeds. Do you have the proper equipment, and if so, is it properly calibrated? Is the product appropriate for your weeds? Check the label.

• Environment. Valuable plants can be harmed or killed if they come into contact with nonselective herbicides. Water and wind carry herbicides, reducing their effectiveness in your garden and polluting the environment. Avoid applying herbicides when it’s windy or just before a heavy rain. Reduce your risk of exposure by wearing protective equipment, as indicated on the label.

• Economics. What is the cost? Number of applications? Many persistent weed problems can be solved by using alternative strategies.

Common ground—annuals with deeply lobed leaves and small yellow disk flowers—produce alliances that make it poisonous to bees and cattle.