

CONTROLLING

WEEDS

IN YOUR GARDEN

Tools

Many varieties of hand weeders, and Fiskars Uproot Weed and Root Remover

Weed killers containing plant oils

Bonide Burn Out Weed and Grass Killer, EcoSmart Organic Weed and Grass Killer

Weed killers containing soap

Bayer Advanced Natria Grass and Weed Killer, Monterey Herbicidal Soap, Safer Brand Fast Acting Weed and Grass Killer

WEEDS CAN BE HELPERS IN THE GARDEN

When they die and decompose, deep-rooted weeds such as thistles, pigweeds, and nightshades can enrich the soil with minerals from deep in the ground. Deep roots can open pathways in the soil for water and for roots of less aggressive plants. Weeds in the sunflower (*Asteraceae*), parsley (*Apiaceae*), and mustard (*Cruciferae*) families produce flowers that feed beneficial insects with their nectar and pollen. Legumes such as Scotch broom (*Cytisus scoparius*) and clovers such as bird's foot trefoil (*Lotus corniculatus*) add nitrogen, an essential plant nutrient, to the soil.

...OR THEY CAN TAKE OVER AND CAUSE PROBLEMS

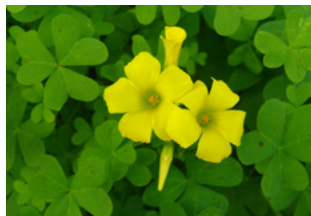
Weeds come into urban gardens when seeds blow in from the neighborhood or are brought in by birds or squirrels. Much of California's native, drought-resistant plant community was outcompeted by European annual grasses "planted" by the cattle brought by the friars establishing the Missions.

Unfortunately, many non-native plants are very serious pests. Invasive species can overwhelm native plants and cause problems for both wildlife and humans. The worst of these invasive plants are considered *noxious weeds*, and the government spends millions of dollars every year to remove them.

Some commonly available garden plants are actually invasive weeds that can escape from our gardens into wildlands. For much more information about invasive

A WEED, BY ANY OTHER NAME

A "weed" in the garden is usually just a plant growing, and often spreading, in the wrong place. Depending on your point of view, "Weeds" is a category that can include not only plants like dandelions and crabgrass, but also the tomato seedlings that burst forth from compost spread on a flower bed.



Sourgrass
Oxalis pes-caprae



English ivy
Hedera helix



Petty spurge
Euphorbia peplus



Sowthistle
Sonchus oleraceus

weeds in our state, visit the California Invasive Plant Council's website, www.cal-ipc.org.



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NON-CHEMICAL STRATEGIES FOR CONTROLLING WEEDS

The key to controlling weeds is keeping them from flowering and producing seeds. In general, weed seeds germinate in bare soil with lots of light; this is one of many reasons why mulching is a good idea.

Mulch to save water and slow weed growth

A thick layer of mulch over drip irrigation is an excellent way to reduce weeds in your garden. Weeds that do pop up out of the mulch are often easy to pull.

With or without drip irrigation, mulching is a good idea, especially when we're all trying to save water. Mulch keeps the soil underneath moist, and organic mulches such as compost, leaves, wood chips, and straw contribute organic matter for soil organisms to feed on.

Particle size will determine how thickly you apply the mulch. For weed control, apply coarse-textured mulches, such as bark and wood chips, 4" deep. Apply fine-textured mulches, such as shredded leaves or dry grass clippings, about 2" deep. Keep all mulch several inches away from the stems of plants or the trunks of trees and shrubs to prevent disease.

Established perennial weeds take more work. If you can't pull or dig up the roots, cut the plant down and cover the crown with a thick layer of mulch. Cut down any new shoots and don't allow the plants to flower, produce new leaves, or go to seed. With no leaves to photosynthesize energy, the roots will eventually use up their reserve energy, stop sending up new shoots, and die.

Sheet mulching with organic matter such as compost, leaves, and wood chips over cardboard, newspapers, or weed control fabric can take up to two years to enrich the soil and kill all the weeds in a large area. Placing drip emitters in a 12" grid on the soil under newspaper and cardboard mulch speeds up the process and provides water to roots of plants you want to keep. While you wait for the layers of mulch to decompose, you can plant vegetables in holes dug out of the cardboard.

All organic mulches break down over time, some quicker than others. You'll need to re-mulch every two or three years.

Weed by hand

Weeds are easiest to pull—by hand or with a weeding tool—when plants are young and the soil is moist, but not wet. If they haven't flowered, and if the weed plants don't reproduce from plant fragments, tubers, or bulbs, you can put them in your compost.



Each pampas grass (*Cortaderia* species) flower head can produce up to 100,000 seeds that are easily spread by wind.

Plant the competition

Vigorous ground covers and plants with dense foliage can shade the ground enough to make it hard for weed seeds to sprout. When you remove weeds from a lawn, sprinkle some grass seed in the spot so that lawn rather than weeds will fill the hole.

Mowing

A lawn cut high will shade out most weeds. You can also mow weeds or cut them down with a weed-whacker before they produce flowers or go to seed.

Less-toxic herbicides

Products containing clove oil or soap will kill the above-ground parts of weeds, but will leave roots that may sprout again. These herbicides will be most effective on young plants. Killing older annual weeds or tough perennials may require several applications.

Caution: When spraying any kind of herbicide, protect desired plants from coming into contact with the spray. Do not spray on windy days. Keep people and pets away from the area until the herbicide has dried.



WWW.OURWATEROURWORLD.ORG

Common home and garden pesticides are found in stormwater runoff, treated wastewater, and in local waterways, sometimes at levels that can harm sensitive aquatic life. **Our Water Our World** is a joint effort by water pollution prevention agencies, participating retail stores, and pesticide distributors and manufacturers—working together to reduce the risks associated with pesticide use.

Our Water Our World fact sheets and store displays educate residents about less-toxic pest management. For the rest of the series of fact sheets, visit www.OurWaterOurWorld.org. Look for the **Eco-friendly** tag next to less-toxic products in participating stores and nurseries. See the *Pesticides and Water Quality* fact sheet for information on active ingredients in common pesticides that may cause water quality problems.

Pest control strategies and methods described in this publication are consistent with integrated pest management (IPM) concepts, and are based on scientific studies and tests in actual home and garden settings. Use suggested products according to label directions and dispose of unwanted or leftover pesticides at a household hazardous waste collection facility or event. For more information on pesticide disposal, visit www.earth911.com. No endorsement of specific brand name products is intended, nor is criticism implied of similar products that are not mentioned.

For more information, contact:

Bio-Integral Resource Center (BIRC), 510.524.2567, www.birc.org
University of California Cooperative Extension Master Gardeners in your area
University of California IPM website, www.ipm.ucan.edu