WEEDS

Introduction

Weeds are any plants that grow where they are unwanted. Common weeds are fast growing, resilient nuisances that compete with your cultivated plants for nutrients, water, and sunlight. They can be fire hazards. They serve as hosts for pests and diseases. Removal is time consuming and can be costly. The key to successful weed control is to prevent them from becoming well established.

Types of Weeds

Weed species are either broadleaf or grassy type. A few examples of broadleaf weeds are clover, dandelion, and purslane. Some examples of grassy type weeds are nutsedge, pampas grass, and bermuda grass. Weeds can be further divided into annuals, biennials, and perennials.

Common Purslane

Annuals complete their life cycle in one year. Summer annuals, such as crabgrass, germinate in the spring and die in the fall with the onset of colder weather. The seeds they produce during the growing season remain in the soil over the winter and germinate the following spring when soil temperatures rise. A single plant may yield more than 10,000 seeds. Many weed seeds remain viable for 20-70 years.

Biennials such as cheese weed (broadleaf) live for two years.

Perennial weeds live longer than two years. Simple perennials reproduce by seed. Common examples are dandelions, plantains, and chicory. Creeping perennials reproduce by seed, but can also spread by rhizomes, stolons, and underground storage organs such as bulblets. Examples are nutsedge, oxalis, bermuda grass, and kikuyu grass.

Bermuda Grass

Common bermuda grass, yellow nutsedge, and some other perennial weeds are most effectively controlled with a systemic herbicide that is applied before the soil is dug and when weeds are actively growing. Always contact the pest control department for your school district if you think herbicide treatment may be needed.

Yellow Nutsedge

Spotted Spurge

WEED IDENTIFICATION AND MANAGEMENT TOOLS

The UC IPM website has a Weed Identification Tool and a Weed Photo Gallery. The photo gallery includes links to the pest notes specific to each weed which describe the lifecycle of the weed, impact, and management of the weed.

Click this link http://www.ipm.ucdavis.edu/TOOLS/TURF/PESTS/weedkey.html to go to the Weed Identification Tool.

Click this link http://www.ipm.ucdavis.edu/PMG/weeds_common.html to view the Weed Photo Gallery.

Methods of Control
Some nonchemical methods of weed control are: cultivation, proper site preparation, solarization, mulching, and preventive seed production.

Cultivation
Remove weeds, by hoeing, hand weeding or digging with a shovel or trowel. Weeds are easier to pull with their root systems intact if the soil is moist. This is best done just after a rain or irrigation. Be sure to remove any part of the weed that can regenerate. Shallow cultivation and hoeing control the weeds in the surface soil. When soil is worked deeply new seeds are brought to the surface. The potential weed population is almost endless.

Proper site preparation
Turn the soil with a shovel. Break up clods, rake surface and level. Irrigate and allow weed seeds to germinate. Remove the weeds and repeat the process again before you plant.

Solarization
This is a technique that can greatly reduce the number of weeds and weed seeds in a garden area by capturing sunlight to heat the soil to temperatures that kill germinating weed seeds. Irrigate the area to a depth of 3-4 inches. This will encourage the weed seeds to sprout. Cultivate and rake the soil level.

Place a sheet of clear plastic one to four millimeters in thickness over the area. The plastic must lie very close to the soil surface as this maximizes the high soil temperatures necessary to kill seeds. Anchor the edge of the tarp by burying it in a small soil trench around the plot. Be sure to repair any rips in the plastic to insure an air-tight cover and maintain maximum soil temperatures. Soil solarization should be done during the summer months to best utilize the high temperatures and high light intensities. Wait three to four weeks while the sun heats the soil and roasts the weed seeds. Remove the plastic and allow the soil to dry slightly before planting. Do not cultivate soil deeply as this will bring more viable weed seeds to the surface.

Mulches

Mulches, whether organic or inorganic, are placed on top of the soil to prevent sunlight from reaching weed seeds, therefore preventing germination and growth. Mulching offers an efficient means of weed control, and it also conserves soil moisture. Examples of organic mulches are weathered sawdust, compost, rotted manure, bark chips or other such materials that you know have not been contaminated with chemicals or weed seed. Mulches should be applied 2-4 inches deep on the soil surface.

Materials high in organic content may reduce the nitrogen available to plants as these materials will require nitrogen during the decaying process. Apply about 2 pounds of a nitrogen fertilizer (such as ammonium sulfate) per 100 square feet prior to mulching. This will ensure that adequate nitrogen will be available to the mulch and crops. If the ammonium sulfate is applied on top of the mulch, much of the beneficial nitrogen will evaporate into the air.

Organic mulches can be tilled under periodically to improve the condition of the soil. Black plastic film, newspapers, and other such materials can also serve as mulches. They provide the same functions as organic mulches, but they do not offer the soil conditioning potential of the organics. Black plastic can be placed on the soil and properly anchored against wind immediately after the soil is prepared for planting. Transplants can then be set through the plastic by cutting holes just large enough for the plant to fit through.

Weed Control Tips

Don't automatically reach for an herbicide to treat garden weeds. A combination of elbow grease, ingenuity, and tools will usually do the job.

- Weeds are easier to pull with their root systems intact if the soil is moist. Also, neighboring plants are less likely to be disturbed or damaged.

- Remove any part of the weed that can regenerate. Wild garlic grass will regrow from little bulblets, plantains have persistent taproots; and bermuda grass can resprout from its deep (sometimes 6 feet), spreading rhizome system.

- Weed seeds need light to germinate. To shade the soil around your plants keep it covered with mulch.

- Don't let soil remain bare between plantings. If you regrade or remove plantings, blanket the soil with a cover crop, ground cover, mulch or grass.

- Hand pick, hoe or smother weeds with mulch to keep them from harboring pests and diseases and robbing your plants of nutrients.

- If you compost your weeds be sure to use only those that have not yet bloomed and set seeds.

- An adult can drench the weeds growing up through the cracks in paving stones or bricks with boiling water.

- Use edging materials like bricks or underground barriers of metal or plastic around garden beds. Plant in raised beds. This will keep lawn grass and perennial weeds from creeping into flower and vegetable plots.

- Check nursery plants for weeds before you bring them into the garden.

- Keep a weed bucket in your garden for quick disposal. Pull weeds as soon as you spot them instead of waiting until later. The longer you wait the harder weeds are to pull, plus it gives them the opportunity to spread.