What is a weed? In theory it is a plant in the wrong place. The term “weed” does not always indicate that a plant is totally undesirable, or that it cannot be beneficial under certain situations. A prime example is bermuda grass, which is great for soccer fields and playgrounds but it is an invasive weed in flower beds, vegetable gardens, lawns and other landscaped areas.

No single weed management strategy will control all weeds. An integrated pest management (IPM) approach, utilizing all options at your disposal, is the best way in providing an effective and economical overall management program.

The first step is to survey your garden for weed species and to properly identify them. Determine if they are perennial or annuals because then you can find out how they spread (seed, stolons, rhizomes, or tubers). If it is an existing garden area, it’s a sure bet you are familiar with what the weeds look like but most likely you don’t know what type of weeds they are. Equipped with this knowledge you can develop a long-range maintenance strategy by utilizing various methods and materials now available on the market.

**PRE-EMERGENT**
*(BEFORE WEED SEEDS GERMINATE)*

- **MULCHES**
- **LANDSCAPE FABRICS/PLASTIC MATERIALS**
- **LESS-TOXIC PRE-EMERGENT HERBICIDES**

Coarse organic mulches can be used in any type of planting, whereas, landscape fabrics are not recommended where an area is to be replanted periodically or where the fabric would inhibit plant varieties that have a spreading root system. Fabrics or plastic materials are relatively expensive and time-consuming to install, but they become cost-effective if the planting is to remain in place for at least four years or more, so these choices are good for perennial plantings.

Corn gluten meal controls emerging weeds and can be applied after planting out garden transplants or when new seedlings are established before weed seeds germinate.

**POST-EMERGENT**
*(AFTER WEED SEEDS GERMINATE)*

- **HAND-WEEDING**
- **SHALLOW CULTIVATION**
- **LESS-TOXIC POST-EMERGENT HERBICIDES**

Dozen of species of weeds are likely to invade your home garden. Most are fairly easy to control with a diligent program of hand-weeding before they flower.

Pulling weeds by hand is the oldest form of weed control and is still an effective method. Pull young weeds when the soil is loose or moist so that the entire root and crown are easily removed. There are many specialized hand tools, for example, weed poppers or dandelion knives that are available for removing individual weeds and their roots while minimizing soil disturbance. For tough perennial weeds, it may be necessary to dig up and destroy all underground stems and tubers that can grow into new plants.

Shallow cultivation using a hoe, such as a scuffle hoe or Hula-hoe, slightly below the soil surface is a very effective method in controlling both annual and perennial weeds as long as you catch the plants when they are young. Be careful not to dig too deep, otherwise this can bring buried weed seeds to the surface of the soil, which may germinate.

As a last resort, use less-toxic natural herbicides. For example, **Bioganic Weed & Grass Killer** is an organic contact herbicide that kills top growth of young, actively growing annual weeds.

Synthetic herbicides pose a risk to health and the environment and many
air or run off in irrigation or rainwater. Some persist in the soil for long periods of time, injuring later plantings. Often the entire process of selecting and using an herbicide (mixing, applying, and cleaning-up) can take more effort than pulling out the weeds.

PREVENTING WEED INTRODUCTIONS

- Avoid purchasing container plants with weeds. Weeds can easily be introduced into your landscape from nursery stock. Check containers for weeds when purchasing and then again before planting in your garden.

- Competitive Plantings. Planting dense-growing annuals or ground covers in bare spots among trees and shrubs can shade out weeds.

- Apply mulch whenever possible. Many types of materials are available to use as mulches. Barks, various hulls (cocoa, buckwheat, pecan, etc.), crushed rocks and others can be used alone or with landscape fabrics. A four-inch application of mulch not only suppresses weed growth but it helps to retain soil moisture, creating an overall healthy landscape.

- Only use organic materials obtained from a reliable source. Topsoil, mulch, manure and other organic soil amendments are often highly contaminated with weed seeds or plant parts. Check to see if commercially obtained materials have been sterilized.

- Dispose of weeds properly. Avoid putting weeds that have gone-to-seed in your compost pile because the seeds can still germinate even after you have applied your finished compost into your landscape. Uprooted weeds left on bare ground sometimes can re-root themselves so dispose of them in your green-waste bin.

- Gardening equipment can be contaminated with weed seeds or plant parts. Clean all equipment well before moving it from one area to the next, for example, lawn mowers (See fact sheet in this series “Tips for a Healthy Beautiful Lawn”).

- Provide sufficient but not excessive irrigation and fertilizer. Maintain healthy plant growth by using natural slow-release fertilizers. A plant can become unhealthy if it is under- or over-fertilized resulting in more weed growth in that particular area of your garden. Avoid overwatering and use drip emitters to deliver water only where it is needed. Excessive watering practices can easily prompt weed seeds to germinate.

PRODUCTS AND RESOURCES

Examples of trade names of products listed in this fact sheet:

**Corn Gluten Meal (pre-emergent herbicide):**
- Corn Weed Blocker, 9-1-0 (pre-emergent and slow release fertilizer)
- Supressa® Concern® Weed Prevention Plus

**Landscape Fabric:**
- Weed Mat
- WeedBlock

**Mulch:**
- Cocoa Mulch 2-0.2-3 (Cocoa Bean Hulls)
- Black Magic (all organic fir bark)

**Organic Fertilizers:**
- Whitney Farms or Dr. Earth

**Clove Oil**
- Bioganic Weed and Grass Killer

Recommended Reading:
- *Weeds of the West* Published by The Western Society of Weed Science, 5th Edition, 1996

PESTICIDES & WATER POLLUTION

Pesticides can damage our health and kill beneficial insects necessary for a healthy garden. Common household pesticides show up in our waterways, sometimes at levels that can harm sensitive aquatic life.

The County of Ventura Environmental and Energy Resources Department is working with local nurseries and hardware stores to reduce the risks associated with pesticide use. This fact sheet is part of a series of informative publications and store displays designed to educate Ventura County residents about less-toxic pest management.

Look for the “Our Water Our World” logo next to products in participating nurseries and hardware stores throughout Ventura County. For a list of participating stores, call 805/289-3333 or visit http://www.wasteless.org

Pest control strategies and methods described in these publications are consistent with Integrated Pest Management (IPM) concepts, and are based on scientific studies and tests in actual home and garden settings. IPM is an environmentally sound approach to pest management combining various methods with good horticultural practices. Follow all label directions on any suggested products. NO endorsement of specific brand name product is intended, nor is criticism implied of similar products not mentioned. Different products with the same active ingredients are equally suitable.

HOUSEHOLD HAZARDOUS WASTE COLLECTION PROGRAMS

Most cities offer FREE monthly collection events that accept pesticides, fertilizers, latex and oil based paint, motor oil and filters, car and household batteries, pool chemicals, stains, solvents, fluorescent light tubes, automotive fluids, cleaning products, photographic chemicals and more. For more information and collection schedules call 805/289-3333 or visit www.wasteless.org.

FOR MORE INFORMATION

Participating stores have been provided books on Integrated Pest Management (IPM) you may use while in the store. The store staff has been extensively trained in IPM to assist you.

The Certified Master Gardener Program operated by the University of California Cooperative Extension provides a free assistance Helpline and offers a variety of workshops and school education programs. Call 805/645-1455.

Check these websites:
- http://www.watoxics.org
- http://www.ipm.ucdavis.edu
- http://www.pesticide.org/factsheets.html

ACKNOWLEDGEMENTS

This fact sheet was researched and developed for the County of Ventura by Deborah Mills, Green Cure, Inc.