



Retail Nursery Newsletter

An Information Source for Retail Nursery Professionals

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Healthy Garden— Healthy Home

**Helping to improve
water quality in
San Diego County
through the
implementation of
Integrated Pest
Management
practices.**

**It's The Water
That Connects Us!**



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HOW TO SAVE WATER IN YOUR GARDEN AND LANDSCAPE

By Janet S. Hartin, UCCE San Bernardino Environmental Horticulture Advisor and Donald R. Hodel, UCCE Los Angeles, Environmental Horticulturist

Did you know that you can save 20 to 50 percent of the water you are currently applying to your garden and landscape plants and actually improve their health, productivity, and appearance? Many people think that to save water they need to replace their current landscape with strictly "drought tolerant" plants and perhaps remove their lawn altogether. While drought tolerant landscapes

and lawn removal could be useful options, they are just two of the many strategies that can be employed to reduce water use. By employing the full range of water-saving strategies, you can grow most plants adequately while still realizing substantial water savings.

Remember that trees provide beauty, shade, cooling, privacy, and oxygen. They can

also significantly increase property value. Even when water is in short supply, taking care of your trees should be a high priority.



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PESTICIDES - How to Handle, Apply, and Store Them Safely

By Cheryl Wilen, UCCE Area IPM Advisor

When an insect is eating your roses, there are brown patches in your lawn, or weeds are taking over your garden, you want to be able to fix the problem. There are a number of ways one can alleviate these problems, from hand-removal of weeds or use of beneficial insects to kill the insect pests to natural or synthetic chemical sprays or granules. This article will provide basic information about the use of pesticides sprays or granules.



What is a Pesticide?

A pesticide is any material (natural, organic, chemical, and synthetic) used to kill pests. It is a blanket term that includes insecticides (insect killers), herbicides (plant killers), fungicides (disease killers) and rodenticides (rodent killers). When used properly, pesticides can be helpful in protecting your plants from damage with little risk of injury to the environment or health of people and pets. However, when the directions are not followed, plant injury may occur, pests may not be controlled, pesticides may contribute to ground or water pollution, and people and pets may be harmed.



When Do I Need a Pesticide?

The first steps in deciding whether or not to use a pesticide is to determine what are the alternative methods of controlling the pest. In general, pesticides are only to be used when there is sufficient damage to warrant their use and when other control methods are inadequate.

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PESTICIDES *continued from Page 1*

Questions you might ask yourself are:

Is there enough damage to warrant controlling the pest? If you notice a few holes in a leaf, that might not be a problem. However, seeing holes in many leaves would probably mean you would want to control the pest.

Are there conditions that have caused the pest to become a problem? Can you change those conditions? Will the conditions change due to the weather? For example, over-fertilizing will cause a plant to have tender growth that is attractive to some insects. Some diseases are only a problem when it is cool and damp. If the forecast is for dry, sunny weather, the problem may take care of itself.

What are my other choices? There are many ways to control pests other than pesticides. These include cultural control (using the right pruning, fertilizing, watering regime), mechanical control (hoeing weeds, spraying leaves forcefully with water for insect control), and biological control (usually beneficial insects that eat other insects or injure them in some way). If you decide to use a pesticide, you will need to answer the following questions:

How do I Know Which Pesticides to Use?

After you have determined what the pest is, either by your own experience, help from the garden center, or another method, your next step is to choose the correct pesticide. The most important information is found on the product's **label**. The label is a legal document and every pesticide registered in the United States will have the following information:

- Pests controlled
- How much to use
- How to apply
- When to apply
- Signal word (*Hazard Level Identifier*)
- Safety precautions

Read the label carefully to be sure that the pesticide you are buying will control the pest. Also be sure that you have the proper equipment for applying the pesticide. Use safety equipment, such as rubber gloves and eye protection. Use a dust mask or respirator when using dusts or granules. If you are

spraying for weed control, keep a sprayer **ONLY** for that purpose. Otherwise, herbicide residue in the sprayer may injure plants if the same sprayer is used for applying another pesticide.



Wear a Dust Mask when applying dusts or granules.

What is the Signal Word?

Signal words are used to indicate the relative hazard of the chemical. Look for the words "Danger," "Warning," or "Caution" on the label. "Danger" is the most hazardous, "Warning" is moderately hazardous, and "Caution" has the least toxicity. It is usually best to choose the product with the lowest hazard rating that will still control the pest.

How Do I Know How Much To Use?

The label will describe the amount of pesticide to use for a given area. For most pesticides the area given is usually 100 ft² or 1000 ft². Therefore, you need to know how big an area you are treating. Suppose you are trying to kill weeds in your lawn and the herbicide label says, "use 2 oz (ounces) for 1000 ft²". However, after measuring, you find your lawn is only 600 ft². Therefore, you would use $(600 \text{ ft}^2 / 1000 \text{ ft}^2) \times 2 \text{ oz} = 0.6 \times 2 \text{ oz} = 1.2 \text{ oz}$ of herbicide. NEVER use more than what the label recommends; the pest will not be controlled any faster, you are wasting the pesticide, and potentially it can cause plant injury. Try to mix only as much as you need immediately. Also, keep a set of measuring spoons or cups for use **ONLY** for pesticides. Write "PESTICIDE ONLY" on them or distinguish them in some way from your kitchen utensils. **Once a spoon, measuring tool, or mixing container is used for pesticides, NEVER use it for anything else.** If you are using something that is not your regular pesticide measuring or mixing tool, dispose of it after thoroughly rinsing (see below) so that it will not be used for food. NEVER mix pesticides with your hands.

How Do I Apply Pesticides Safely?

Apply pesticides when there is little or no wind. Do NOT apply near people and pets. Follow label directions about when the pesticide-treated area can be re-entered and/or fruits and vegetables can be harvested.

What To Do if I Have Leftover Pesticides?

If you have mixed too much pesticide, try to spray it out in an alternative area where it is consistent with the label requirements while also being careful not to spray more than the recommended amount per square foot. If you cannot do that, transfer the leftover solution to another container and clearly mark the container with the pesticide name, for example, "Sevin." Do not use an old soda bottle or anything that could be mistaken for a drink container. Many people have been poisoned by inadvertently drinking from these containers. Do not dump the materials down the drain, onto the soil, or into sewers. Pesticides can be disposed of by taking them to the local hazardous waste disposal facility.

Empty pesticide containers need to be rinsed three times before disposing in the trash. The best time to do this is when you are using up the last amount of pesticide in the container. Put a small amount of water in the sprayer and add the pesticide to the sprayer. Then, add about 1/3 of the final amount of water to the pesticide container. Swirl it around the container and transfer it to the spray tank. Repeat two times. This way, you will have rinsed the container three times and used that water to make the pesticide application.

How Do I Store Pesticides Safely?

Always store pesticides and mixing tools where children cannot get to them. Store pesticides in a well ventilated area, away from food and seeds. If possible, lock the pesticide storage area and put a sign on it to warn others that pesticides are stored there.



Locked Pesticide Storage Shed

HOW TO SAVE WATER *continued from page 1*

TRY THESE WATER-WISE TIPS:

- When selecting plants, consider their climatic suitability for the site. There are many books and other publications you can consult for recommended plants in your area.
- Check your sprinkler system for leaks and make necessary repairs to ensure even distribution and avoid water loss (see Table 1 below).
- Water early in the morning before sunrise to reduce evaporation.
- Avoid watering during windy times of the day to reduce uneven distribution, evaporation, and water waste.
- Control weeds, which compete for water, light, and nutrients.
- Fertilize moderately, applying the low end of recommended rates, to avoid excessive growth, which increases the need for water.
- Apply three to four inches of mulch around trees and other woody plants, keeping it a few inches away from trunks and stems. Mulches reduce water evaporation from soil, buffer soil temperatures, and reduce weeds. Apply or renew mulches in late spring when soils have warmed up and water demands are increasing. Use backyard compost, decomposed lawn clippings, shredded bark, fir bark, composted manure, or other bagged products. Decorative gravel can even be used in places not subject to soil cultivation. Remember to water through the mulch and into the root zone.
- Reduce runoff on slopes by cycling water in several short intervals. Apply water only until runoff begins. Wait an equal amount of time then repeat watering until runoff begins again.

Repeat this cycling until the soil has been moistened to about one foot deep. Clay and other heavy soils are especially prone to runoff. Use low-flow sprinklers (less than ½ inch output per hour).

- Prune trees and other woody plants only when necessary. Pruning stimulates shoot growth, which increases the need for water.



Healthy Landscape

- Water trees and other woody plants separately from the lawn, if possible, since it is best to water them less frequently but more deeply than lawns. A garden hose, mini- or micro-sprinklers, deep-root irrigator, or drip emitters all work well for trees and other woody plants.
- Water trees and other woody plants to a depth of two feet to help promote a deep root system. You can use a soil probe, screwdriver, auger, or straightened coat hanger to find out how deep the water reached. These tools will readily penetrate a moist soil, but will resist penetration in dry soil.
- Consider installing a drip system that applies water through emitters directly at the root zone where it is needed most and not wasted.
- The type of soil you have largely determines how often you should water.

Clay soils hold much more water than sandier ones, but take it up more slowly; therefore, they can go longer between waterings than sandy soils. Clay soils may only need to be watered once during a given period while sandy soils may need two or three waterings during the same time. Add organic soil amendments to sandy soils, such as those used for mulches, and thoroughly mix them into the upper foot. Although these amendments will not decrease the plant's water need, they can usually increase the water-holding capacity of the soil and the interval between waterings.

- Aerate lawns and ground around trees and other plants by removing small plugs of grass and/or soil to prevent compaction and increase water absorption. Most local rental businesses can provide soil.
- Aerators. Clay and other heavy soils especially benefit from annual aeration.
- Remove the accumulation of old grass roots, stems, and leaves, called thatch, on your lawn, which acts as a barrier to keep water out of the soil. Remove thatch in spring, before temperatures get too warm, if it is more than ½ inch thick.
- Mow your lawn at the correct height: Common Bermudagrass 1 inch; Hybrid Bermudagrass ½ - ¾ inch; Zoysia ¾ - 1 inch; St. Augustine grass ¾ - 1½ inches; Tall Fescue 1½ - 3 inches; Perennial Ryegrass and Kentucky Bluegrass 1½ inches.
- Check faucets, hoses, and sprinklers for leaks. A new rubber washer is inexpensive and easy to install.

TABLE 1.

COMMON SPRINKLER PROBLEMS AND THEIR SOLUTIONS

PROBLEMS	SOLUTIONS
Broken Sprinkler	Replace with a sprinkler that applies water at the same rate
Unmatched sprinklers	Replace with matched sprinklers
Sunken or blocked sprinklers	Raise the sprinklers or replace risers; remove vegetation blocking the water
Crooked sprinklers	Straighten to an upright position
Lawn or grass growing around sprinklers	Mow or chemically remove grass
Sand or debris plugging sprinklers	Flush out sprinklers to remove debris, replace sprinklers as necessary
Spraying in wrong direction	Realign sprinkler

HEALTHY GARDEN—HEALTHY HOME

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FREE Point-of-Purchase Educational Materials and Training Workshops Available for Local Nurseries and Garden Centers!

As part of the **Healthy Garden – Healthy Home** IPM outreach effort, research based educational materials, and the fixtures necessary to display them, are available to nursery and garden centers throughout San Diego County. Materials include water resistant pest cards and informational tear-off sheets. Pest Card topics include; *Ants, Aphids, Cockroaches, Earwigs, Fleas, Giant Whitefly (coming soon), Head Lice, Snails & Slugs, Spiders, Termites, Safe Use & Disposal of Pesticides, Lawn Insects, and Gardening with Good Bugs*. Tear-Off Sheet topics include; *General IPM Information, Ants, and Snails & Slugs*. And coming soon; *Aphids, Giant Whitefly, and Gardening with Good Bugs*.

In addition to these Point-Of-Purchase items, several Public Service Announcements ranging in length from 15 second to 3 minute are available for use in your store. Nursery Staff workshops focusing on topics related to Integrated Pest Management and Water Quality are also available for booking.

For more information about any of these opportunities or to make arrangements for your nursery or garden center to participate in the **Healthy Garden—Healthy Home** program please contact Scott Parker by phone at 858-694-2184 or email at saparker@ucdavis.edu.



FREE Pest Cards and Display Holder