



Retail Nursery Newsletter

An Information Source for Retail Nursery Professionals

Volume 1, Issue 1

September 2005

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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HEALTHY GARDEN – HEALTHY HOME Program to Spread the Word on IPM!

Healthy Garden – Healthy Home is a new program aimed at providing the residents of San Diego County with the opportunity to improve our water resources. In addition to an extensive media campaign, the **Healthy Garden –Healthy Home** program will conduct a series community outreach efforts to inform the general public about Integrated Pest Management (IPM) and how they can do their part to improve San Diego County's water quality. This outreach campaign will include distrib-

uting IPM information at local retailers, participation in community events, as well as sponsoring community workshops. As part of this effort, we are developing materials and resources to be utilized by local Retail Nursery and Garden Center staff to help educate their customers on how they can control their pest problems while simultaneously helping to improve water quality in San Diego County. This newsletter is just one of the resources being made available to local nursery staff. Additional re-

sources include FREE Pest Cards on some of the most common household and garden pests, Point-Of-Purchase Tear-off sheets on a variety of subjects, and nursery staff training on issues related to IPM and water quality.

For more information regarding the **Healthy Garden – Healthy Home** program, please contact the UCCE San Diego County IPM Program Representative, Scott Parker, at 858-694-2184.

What is Integrated Pest Management ? From the UC Integrated Pest Management Web Site

What is IPM?

Integrated pest management (IPM) is an strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticide treatments are made with the goal of removing only the target pest and only when numbers of the pest have reached an unacceptable level. Pest control materials are selected and applied in a manner that minimizes risks to the environment, the desirable plants, insects and animals, and to humans.

Why IPM?

Integrated pest management (IPM) uses environmentally

sound, yet effective, ways to keep pests from annoying you or damaging plants. IPM programs usually combine several pest control methods for long-term prevention and management of pest problems without harming you, your family, or the environment-IPM also reduces pollution in California waterways. Successful IPM begins with correct identification of the pest. Only then can selection of the appropriate IPM methods and materials be made.

Preferred IPM methods

- Plant pest-resistant or well-adapted plant varieties such as native plants
- Discourage pests by modifying the way you design, irrigate, fertilize, and manage your garden

- Alter the garden or home environment to deprive pests of the food, water, shelter, or other requirements they need to thrive
- Keep pests out of the home & garden using barriers, screens, and caulking
- Squash, trap, wash off, or prune out pests
- Rely on natural enemies in your garden to eat pests, thereby eliminating the need for insecticides that may end up in our waterways
- Pesticides should only be used when nonchemical controls are ineffective and pests are reaching intolerable levels; choose them carefully so that the least toxic, most effective material is used

HOUSEHOLD ANTS AND THEIR CONTROL

By Dr. John H. Klotz, Cooperative Extension Urban Entomology Specialist, UC Riverside

Ants are common pests in and around homes where they can find food, water, and places to nest. They can be a nuisance or a serious problem when they contaminate food or damage structures and surrounding landscape. Some ants even "cultivate" and protect plant pests, such as aphids, scales, and mealybugs, increasing the damage these pests cause. Some ants can inflict painful stings. About 200 kinds of ants exist in California, but only a few are pests.

Ants are social insects that live in colonies. They locate food by random searching. When an ant finds food, it may carry some back to the nest, leaving a scent trail that other ants can follow back to the food source. Many types of ants transport honeydew – a sugary liquid produced by aphids, scales, and mealybugs.

IDENTIFICATION

The most common ant that invades households is the small (3/32-1/8 inch long), brown Argentine ant. These ants form long trails from their nests to favored food sources, such as syrup, honey, fruits, and other sweets.

The odorous house ant ranks second to the Argentine ant as a household pest and is about the same size. These ants are dark brown to black and produce a

strong coconutlike odor when crushed. They also follow distinct trails.



Argentine Ant

Pharaoh ants are problems in the household because of their preference for sweets, grease, meat, and fat. They are yellowish or light brown to reddish and smaller than the Argentine or odorous house ant.

The Southern fire ant and California harvester ant are mainly outdoor species, sometimes common in residential areas. Both can sting, the latter being very painful. The fire ant has a yellowish to reddish head and upper body and a dark abdomen. They range in size from 1/16-1/4 inch long. The California harvester ant is large (1/4-5/16 inch long), reddish brown, and prefers to nest in sandy soil. There are several other species of harvester ants in California, which vary in color and are also capable of stinging.

Several species of carpenter ants in California invade houses and cause structural damage when they tunnel into wood. They can be very large, ranging in size from 3/16-5/8 inch long. Unlike termites, carpenter ants do not eat wood; they make tunnels solely for their nests.

CONTROL

The three general methods of ant control are baiting, spraying, and nonchemical prevention. To be effective, ant control must be based on an understanding of what ants like to eat and where they prefer to nest. Food preferences are an important factor in choosing an attractive bait, and it is also important to understand how ants make nests in order to locate the colony. Unfortunately, many of the ant baits and sprays registered for homeowners are not always effective.

Baiting should be the first line of defense, because it targets the entire colony. Baits are formulated as solids or liquids and applied in stations or, in the case of granules, by broadcasting them. To be effective and safe, baits should be placed where ants are trailing or along edges where they prefer to travel, but always only in areas inaccessible to small children and pets.

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FREE 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.

HOUSEHOLD ANTS AND THEIR CONTROL *continued from page 2*

To achieve wide distribution of the bait so the entire colony will be killed, the bait ingredients must be slow acting. Some examples of toxicants used in ant baits are hydramethylnon, boric acid, and fipronil. Hydramethylnon breaks down in sunlight, so if it is broadcasted in granular form it should be applied in the evening. Boric acid is most effective at concentrations of 1% or lower. Fipronil is a new class of toxicant that is effective against ants at ultra-low doses.

Many of the common household ant pests, such as Argentine ants, odorous house ants, and carpenter ants, have a "sweettooth," so baits containing sugar as an attractant can be very effective. In the case of the Argentine ants, sweet baits are highly attractive year-round. Protein baits are more attractive in the spring when the colony is producing new offspring. Offering a small quantity of each kind of bait and observing which the ants prefer is a good way to determine what to use. Examples of brand name products that use sugars as attractants are Terro and Grant's Ant Stakes. Combat ant baits are protein-based.

Fire ants, Pharaoh ants, and harvester ants are attracted to oil-based products like Amdro. However, because food preferences may change over the short term or seasonally, a good "rule-of-thumb" is to offer the ants a little bit

of each to determine which ones they prefer. New products are continually being developed, so be open to testing these as well. The goal is to find a bait that the ants will readily collect and feed on, and ultimately take back to the colony. Most baits take several days to be distributed so be patient.



Ant Bait

If ants are still active after several days, and they are no longer feeding on the bait, it is probably time to consider the second line of defense, sprays. Application of sprays should only occur following an initial baiting program so that the active bait ingredient can be carried into the nest. Several days between baiting and the application of other chemicals are most effective.

In the case of Argentine ants, fire ants and harvester ants, the insecticide can be sprayed directly on their nests in the ground. Odorous house ants, Pharaoh ants and carpenter ants will nest in

structures so it is sometimes very difficult to determine where the nest is. One way to find the nest is to feed the ants, using pieces of insect or a drop of sugar water, and then follow them. After collecting the insect or drinking the sugar water, they will head directly back to their nest. Because ants are cryptic by nature, their trails are sometimes difficult to find. But, with a little patience and a lot of determination, both the nest and trails can be located. Since carpenter ants are primarily nocturnal, inspecting at night is the best time for trailing this species.

After the treatment with baits and sprays, there are nonchemical measures, which can significantly add to the overall success of your ant control program. Trimming back vegetation in contact with the house eliminates potential nesting sites, and caulking holes will help to prevent entry. Ants prefer to trail along structural guidelines, such as wires and pipes, and frequently use these elements to enter and travel within a structure to their destination. Sealing off these entry points is an effective nonchemical control strategy. Tanglefoot or Stickem applied as a barrier around trees or shrubs will cut off the ants from a food source (honeydew) and thereby increase the consumption of baits.

How Are Pesticides Affecting Water Quality?

From the University of California IPM Web Site

Contamination of creeks and rivers

California creeks and rivers are being contaminated with pesticides, primarily diazinon and chlorpyrifos. These and other pesticides are not only a threat to aquatic life, but they can also affect the quality of our

drinking water.

Toxicity to living organisms

All pesticides are [toxic](#) at some level, but organophosphates are among the most toxic pesticides to vertebrates. Both diazinon and chlorpyrifos are members of the

organophosphate class of pesticides. Organophosphates are insecticides that contain phosphorus; they are nerve poisons and act by inhibiting important enzymes in the nervous system. Other classes of insecticides include carbamates, soaps and oils, botanical insecticides, pyrethroids,

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HEALTHY GARDEN—HEALTHY HOME

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Funding for this project has been provided in full or in part through an Agreement with the State Water Resources Control Board (SWRCB) pursuant to the Costa-Machado Water Act of 2000 (Proposition 13) and any amendments thereto for the implementation of California's Nonpoint Source Pollution Control Program. The contents of this document do not necessarily reflect the views and policies of the SWRCB, nor does mention of trade names or commercial products constitute endorsement or recommendations for use.

How are Pesticides Affecting Water Quality?

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insect growth regulators, and microbials.

Threat to aquatic invertebrates

During the past decade diazinon and chlorpyrifos have been found in California rivers and creeks at levels that threaten [aquatic invertebrates](#). Several other types of insecticides have the potential to cause harm, especially malathion, carbaryl, and the pyrethroids. All pesticides must be used with caution and should never be allowed to go into storm water, as their impact in some cases is not known.

Environmental regulations

Agencies involved in pesticide regulation and water quality include:

- [CA Dept. of Pesticide Regulation](#)

- [California State Water Resources Control Board](#)
- [U.S. Environmental Protection Agency Water Programs](#)

The Federal Clean Water Act of 1972 requires that a written plan (called a Total Maximum Daily Load or TMDL) be developed for every water body that is impaired and does not meet water quality standards. Many California rivers and creeks have been identified as impaired.

To find out more about the TMDL process and which water bodies have been identified contact the [California State Water Resources Control Board TMDL Program](#) at www.swrcb.ca.gov/tmdl/tmdl.html.

Diazinon and chlorpyrifos are the primary pesticides threatening surface water quality

Diazinon and chlorpyrifos have been found in California waterways. The U.S. EPA's Office of Pesticide Programs provides summary sheets describing risks related to these pesticides.

- [Diazinon](#)
- [Chlorpyrifos](#)

Avoid the use of products that contain diazinon and Chlorpyrifos.

Pesticide labels provide information on the ingredients contained in a product. **Always read the label before applying a pesticide.**