



# Master Gardener Newsletter

New Mexico State University  
Cooperative Extension Service  
U.S. Department of Agriculture  
College of Agriculture & Home Economics

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◀ AUGUST 2009 ▶

Volume 10, Issue #8

## Plant of the Month

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### Growing Citrus in New Mexico

Citrus trees are relatively easy to grow, but are at a disadvantage because our winters here in New Mexico are accompanied by freezes. Because citrus trees are subtropical to tropical in nature (i.e., they are actually evergreen shrubs that retain a majority of their leaves year round), they will suffer severe damage or even death because of our freezing temperatures. The easiest and surest way to avoid potential freeze injury is by planting these trees in large but portable containers that can be rolled into a protected area at the onset of adverse weather. Citrus are very special plants. Not only are they beautiful evergreen plants with lush, green foliage; they produce heavenly fragrant blooms in the spring and provide us with delicious fruit in the fall.

Containerized plants can be stored in garages where it is easier to keep them warm during prolonged periods of cold. It is more economical to maintain the temperature of a garage above 25° F. degrees than it is to maintain the same temperature in a plastic-covered lean-to type structure on the side of the house. The root system of a citrus tree is more susceptible to cold damage because it is not as well insulated in containers as it is in the ground. Container-grown citrus require some form of cold protection to survive most freezing temperatures. Moving them to a protected area during freezes is usually the simplest solution.

Most people lose their citrus trees in the first or second year of the tree's life. So it's very important to protect these small trees during 29° F. degree or lower freezes. Temperatures below 20° F. degrees will literally defoliate trees and make them non-productive the following year. So, avoid low temperatures where you store your citrus trees.

To "winterize" your tree, never fertilize it after July as this promotes late, tender growth that is susceptible to freeze damage.

#### ● Growing Citrus in Containers

Dwarf citrus trees are especially suited for container growing as they can be kept at manageable sizes. Even though they are small, dwarf citrus trees can produce a very reasonable harvest of normal-sized fruit, usually after three years. Dwarf citrus trees are standard sized citrus that have been grafted onto special cultivar variety rootstock. On an average, dwarf citrus can achieve a maximum height of 8-10 feet if grown in the ground, but they will be smaller if grown in a container. *(Article continued on page 2)*

Please submit your information, articles, and suggested topics for the September newsletter to Ann Shine-Ring by Friday, the 28th of August:

Contact Info:  
[asring@hughes.net](mailto:asring@hughes.net)  
(575) 640-7177

## Growing Citrus in New Mexico – Continued from Front Page

### ● Growing Citrus in Containers - Continued

Container growing allows gardeners to overcome poor soil conditions or limited space in a landscape. People can enjoy their trees in decorative pots on their patio or apartment balcony plus they have an ability to bring their citrus indoors during freezing weather.

Every 3 to 4 years, trees will outgrow their containers. This is usually signaled by leaf shed or browning and twig dieback, which is not related to drought stress. You have two choices: 1) Move the tree to a larger pot, or 2) lift the plant out, prune the roots and put it back in the same pot with some fresh potting mix. Remember, the ultimate size of the tree is directly related to the size of the container. If you want a larger tree, choose another container, which is at least 25 percent larger than the original, repot the tree using new potting mix fortified with slow-release fertilizer pellets and water thoroughly. If you want to keep the plant in the same container and are happy with the size of your tree, lift it out of the pot, cut about a quarter of the roots or about 2 to 3 inches off, shake off the loose soil, and pot it with new potting soil as above. Prune at least a third of the foliage off at the time of this root reduction.

Most container citrus trees produce too many fruit for the size of the tree. Thinning or removing a large number of fruit every spring will ensure tree health, fruit size and prevent alternate bearing (producing a crop every other year because of over-fruiting stress on the tree). Do not let small, young trees set too much fruit or you will stunt their growth and decrease overall production. A five-gallon tree should only be allowed to set 4 to 6 fruit the first year. As the tree size increases, there should only be one fruit for every 42 leaves. If you do not allow your tree to overproduce, it will provide you with crop-after-crop, year-after-year of delicious citrus. Over fruiting also makes the trees more susceptible to pest damage and freeze injury.

### ● Keys to Successful Container Growing:

- Select the right size pot with adequate drainage holes.
- Use a soil mix that is lightweight and drains well. If the mix is dense or contains peat moss, amend your soil mix with 1/4-1/3 volume of 1" redwood or cedar shavings.
- Develop a watering schedule so the tree stays on the dry side of moist.
- Provide 8 or more hours of direct sunlight or grow light per day and afternoon shade. . A warm, sunny, southern or western exposure is best. A nearby reflective wall, fence, or even patio can provide both shelter and a bit of extra warmth, too.
- Plant tree so the root collar is above the soil line and the top of the root crown is barely below the soil. Do not cover trunk with soil at all.

### ● Selecting Planting Containers

A variety of decorative plastic containers are available at reasonable prices. A 10"-14" pot is sufficient for a young citrus tree. Clay pots and wooden containers are very attractive but less mobile choices. Half-whiskey barrels also make for a suitable container for citrus. When selecting a container be sure there are sufficient drainage holes. Drilling extra holes is an easy way to improve drainage with wood or plastic. As the tree grows, increase the container size to a 16"-20" diameter pot. Do not start out with a pot that is too large as it makes soil moisture levels harder to control with small trees. Be sure your container drains freely, raising it off the ground if need be.

### ● How to Plant in Containers

One advantage of growing plants in containers is that we can "engineer" the soil to meet the specific need of the plants we will grow. However, we often just use "potting soil", which may result in problems. Soils with good drainage and less organic matter are more appropriate for your citrus. Many locations that commercially growing citrus have well-drained, sandy or gravelly soils. There may be some organic matter but not as much as in potting soil. These areas often have high calcium content in the soil (more alkaline than potting soil). You can start with soil from your garden or with potting soil. If you begin with potting soil, add coarse sand (sand-blasting sand) or small gravel (aquarium gravel) to increase drainage. If you begin with garden soil, you may need to add these elements in addition to compost or potting soil. Generate a soil that readily lets the water pass through, yet retains some of the water. The water will provide sufficient alkalinity. (Most New Mexico water contains dissolved calcium salts and sometimes sodium salts.) A soil that allows surplus alkalinity to wash away with water through drainage will prevent the salts from accumulating to harmful levels.

Place one inch of soil in the bottom of your new container. Gently remove the roots and soil from the old container. Try to keep the root ball intact. Place the root ball in the new container and fill with your fresh potting mix. The top of the roots should be just barely beneath the top of the soil level. Loosely tie tree to a stake if needed. Press the soil around the root ball to provide stability and water deeply. Repotting with fresh soil mix every year or two will provide fresh nutrients to the soil.

### ● Watering

Consistency is the key to watering citrus. Citrus trees require soil that is moist but never soggy. Watering frequency will vary with soil porosity, tree size, and environmental factors. Do not water if the top of the soil is dry without checking the soil at root level! A simple moisture meter, available at garden supply stores, will read moisture at the root level. This inexpensive tool will allow you to never have to guess about whether or not a plant needs water.

A wilted tree that perks up within 24 hours after watering indicates the roots got too dry. Adjust watering schedule accordingly. A tree with yellow or cupped leaves, or leaves that don't look perky after watering can indicate excessive watering and soggy roots. Give your tree water less often. Citrus prefer infrequent, deep watering to frequent, shallow sprinklings. Creating a watering basin around the tree's drip line can aid in deep watering. Deeper watering promotes deeper root growth and strengthens your tree. Generally, once or twice a week deep watering works well for container specimens. Be sure to adjust based on weather conditions! In general, it is probably best to water in the morning, but if plants are dry or wilted it is better to water them right away than wait until morning. *(Article continued on page 3)*

## Growing Citrus in New Mexico – Continued from Page 2

### ● Fertilizer

Citrus trees feed heavily on nitrogen. Your fertilizer should have more nitrogen (N) than phosphorous (P) or potassium (K). Use at least a 2-1-1 ratio. In some regions, you may be able to find specialized citrus/avocado fertilizers. Apply them according to package instructions, typically three to four times a year for slow-release types.

Also important are trace minerals like iron, zinc, and manganese, so make sure those are included as well. Many all-purpose products will work. Slow release fertilizers in the granular form are preferred rather than fertilizer stakes. Foliar applications of trace minerals in the form of kelp or other soluble fertilizers can be effective on leaves when half their mature size. Yellowing leaves indicate lack of fertilizer or poor drainage.

### ● Suckering

Know where the graft union is on your tree. It can usually be seen as a diagonal scar between 4 and 8 inches from the soil. Remove all shoot growth below the graft. These so-called "suckers" take vitality from the top of the tree (the fruiting wood). Especially on young trees, they are very vigorous. Remove suckers as soon as they are observed.

### ● Thorns

Look out for thorns. Some citrus trees grow long, sharp thorns, and getting citrus juice in the cuts from these thorns is absolutely painful. Look closely, and wear gloves or use a long-handled fruit picker. Thorns should be removed from rootstocks when they are grafted. Juvenile fruiting wood will sometimes have thorns; this is a young plant's way of defending against grazing animals. As the tree matures, thorns will not appear as often. Prune off thorns if desired. Check thorny branches to see if they are fruiting wood or rootstock.

### ● Pruning

Citrus may be pruned to any desired shape. Moderately thin the foliage if it grows excessively dense, to promote air circulation and availability of light. Pruning is fine any time of year, except in the winter for outdoor trees. Pinching back tips of new growth is the best way to round out the trees without impacting future fruit. Citrus will look fuller with occasional pruning to shape leggy branches. Some trees may develop erratic juvenile growth above the graft. If so, prune for shape and balance. Any growth above the graft can eventually bear fruit. Do not be afraid to cut off branches. It will stimulate growth and multiple branches from the site you pruned. Well-pruned trees have higher fruit yields and are less prone to branch breakage.

### ● Pollination

Most citrus are self-pollinating, even indoors. Some people enjoy pollinating their trees and can do so by using a small soft brush or cotton swab to transfer pollen among the flowers.

### ● Beneficial Insects

Most insects do no harm to citrus trees! Spiders, lady beetles, lacewings, and praying mantis are some of the beneficial insects you may see around citrus trees outdoors. You can even buy some of these predator insects in local nurseries for release in your garden.

### ● Pest Insects

Keep your tree free of ants, as they will farm scales or aphids, moving them from place to place, milking their secretions, and protecting them from beneficial insects. Ant baits may be helpful. If you find harmful insects like scales, aphids, or mites, a household spray bottle of water with some mild dish soap could be all you need. If insects persist, the usual treatment is a 1% solution of light horticultural oil.

### ● Rabbits

As many of us have yards where rabbits can frequent, it is prudent to put rabbit fence around the citrus tree to prevent rabbits from munching on your tree's leaves, which I've found is a rabbit delicacy.

### ● Frost

Even temperate locations can drop below freezing, so it's good to have a plan in mind for that eventuality. Christmas lights strung around your tree will provide some protection, as will an anti-transpirant like "Cloud Cover". A frost blanket, loosely draped over and around the tree, will also help. But the best plan is to over-winter your tree indoors.

### ● Harvesting Citrus Fruit

Oranges, lemons, and grapefruit should all be completely free of green coloring. They will not ripen off the tree. Limes are generally picked green, so go by size and season.

Choosing varieties with different periods will ensure fresh citrus for up to nine months a year. Some experts suggest that citrus fruits do not improve in flavor after they are picked. Others agree that an acid reduction and color change may occur and lead to a milder flavor if held a few days after they are picked. All agree that citrus should be allowed to ripen on the tree. In fact, if the fruit stays longer on the tree, it will get slightly sweeter and less acidic. Essentially, citrus are fully ripe when they have reached the color, size, and flavor as specified for their type. Again, with proper care, good cultural practices, and a favorable rootstock, a citrus tree is capable of producing fruit in excess of 50 years. *(Article continued on page 4)*

## Growing Citrus in New Mexico

—Continued from Page 3

### ● Growing Citrus From Seed

Citrus can also be started from seed. If no cross-pollination occurs, citrus generally come true from seed. If you grow citrus from seed it could take as long as 15 years to produce fruit. This could be an interesting project to do with your children, and they can watch their trees grow over the years.

While citrus are cold tender, it is possible to grow them in the Las Cruces/El Paso area. You might be surprised to find them from time to time in protected neighborhoods. Jeff Anderson has personally seen lemons, oranges, grapefruits, kumquats, and mandarin oranges growing in this area. If you love the taste of citrus fruit, and are adventurous, consider planting one in a protected location. Sometimes the risks are worth the rewards.

The photo below shows Mrs. Duffee's grapefruit tree, which was started from seed and has been growing in her yard since 1992. Mrs. Duffee reported she harvested 155 grapefruit in the fall of 2008.



Longevity of citrus trees is dependent on many factors:

- Select a good quality tree on favorable rootstock
- Correctly plant tree in suitable location and in right size container
- Provide the right amounts of water and fertilizer
- Protect trees from diseases, insects, & harsh weather changes

Many varieties of dwarf citrus trees are available:

- Orange (*Citrus sinensis*)
- Grapefruit (*C. paradisi*)
- Lemon (*C. limonia*)
- Lime (*C. aurantifolia*)
- Mandarin orange
- Satsuma orange & tangerine (*C. reticulata*)
- Kumquat (*Fortunella* species)
- Tangelo (*C. hybrid: tangerine and grapefruit*)
- Limequat (*C. hybrid: lime and kumquat*)
- Tangor (*C. hybrid: tangerine and orange*)

Citrus-fruit trees are available as standard trees and, in some parts of the country, in dwarf sizes as well. Both types of citrus trees must be protected in the under 29° to 32° F. degree temperature range, all bloom in spring time, and the usual fruiting seasons can range from spring to fall to winter depending on the type of fruit.

*(Research and compilation of information for this article conducted by Ann Shine-Ring, Certified Master Gardener; "Growing Citrus From Seed", section written by Jeff Anderson.)*

Primary Source:

Four Winds Growers (dwarf citrus trees and their maintenance)

Other Sources:

Greenfield Citrus Nursery, Mesa, Arizona (website)

"Growing Citrus in Patio Containers"—Texas Cooperative Extension

"Growing Citrus Trees"—Mack Lindsay, Home Improvement Guide

"Home Fruit Production-Citrus" —Julian W. Sauls, Texas Cooperative Extension

"How to Grow Citrus Fruits"—wikiHow website

"Proper Soil for Citrus in Half-Wine Barrels"—Curtis Smith, NMSU Cooperative Extension

## NO PESTS—NO CHEMICALS:

### Keep Your Garden Safe With “Green” Pesticides

By Sherri Ribbey, Garden Gate Magazine, June 2009

Everyone wants a good-looking garden. But when pests like the scale, aphids and caterpillar get out of hand, what can we do and still be considerate of the environment? We can choose “green” pesticides!

What makes a pesticide “green”? First, in most cases, it’s organic, which means it’s made from natural ingredients. Second, it’s easier on the environment than its non-green counterparts. Because it breaks down quickly after being applied, it won’t hang around in the soil or water for a long time. And many green pesticides tend to target specific pests, as in the case of Bt.

But not all “organic” products are totally safe. For example, if someone suggests you use nicotine-based pesticides, think twice. While nicotine does come from a plant, it can harm people, animals and even some plants.

Be sure to read the label directions for any pesticide. And follow all safety precautions. For help deciphering those labels, check out “Read the label” on the next page.

You’ll find that there are a lot of choices out there, including products that combine these pesticides. So to help you figure out what fits your situation this chart will give you some ideas on the greenest pesticides available. Whatever you choose, you’ll have a beautiful garden that’s safe for you, children, pets and all the wildlife that live nearby. *(Chart and information continued on Page 6)*

*Please also refer to “Organic Gardening—Natural Insecticides (Guide H-150) by L.M. English, Extension Entomologist, NMSU Cooperative Extension Service, July 2005 Link: [http://aces.nmsu.edu/pubs/\\_h/h-150.pdf](http://aces.nmsu.edu/pubs/_h/h-150.pdf)*

“Green” Pesticides	Pests It Kills	How Does It Work?	What’s In It?	Green Facts	Look Out!
Bt (Bacillus Thuriensis)	Specific strains attack: Caterpillars (Bt kurstaki) Beetle larvae (Bt tenebrionis) Fly larvae (Bt israelensis) Gnat larvae (Bt israelensis) Mosquito (Bt israelensis)	–Destroys insect’s digestive system when it’s eaten: –Used most often for lawns, vegetables, and water gardens and on ornamentals. Buy as spray, dust or mosquito dunks for water gardens.	The soil-born fungus: bacillus thuriensis	–Bt isn’t recognized by receptors in the digestive system of people or animals. If you accidentally ingest it, it’s not harmful. –Each strain of Bt is effective on a specific type of pest.	–Bt for pest caterpillars kills butterfly caterpillars too! –Breaks down in sunlight, so you may need to reapply every 3 to 5 days.
Horticultural Oil	–Aphids –Insect eggs –Mites –Scale	–Suffocates insect –Used most often on trees & shrubs –Apply lightweight summer oil in growing season & heavy dormant oil in winter before insects do damage. Buy as concentrate, spray, or pre-mixed	Highly refined petroleum oils combined with an emulsifying agent. Did you know? Vegetable oils used in home remedies don’t work well. Because they’re not as refined, they don’t mix well with water. Manufactured oils are more refined and easier to apply.	–Horticultural oil has little effect on beneficial insects. Since they are larger and faster than the pest insects, they can usually get away before being coated in too much oil. –It’s also effective against powdery mildew.	–Follow label directions carefully. Too much oil applied in too much heat or cold can burn plant foliage. Japanese maples, evergreens, redbuds and smoke trees are especially sensitive. –Needs to coat insect thoroughly to work
Horticultural Soap	–Aphids –Boxeider bug nymphs –Japanese beetles –Mealy bugs	–Washes away insect’s protective outer coating so it dehydrates. –Used most often for smaller plants and houseplants. Buy as spray	Specially formulated soap with fatty acids—some are natural, others are synthetic.	–Chemically similar to liquid hand soap, so it’s pretty mild. –Beneficial insects are not as susceptible because they often have an exoskeleton, or protective outer shell.	–Check label—incorrect mixture or too many applications can burn plant foliage. –Needs to coat insect thoroughly to work –Won’t affect caterpillar or beetle larvae.
Neem	Broad spectrum (kills all insects); mostly used on • Aphids • Beetles • Mites • Scale • Whiteflies	–When eaten by pests, interferes with hormones, preventing eating and growth –Used for ornamentals and vegetables. Buy as spray	Oil from the seeds of the neem tree (Azadirachta indica)	Neem also smothers fungus spores, making it a good fungicide. It’s especially effective against powdery mildew and leaf spot.	–Some studies show people can have an allergic reaction to Neem. –Toxic to fish and aquatic life.

**No Pests-No Chemicals—Continued from Page 5**

- READ THE LABEL** Look for these signal words to know how toxic a pesticide is. All the products in this chart are labeled, “Caution” in the ready-to-use form, but concentrates may have a higher rating.
- CAUTION** Relatively non-toxic to mildly toxic. This product may cause a mild reaction if eaten, absorbed by the skin or inhaled. If you get it in your eyes or on your skin, it may cause a slight irritation.
- WARNING** Moderately toxic. Look for a stronger reaction if this product gets on your skin, is inhaled or gets into your eyes.
- DANGER** Highly toxic or poisonous. A product like this could cause irreversible damage if mishandled.

For more information about signal words and pesticide safety, check out the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu)  
 Please also refer to “Organic Gardening—Natural Insecticides (Guide H-150) by L.M. English, Extension Entomologist, NMSU Cooperative Extension Service, July 2005 Link: [http://aces.nmsu.edu/pubs/\\_h/h-150.pdf](http://aces.nmsu.edu/pubs/_h/h-150.pdf)

“Green” Pesticides	Pests It Kills	How Does It Work?	What’s In It?	Green Facts	Look Out!
Pyrethrum	Broad spectrum (kills all insects); mostly used on <ul style="list-style-type: none"> <li>• Aphids</li> <li>• Beetles</li> <li>• Caterpillars</li> <li>• Wasps</li> <li>• Whiteflies</li> </ul>	<ul style="list-style-type: none"> <li>• When eaten or absorbed, affects insects’ transmission of impulses to/from brain. Also works as a repellent.</li> <li>• Used most often on ornamentals, fruit trees and vegetables. Buy as spray or dust</li> </ul>	Seeds of Dalmatian chrysanthemum ( <i>chrysanthemum cineraria folium</i> ) Did you know? You may also see products called “pyrethroids.” They’re synthetic forms of pyrethrum that are more toxic and hold up in sunlight better than their natural counterparts.	<ul style="list-style-type: none"> <li>• People have an enzyme in the body that detoxifies pyrethrum, if ingested, before it can do any serious damage.</li> <li>• It works quickly, so it’s also used in many wasp sprays.</li> </ul>	–Breaks down quickly in sunlight; reapply weekly. –Some insects have developed resistance. –Highly toxic to fish, tadpoles and beneficial insects. –Can cause rash or allergic or asthmatic reaction in some cases, so wear safety equipment.
Spinosad	-Caterpillars -Flies -Leaf miners -Thrips	<ul style="list-style-type: none"> <li>• When eaten or absorbed, disrupts insects’ nervous system</li> <li>• Used most often for lawns, trees, ornamentals &amp; vegetables. Buy as spray</li> </ul>	The soil-born fungus. <i>Saccharopolyspora spinosa</i>	Most beneficials aren’t harmed by this pesticide. There’s one exception, bees. Apply it early in the morning or late at night so it dries before the bees become active.	Don’t use around pools or water sources. Spinosad degrades more slowly in water and is toxic to fish and mollusks.



**FREE PESTICIDE BOOKLET**

Nobody likes pests, and everyone likes a freebie, so this deal from the Environmental Protection Agency is a great find. It’s a free booklet on how to use both organic and chemical solutions to get rid of pests in your home and garden. Visit the following website to download your copy of the 54 page, “Citizen’s Guide to Pest Control and Pesticide Safety”.

[www.epa.gov/oppfead1/publications/citguide.pdf](http://www.epa.gov/oppfead1/publications/citguide.pdf)



### GROWING CHILE PEPPERS IN NEW MEXICO

If you want to know more about growing chiles, read Guide H-230 (Growing Chiles in New Mexico, Cooperative Extension Service).

Link: [http://aces.nmsu.edu/pubs/\\_h/h-230.pdf](http://aces.nmsu.edu/pubs/_h/h-230.pdf)

This article, written by Paul Bosland and Stephanie Walker, states that, "Since 1970, Chile has become an important cash crop for farmers." Further, they state that, "Most chiles are grown under contract and sold to processors." These processors tend to prefer mildly pungent chiles. "Chiles for local sales are a relatively small part of total commercial Chile acreage, but Chile is a good cash crop for some small growers."

This Guide covers a number of interesting topics:

- ✓ Varieties and Cultivars
- ✓ Preparing the Land
- ✓ Fertilizing
- ✓ Planting
- ✓ Row Spacing and Plant Population
- ✓ Transplanting
- ✓ Cultivating
- ✓ Fruit Set and Development
- ✓ Irrigation
- ✓ Pest and Disease Control
- ✓ Harvesting

For an extensive and thorough review of information on Chile Pepper Diseases see Circular 549 written by Natalie Goldberg:

Link: [http://aces.nmsu.edu/pubs/\\_circulars/circ549.html](http://aces.nmsu.edu/pubs/_circulars/circ549.html)

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- ✓ Parasitic Diseases (caused by infectious disease agents)
- ✓ Seedling Disease
- ✓ Leaf Diseases
- ✓ Fruit Rots
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- ✓ Figures & Summary



### Resource Information for Problems & Pests of Agave, Aloe, Cactus & Yucca

Recently, our MG Hotline was contacted regarding a problem with the caller's diseased "prickly pear" cacti (*Opuntia* species). See above photo.

Our resourceful MG volunteers, provided the following article from the University of Arizona's Cooperative Extension:

Title: Problems & Pests of Agave, Aloe, Cactus & Yucca

Authors: Jack Kelly & Mary Olson (Pub No. AZ 1399)

Date: Newly revised, October 2008

Link: <http://ag.arizona.edu/pubs/garden/az1399.pdf>

A copy of this article is available in our MG library files, as well as at the above website.

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##### Abiotic (non-living) problems

Selecting the correct plant and planting location

- Freeze Damage
- Sunburn
- Planting depth
- Poorly-drained soils
- Irrigation
- Hail damage

##### Diseases

- Fungal diseases of pads and leaves
- Phyllosticta pad spot
- Anthracnose of agaves
- Other fungal lesions
- Fungal crown rot of *Echinocereus*
- Pythium* rot of barrel cacti
- Root and crown rot of agaves
- Bacterial necrosis of saguaro
- Sammon's virus of *Opuntia*

##### Insects

- Agave Snout Weevil (*Scyphophorus acupunctatus*)
- Cactus longhorn beetle (*Moneilema gigas*)
- Cochineal scale (*Dactylopius coccus*)..
- Plant bugs
- Coccid scale, soft scale

##### Mites

##### Animals

##### Additional Information

## Dixie's Honey Do List for August



If our bullets are followed by (MI), the information came from *Month by Month Gardening in the Desert Southwest* by Mary Irish. We just wanted you to know that this is an outstanding book. Also, some of the suggested tasks listed below came from Backyard Living Magazine and are shows with (BL) in parentheses.

### In General:

Now is the time of year when the days are hot and it's tempting to just kick back in a lawn chair or hammock, but take time to remain involved in your yard and garden. Plants are thirsty and many are at the critical stage of peak production or almost ready to harvest. (Backyard Living, August/September 2008)

### Ornamentals

- Plant and divide clumps of bearded iris and daylilies. Pry each clump with a garden fork, and cut the foliage back. They split it into smaller sections, each with some fat rhizomes and a little fan of leaves. Replant and water—there's time for the divisions to establish themselves before cold weather arrives. (BL)
- Plant seeds of pansy, Johnny jump-ups, snapdragons, and pinks for fall transplant.
- Plant annual and perennial wildflower seed for spring bloom. Bachelor buttons, flax, lunaria, coreopsis, Mexican hat, and penstemon are options.
- Start planting chrysanthemums now.
- Order bulbs for fall planting.
- As temperatures cool, aphids may re-emerge. Hose them off!
- Remove seed heads from crepe myrtles.
- As usual, deadhead flowers, oleander, and others.
- By this time, drought-tolerant plants may look pretty disreputable. Assuming that they are done flowering, cut them back. It's safe to reduce their bulk by a third. (BL)
- Give big, floppy, late blooming flowers, such as boltonias, asters and dahlias, extra support. Rig some stakes or branches around the plants, cinching them with soft twine. (BL)
- Continue to plant cactus and other warm season succulents.
- Fertilize ornamental grasses with a balanced fertilizer to enhance flowering. Water well after application.



### Roses

- The best time to cut roses for a bouquet is mid-morning, after the dew has dried and just before the heat of the day stresses the blooms. Pick blooms that are just starting to unfurl; they'll finish opening for you indoors. (BL)
- Fertilize roses in early August for fall bloom.

## Dixie's Honey Do List for August- Continued



### Fruits, Nuts & Shade Trees

- Water pecans deeply as nuts are beginning to fill.
- Black pecan aphids may become a problem. Treat to prevent premature leaf abscission.
- Surely it's time to stop cover sprays. Read pesticide label.
- Harvest 'Bartlett' pears from trees before they turn gold.
- Finish planting palms.
- Continue treating peach tree borers on plums, apricots, peaches, and almonds.

### Vegetables & Herbs

- In areas of the garden that have finished producing, renovate the bed for fall planting by adding compost and working it in.
- Divide garlic chives, lemon grass, and mints. (MI)
- Time to plant bush and pinto beans, beets, chard, collards, carrots, kohlrabi, leaf, Romaine, and head lettuce, mustard, radishes, and turnips.
- Ripening peppers ought to be left on the plant as long as possible. Warm days and cooler nights inspire a good fruit set and excellent flavor. (BL) Handy Tip: Peppers with 3 bumps on the bottom are sweeter and better for eating. Peppers with 4 bumps on the bottom are firmer and better for cooking.
- The best time to harvest herbs is right before their flowers open. Their essential oils will be at their peak now. Examples include mint, thyme, basil and epazote. (BL)



### Lawns

- Later this month, fertilize established cool season turf.
- It's time to start seeding cool season grasses. Incorporate phosphorus into seedbed before seeding.
- Continue fertilization schedule for warm season grasses.
- It's time to apply a pre-emergent herbicide for cool season weed control. Follow label directions carefully.
- Discontinue grub treatments as white grubs are larger and moving deeper in the soil profile.
- Certain lawn grasses benefit from a late-summer feeding—particularly St. Augustine, Bermuda and Bahia grasses. Apply a light amount of fertilizer, and remember to water before and after the application. (BL)

### Miscellaneous

- Depending on weather, continue deep watering schedule for everything.
- Mary Irish suggests some alternative pesticides:
  - For annual weeds, use 50% alcohol/50% water solution or full strength white vinegar. For invasive weeds such as Bermuda grass, use 12.5% white vinegar, 12.5% lemon extract in 75% water. These are contact herbicides so spray weeds thoroughly and avoid contact with desirable vegetation.
  - To kill ants, cut up the rind of 1 or 2 oranges and blend in blender with enough water to



make slurry. Pour slurry onto anthill. The volatile oils permeate the hill, killing the ants.

## New Master Gardener Profile: Betty Tomlin



Betty Tomlin has called Las Cruces home for only a little over a year but since she loves to garden, she knew the Master Gardener course was a “must” so she could adapt her gardening skills to this climate.

Las Cruces/Dona Ana County bears little resemblance to Betty’s former homes in Tennessee, Michigan and Ohio. She started gardening very young--some 50 years ago--by helping in her mother’s flower garden. One of Betty’s early success stories involved successfully transplanting a “Jack-in-the-Pulpit” from nearby woods to a similar space in her Mother’s garden. “It was still there when we left Ohio several years later,” Betty recalls.

When asked what she likes to grow best, Betty says, “I have grown nearly everything – vegetables, berries, fruit trees, grapes, perennials, trees and shrubs. I even assisted my husband, Mike, in crop farming (hay, soybeans and corn).” Now Betty is even growing cactus at their new home on the north end of Las Cruces off Del Rey Boulevard.

At one point Betty and Mike had a nursery and greenhouse and they even grew some exotics just for pleasure. She is proud to have successfully grown Himalayan poppies east of the Mississippi, which she had read was just not possible.

Obviously a person with green thumbs, Betty offers this ‘advice’ when asked what is the secret to her success – ‘tend your soil’ as you tend your plants; enrich it, compost, be careful what you put in it – care for it like a ‘baby.’ Betty is always eager to learn new things to improve her gardening and hopes she is never done learning about gardening.

Betty also enjoys bicycling, needlework, reading, cooking, and spending time with her children and six grandchildren. She and her husband, Mike, have been married for 43 years and are the parents of three (two boys and a girl). Their older son and daughter still live in Michigan and their middle son lives in Reno, Nevada.

Although Betty doesn’t recall giving too much help in the garden when she was growing up, she is pleasantly surprised at how much knowledge she and Mike have absorbed and now proud of they are of their gardening skills they exhibit along with their other talents.

*(Profile written by Ann Palormo)*



## AUGUST BIRTHDAYS

Craig Severy	August 1
Marti Taylor	August 12
Richard Hiss	August 19
Edna Lucero	August 21
Betty Tomlin	August 31

**MANY THANKS FOR THE GOODIES:**  
We appreciate your thoughtfulness

### August Goodies

Doug Brown  
Ann Palormo

### September Goodies

David Hutchinson  
Susan McNeill  
Ann Shine-Ring

### NOTICE:

The discussion of Craig Severy’s data on the Hotline Contact Sheet survey will continue in the September edition of the MG Newsletter.

# Master Gardener Matters

As always, July was a very busy month with lots of announcements and many things to do. In addition, there was plenty of good food, as usual.

## MG Hotline

We have a new Chairperson for the MG Hotline, Pamela Crane. Please, if you are free, check the hotline calendar and volunteer. There are a number of vacancies for Certified Master Gardeners—see page 15 of this newsletter.

## Farmers' Market

Barb Sallach announced that the Farmer's Market Booth is doing fine, and that the Fall Plant Sale will probably be on Saturday, September 26<sup>th</sup>. She also announced that we now have a shade canopy available for the booth.

## Graduation & Awards Ceremony

Valice Raffi announced that this year's graduation and awards ceremony would be held January 9, 2010 at the Trails West Recreation Hall. Kristee West asked that everyone check their time sheets and bring them up-to-date.

## CoCoRaHS Update

Joan Lane asked for members who are interested in participating in a Severe Weather Spotters class. There were many names and she is setting up a class with John Fausett of the National Weather Service.

## Community Events Update

- Juliet Williams announced that the 4-H District and State Horticulture contests went very well and she offered many thanks to those who volunteered.
- "National Night Out" will occur on Monday night, August 4<sup>th</sup>.
- The annual Butterfly Flutterby event at the Chihuahuan Desert Nature Park is scheduled for the morning of August 15. It is always a lot of fun for all.
- The Hatch Chile Festival, September 5-6, is fast approaching. We need volunteers for this event.
- We will also be asking for volunteers for the Southern New Mexico State Fair, which will be in early October.
- The Santa Fe Master Gardeners will be hosting the NM State Master Gardeners' Conference, September 17-19. This will also be discussed at our August meeting.
- We are looking for a new coordinator for the Garden Expo at Enchanted Gardeners for either for fall or spring. Dee Davis will provide that volunteer with all the materials, etc. he or she will need.

## Educational Presentations

- Master Gardener Intern, Dale Petzold, gave a demonstration on propagating *Sansaveria sp.* (*aka snake plant or Mother-in-law's tongue*) from cuttings.
- Frank Robitaille, our guest speaker, gave us a very entertaining presentation on Weather Stories and Cloud Seeding. Frank provided us with some interesting weather-related websites. Dale Petzold has forwarded these websites to us:
  - ➔ Weather Underground                      Link: <http://www.wunderground.com> (you can track storms down to your local street)
  - ➔ NOAA – New Mexico Data                      Link: <http://www.weather.gov/view/states.php?state=NM>
  - ➔ NOAA – All U.S. States Data                      Link: <http://www.weather.gov/view/states.php?product=NCR&rid=epz&loop=yes>
  - ➔ Nat'l Center for Atmospheric Research                      Link: <http://www.rap.ucar.edu/weather/model/index.php?model=gfs>
  - ➔ Holloman Air Force Base, NM Radar                      Link: <http://radar.weather.gov/ridge/radar.php?rid=hdX>

We hope to see all of you at our next meeting, August 19, 2009.

Barb & Juliet



## Death by Mint Oil: Natural Pesticides

By Gwendolyn Bounds (Wall Street Journal, 7/31/09)

This summer, pests around my house are dying of more natural causes. One colony of wasps on my deck got neutralized by shots of mint oil. The cabbageworms shredding my broccoli plants were done in by an ingredient culled from seeds of trees native to India. And I annihilated several fire-ant compounds by enticing them to eat bait packed with a soil-dwelling bacterium that fried their tiny nervous systems (see photos on page 13).

Surprisingly, none of these products was hard to find. Increasingly, well-known insecticide manufacturers, retailers and even professional pest-control services are rolling out solutions derived from natural materials like animals, plants, bacteria and minerals, many of them considered potentially safer to humans, pets and the environment than their synthetic-chemical counter-parts. Fueling the move is increased governmental scrutiny over what pesticides we spray in and around our homes, as well as a bid to satisfy more health-conscious consumers—especially women, who typically dictate household pest-solution purchases.

Targets include everything from carpenter ants and mosquitoes to the slugs, caterpillars and mites that feast on fruit trees and vegetable plants. For instance, [Terminix](#), a large professional pest-control company and a division of Memphis, Tennessee-based [ServiceMaster Co.](#), is introducing its first consumer product called SafeShield. The \$9.99 indoor insecticide spray contains active ingredients thyme oil and “geraniol,” a substance found in geranium, rose, lemon and other plants.

Meantime, St. Louis-based [Senoret Chemical Co.](#) is expanding its line of Terro brand ant- and bug-bait products using a mineral containing the element boron, which is generally considered low in toxicity to humans and animals. And [Woodstream Corp.](#) last year bolstered its Safer product line with an organic mosquito- and tick-control concentrate made in part from chrysanthemum flowers.

The biggest bellwether came earlier this year when lawn and garden giant [Scotts Miracle-Gro Co.](#), introduced a seven-product “EcoSense” line under its home pest-defense [Ortho](#) brand sold in major retailers such as [Home Depot](#) and [Wal-Mart](#). Included in the EcoSense arsenal: an indoor insect-killer spray made from soybean oil and an insecticidal soap for vegetables and plants. EcoSense is on track to meet or exceed sales expectations, the company says.

“There are consumers who want a more natural product lineup,” says Jeff Garascia, [Scott’s](#) senior vice president of global research and development. “A few years ago, we decided that even though the performance didn’t meet our traditional products, we would push through anyway. Now we are starting to see efficacy there.”

Efficacy is tantamount to survival. Manufacturers know there’s often disconnect between what consumers say we want (natural products) and what we really want (dead bugs, now!). Plus, pests can transmit illnesses such as West Nile virus and Lyme disease that can be more harmful than some potential side effects from pesticides. [S.C. Johnson & Son Inc.](#), for instance, launched a Raid “Earth Options” product in 2006, then discontinued it the next year due to low consumer acceptance. [Spectrum Brands Inc.](#) offers a lemon-eucalyptus version of its Cutter mosquito repellent without DEET (a common chemical repellent) but says it doesn’t sell very well.

Still, the category continues to draw investment dollars. Next year, [Spectrum](#) plans to launch a natural indoor bug killer to go along with its Hot Shot and Spectricide insecticides. “There’s just a lot of a

movement out there now to use safer chemicals,” says Jay Matthews, business director at [Spectrum](#).

Meantime, sales of organic and natural products in the past 18 months have risen 30% to 40% at the Web site [DoMyOwnPestControl.com](#), run by [P&M Solutions LLC](#) in Norcross, Ga. Best-selling natural items include “[MotherEarth D](#),” a powder made of diatomaceous earth (ground fossils) that triggers dehydration and death in bugs, as well as an “[EcoExempt IC-2](#)” spray made from botanical oils such as spearmint and rosemary. The latter targets a wide range of pests from mosquitoes to bedbugs.

Even the \$6.6 billion professional pest-control industry, where efficacy directly affects profit margins, is adopting more natural alternatives. For instance, Arizona-based [Bulwark Exterminating LLC](#), which operates 11 branches in eight states, uses only botanical sprays and boric-acid products (also derived from boron) whenever customers request all-natural solutions. It often includes them as part of an overall treatment plan even when they don’t.

“About 35% of people who call now ask us, ‘Will this hurt my kid or dog?’” says [Bulwark](#) founder Adam Seever. One customer, Carol Kidd, lives in a rural suburb of Phoenix and recently rang [Bulwark](#) to cancel her service because she was experiencing hormone imbalances and had read pesticides might be a contributing factor. [Bulwark](#) instead switched her to an all-natural service, employing botanical oils and boric-acid bait around her foundation instead of a synthetic solution, and didn’t raise her \$44-a-month price.

“I’ve seen no excess insects since switching,” 39-year-old Ms. Kidd says, “and I’ve got bugs in the yard around my chicken coop, but not on my patio or in my house.”

The EPA registers pesticides—an umbrella term for products that kill insects, fungi and weeds—for use in the U.S. The agency says general health issues from exposure to pesticides may range from simple skin or eye irritation to hormonal and endocrine disruption, cancer and other illnesses.

For instance, a study published in 2000 in the *Journal of the American Medical Association* with research from Stanford University found that in-home use of insect-killing chemicals was associated with a 70% increased risk of Parkinson’s disease, compared with no use of pesticides. And in April, the EPA said it would intensify evaluation of spot-on pesticide products used in pet flea and tick control due to increases in reported problems ranging from skin irritation to seizures and death of the animals. Some of the active ingredients also are found in household insecticides.

Over the years, the EPA has banned some insecticides considered too risky from use in the home market, such as diazinon and chlorpyrifos. It also now maintains a list of active ingredients used in what it dubs “minimum risk” pesticides. “It’s a pretty good bet it’s a safe product if it’s on that list,” says John Kepner with [Beyond Pesticides](#), a not-for-profit group based in Washington, D.C.

Today, the most commonly used synthetic residential insecticides fall into a broad category called pyrethroids: common names include pyrethrum, cypermethrin and tetramethrin—which are essentially juiced up, longer-lasting human-made versions of the natural chrysanthemum (*Article continued on Page 13*)



Please also refer to “Organic Gardening—Natural Insecticides (Guide H-150) by L.M. English, Extension Entomologist, NMSU Cooperative Extension Service, July 2005  
 Link: [http://aces.nmsu.edu/pubs/\\_h/h-150.pdf](http://aces.nmsu.edu/pubs/_h/h-150.pdf)

### Death by Mint Oil: Natural Pesticides—Continued from Page 12

“pyrethrums” used in some natural products. Both affect an insect’s central nervous system; both can be harmful to aquatic life and honeybees. The EPA will re-evaluate pyrethroids’ and natural pyrethrins’ risks starting next year.

To be sure, natural products can trigger health concerns as well. Citric sprays, for instance, can hurt the eyes, and there have been questions about the safety of inhaling powders made from diatomaceous earth or boric-acid powders, Mr. Kepner of [Beyond Pesticides](#) notes. “There are plenty of things from nature that can hurt us—like nicotine.”

In general, though, the EPA says bio-pesticides are usually “inherently less toxic” than conventional pesticides and decompose more quickly, thereby resulting in lower exposures and largely avoiding pollution problems caused by conventional pesticides. What’s more, the agency says, they often primarily harm only target pests, which can help protect beneficial bugs and other animals (*see “Better Bugs and Gardens” inset below*).

Generally, my own pest issues have disappeared using only natural products. One exception: carpenter ants, likely a byproduct of multiple firewood piles around the property and a recent roof leak (the ants like moisture). To wage war, I carefully applied a tiny bit of a synthetic pyrethroid dust inside crevices around my ceiling beams where no children or pets could reach—and where the bugs had left traces of activity. (At the time, I didn’t have the botanical version on hand.) Elsewhere, I’ve used all natural controls, including a mint and herbal oil spray along the backyard foundation where my dog roams and MotherEarth’s and Terro’s boric-acid bait near woodpiles and the front door where I saw ants marching. So far, it’s working pretty well.

One day, however, my dog Dolly got free from her fence and gobbled up a mouthful of the boric-acid bait. Panicked, I called a pet poison control hotline and was told not to worry, that the active ingredient was “very safe” with low concern for toxicity, and Dolly would be fine. That was the most compelling sales pitch for naturals yet.

*Article contributed by Mary Thompson, Certified Master Gardener*

### Better Bugs and Gardens

It’s tempting to dub all bugs pests, but many insects help perform important tasks in yards and gardens, from pollination and control of harmful insects to helping build good soil. Even some organic or natural sprays can harm beneficial species, so check labels and use sparingly.

A few potential allies:



- ▲ **Bumblebee**—Helps pollinate crops and gardens.
- **Lacewing**—Larvae prey upon various small insects such as aphids, caterpillars and thrips. Adults are green or brown and have delicate, netted wings.
- **Ground beetle**—Blue-black beetles prey on cabbage root maggots, cutworms, snail and slug eggs and other pests.
- **Parasitic wasp**—parasitize garden pests such as cutworms, white grubs and caterpillars by injecting eggs into hosts; larvae then ‘eat’ their way out after hatching.

- **Assassin bug**—Characterized by narrow elongated head with beak folded underneath. Preys on many insects such as aphids and caterpillars by inserting needle-like mouthpart and sucking out juices. Downside: can deliver painful bite to humans.
- **Tachinid flies**—Large bristly flies help suppress tent caterpillar and armyworms.
- ▼ **Lady bug (lady beetle)**—Adults and larvae feed on many soft-bodied pests including aphids and mites and other insect eggs.



Sources: Rodale’s Ultimate Encyclopedia of Organic Gardening, (rodale.com) the National Gardening Association (garden.org) and Clemson University Cooperative Extension Service (entweb.clemson.edu)



## SO EASY SKILLET FRITTATA

(Served at our July MG monthly meeting--Source: kraftfoods.com)

### What You Need!

- 6 eggs
- 1/2 cup (1/2 of 8-oz. tub) PHILADELPHIA Cream Cheese Spread
- 1/2 cup each: chopped red and green peppers
- 6 slices bacon, crisply cooked, drained and crumbled
- 1 cup Mexican Style Finely Shredded Four Cheese, divided
- 3 Tbsp. chopped fresh cilantro

**PREHEAT** oven to 400°F. Beat eggs and cream cheese spread with wire whisk until well blended; set aside. Spray 10-inch ovenproof nonstick skillet with cooking spray. Add peppers to skillet; cook and stir 2 min. or until crisp-tender.

**ADD** bacon to cream cheese mixture along with 3/4 cup of the shredded cheese and the cilantro; stir until well blended. Add to ingredients in skillet; stir. Cover skillet with lid. Reduce heat to low; cook 6 to 8 min. or until egg mixture is almost set in center. Remove lid. Place skillet in oven.

**BAKE** 5 min. or until center is set. Remove from oven. Top with remaining 1/4 cup shredded cheese; cover with lid. Let stand 2 min. Loosen frittata from side of skillet with spatula; slide onto serving plate. Cut into wedges to serve.

### Make It!

Prep Time: 10 minutes

Total Time: 25 min

Makes: 6 servings, one wedge each

**VARIATIONS:** Omit peppers. Prepare as directed, using one of the following flavor options:

**Portobello Mushroom & Green:** Substitute 3 sliced green onions for the cilantro and Shredded Mozzarella Cheese for the Mexican Style Cheese. Slice and coarsely chop 1/4 lb. Portobello mushrooms. Melt 1 Tbsp. butter in 10-inch ovenproof nonstick skillet. Add mushrooms and 3 minced cloves garlic; cook and stir until mushrooms are tender.

Remove from skillet; set aside. Continue as directed, adding the mushrooms to cream cheese mixture along with the shredded cheese and green onion.

**Italian Sausage & Arugula:** Substitute 6 oz. Italian sausage links for the bacon, and 1-1/2 cups torn arugula and 6 quartered cherry tomatoes for the cilantro. Remove sausage from its casing; cook in 10-inch nonstick ovenproof skillet until cooked through, stirring occasionally. Drain. Continue as directed, substituting Shredded Mozzarella Cheese for the Mexican Style Cheese.

**Turkey & Sun-dried Tomatoes:** Prepare as directed, substituting 4 slices Oven Roasted Turkey for the cooked bacon, 1/2 cup chopped drained sundried tomatoes for the peppers, 1 cup torn baby spinach for the cilantro and Shredded Cheddar Cheese for the Mexican Style Cheese. If necessary, increase the baking time to 10 min. or until center of frittata is set.

Please note the open timeslots for certified MG's—one on August 7 and five in September; also too many (3) Interns signed up for August 7—Can one of those Interns please switch to another date?  
 (The Hotline assignments listed below were current as of 7/24/09)

**Master Gardener Hotline Assignments for  
AUGUST**

Tuesday, August 4	<b>Pam Crane</b> Laurie Davidson (I) David Hutchinson (I)
Friday, August 7	<b>OPEN—Certified MG</b> Mike Lee (I) Lori Petro (I) Velina Hames (I)
Tuesday, August 11	<b>Alberta Morgan</b> Terry McCatherin (I) Helen Moser (I)
Friday, August 14	<b>Ann Shine-Ring</b> Mike Lee (I) Mike Smith (I)
Tuesday, August 18	<b>Ina Goldberg</b> <b>Mary Thompson</b> Mona Nelson (I) Joan Woodward (I)
Friday, August 21	<b>Pat Anderson</b> Lori Petro (I) Mike Smith (I)
Tuesday, August 25	<b>Linda Fredickson</b> Dale Petzold (I) Sue McNeill (I)
Friday, August 28	<b>Marti Taylor</b> Betty Tomlin (I) David Hutchinson (I)

**Master Gardener Hotline Assignments for  
SEPTEMBER**

Tuesday, Sept. 1	<b>OPEN—Certified MG</b> Frank Collins (I) Marcella Newman (I)
Friday, Sept. 4	<b>OPEN—Certified MG</b> Dale Petzold (I) Mike Smith (I)
Tuesday, Sept. 8	<b>Alberta Morgan</b> Joan Woodward (I) Sue McNeill (I)
Friday, Sept. 11	<b>Ina Goldberg</b> Frank Collins (I) Hope Movsesian (I)
Tuesday, Sept. 15	<b>OPEN—Certified MG</b> Terry McCatherin (I) Helen Moser (I)
Friday, Sept. 18	<b>Pat Anderson</b> Velina Hames (I) Mike Smith (I)
Tuesday, Sept. 22	<b>Pam Crane</b> Mona Nelson (I) Sue McNeill (I)
Friday, Sept. 25	<b>OPEN—Certified MG</b> Chris Courtney (I) Richard Hiss (I)
Tuesday, Sept. 29	<b>OPEN—Certified MG</b> Hope Movsesian (I) Dale Petzold (I)

*\* Certified Master Gardeners' names shown in green*

**ADDITIONAL TIMESLOTS ALLOTTED FOR INTERN HOTLINE HOURS**

At our May 22<sup>nd</sup> monthly meeting, the following changes were made in Hotline assignments:

January – April (1 or 2 certified MG's to one Intern)

May – December (1 or 2 certified MG's to two Interns)

This increase in Intern timeslots will give Interns greater flexibility in obtaining their hotline hours.

**Next Monthly Meeting of the Doña Ana County Master Gardeners**  
 \* \* \*  
**Wednesday, August 19, 2009**  
**9-11am Cooperative Extension Office**