

Master Gardener Communicator

University of Arizona

Cooperative Extension

Summer, 1993

Maricopa County Cooperative Extension
4341 E. Broadway Road
Phoenix, AZ 85040
255-4456
Office Hours: 8 a.m. - 5 p.m. weekdays

Satellite location:
Property Owners and Residents Association
(PORA) Office
13815 Camino del Sol Blvd.
Sun City West, AZ 85375 546-1672
Tues. and Fri. 9 a.m. - 3 p.m.

Dial Extension 255-4980

THINGS TO EXPECT:

GROWTH RECOVERY of summer weary landscape plants will be noted due to decreasing daytime heat.

AGAVES MAY COLLAPSE into a putrid rotted mess during late summer as a result of internal infestations of Agave Snout Weevil larvae. They also infest the bases of Yucca stems, causing chlorotic decline and death of infested stalks. Controls should have been applied during May and June. Remove dead plants and treat soil to kill larvae shaken to the soil.

LEAF DROP on deciduous trees and fall bloom of citrus may occur, particularly on shallow watered and growth stressed plants.

DAMPING-OFF of Petunias and other bedding plants. Don't keep beds too wet. Recommended fungicide provides fair control. Infection is most likely in repeatedly planted flower beds.

MESOPHYLL COLLAPSE is a sudden wilt and dying of citrus leaves triggered by abrupt weather changes which can occur in the Fall. East and north sides of grapefruit, lemon, and orange trees are most affected.

PECAN APHID INFESTATIONS occur around October and cause leaves to become sticky and glisten in the sunlight. No control is recommended. Don't park cars under them.

NUISANCE INSECTS such as crickets, roaches, earwigs, etc., may move indoors if not controlled outside. Apply Dursban™ or carbaryl around building foundations.

ORANGE AND TANGERINE FRUIT SPLIT occurs on sunburned or otherwise inferior fruit.

THINGS TO DO:

EARLY FALL FERTILIZATION can help the recovery of summer-weary plants. Nitrogen fertilizer should be adequate. Follow with a deep irrigation. Avoid fertilizing freeze-sensitive plants such as citrus, hibiscus, bougainvillea, etc. Allow their growth to slow down for freeze resistance.

CUT BACK WATERING FREQUENCIES to minimize risk of root rots and allow dormancy to occur and harden cold-tender plants.

EARLY FALL ROSE BUSH CARE. Prune out dead canes and moderately prune back weak top growth, fertilize and follow with a deep watering.

PLANTING TREES AND SHRUBS. September through October is a good season. Frost sensitive plants can be planted remembering extra care during upcoming freezing nights.

KEEP FIGHTING the noble but nearly endless battle with Whiteflies. Relief marches slowly as nights cool. Keep looking for Orion in the east and the battle will be done--for this year.

FALL APPLICATIONS OF POTASSIUM FERTILIZERS on turfgrass help the grass more efficiently go in and out of dormancy with more vigor.

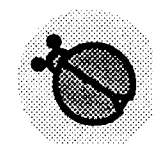
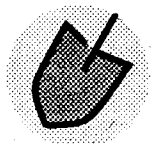
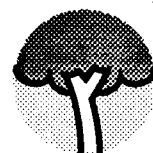
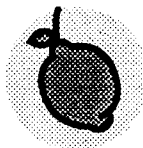
PLANT FLOWERS for Fall, Winter, and Spring bloom--seeds, bedding plants, or bulbs.

OVERSEED BERMUDA GRASS lawns with winter grass from mid-October until mid-November.

PRE-EMERGENT HERBICIDES for winter weed control can be applied to soil surfaces from late October through November. But, don't apply where seeds are to be planted.

POSTPONE EXTENSIVE PRUNING of trees and shrubs until January.

Terry H. Mikel
Extension Agent, Horticulture



ALL ABOUT TREES

Ah, the good old summer time in Phoenix. The crickets love it, but it's pretty tough on people and sometimes on trees. The lack of July rains this year has resulted in smaller than normal fruit size in citrus but mid and late season varieties will regain the size through the Fall and Winter. Desert type landscape trees do not produce as much new growth when rain is sparse but in general look great. Normal rainfall will be enough moisture to maintain mature desert species through the winter.

While Texas root rot continues to be our most serious summer disease problem, verticillium wilt symptoms are pretty obvious in olive trees throughout the Valley. Vert generally affects one or two limbs initially but may in some situations rapidly affect the entire tree. These "rapid decline" trees are generally not salvageable. In trees where only a few limbs are affected, pruning out those limbs combined with routine nitrogen fertilizer applications will generally insure re-growth.

Queen palms have been widely used as landscape palms over the past 20 years but are not as tolerant of our summers as fan or date palms. The tattered appearance of bottom fronds is often just wind damage but salt burn is much more common than in other palm species. Iron chlorosis is often a problem in Queen palms with some general concerns that magnesium and other minor elements (such as manganese and zinc) are also needed in addition to iron. Iron chelate, as a soil application on Queen palms or any other iron chlorotic landscape plant, should be applied by late September. Uptake of iron becomes very iffy as soil temperatures drop in the fall. Trunk implant iron capsules (Medi-caps™) work well on Eucalyptus, Silk Oak, etc., during the cooler months.

The late August, September and early October period is the time when pecan nut meats are filling. In contrast to fruit trees and most landscape trees, regular, deep irrigation should be continued on pecans during this period. Mature pecans have a 70 to 100 gallon per day water use during this period.

Lowell True
Extension Agent, Fruits & Nuts
Emeritus

BITS ON BUGS

Here in Arizona we look forward to planting our Fall vegetable gardens and working in the yard again after the long, hot summer. But, don't be surprised if some unwelcome guests take advantage of the good weather and show up as well. Fall is the time for certain caterpillars to become nuisance pests.

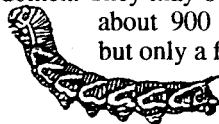
The most common Fall caterpillars to become pests are the woollyworms or salt marsh caterpillars. If you have been in Arizona for any length of time you have seen these caterpillars. The mature caterpillars are an inch and a half to two inches long, and have many clumps of long, erect hairs (hence the name "wooly"). They vary in color from a light yellowish-tan to dark brown or even black. You might not have seen the adult moth, which has white wings with a peppering of black spots and yellowish-orange markings on the abdomen. The adults are attracted to lights at night.



Salt marsh caterpillar

The salt marsh caterpillars feed on cotton, where they are considered to be a pest. Occasionally, when the cotton is defoliated, they can migrate into urban areas where they fall into pools and munch on gardens. Best bet for control is to construct an upright barrier of aluminum at least four inches tall around any areas you want to protect.

Another noticeable group of caterpillars this time of year are the hornworms. These big caterpillars are smooth, often bright green with white markings and have a horn-like projection at the end of their abdomen. They may be up to six inches long. There are about 900 different species of hornworms but only a few may be considered pests. The caterpillars pupate in the soil,



forming a reddish brown pupa up to four inches long. The adults are good-sized moths, often with grey or black and white wings. Perhaps best known by gardeners here in Arizona is the tobacco hornworm (often mistakenly called the tomato hornworm). It has straight diagonal body stripes with a red horn and feeds on tomatoes, peppers and eggplant. For control, pick off by hand (easiest to find at dusk) or use *Bacillus thuringiensis*.

Roberta Gibson
Research Specialist, U of A
Maricopa Agricultural Center

FALL VEGETABLE VARIETIES

Listed below are varieties recommended by the Scottsdale Community Garden newsletter that are not listed in our Q-337, "Vegetable Varieties" publication (which is several years old).

BEETS: Crosby Green Top, Green Top Bunching, Perfected Detroit, Royal Red, Detroit Nero, Burpee Golden, Early Red Ball

BOK CHOY: Tak Choi



BROCCOLI: Premium Crop (early); Premium Crop, DeCiccio (mid-season)

CABBAGE: Head Start, Rio Verde, Sanibel, Super-boy, Red Meteor, Ruby Ball, Enterprise

CARROTS: Candy Pack, Gold Pack, Packmaster, Hi Pak, Carousel, Half Long

CAULIFLOWER: Master Oceana, Purple Head, Burpeana (early), Igloo (late)

CHARD: Large White Rib



GARLIC SETS: California Early, California Late

LEAF LETTUCE: Dark Green Boston, Dark Green Cos

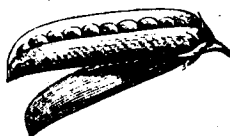
MUSTARD: Southern Giant, Green Wave

ONION, GREEN BUNCHING: Southport White, Japanese Bunching

PARSNIPS: Harris Model (Early planting is best.)

PEAS, EDIBLE POD: Little Sweetie, Dwarf White Sugar, Dwarf Gray Sugar

PEAS, SHELL: Telephone, Sparkle, Laxton, Icer 95



RADISHES: Champion

SPINACH: Savoy Hybrid, Emerald Queen, Bonus Curly Leaf, Grand Stand, Melody

STRAWBERRIES: Tioga, Sequoia, Tuft, Brighton

Last year I gave out seeds for 4 open-pollinated, curly top-resistant tomato varieties. One of these is Row-Pac, which is no longer commercially available, even though it does well here in the desert Southwest. One MG has already told me that he obtained close to 90% germination and should have seeds to share with others. If anyone else has information and/or seeds from these varieties to share, please call me (252-4456, ext. 309.) Also, I would appreciate any variety names of Fall or Spring veggies that Master Gardeners have successfully grown that are not listed in "The Communicator" or in publication Q-337. Thanks!

Carolyn Chard
Ag Program Coordinator

HOME HORTICULTURE PROGRAM

Allen Boettcher, Home Horticulture Extension Agent, offers a free monthly program to Maricopa County residents. The September topics, **Winter Vegetable Gardens**, **Fall Rose Care** and **September Citrus Harvest** are offered at the following locations and times:

- Wednesday, September 8, 9:00-10:30 a.m. at the *Peoria Senior Center*, 8335 W. Jefferson, Peoria, and from 12:00-1:00 p.m. at the *Olive Branch Senior Center* in Sun City, 10765 W. Peoria in Sun City.
- Tuesday, September 14, 10:30-11:30 a.m. at the *Scottsdale Senior Center*, 7375 E. 2nd Street in Scottsdale, and 1:30-3:00 p.m. at the *Saguaro Branch Library*, 2808 N. 46th Street in Phoenix.
- Thursday, September 16, 9:30-11:00 a.m. at the *Maricopa County Cooperative Extension* office, 4341 E. Broadway, in Phoenix.
- Saturday, September 18, from 9:30-11:00 a.m. at the *Mesa Dobson Branch Library*, 2425 S. Dobson Rd. in Mesa.
- Tuesday, September 21, from 10:00-11:00 a.m. at the *Mesa Senior Center*, 247 N. MacDonald, Mesa, and from 1:30-3:00 p.m. at the *City of Mesa Dobson Branch Library*, 2425 S. Dobson Rd. in Mesa.

MASTER GARDENERS, INC.

Arizona Master Gardeners, Inc., is a new non-profit organization that grew from the ranks of dedicated Master Gardeners. Why should you join? Good question! "Inc." was formed to provide us with an organization independent of the sometimes complicated University administrative structure to carry out activities and events like the Master Gardener Conference. For instance, "Inc." paid for our sale items (T-shirts, Square Foot Gardening books, and sports bottles) and conference tour expenses as soon as the bills came in. There was no need to go through university procedures to get a purchase order approved and our suppliers didn't have to wait for their money. If you have ever been involved with a big company or government organization, you understand how much simpler this was!

We are currently working out a Memorandum of Understanding with the University. The University will develop gardening information and make it available through their Horticulture Specialists. This means that Inc. members can answer questions, speak to public groups, have garden fairs, or sponsor events that are not University activities in addition to performing duties in the Master Gardening program. We hope you will want to join Inc. because of the many new benefits and activities. Possible nursery discounts, additional educational tours and plant sales are all in the planning stages. Best of all, your participation in many of the events will count towards your volunteer hours. Nationally, there's a trend towards Master Gardeners organizing into private non-profit corporations like ours. No one will be penalized for not being a member...but you may receive discounts for some events if you join. A Fall meeting date for everyone to hear more about Master Gardening Inc. is in the planning stages.

The Board of Directors for Arizona Master Gardeners, Inc. includes Sam Kelsall (Chair), Shan Hays (Treasurer), Carole Burtchaell (Secretary), Marlene Hooper, Don Copelan and Joe Velazquez. Membership is \$24 per year or just \$8 for the rest of 1993. Contact any board member or write for more information to:

Arizona Master Gardeners, Inc.
P. O. Box 41944
Mesa, Arizona 85274-1944

THEY'RE BACK!

It's that time of year again when whiteflies descend on our vegetables and ornamentals. While many gardeners have noticed them in July rather than late August as in past years, so far we've been spared the "white snow" level of whiteflies. But judging by calls coming into the office they are creating quite a problem in the garden. Lenora Boner, MG, reports "one woman called in recently saying that her garden was literally infested and all her squash, beans, and tomatoes were dead."

What to do? First try the always safe one tablespoon of liquid Dawn™ dish soap per gallon of water, preferably with a hose end sprayer or spray bottle once a week. Saturate the under side of leaves where the nymphs are feeding. If your infestation is heavy you can double this dose. Tests indicate you can go up to a 2% solution which is 5 tablespoons of liquid dish soap per gallon once a week, but usually two tablespoons is just as effective as the higher dosages as well as safer. Levels above a 2% solution can cause burning of plant foliage. Be careful to measure your water first before adding Dawn™ or you can end up with a higher dilution!

Many Master Gardeners have found other ways in addition to the soap sprays to help gardens survive. The use of floating row cover keeps the whiteflies out and is useful for many plants like tomatoes and beans that do not require the help of bees for pollination. Be sure to use the soapy water first to prevent building up a whitefly colony under the row cover! Check periodically to be sure a reinfestation hasn't occurred. Master Gardener Mark Miller has been experimenting with Saf-T-Side™, an emulsified oil that controls whiteflies and appears safe for use even in our high summer temperatures. So far he has been satisfied with the results. Other gardeners have tried Garlic Barrier™ with good results. We've all often heard of the effectiveness of planting garlic and other herbs to ward off pests so it makes sense, when you think of it, that this product might work.

Realistically, whiteflies will be with us for awhile. What works best for you may be a combination of all or some of the above suggestions to help your plants survive until the weather cools.

Gail Morris
Master Gardener

ALL ABOUT HERBS

The **onion** family is in a class by itself. They all require fertile, moist soil in a weed-free environment. They have a long germination period and weak emergence, so be patient! Plant mid-October to mid-December. After they are established they grow effortlessly, troubled by few pests.

Shallots and **leeks** are sometimes called the gourmet's onion. They have a milder, more subtle sweet flavor than onions and are easier to digest. Both can be harvested as needed. If you have an excess, simply chop them coarsely and freeze in baggies.

Elephant garlic has a much softer and milder flavor than pungent regular garlic and is actually more closely related to leeks than garlic. Garlic and elephant garlic require at least a six month growing season before harvesting.

When everything is garden ready try this recipe:

"Abuela Maria's Chicken & Sour Cream Enchiladas" Mike Hills, AZ Herb Association

- 10 chicken breasts - stewed with chopped onion & celery. (Save broth for soup.)
- 4 cans Cream of Chicken soup
- 2 pt. sour cream
- 2 small cans chopped green chilis
- 6-10 chopped green onions
- 2 whole shallots - minced
- 5 single cloves elephant garlic - minced
- 2 tsp. finely chopped fresh oregano
- 2 Tbsp. chopped garlic chives (Add as garnish)
- 4 cups mixed Jack and Cheddar cheeses - grated
- 22 corn tortillas
- cooking oil - vegetable (olive or herbal)



Mix soup, sour cream, chilis, green onions, shallots, garlic and oregano, and warm on stove to mix well. Dip corn tortillas in hot oil to soften and set aside on paper towel. Lay tortillas on counter, put chicken (shredded), cheese and sauce on each tortilla and roll up. Coat baking dishes with light layer of olive oil and a thin layer of sauce. Lay rolled tortillas in baking dishes, pour on the remaining sauce and top with cheese. Bake at 350° for 40 minutes. Serves 10.

Jackie Wilcox
Urban Gardening

1993 MASTER GARDENER EDUCATIONAL TOUR

Mark your calendars! November 11-12 has been set for the 1993 Master Gardener Educational Tour. This year we're going to get to see a different segment of Arizona agriculture, geography and local culture. Dr. William Frost, County Extension Director for Gila County, has planned the proposed itinerary. We'll leave early the 11th and spend the morning at the Boyce Thompson Southwestern Arboretum in Superior. Then we'll proceed to Miami (pronounced Miama) to look at the mine's efforts at reclaiming the tailings and grazing cattle on them. That evening we'll do the Globe Community Dinner Theater.

Friday morning we'll continue to the Tonto Basin and visit a ranching operation followed by the Tonto National Monument and a tour of the cliff dwellings. Finally we'll drive to the dam at Lake Roosevelt and return to Phoenix by way of the every popular, ever winding, ever steep, ever narrow, never paved Apache Trail. Sounds great to me! More details to follow.

Terry H. Mikel
Extension Agent, Horticulture

LOGO CONTEST EXTENDED

We need a new logo! A few Master Gardeners and the Desert Botanical Garden feel the agave plant used on different MG items for the last three years too closely resembles the trademarked agave used by the Desert Botanical Garden. Our new logo must be easily identifiable, crisp and simple. This graphic would then be used for MG badges, The Communicator (this newsletter), our letterhead and other MG items. Please submit as many designs as you wish by September 30th. Entries will be voted on by MG's from around the state. Deliver entries or mail to:

Master Gardener Logo Contest
4341 E. Broadway Road
Phoenix, AZ 85040

Gardening in Arizona requires a lot of moisture--usually in the form of perspiration.

Jack Blake, Master Gardener

1993 MASTER GARDENER CONFERENCE

The third annual Arizona Master Gardener Conference was held August 5, 6 and 7 at the Arizona Biltmore Conference Center. Master Gardeners from 9 counties in Arizona and a few Master Gardeners from Nevada and California participated as well as many members of the gardening public.

In her keynote address, Mary Irish, Director of Public Horticulture at the Desert Botanical Garden, challenged Master Gardeners to devote their resources and energies to creating desert gardens utilizing ambitious design with arid plants. To help meet that challenge, gardeners were offered 18 speaker topics and four workshops ranging from tree care and rose production to landscaping for wildlife and horticultural therapy. Kent Newland gave an enthusiastic narrative and an excellent slide show to illustrate his personal "Searching for Botanical Wonders," primarily in Mexico and Baja California. Master Gardeners Carrie Nimmer and John Nagle featured lively discussions on "Desert Colors from Around the World" and "Ponds and Water Gardening" respectively.

During the Thursday luncheon, the conference honored **John Augustine** of Desert Tree Farm and **Ron Gass** of Mountain States Nursery for their work in developing and making commercially available desert plants for our region. Proclamations declaring "Master Gardening Week" from Governor Fife Symington and "Master Gardening Days" from Mayor Paul Johnson were read and displayed.

Friday's luncheon featured a spectacular raffle drawing and door prizes for nearly everyone in attendance. The highlight of the luncheon program was a Master Gardener fashion show, a humorous display of whimsical gardening fashions. Beginning with the crowning of the "Queen of Compost," Carolyn Chard, the fashion show featured outfits ranging from Shelly Rada and Mark Corona's "pond attire" to the "Bug Lady" selection modelled by Donna Ellsworth. Patty Hart and Gail Morris modelled their original sunflower outfits.

The tours to Frank Lloyd Wright's Taliesin West (with entertainment by Marshall Trimble), Desert Botanical Garden's Desert House, the Biltmore grounds, Desert Tree Farms and Baker's Nursery

completed the educational process. Master Gardeners presented Jim Baker with a 70th birthday cake and Jim Baker and his family provided a surprise buffet lunch and door prizes. It was a perfect ending to an educational, innovative and enthusiastic three-day conference.

A huge applause and **THANK YOU** to Karen Tsutsumita, Chair of the 1993 Conference and her extraordinary committee. The support of Terry Mikel, the Maricopa County Extension staff, and all the dedicated Master Gardeners combined to make our conference an overwhelming success.

Barbara Adler
Master Gardener

The first planning meeting for the 1994 Master Gardener Conference is on September 22, 1993, at 9 a.m. at the Cooperative Extension office. If you are interested in helping, please plan to attend. Help make next year's conference the best ever!

INTERNATIONAL MG CONFERENCE

Carolyn and I had a wonderful time at the 1993 International MG Conference August 12-15 in San Antonio, Texas. Arizona was well represented! MG's Lucy Bradley, Carol Burtchell and Nelda Caldwell attended, as well as Extension Agent/MG Coordinators Thomas DeGomez from Coconino County and Robert Call from Cochise County. Joanne Littlefield was an invited speaker and gave a talk on "MG's in the Media". Over 600 MG's and University Extension personnel from all over the U.S., Canada, and Mexico attended.

Most exciting were 2 awards we brought home. The **Rock Springs Sweet Onion Festival**, organized by MG John Ward, won 2nd place (\$300) for the Consumer Education Award. The **Lowell School & Urban Wildlife Habitat Project**, organized by MG Lucy Bradley, won 3rd place (\$100) for the Environmental Program Award.

At the September 29th Update (Wednesday 9 a.m. to Noon), we will share with you all the information we learned.

Donna Ellsworth
Ag Program Coordinator

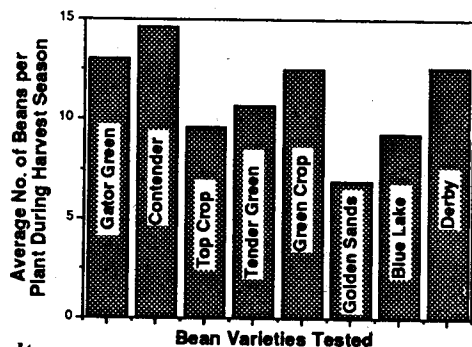
VARIETY TRIALS

The BIG QUESTION vegetable and flower gardeners always have is, "What varieties grow best in my area?" This is difficult to answer in the Desert Southwest since most seed companies find our region too small to have variety trials of their seed stock tested in our climate. I was excited to see that George Brookbank and the Pima County MG's are doing variety trials at the Extension Garden Center and have Peto Seeds interested in providing seeds. In the mean time do your own variety trials. Even garden-to-garden we create micro-environments with our own special surroundings and growing conditions we have developed. Terry and I did a bush bean trial last March. Below are the details and our results.

Materials and Methods

Planting date: 3-29-93.

Eight bush bean varieties (see list below) were planted in blocks of 7 rows (6" apart), 9 plants across (6" apart). This gave a total of 63 plants per block. Nitrogen sidedress was applied on 4-12 and 5-10. Beans were harvested every 5 days and individual beans counted for yield from 5-24 to 6-24.



Results

While Contender was the top producer, individual bean quality was not as good. These plants opened up and laid over, causing beans to curl. Perhaps this growth habit also improved production because bees pollinated this variety more consistently since blooms were more exposed. The taller varieties were more crowded and shaded than the shorter varieties, especially at the tight spacing we used. Keep in mind when doing trials that results can be affected by many factors and there are many conditions which may change your results.

Donna Ellsworth
Ag Program Coordinator

FARM & HOME

Upcoming topics on **Farm & Home**, KTSP (TV-10) 5:30 a.m., Saturdays:

- Lowell School Wildlife Habitat
- Planting Onions
- Fall Planting Tips
- Saguaro Research
- Growing Iris

Take a few minutes and set your VCR. Remember watching **Farm & Home** counts towards your educational hours as a Master Gardener.

A GOLDEN OPPORTUNITY!

In the Kingdom of Humus - straw is turned into gold, "black gold!" Of course, I'm referring to the making of humus (i.e. compost) and you don't have to be named Rumpelstiltskin to help us accomplish this wonderful task! There is a mountain (almost) of straw in our back lot which is just waiting to be mixed with grass clippings, etc. in our compost bins. The large, motorized composter should be in place by the greenhouse and small demonstration bins of varying types will also show visitors their home composting options. We are starting to keep records on the type of materials used, watering & turning times, temperatures and speed of decomposition. If you want to help with this project put your name on the schedule sheet when you're in the office or call Carolyn, the "Compost Queen," at 255-4456, extension 309.

VOLUNTEER OPPORTUNITES

Phone Assistants are needed at the Extension Office on Wednesday and Thursday afternoons. Contact Carolyn Chard.

MG Class Notebook Assemblers are needed to help with clerical work involved with assembling MG notebooks for upcoming classes. Prefer someone who can volunteer on a regular basis once every week or two. Contact Donna Ellsworth.

Experienced speakers are needed to give **Horticulture Talks** to clubs, groups, or at libraries. Contact Joanne Littlefield.