

# Yavapai Gardens

June 2000

Master Gardener Newsletter

## Grass



*Raceme*

*Flower Forms*

Many of you are aware of my continuing war against grass, in particular bermuda grass (and everything else that needs to be mowed.) But there are a large variety of grasses that are wonderful accents to the garden (and you don't have to mow them!)

First, a little general information—If you know any botany, you may know that grasses are in the family Gramineae. In the landscape, though many of the plants we use are grasslike and may belong to other families, the most common are the mondo

grasses Ophiopogon, Liriope, sedges, rushes—even members of the lily family can have grass-like foliage. Today we are sticking to the true grasses.

Grasses can be annual (rye grass,) biennial (there are few biennial grasses) or perennial (bluegrass, bermuda.) Aside from those categories, grasses are also either warm season or cool season. Here in Arizona we use the cool season grasses in the winter, grown over dormant warm season grasses. But wait, we are drifting into that lawn stuff again. Let's move on.

One of the wonderful things about grasses is that they can add a lot of color and shape to the garden. The

plants can vary from tall, upright sculpture shapes to arching mounds. Colors can vary from grassy green to golden yellow, brown and red, to variegated varieties.

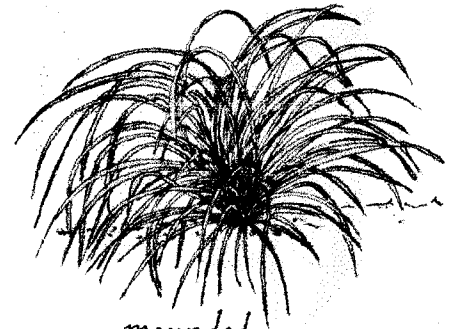
Now for a little botany—the stem of a grass is called the culm. This carries the leaves, flowers and seeds. The flowers are arranged in a number of different

"patterns;" panicles, racemes, spikes, and unilateral spicate branches are only some of the types. (See pictures.) These flowering structures can be a number of different colors also. Grass pollen is distributed almost exclusively by the wind as most hay fever sufferers are aware.

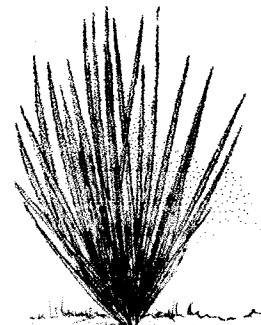
Grasses generally bloom between May and July, with some blooming into November even blooming in the winter.

While most people think of grasses for lawns, they can be used in a variety of other places. Even those with a minimum of space can use grasses as they can be grown in containers. A place can be found for them in rock gardens, meadows, wildlife gardens, cook gardens and even ponds.

So now that I've talked you into



*mounded*



*upright divergent*



Spike with 1  
spikelet at each node

trying some grasses in your landscape—how do you decide which to use? Find something that works in your climate. Check to make sure its fully grown size will fit into your landscape. Some varieties can be quite large while others are small. Consider how much maintenance it takes and its growth patterns. Varieties can send out runners or self-sow and soon you have lots of grass where you don't want it. In our climate some

grasses can be mostly evergreen while others die back in the winter creating interesting sculptural shapes.

Planting is determined by the type of grass—warm season grasses should be planted in the spring, cool season grasses should be planted in the fall. You can plant warm season grasses in the summer but cut back the foliage by a fourth or third and water well.

By using native varieties, you will not have to do much to your soil. In fact, most grasses adapt well to a variety of conditions. After planting, just keep them watered; a mulch will help keep the soil moist. Routine watering will cause the grasses to grow quickly and lushly. Cutting back on the water will slow the growth and the size of the plant.

Grasses benefit from a severe cutting once a year. This mimics the natural conditions of fire or grazing in their native environment which they are very adapted to and is necessary to encourage new growth. Wait until late winter to prune them back to the ground. By waiting until just before the spring growth starts you can also enjoy the grasses with their golden stems and dried seedheads. This is a place you can use your string trimmer without fear of damaging the plant.

I didn't have time to check at the nurseries to see what is available in the area, but here are a few you might want to look at:

**Blue fescue (*Festuca ovina var. glauca*)**—this is a wonderful blue-green colored grass that creates mounds between 6 and 10 inches tall. It is great for borders or creating a natural uneven, bumpy, natural effect over a larger area. It will need extra water in zones 7 through 10.

**Maiden grass (*Miscanthus sinensis*)**—This is a tall grass, up to 6 feet, with lacy flower heads that can be dried. Some varieties have variegated foliage.

**Fountaingrass (*Pennisetum setaceum*)**—Most of us are familiar with fountain grass. The familiar variety is huge with white flowers but today they have created smaller versions with different colored flowers. These can self-sow and I have heard can become invasive and displace native plants. Cut the flowers back before seeds can form.

**Blue wheat grass (*Agropyron magellanicum or Elymus magellanicus*)**—Another blue-green grass but with a more blue metallic appearance. It forms clumps 1 to 1 1/2 feet tall and wide. It's an excellent accent plant because of its color. It is evergreen in mild climates.

**Blue grama (*Bouteloua gracilis*)**—Blue grama is a native to much of the western United States. It is one of my favorites because its flowers are like little flags flying in the breeze. It can work as a lawn grass in some areas. The plants only reach 12 inches high.



Unilateral spicate  
branches

These varieties are just the last snowflakes on an iceberg. The grass family is huge with something for every need. Check with your local nursery to see what varieties are available or check native plant catalogs for other types available. Spend your summer days in the hammock and not behind a lawnmower.

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# Warm Season Lawn Mowing

(for those who like mowing)

By: Jeff Schalaus, County Director, Agent,  
Agriculture & Natural Resources

Midsummer is the peak of the warm season turf growing calendar. Warm season grasses lie dormant all winter. Once the mercury begins to rise in mid-April, warm season turf grasses begin to green up. They grow vigorously through the summer then slow down and ease into dormancy in mid-October. Varieties of warm season grasses that are well-suited to the Verde Valley are bermudagrass, zoysiagrass, and buffalograss. St. Augustine is also a warm season grass but is not recommended for our area.

Many lawn owners are misinformed about how to care for turf. The most common misconception is: mow your lawn as short as possible to avoid frequent mowing.

Low mowing actually stimulates turf growth and triggers a stress response in the grass. This stress is a negative effect on the grass and increases water consumption, increases fertilizer (nitrogen) demand, and reduces lawn density, allowing weeds to establish.

Correct mowing height is determined by the species and variety of grass being grown. Common bermudagrass should be mowed 1 to 1 1/2 inches in height during normal weather and 1 1/2 to 2 inches during high temperature periods. Hybrid bermudagrass should be mowed 1/2 to 1 inch in height during normal weather and 1 to 1 3/8 inches during high temperature periods. Zoysiagrass should be mowed 1 to 2 inches in

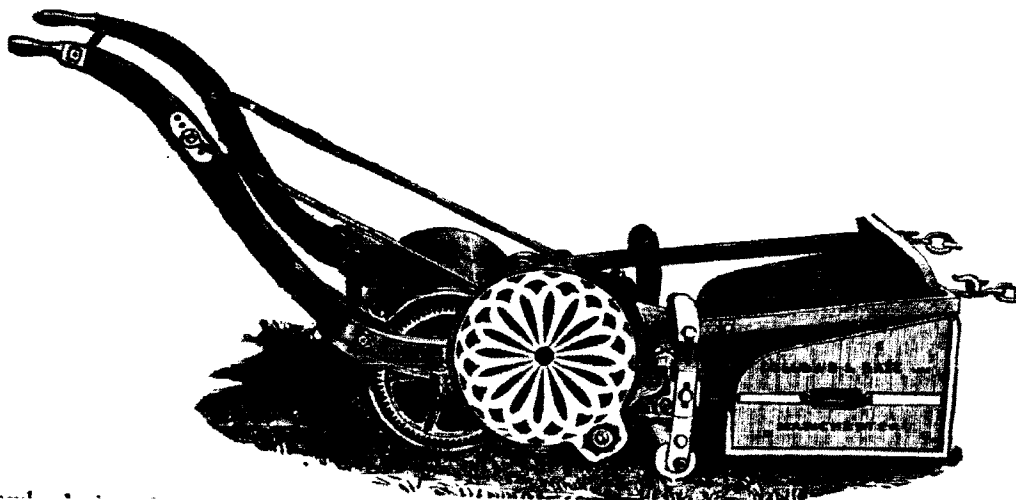
height during normal weather and 1 1/2 to 2 1/2 inches during high temperature periods. Buffalograss should be mowed 2 to 3 inches in height during normal weather and 3 to 4 inches during high temperature periods.

The number one rule of lawn mowing for all species and varieties is: never remove more than one third of the height of the grass at one mowing. If more needs to be removed, do it gradually over the next couple of mowings. The longer the blade length, the more leaf area the plant has. Greater leaf area allows it to produce more photosynthate (sugar) and store more energy in the roots. This stored energy is a reserve that allows

the grass to survive stressful periods. Grasses don't thrive on mowing, they merely tolerate it.

The number two rule of lawn

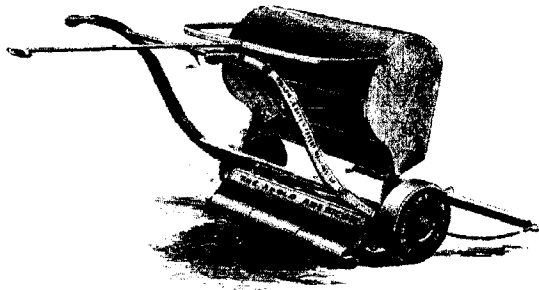
mowing is: keep the lawn mower blade sharp. Dull lawn mower blades whip the grass rather than slicing it cleanly and caused what Dr. David Kopec, University of Arizona Turf Specialist, calls the dreaded silver leaf tip disease. Most homeowners have rotary lawn mowers. These have a single blade that rotates at high rpm on a plane parallel to the lawn surface. The other style of mower is the reel type. Reel mowers are designed for close mowing (less than 1 1/4 inches.) These have several blades arranged in a circular, twisted pattern



that snips the grass against a fixed blade called the bed knife.

Lawn mowers are dangerous and care should be taken when using them. Follow the instructions that came with the mower and do not remove any of the safety equipment. Before sharpening the blade(s) always disconnect the spark plug wire or unplug the mower. Sharpening the blade on a rotary mower is not difficult but the blade needs to be balanced as well. Reel mower sharpening is more difficult and requires more specialized equipment.

Contrary to popular belief, leaving the grass clippings on the soil surface contributes very



little to thatch build-up when proper mowing is practiced.

With proper mowing height and frequency, clippings will decompose rapidly. However, excess clippings left on the lawn will weaken the turf. If long blades are sitting on top of the grass, then they should be removed. Mulching mowers chop the clippings in finer pieces and increase the decomposition rate. At any rate, allowing clippings to stay on the lawn will decrease fertilizer needs by up to 25%.

Some final lawn mowing tips: Avoid mowing wet grass, but during rainy weather it is better to mow the grass wet than let it get too tall. If it does get too tall, cut only one third of the total height at any one cutting. You may even need to only cut a one-half to three quarter swath rather than full width. When leaving the clippings on the lawn with a side discharge mower, mow in the direction that puts clippings onto the area that has already been mowed rather than concentrating the clippings in the center of the lawn.

Cool season grasses are somewhat dormant during the summer. Most of this information (aside from mowing heights) can also be applied to cool season turf types.

## The Arbor

Arbors are great places in which to spend your summer. Open to the breezes but with a cooling cover of vines, they are a great at home -picnic area. Creating a simple arbor is not that difficult, although it is labor intensive. This might be a project for a couple of friends over the weekend.

Before construction, select the site and measure it out. Find a site that avoids the wind. Vines fully leafed out can be quite heavy. If you live in a windy area, make sure your construction can support all the vines and withstand the wind also. In selecting the site, look for an area that the arbor will fit into. Just sticking it out in the middle of the lawn will look strange. If it is one of the first parts of your garden you are putting together, make sure your landscape plan is organized around, or an integral part of, the arbor.

While there are lots of fancy plans for arbors out there, this one takes only straight cuts with the saw. You will need a good saw, drill, hex-headed screws and dry wall screws or other wood screws. (You can use nails instead of screws but I find screws are better, in the long run, at holding things together)

You can make this arbor as long or as short as you want.

Supplies you will need:

4 x 4 x 10 posts—these are going to be sunk into the ground as the main supports for the arbor. Pressure treated wood can be used or, if you are more construction minded, concrete pillars can be poured and the wood attached to them. Putting the timbers directly in the ground with no treatment will cause them to rot fairly quickly. You will need 2 beams for each eight feet of your arbor.

2 x 6 crossbeam—three for each pair of 4 x 4's, plus one. (Length will depend on how wide your arbor is going to be.)

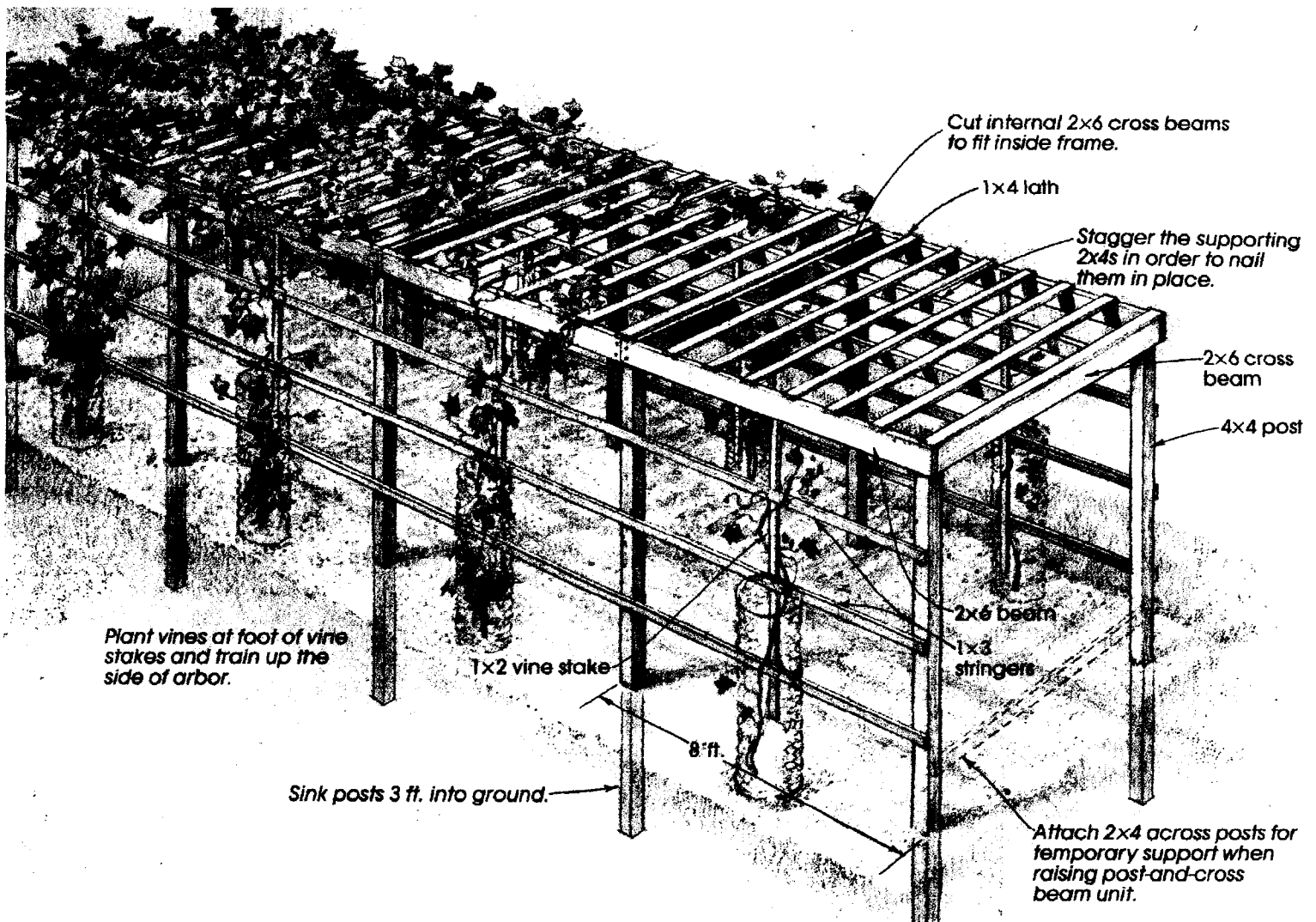
2 x 4's—two for each eight foot section.

1 x 3 x 8—for sides—6 for each 8 foot section

1 x 4 lath

If you don't use pressure treated wood, you will need to stain or paint the arbor.

Dig the holes for the posts three feet deep. Raise the posts two at a time. First, attach a 2 x 6 cross beam to the top of the posts before putting in place with the hex-headed screws. Pre-drilling the holes will make this job easier. Nail a 2 x 4 about 4 feet from the bottom of the posts—this is to help stabilize the uprights only—you will be removing it later. Use a level to make sure the posts are vertical. Pack the soil around them. Continue this process the length of the arbor. As each new posts go in attach a 2 x 6 between the first set of posts and the second (and so on) to make sure everything is level and square. Then fill the hole on the second set of uprights. After this framework is completed cut 2 x 4's to fit between the 2 x 6's at the top. This will add extra structural support. Screw or nail into place, two per section. Nail or screw in the 1 x 4 lath along the top and attach the 1 x 3 pieces on the sides. The lath on the top and the pieces on the sides will support the vines. If you haven't treated the wood, paint the structure, let it dry, plant your vines and pull up a lawn chair and watch them grow!



# CORN EARWORM

At this moment your corn is probably, at best, a foot or so high, if you have even planted it yet, but the dreams of fresh sweet corn are already tantalizing the taste buds. To make that dream come true will take a lot of luck, patience and hard work. One of the things that can ruin the dream is the corn earworm. I'm sure most of you have seen the results of the earworm's activities. Sometimes (if you are not really squeamish) you can simply cut off the bad portion and still eat the rest. Other times, the damage may be too severe.

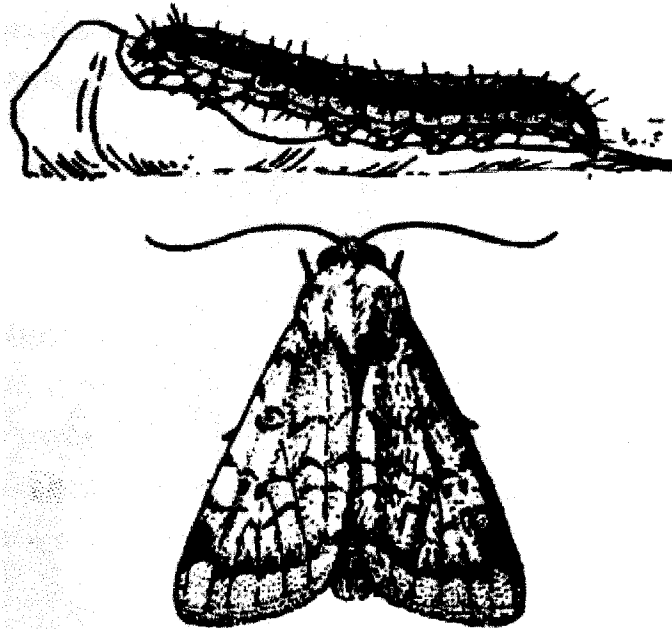
The corn earworm is found throughout North America. The adult moths are greenish-gray to brownish, with black markings on the forewings. These night flying insects have an inch and half wingspan. The eggs of the moth are light brown or yellow, domed and ridged, and laid singly on plant leaves and silks, usually one egg per ear. It takes two to ten days for the eggs to hatch into caterpillars. They are about 1-1/2 inches long when mature and are green, brown or pink with light stripes on the sides and back. First they feed on the leaves of the plants then move to the silks and then the kernels. Corn isn't the only plant that the earworms like. Beans, peppers, potatoes, squash and tomatoes are favorites also. When found on tomatoes they are also called tomato fruitworms.

For those fortunate to live in colder climates, generally a single wave of insects moves North from southern areas where they overwintered. In warmer areas there can be up to seven generations per year. After the worm feeds about four weeks it then drops to the ground where the pupa winters (in colder areas) 2 to 6 inches below the surface of the soil.

The earworms chew buds and leaves, causing plants to be stunted. They enter corn ears at the tip and work their way to the kernels.

Fortunately, there are a number of things you can do to reduce the damage by the caterpillars. The moth is a night-flyer and is attracted to lights. If you have any lights on near your corn, turn them off. No point in advertising— **This Way to a Great Meal** →. Another way to help control

them is to till the soil down at least six inches in the fall to kill the pupae. Attach a clothespin or rubber band to the top of the ear after the tips of the silks have turned brown to close off entry to the earworm or plant a variety that has particularly tight husks. Apply about 1-2 drops of mineral oil inside the tip of each ear after silk has wilted or control with *bacillus thuringiensis* (Bt) on vegetables. One of the problems with



*Corn earworms. Larva and adult.*

the mineral oil is that it should probably not be applied when the temperatures go over 90°F. Don't apply the oil too soon (wait till the silk tips turn brown.) Pirate bugs, damsel bugs and trichogramma wasps are natural controls that can reduce damage. There are pheromone traps available to tell you when the adults are flying but I am not familiar with them and do not know how effective they are in this area. I have read that the chemical is unstable and the traps have to be replaced frequently. If you have used them, let me know how they worked. There are insecticides that will also control the worms; look for a dust that has carbaryl in it. Follow the directions on the label for use.

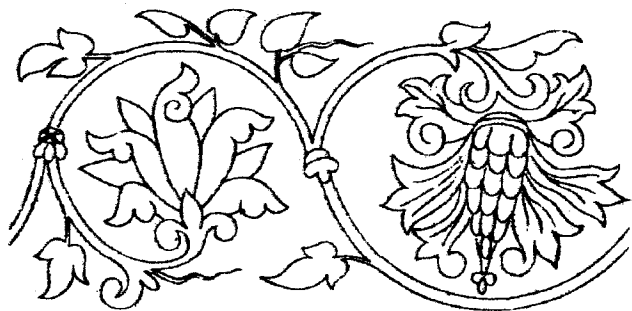
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# Events & Activities

**June 19—Yavapai Rose Society**, 2pm at the First Christian Church, 1230 Willow Creek Road, Guests are welcome and there is no charge. For more information call Bob or Nancy at 771-9300.

**June 17—EXTRA! EXTRA! Free Knowledge**—Like the rare and unusual? Do you love discovering the hard to find? Is talking about plants your favorite pastime? Then come with a group of Master Gardeners to the 15th Annual Horticultural Fair at the Arboretum at Flagstaff. Interested? Please call Pattie Conrad at 778-4810 for further information. There is no admission fee to the Arboretum grounds. Lots to see, do and



learn. Don't miss this horticultural opportunity. We would miss you!

**Prescott Farmers Market** is planning to begin the fourth market season. The market will open on June 3, 2000, and through October 7, 2000. There will be no market on July 1, 2000, and, since this is open-air, weather is always a factor.

Prescott Farmers Market is open to vendors who have grown or produced their wares. In previous seasons, a variety of fresh produce has been available to consumers, including tomatoes, Swiss chard, peppers, peaches, Japanese eggplant, soybeans, gourds, herbs, and potatoes. Growers arrive from Prescott, Chino Valley, Verde Valley and the Phoenix area to sell their produce direct to customers. In addition to the produce, honey, soaps, salsa, plants, fresh cut flowers and baked goods have been available. Vendors provide their own booth sales area and tables and the market

set-up begins at 7:00am, with the market closing at noon. Prescott Farmers Market is a non-profit organization so vendors pay a nominal membership fee and a percentage of their weekly sales to participate in the market.

Applications and further information can be obtained by contacting Prescott Farmers Market at [sebaker@yahoo.com](mailto:sebaker@yahoo.com), or calling (520) 445-1771, or writing to P.O. Box 1853, Prescott, AZ 86302.



## Master Gardener Website

You can find this newsletter along with the Master Gardener Manual, the Farm Fresh brochure plus other information at the Yavapai County Cooperative Extension Website. Go to:

<http://ag.arizona.edu/yavapai>><http://ag.arizona.edu/yavapai/>



# June Calendar

Keep roses deadheaded. Fertilize and water deeply.

Snip away at those herbs. Morning is the best time.

Plant warm-season crops: cucumbers, eggplant, peppers, pumpkins, squash, tomatoes, corn, black-eyed peas, beans and melons.

Strawberries, raspberries, blackberries and other small fruit will probably need to be protected from birds as they ripen.

Squash borers will be looking for places to lay their eggs. Look for the eggs on the vines and rub them out before they hatch.

Water trees and shrubs deeply.

Watch for spider mites. A simple hosing off of the plant should control them if you catch them early.

Check any staked trees. Make sure whatever you used isn't cutting into the plant or the plant isn't growing around the ties. If you have planted the tree correctly and watered it well, after the first year or two it should not need to be staked.

Tomatoes can start suffering from blossom-end rot. The best cure is to maintain even watering schedules. Don't let the plants wilt or suffer from the heat. This helps prevent blossom-end rot.

Plant summer flowers: marigolds, zinnias, cockscomb, globe amaranth, and salvia are all good summer bloomers.

Now is a good time to solarize your soil if you need to remove unwanted weeds and pests. Use clear plastic to cover soil. Leave in place for 3 to 8 weeks to heat soil temperature above 114°.



The "Arizona Master Gardener Manual" is now on-line. Check out <http://ag.arizona.edu/pubs/garden/mg/>

#### NOTE FROM THE EDITOR:

Let me know about your garden, the types of seeds you planted, interesting articles you found—anything of gardening interest. Send to:  
**Nora Graf**

**P.O. Box 3652  
Camp Verde, AZ 86322**

**Jeff Schalau**  
*County Director,  
Yavapai County Extension Agent,  
Agriculture & Natural Resources*

Prescott:	Cottonwood:
P.O. Box 388	2657 Village Dr.
Prescott, AZ 86302	Cottonwood, AZ 86326
(520)445-6597	(520)646-9113
FAX: (520) 445-6593	FAX: (520) 646-9108
E-Mail: <a href="mailto:jschalau@ag.arizona.edu">jschalau@ag.arizona.edu</a>	

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