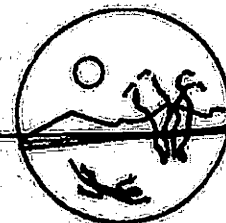


# High on the Desert

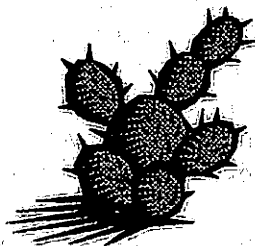
Cochise County Master Gardener

## Newsletter



The University of Arizona and U.S. Department of Agriculture cooperating.

### Prickly Pear Cactus -



#### Culture, Uses, and Fruit Peeling Etiquette

##### CULTURE

Since Prickly Pear Cactus (*Opuntia*) are a native plant, we don't ever think about giving them some tender loving care. I see so many dried up, stressed out, and fungus ridden plants every day. This is usually because they have been put in a hot dry place, never watered, and never fed. If you would like beautiful healthy plants, here are a few suggestions.

Prickly Pear, like many plants, will tolerate a variety of soils and conditions. A sunny, well-drained sandy loam will help them grow best. Protection from cold winter winds, will help them stay healthy

so they have a jump start in the spring.

##### FERTILIZER

Few of us ever think about fertilizer when it comes to prickly pear. During their growing period, spring through fall, they benefit from applications of a balanced fertilizer and can use about as much water as any of your other cultivated plants...provided they have excellent drainage. For pad production use a high-nitrogen fertilizer and for flowers and fruit production use a no-nitrogen fertilizer (0-10-0) applied once a month. Continue this fertilizer even through the winter.

We have intense summer sun, so it is best to arrange the pads so the skinny side points north and south. The sun will pass the narrow side and the pads won't get sunburned.

##### USES

Did you know that you can use the juice from the pad the same way as you use *Aloe vera*? Cut a piece from the plant, crush it, and squeeze the juice on to a wound or bruise.

If you spread the juice on water, such as a non-circulating pond, the juice will smother mosquito larvae and is said to last for up to a year. I don't know what it would

do to any fish in the pond though. You can boil or fry the young pads like eggplant or zucchini, pickle it like okra (that's the only way I will eat okra!), cut them up in slivers and cook them like green beans, add a little onion and garlic for flavor. You can even dry the fruit and make them into a flour and bake into sweet cakes.

Of course we all think of the other use...prickly pear jam! But have you ever thought of using the fruit for cactus candy, syrup, food coloring, or just eating them with a little lemon juice...which brings me to my last subject-fruit peeling etiquette. NEVER, NEVER touch the fruit directly with your fingers. It can cause you to get spines on your tongue if they get mixed with the fruit. So here is what you do. Rub the fruit with heavy gloves on or roll them in sand. If this does not appeal to you, stick them under a broiler for a minute and singe the little devils off. Put down some newspaper covered with paper towels. Stick a fork into the fruit to keep it from rolling around on you. Cut off both ends and make a slit down the middle from end to end.

(Continued on next page)

#### Cochise County Cooperative Extension

1140 N. Colombo, Sierra Vista, AZ 85635  
(520) 458-8278, Ext. 141

450 Haskell, Willcox, AZ 85643  
(520) 384-3594

Don't make the slit too deep, just through the skin to the flesh. Now the tricky part. With fork in place for an anchor, start to peel away the skin with your knife. Just slip it in between the skin and flesh and start pulling downward. Your first few attempts may result in a bunch of messy pieces, but practice makes perfect.

You're not done yet...while still on the fork, run the fruit under water, to make sure it is free of any spines. Now, pop it in your mouth, and enjoy!

*Linda Jenkins-Wensel*  
Master Gardener Associate



## Cuttings 'N' Clippings

✓ Cochise County Master Gardeners Association (CCMGA) invites Master Gardeners and Associates to the next meeting, October 7, 5:00 pm at the Mona Bishop Room of the Sierra Vista Library. Agenda:

### Old Business

wrap-up on Garden Fair,  
San Pedro House Project, and  
National Public Lands Day  
library books

### New Business

CCMGA policy memo  
holiday party

### Presentation

Video "How Water Moves  
Through Soils"

### Garden Gab

seed exchange—bring seeds  
and/or containers  
plant diagnosis—bring your  
sick or unknown plants  
round table session—  
general garden talk!



✓ CCMGA is proud to announce the donation of Southwestern books to the Jimmie Libhart Library (Bowie), the Alice Woods Library (Sunizona), the Myrtle Kraft Library (Portal), the Sunsites Community Library, and the County Bookmobile valued at \$743.

✓ In September, CCMGA also made a \$500 donation to the Dr. Jimmy Tipton Research Fund handled by the Arizona Landscape Contractors Association (ALCA) in Phoenix.

✓ The Tucson Botanical Gardens, 2150 N. Alvernon Way, Tucson, will be holding their 12<sup>th</sup> annual celebration of the chile pepper and its place in food, music, gardens and folklore, La Fiesta de los Chiles, October 17-18, 10:00 am - 5:00 pm. Tickets are available at the gate.

## Advanced Master Gardener Class

Beginning November 4 and running for four weeks from 6:00 to 8:00 pm, Rob Call, Extension Agent, will be conducting an advanced Master Gardener Class. This class is open to Master Gardeners and Associates. For more information call the Sierra Vista Cooperative Extension office.

## Frost Protection

As the nights have been getting progressively colder, our plants have been moving gradually into dormancy. A drop in temperatures followed by a rise will often slow this move and increase the chance of frost damage. Watch for unusually warm periods followed by sharp drops in temperature. During the early winter and early spring when temperatures fluctuate is when most frost damage occurs. Warning signs of potential frost in Cochise County are the same as in other parts of the country: still air, no cloud cover, very bright stars, low humidity, and low temperatures early in the evening (45° or lower by 10:00 pm).

The best frost protection strategy is to plant only those varieties that are hardy to frost. If you have already planted frost-tender ornamentals outside, you should probably move them to containers for the winter or replant them in warmer microclimates in your yard. Other frost protection strategies are cardboard boxes inverted over plants at night (removed during the day), vertical water tunnels made of plastic, and old quilts, blankets, or sheets laid over planting beds at night and removed each morning. An unusually cold spell or long, hard frost can kill or seriously injure mature trees that are only marginally cold-hardy.

*Jackie Dillon-Fast*  
former Cochise County Master Gardener

*Robert E. Call*

Robert E. Call,  
Extension Agent, Horticulture

Carolyn Gruenhagen,  
Newsletter Editor

# THE VIRTUAL GARDENER

## The Iceman Cometh

It's getting to be that time of the year when gardeners have to begin thinking about cold weather, particularly the first frost. That prompted me to go to the Western Regional Climate Center of the Desert Research Institute Web site ([www.wrcc.dri.edu](http://www.wrcc.dri.edu)) and see what I could find out about the dates of first frosts in Cochise County. What I found was a great set of tables and graphs that give the probabilities of the dates of occurrence of certain temperatures. These probabilities are calculated based upon years of weather observations made at a location. Some locations—Tombstone, Bisbee, and Willcox, for example—have records stretching back to the last century. Table 1 shows first frost data for five locations in Cochise county.

The dates shown in the columns labeled "Earliest" and "Latest" indicate the earliest and latest dates that the temperature has dropped below 32.5°F for a given location. The percentages on the other columns indicate the probabilities that the temperature will drop below 32.5°F on or before the date shown. For example, there is a fifty percent chance that the temperature will drop to freezing at Fort Huachuca on or before the 16<sup>th</sup> of November.

Knowing that on the average Fort Huachuca can expect a first frost on the 16<sup>th</sup> of November doesn't tell you anything about what will happen this year, but it does give you some pretty useful information for planning purposes. By subtracting the percentages in the top row from 100 percent, you can calculate the probability of how many frost-free days are left in the year for your location. For example, if you live in Bisbee, you can calculate that as of 29 Sep you have a 90 percent (100% - 10%) chance of having 20 (19 Oct - 29 Sep) more frost free days, which is a pretty good bet. On the other hand, you have only a 10 percent chance of having 71 (9 Dec - 29 Sep) more frost-free days, which is not a very good bet. Of course, frost-free in your garden may not be the same as frost-free at the location where the temperatures are officially measured and may even vary with locations in your yard.

In determining your risk of frost, you have to take into account the microclimates on your property. Topography has a major influence on microclimates. Since cold air is heavier than warm air, it tends to sink to the lowest possible level, flowing down slopes and along drainages and pooling in low spots just like rain water. Temperatures

will be lower in these places. Temperatures will also be affected by surrounding objects. Buildings, sidewalks, rock outcroppings, and similar massive objects store heat from the sun and release it over night, keeping temperatures in surrounding areas higher.

To protect frost sensitive plants or squeeze the last few tomatoes from your vines in the fall, you will need to cover your plants. The best materials to use are cloth and paper. Avoid using plastic since it does not provide effective insulation against frost or if you do use plastic, make sure that it does not touch the plants. One technique to provide a little extra heat on cold nights is to place Christmas tree lights under the coverings.

Until next month, happy surfing.

Gary A. Gruenhagen, Master Gardener  
[gruenha@sinoso.com](mailto:gruenha@sinoso.com)



### OCTOBER REMINDERS

- > Be ready for the first frost
- > Thin the seedlings
- > Overseed lawns
- > Plant spring bulbs
- > Divide perennials
- > Don't let weeds go to seed

	Earliest	10%	20%	30%	40%	50%	60%	70%	80%	90%	Latest
Bisbee	19-Oct	3-Nov	10-Nov	12-Nov	16-Nov	21-Nov	25-Nov	1-Dec	6-Dec	9-Dec	23-Dec
Douglas	8-Oct	15-Oct	18-Oct	23-Oct	26-Oct	29-Oct	30-Oct	1-Nov	6-Nov	10-Nov	20-Nov
Ft Huachuca	17-Oct	29-Oct	5-Nov	11-Nov	16-Nov	16-Nov	19-Nov	24-Nov	29-Nov	4-Dec	23-Dec
Tombstone	18-Oct	29-Oct	5-Nov	8-Nov	12-Nov	16-Nov	20-Nov	27-Nov	1-Dec	11-Dec	23-Dec
Willcox	21-Sep	8-Oct	12-Oct	17-Oct	20-Oct	23-Oct	25-Oct	28-Oct	2-Nov	7-Nov	27-Nov

Table 1. First frost probabilities for selected locations in Cochise County.

## The Agent's Observations

**Q** I have several cucumber, pumpkin, and squash plants that have discolored leaves and distorted leaves. I see no insect damage and have sprayed for powdery mildew. The plants have adequate nutrition and are watered regularly. What's wrong with my plants?

**A** Your cucurbits (squash and melon family) have been infected with a virus. There are several different viruses that infect this family of plants. They include: cucumber mosaic virus (CVM), squash leaf curl virus (SLCV), squash mosaic virus (SQMV), watermelon mosaic virus (WMV), and zucchini yellow mosaic virus (ZYMV). Each of these pathogens usually have several strains. Sometimes an infected plant may have more than one virus causing the symptoms. Therefore, it makes an exact diagnosis difficult with out laboratory work.

Plants will have mottled leaves, that is patches of green and yellow, often in varying hues mixed in the leaf. Whole plants and leaves are usually smaller than normal and many times deformed and fragmented. Cucumber, melon, and squash fruit are also small, stunted and colored unusually. The fruits at times will have warts and be bumpy.

Viruses can not survive outside of living organisms. They may be contained in the seed when planted, which occurs with SQMV. Insects

serve as vectors (transmittance agents) for many viruses. Sucking insects like aphids and white flies and chewing insects such as cucumber beetles and grasshoppers transmit virus particles from infected plants to healthy ones.

**Control:** Some virus resistant varieties are available; their use is advisable. Control of host plants like weeds serve as stores of viruses as well as infected crop plants. Destroy these plants as soon as symptoms appear. Control insects which transmit viruses from one plant to another. I know of no chemical or natural cures for viruses in plants. The plant many times will live in a weakened state much like what happens to humans when we get a viral flu or cold.

**Q** What can I do about cicadas? They are so loud some years?

**A** Periodic cicadas are distributed widely throughout the United States. The annual cicadas are present in summer, but the periodic species have long life cycles. A mature annual species is over two inches long, with a brown-black body, ornamented with clear wings that have green veins. Eyes are red to brown and quite large. There are six species of periodic cicadas in the United States. Three with a 17-year life cycle and three with a 13-year life cycle. When all life cycle coincide the male mating sounds can be deafening. Damage is caused by egg laying or ovipositing females in twigs and branches of trees and shrubs. Branches having a diameter

slightly larger than a pencil are preferred. A series of wounds are made in which eggs are laid. Weakened branches can break off or become permanently scarred and abnormal. Over 500 eggs can be deposited by one female. Nymphal cicadas hatch and then drop to the ground, burrow in to the soil, and feed on root sap. Depending on the species they will remain in soil for 17 or 13 years. At the end of this time they emerge from the ground through soil tubes they construct that are nearly a half an inch wide and a quarter inch high above the ground. Great numbers emerge at the same time, starting at dusk. They crawl up tree trunks or other objects, expand their wings, and begin their short adult life. The familiar song or call is made only by the males and is produced by a pair of drum like organs on the basal segments of the abdomen. These "love calls" can become very loud. Mating occurs and then egg laying begins, completing the life cycle.

**Control:** Winter pruning and destruction of damaged limbs or twigs that contain eggs may decrease the population. Where feasible, valuable plants may be protected by covering them with shade cloth, cheesecloth, or hardware cloth. Natural enemies include birds, fungal diseases, and the cicada killer wasp, which kills some adults. Other predatory insects and mites may attack the eggs.

**Reference:** *Insect Pests of Farm, Garden and Orchard*. 1987. Davidson and Lyons. John Wiley and Sons. New York. Pp. 373-376.

*Robert E. Call*  
*Extension Agent, Horticulture*

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# Thank you!!!

National Public Lands Day (NPLD), Sept. 26, was a big success—especially for the Master Gardeners. True to their credo of educating the public, seven dedicated Master Gardeners and Associates taught hands-on planting techniques to approximately fifty volunteers. Buffalo Soldier Trail (BST) was the “training site” and if practice was needed, the volunteers (and MG’s!) had the opportunity to practice with 370 plants to plant! Armed with the new planting standards, Sal Valverde, Angel Rutherford, Janet Jones, Helene Wingert, Lorraine Groberg, David Hoggett and William McCraney braved the hot sun, hard soil, and gusty winds. The city of Sierra Vista had the holes pre-dug (which was a HUGE help), but it took some time to fill the holes back in and attempt to enlarge the diameters to make the holes just right. The challenge was to give the plants the best growing environment possible as the city is trying this landscape without installing an irrigation system (they will be hand-watering to get the plants established).

The Master Gardeners/Associates taught the volunteers how to determine if the hole was the right depth, how to prepare the plant for placing in the hole, how to replace the soil around the rootball, watering in (thanks Clyde Russell for those 30 water jugs!), mulching with chip gravel and berm building. Angel had the honor of counting City Councilman, Cecile Carlile, as part of her group. He has, by the way, a prize Queen of the Night Cactus (*Pentocereus greggii*) he’s offering a piece of to the Plant Sciences Center for propagation.

Sal commented that he felt like a mountain goat as he got saddled

with the two sites that were practically vertical—but he was still going strong at 3 pm! Janet became a bit apprehensive when she and her high school volunteers were separated for the afternoon planting, but her apprehension was lifted when the kids said, “Janet—you taught us so well in planting our west section, we could plant on our own on the east side.” One of the best comments came from Pat Bell, Sierra Vista’s Environmental Services Director. He related that at least a dozen volunteers told him that the Master Gardeners were very patient and the volunteers had learned a lot from them. So, many thanks to all that helped make our part of National Public Lands Day a success—all those sore muscles were worth it!

*Cado Daily*  
Master Gardener



## San Pedro House Project

Bright and early on Saturday September 19th, approximately twenty folks to include volunteers from the community,

BLM folks, The Friends of the San Pedro River, and Master Gardeners/Associates gathered to install an Urban Wildlife Habitat Demonstration Garden at the San Pedro House, part of the San Pedro Riparian National Conservation Area, located off of Hwy 90.

The morning started off with a short demo on how to plant a five-gallon desert willow (*Chilopsis linearis*). After everyone received a

packet consisting of the U of A Planting Standard Guidelines, a list of Low-Water Use Xeriscape Plants for Cochise County and guide on Xeriscape Principles, courtesy of the WaterWise Program, and a list of places in Cochise County to buy native plants and books, we broke off into partners and proceeded to get busy!

Plants used were chosen for their wildlife attributes such as providing seeds and fruits for birds and mammals, nectar and larval foodplants for butterflies, nectar for hummingbirds, and general wildlife browse and shelter. The plants also needed to be cold hardy, heat, and drought tolerant.

Weeks earlier the area was cleared of weeds and the week before planting, mulch was delivered and spread out. The areas near the house were mulched with decomposed gravel 3 to 4 inches thick. Further away from the house a thick layer of compost mulch from the City Compost Facility was placed. Usually an area is planted first, irrigation is installed, and then mulch is put down last. With over 20,000 square feet of area to be planted and mulched it was easier to break down the tasks into manageable sections. It wasn’t too difficult to rake back the mulch, dig and plant, berm, water, then remulch.

Because the area will be hand-watered until establishment, two water berms were made for each plant, with the exception of the cacti and succulents which were watered in and then mulched. The first berm was just outside of the rootball. This was to concentrate the water around the roots so they would not dry out. The second berm was constructed about 6 to 12 inches around and out from

*(Continued on back page)*

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the first berm. This was to apply the water at the interface between the rootball and native soil. Generally roots will not penetrate dry soil so watering this second berm will hopefully entice the roots to grow!

Following the U of A Planting Standard Guidelines one-gallon container holes were dug out 2.5 feet wide and five-gallon container holes were 4.5 feet wide. The depth of the hole was determined by carefully removing the plant from the container to check the depth of the rootball. Some plants were so rootbound that the bottom inch or so had to be cut off. Other plant rootballs had not quite filled out the pot and the soil would fall away and reveal the true story of the rootball system. And then there were some plant rootballs that were just right! Backfill used was the same native soil that was dug out without any added amendments.

It was very satisfying to see how soon the wildlife came to visit the new garden. The barn swallows would perch on the tree branches and the hummingbirds immediately claimed the ocotillos as lookout towers around the feeders. The very noisy Gila Woodpeckers came to inspect and the butterflies started floating around when the watering began so they could puddle—in fact, a Queen butterfly just could not wait to sip nectar from the pineleaf milkweed while Master Gardener Gwin Garcia and her son were trying to plant it! Within the next few weeks benches will be installed, interpretive plant signs will be in place, and a plant list will be available to visitors.

As the MG chairperson on this project I would like to send a very BIG thanks to everyone who participated, especially to the Master Gardeners/Associates. I received

favorable comments from Dorothy Morgan, Outdoor Recreation Planner, BLM, and Jack Whetstone, BLM, who were impressed by the professionalism, patience, and hard work you displayed. Thanks for representing the CCMGA so well! Special thanks also to The Friends of the San Pedro River for providing lunch, to the BLM staff and BLM's Dorothy Morgan with whom I had the great pleasure of working with on this project, and to Mary Jo Cox for ordering and arranging delivery of the plants. And finally the wildlife sends their thanks and gratitude—come visit them soon!

*Cheri Melton  
Master Gardener*

