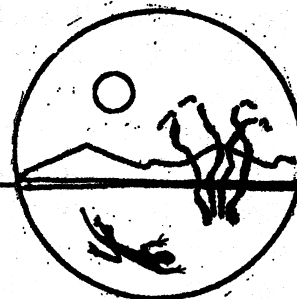


High on the Desert

Cochise County Master Gardener

Newsletter



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

The "Ice Man" Cometh

Preparing for Jack Frost

What we do in our fall garden will greatly affect the success of our gardens next spring, so don't put off putting the garden to bed, so to speak!

Till in what is left of the plants after you have harvested the fruit and vegetables from them. If you leave the plants where they are now, you will create a haven for insects, worms, and diseases. After the plants are tilled into the ground, microorganisms will break them down so they will become part of the soil. You can also put the plants on the compost pile.

If you can, plant a cover crop or an alternative. An alternative that is recommended is to mulch the areas you are going to plant in the spring. It will make the soil much easier to work. It will also act as a herbicide and discourage unwanted guests such as garden pests and diseases.

With your winter crops such as broccoli, cabbage, Brussels sprouts, celery, lettuce, beets, and carrots plant a cover right in with them such as annual rye grass. Do not put the rye grass seed into the very same holes you plant the winter crops. You might sow the rye in a separate row between the crops.

Now we are faced with a real dilemma. What will we do with summertime plants that

were not hit by the early frost? Should we pull them up to make space for the wintertime vegetables? Even if we have had a mild start to winter weather, we know to expect more severe and damaging freezes in the next few weeks. Should we gamble?

Remember last spring plants took a little longer than usual to get established. Well, a similar period this coming spring can be avoided. Preserve your old summer vegetable plants by repotting them into five-gallon buckets before Jack Frost gets to them. Now remember that many of the harmful bacteria and fungi that we are trying to avoid in our plants are helped along by having the very same soil in the containers also available to them. We have to take as much of the soil off of the plants, being careful not to injure them, and add new soil to the containers.

Prune the straggly top growth and make short main stems from it. This encourages new growth and on that growth we hope to see flowers that turn into fruit next spring.

After the plants are carefully placed in their containers, place the containers in a tunnel covered with clear plastic. To make this tunnel you need a framework. This is most easily done by using construction mesh, the 6-inch square material. Cut off a 10-foot length from the 100-foot roll you buy (you might share with a friend). The rolls come in widths of 5 or 6 feet. A 10-foot length makes a nice arch over a 4-foot bed. This

(Continued on next page)

Cochise County Cooperative Extension

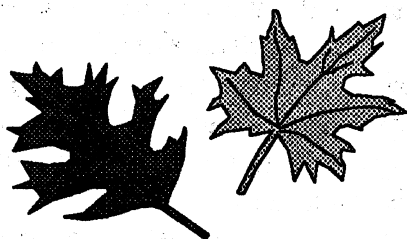
1140 N. Colombo, Sierra Vista, AZ 85635
(520) 458-1104, Ext. 141

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

can be neatly covered by a roll of clear plastic 12 feet wide and 4 to 6 mils thick. The extra two feet of the plastic enables you to anchor it down along the sides with bricks. You will need extra material to close up the ends of the tunnel.

On sunny days, keep the tunnel closed and allow moisture to build up inside. Moist air absorbs heat and holds it better than dry air. Watch the plants inside to make sure they don't get too hot, or the closed, warm atmosphere doesn't encourage aphids or molds. On really hot days open up one end, or maybe both, to cool things off and let the breezes in. Remember, don't let the soil dry out!

Barry R. Bishop
Master Gardener/Staff Writer



November Reminders

- ✓ A good time to install a drip system
- ✓ Replace summer mulch with fresh
- ✓ Start a winter herb garden
- ✓ Protect plants from frost
(Call the Extension Office for a copy of the bulletin *Frost and Frost Protection*)

Cuttings 'N' Clippings

➤ What herb goes with which food. Try with:

Eggs – sorrel, fennel, dill, chives, parsley, savory, basil, shallot, chervil, thyme, tarragon, or marjoram

Fish – basil, parsley, fennel, bay, savory, thyme, dill, shallot, chervil, tarragon, rosemary, or marjoram

Fruits – sweet cicely seed, lemon balm, mints, anise, rosemary, caraway seed, fennel seed, angelica, dill seed

Teas – pennyroyal, anise, dill, bee balm, fennel, burnet, borage, marjoram, mints, lemon balm, chamomile, tarragon, sage, rosemary, or horehound.

Maggi Crist
MG Trainee

➤ On being generous when sowing seeds: "One for the rook; one for the crow. One to die and one to grow."

- *Old Wives' Lore For Gardeners*
Copyright 1976

➤ Water conservation is something we all should practice. Except for the air we breathe, water is the single most important element in our lives. It's too precious to waste. Here are some useful facts and simple suggestions that will help you understand more about water. They'll help you save hundreds, even thousands, of gallons per month without any great inconvenience.

1. There's as much water in the world today as there was thousands of years ago. Actually, it's the same water. The water from your faucet could contain molecules that dinosaurs drank. Perhaps Columbus sailed across it.

2. Every glass of water brought to your table in a restaurant required another two glasses of water to wash and rinse the glass. Since nearly 70 million meals are served each day in U.S. restaurants, we'd save more than 26 million gallons of water if only one person in four declined the complimentary glassful.

3. Ultra-low-flush toilets, which may cost from under \$100 to over \$300, depending on the type purchased, use only about 1.5 gallons of water per flush. That could cut your family's total indoor water use by as much as 20%.

4. Mulch planting areas. Mulch covers open areas with tasteful good looks, helps keep the ground from overheating, holds moisture that otherwise would evaporate, and discourages weeds.

- *55 Facts Figures & Follies of Water Conservation*, Compliments of Arizona Water Company

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Top Ten Tree Killers . . Tree Mortality and Community Forestry Program

Few people know more about tree health than the arborists and urban foresters who care for our nations street and park trees. To get an overview of the worst cases of premature tree mortality, 10 professionals representing all regions of the country were asked to rank the top 10 killers. Here are the results:

Number One Killer Construction Damage

Every respondent mentioned this preventable cause of tree death and rated it strongly into the number one position of infamy. It is clear that a priority challenge for urban forestry programs is public education stressing the value of saving existing trees during development projects of all kinds.

Number Two Killer Improper Pruning

If ever there was a gap between what is known in the technical sense and what is actually practiced, pruning is the prime example. Despite the research and educational efforts that have been done on this subject, respondents named poor pruning practices as the second greatest danger to urban trees. Specifically cited were topping, other excessive pruning and the kind of "flush cutting" that Dr. Alex Shigo and others have shown to break down a tree's natural defenses against the invasion of decay organisms.

Number Three Killer Vandalism

This is one of the most difficult problems to prevent. In most

cases vandalism is probably caused by an expression of anger or frustration unrelated to trees, or the actions of youngsters. Ways to prevent vandalism include: planting larger trees (minimum of 2" caliper); pruning lower limbs to at least 8' above sidewalks as the tree grows; and involving residents in the selection, planting and care of street trees.

Number Four Killer

The Wrong Tree for the Site
Poor species selection dooms many trees right from the start. Disease resistance and suitability to soil and climate conditions were mentioned as the factors most often overlooked. Planting large tree species beneath utility lines was also frequently mentioned as asking for trouble. The involvement of qualified foresters and arborists in the planning stage of all planting projects could easily eliminate this unnecessary cause of tree mortality.

Number Five Killer Lack of Watering

A systematic means of watering during dry spells—especially newly planted trees—is one of the essentials of a well managed urban forestry program. Enlisting the aid of local residents is one way to do this if equipment and paid personnel or contractors are not available to do the job.

Number Six Killer Poor Planting

Proper planting is essential. It requires special training of crews and close supervision. Planting too deeply was the problem mentioned by several of our respondents. Other

problems typically include rough handling of new trees, allowing roots to dry, not removing the root-bound trees without cutting or straightening encircling roots.

Number Seven Killer Soil Compaction

Soil Compaction is one of the slower and more insidious cases of tree mortality. Mulching and regular aeration are good ways to minimize the damage.

Number Eight Killer Bark Damage

Lawn mowers and string trimmers are the main culprits here—or, more correctly, the people who operate them carelessly. Proper instruction and supervision are key solutions, with mulch helping even more.

Number Nine Killer Misuse of Herbicides

Herbicides, especially those containing chemicals that work through reaction in the soil, should be kept away from the root zones of trees. Weed treatments on windy days should also be avoided and weed or lawn crews should be given special instruction about tree roots and how to avoid damaging them.

Number Ten Killer Automobiles

Not surprisingly, bark damage and the breakage of young trees caused by cars is a common occurrence in urban areas. Traffic barriers, proper curbs, and planting out of reach of bumper and tailgate overhang can help reduce this damage.

(This information is reprinted from the National Arbor Day Foundation's Tree City USA Bulletin No. 14, How to Kill a Tree.)

Urban Integrated Pest Management In-Service

The University of Arizona Urban IPM Team announces an Urban Integrated Pest Management In-Service for county agents and specialized Master Gardeners, February 20 & 21, 1996 at the Maricopa Agricultural Center. Call either the Willcox or the Sierra Vista Cooperative Extension Office for information.

The "Chig" Is Up!

The other day at a meeting of the Sierra Vista Garden Club, someone brought up the subject of chigger bites. Some of (new-comers to the Sierra Vista area) had no idea there were chiggers here, but most of us had one or two "bites" on us somewhere. We didn't remember seeing the bug that bit us, only knowing that the welt itched, becoming painful when scratched or rubbed, and didn't seem to want to heal up or go away. Those who have lived here for some time told us we were describing chigger bites.

Insect Pests of Farm, Garden, and Orchard, 5th edition, by Peairs and Davidson describes *Trombicula alfreddugesi* as the most numerous and widely distributed species of chigger. It goes on to say that contrary to popular belief, chiggers do not burrow into the skin; they only insert their mouthparts, usually in a skin pore or hair follicle, and begin feeding. On humans they are found especially in regions of the body with tight fitting clothing. The salivary juices secreted by the chiggers cause severe irritation accompanied by intense

itching. This results in scattered red blotches of various sizes, with frequent secondary infection.

Chiggers are found wherever vegetation grows—high grass or weeds, fruit orchards, even lawns, golf courses, and parks. They are very tiny and



not easily seen, and since their bites might not be felt for several hours or even the next day after exposure, it is difficult to know the exact location of infestation. If that area of infestation happens to be in your garden or on your property, you may want to use diazinon spray or dust for control.

The eggs of chiggers hatch into 6-legged individuals called "larvae," the only stage which attacks people. After engorgement, which may require from one to several days, the larvae drop off, transform into nymphs, and finally into the adult stage.

To remove chiggers from your skin, bathe thoroughly in hot, soapy water. Contact your druggist for compounds to relieve the itching. When walking through chigger infested areas, wear protective clothing, and tightly button or tape sleeves, pant cuffs, and collars. Apply insect repellents to the skin and clothing, especially around the ankles, underarms, waist, sleeves, and cuffs.

Maggi Crist
MG Trainee

High on the Desert

The third annual High Desert Gardening & Landscaping Conference will be held at the Wyndemere Hotel and Conference Center, Sierra Vista on March 1 & 2, 1996. Everyone is invited to attend. Watch for details!

The Agent's Observations

I was asked to give a presentation to the August 11th lunch time crowd during the "Southwestern Low Desert Landscaping and Gardening Conference" held at the Arizona Biltmore Hotel in Phoenix. The assigned topic was *Wives Tales and Snake Oils*. I added "Gardening Myths" to the title. Several of the conference participants were from Cochise County and they requested that I write my presentation for the Cochise County Master Gardener Newsletter.

Myth #1: Soil structure and chemistry can be changed with amendments. Soil is huge; it is under our feet everywhere. The weight of one cubic foot of soil is from 80 to 120 pounds depending on the soil type. Many western desert soils have from 1 to 10% free lime or calcium carbonate. In our desert soils we have alkaline soil pH's. This is because of the calcium carbonate content of the soil. It is not leached through the soil because of our limited rainfall. Back in the East and the Midwest the high rainfall amounts removes the calcium by leaching and the result is acid soils. Assuming a cubic foot of soil weights 100 pounds and has a 1% calcium carbonate content

then there would be one pound of calcium carbonate present. It takes one pound of sulfuric acid or its equivalent to neutralize one pound of calcium carbonate. Therefore, to decrease soil pH from alkaline to neutral or acid it would require equal mixing of one pound or equivalent of sulfuric acid throughout the cubic foot of soil. If the soil had 10% calcium carbonate then 10 pounds of sulfuric acid or its equivalent would be needed to neutralize the soil. This is not cost effective to do and is not going to happen. We need to learn to work with the soil we have on our property.

Myth # 2: Chemical fertilizers harm the soil and the organisms in it. The soil is a dynamic, living world of microscopic bacteria, fungi, nematodes and other organisms which are not static but constantly changing. When anything is added to the soil there is a reaction in terms of soil chemistry and organism. "For every action there is an opposite and equal reaction" applies to the soil. As a fertilizer is added to the soil weather, from a "chemical" or "organic" source, the population and ratio of organisms changes. If the fertilizer is high in nitrate-nitrogen the bacteria and fungi that consume it will increase in population, perhaps "pushing out" of balance

other organisms for a while. When the nitrate-nitrogen is consumed by soil organisms and/or plants the soil returns to pre-nitrate-nitrogen "normal" and the population of organisms returns to "normal." "Organic" forms of fertilizer have the same effect on the soil, however they normally breakdown more slowly. "Organic" sources of nitrogen, for example, have to be broken down by soil organisms to nitrate-nitrogen before they can be used by plants for growth. Plants can use only inorganic sources of nitrogen. Just because something comes from a "natural" source does not mean that it is better or worse than "conventional" sources. Some of the most toxic compounds know to man come from "natural" sources, i.e., botulin toxin, nicotine and the venom of a South American sea snake. Bagged fertilizers are mined in the cases of phosphorous and potassium. Nitrate and ammonium nitrogen comes from natural gas and air (which is 78% nitrogen gas) that are combined and processed under high temperatures and pressure. These are all natural products combined to make an "artificial" product.

To be continued next month...

Robert E. Call
Extension Agent, Horticulture

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Hints for Preventing Holiday Accidents

The University of Arizona Health Sciences Center and The Arizona Poison and Drug Information Center offer the following information to help keep your holidays healthy and happy. If you have the slightest suspicion that a poisoning has occurred, call the Poison and Drug Center right away at 1-800-362-0101. The center is open 24 hours, seven days a week. If signs of grogginess, difficulty in breathing, or unconsciousness have occurred, call 911 immediately.

- ♦ To ensure immediate treatment of accidental poisonings this holiday season, make sure you have Syrup of Ipecac in the house, especially if small children are present. If you are traveling, take a bottle with you. The syrup is used to induce vomiting in some poisoning situations; however, it should never be used without calling the Poison Center first.
- ♦ Mistletoe may be a great enticement for a kiss during the holidays, but its berries can be dangerous if they touch the lips. If your child or pet swallows several mistletoe berries, the result can be very serious. They are likely to experience nausea, vomiting, abdominal pain and diarrhea. In worse cases, the mistletoe berries can cause hypertension or convulsions. The same is true of holly berries. Pyracantha is a good substitute for berried decorations and is non-toxic. Contrary to popular belief, poinsettias are not toxic but can cause an upset stomach if several leaves are eaten.



Happy Thanksgiving!