

COOPERATIVE EXTENSION

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the Cochise County Master Gardener

NEWSLETTER

VOL. 4, NO. 11

NOVEMBER 1993

CHILI (*Capsicum frutescens* L.)

Barbara Kishbaugh
Staff Writer

Chilies are not difficult to grow, and the variety selected depends on individual taste. We are in a prime chili growing area. Chili is grown commercially in Cochise County, and a processing plant on Frontier Road near McNeal cans chili to be shipped across the United States. Before canning, the chili processing plant leaches the chilies in a lime solution which preserves them. The chilies grown locally, and in Hatch, New Mexico, are the largest and meatiest of varieties.

All peppers are grown in the same manner, maturing just about the time school begins in September, or a little later. Planted in spring, usually as transplants, although seeds are also used, the plants are similar in appearance to a bush-type bean plant. They like sandy soil and don't mind a little crowding from other chili plants. They are more successfully grown in a raised bed where water is readily available to the roots. The extra nutrients brought in with the summer rains can then collect in the troughs between the rows, giving the plants the added moisture required for full and meaty fruits. Keep the chilies picked regularly and they will continue to produce until frost.

The Native Seed Search catalog has over 15 selections of chili seeds—the largest collection available for purchase, it seems. Chili contains capsaicin which is used in liniments to sooth sore muscles. The capsaicin causes blood to increase in circulation. That is why some of us get the red ear while still chewing the stuff. It is also addictive—once enjoyed in a food, the desire for more is compelling.

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The homemaker can purchase a gunny sack full of green chili from a grower or roadside vender in the fall. Sometimes the chilies are roasted in a large drum, rotisserie style, at the location where they are purchased, or at home they are cooked on a grill outside or in an oven, roasted until the moisture inside makes the chili pop or explode allowing the steam to escape. Chilies can then be stored in plastic bags, frozen, and then peeled, ready for consumption. After freezing, the skin seems to be more easily removed by gently rolling the chili between your fingers. These are the type of chili stuffed with cheese and onion, dipped in a milk mixture, floured and fried in hot oil—a chili rellano.

These long chilies, while still green, are strung individually and gathered together forming a ristra which is bright red when dried. Hanging under a porch by a door, these ristras are a southwest art form and are also useful since chilies are picked from the ristra to be used in cooking when needed.



The bright red color of fresh dried home-ground chili is exceptionally pleasing to the senses. It is most appreciated for its fresh, poignant flavor, more so, because the cook can grow it, dry it, and prepare it.

The red, dried chili may also be soaked, and chopped in a blender with water. This mixture is used as a base for enchilada sauce. To make enchilada sauce simply heat a tablespoon or two of oil, add a little flour, salt and garlic salt. Stir until lightly browned. Carefully add the chili water mixture, stirring until it boils or is the desired consistency.

A smaller sized chili, the jalepeno, is also now popular as a cheese-stuffed appetizer. The meaty jalepeno has a stronger, more distinctive flavor than the larger green chilies. Jalepenos can be eaten fresh. Pico de Gallo sauce uses fresh ingredients—peppers, tomatoes, onions, garlic, cilantro, and a touch of lemon. A lively addition to any meal, jalepeno peppers are now grown for flavor, not hotness. They are also pickled and canned or used in the making of jelly.

Yellow hot peppers can be grown and used fresh in sauces, also. They may be served raw, taking the place of a crunchy pickle with a sandwich.

Chiletepin is a northern New Mexico native and is used as a decorative bush. The small red dried seed pod is crushed between the fingers and used to flavor salsa made with canned tomatoes and onions for use over tacos and tostados.

The pequine-type chili is the one used in making Louisiana hot

sauce and in Cajun cooking.

The oriental chilies are the hottest and used in Szechwan dishes. If you request "hot" sauce in an oriental restaurant, you will probably receive crushed chilies in an oil base and it will be hot! Microscopic portions only can be consumed.

Depending on location, the manner in which chilies are prepared varies significantly. A favorite New Mexico winter tradition is a pot of green chili bubbling at the back of the stove. Green chili made with pork, green chilies, pinto beans, onions, and seasonings is guaranteed to warm the soul of the person who eats it. This dish is served in a bowl, accompanied by a tortilla—soup and crackers to a gringo.

Fresh chili, an important southwestern staple, is stocked in most supermarkets. Usually Anaheim and jalepenos are obtainable. If other varieties are desired, try growing your own. Consider this *HOT* tip: chilies produce prolifically and continuously and are easy to grow—no wonder they are so popular!



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1993 PHONE BOOK RECYCLING CAMPAIGN

The first week of November, 1993 new telephone books will be delivered to Cochise County. The City of Sierra Vista Environmental Affairs Commission, Horizon Moving Systems, and US West Direct are sponsoring a recycling campaign. From November 1 to mid-December, you may drop your old telephone books off at the following locations: Sierra Vista City Hall, Cochise Lock & Safe, Safeway, Wal-Mart, and SHARC. Also Johnston School, Meyer School, Smith Middle Schools, and the Commissary on Ft. Huachuca will be collecting them.

For every 1,300 phone books recycled, we save 17 trees, 3 cubic yards of landfill space, 7,000 gallons of water, 4,100 kwh of electricity, and 683 gallons of crude oil!

Please help preserve, protect and restore our environment.

CLASS OFFERED IN TUCSON

The Tucson Botanical Gardens, 2150 North Alvernon Way, Tucson, AZ, is offering the class *Turn Surviving Plants Into Thriving Plants*, Saturday, November 13 from 1:00 pm - 2:30 pm (fee). Get tips on varieties best suited to special areas and creative ideas to help you bring your green thumb inside. The instructor is Elizabeth Newton, owner, Fig Tree Living Interiors. For information, call (602) 326-9255.

Luminaria Nights at the Tucson Botanical Gardens are December 4 & 5. Call for details.

A BOOK REVIEW

Frank L. Christ

[b035] *Gardening Success with Difficult Soils: Limestone, Alkaline Clay, and Caliche* by Scott Ogden. Dallas: Taylor Publishing Co., 1992.

Instead of cursing the soil of Cochise County, gardeners can reap its blessings as they recognize its composition, its needs, its nutrients, and the many native and exotic adaptive plants that it can grow. This 1992 book can help Cochise County gardeners to appreciate and exploit soil that is mostly limestone, alkaline clay, and caliche.

The author starts out by identifying the nature of calcareous soils, discusses its garden chemistry, explains the value of humus in enriching such soils, details the necessary ground preparation, and begins a remarkable catalog of lime-loving plants that can be selected for gardening pleasure. In later chapters covering more than 150 pages, the author describes mixed border plants, herbaceous plants, mid-season flowers, lime-tolerant shrubs and trees, plants for heavy, wet clay soils, and plants for dry banks and chalk gardens, heat loving annuals and biennials, night-blooming plants, wildlife plants, roses, shade plants, vines and ground covers, plants of the Sierra Madre, and fruits and vegetables for limy ground.

A listing of plant sources and plant societies, along with references and an extensive index complete a book that every Co-

chise County gardener will appreciate...especially Master Gardeners who are called upon to sensitize their neighbors and other Sierra Vistans to the joys and successes of gardening according to the land. Ogden's book is a recent addition to the Sierra Vista Public Library.

High on the Desert

The first annual High Desert Gardening and Landscaping Conference will be held February 17 & 18, 1994 at the Ramada Inn in Sierra Vista, AZ. Optional tours are scheduled for February 19. The conference is sponsored by the Cochise County Master Gardeners in association with The Arizona Native Plant Society, Cochise Global Releaf and Sierra Vista Garden Club.

Watch for more details!

TURKEY HOTLINE

The Agriculture Department wants to talk "turkey" with you. Year around, registered dietitians and home economists staff the hotline ready to answer questions about the entire spectrum of food, its preparation, storage, and how to use cooking equipment.

The toll-free number is:
1-800-535-4555

During November the line will be open from 9:00 am to 5:00 pm (EST) Monday through Friday. The hotline will also be staffed to answer last minute "turkey" questions on Thanksgiving from 8:00 am to 2:00 pm (EST).

SOLAR GREENHOUSES- PART V

Emilie Vardaman

Now that there has been some serious chill in the air for a few weeks, it is time to talk about heat. Just sit in your favorite chair in a sunny window one winter day and see how fast the sun warms you up. The sun creates heat.

All objects, including people, water, air, and soil warm up when they are exposed to the sun. However, some objects are better than others at storing the sun's heat. People aren't good at storing heat. When you move out of your sunny window, you'll feel cool pretty quickly, especially if the temperature in your house is about 55-60 degrees.

Other objects hold heat and cool off slowly, releasing heat into the surrounding air. Think about a cast iron pan. If you use one to stir-fry some veggies and turn off the heat, the pan will stay hot to the touch for quite a while. The hotter you get it, the longer it will take to cool off, and during the time it cools, it will radiate heat.

This ability of certain materials to store and release heat is one of the most important principles of solar greenhouse design. If enough heat-storing materials in a greenhouse are exposed to the

sun, they will absorb the sun's heat by day, and release the heat in the evening, keeping the greenhouse and its plants (people, too) warm.

Things that store heat well are generally those that weigh a lot for their size. Bricks, rocks, gallons of water, and cement are such objects, and they can also be used in construction. Yes, water can be used in construction. More about water next month.

Very heavy things such as steel and other metals, though capable of warming up quickly, also release their heat quickly. This makes them unsuitable for use in a greenhouse. What a good solar greenhouse needs is materials that gather heat slowly and release it slowly, keeping the greenhouse warm after the sun goes down.

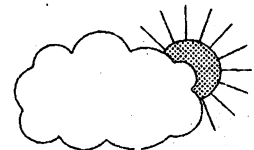
Another important principle of greenhouse design is minimizing heat loss. Because the goal is to keep the greenhouse warm at night, not warm the great outdoors, the room must also be well insulated and weather stripped. Curtains, shutters, or movable insulation over the south facing glass will help slow heat loss through the windows at night.

A third design principle is ventilation, both between the house and the attached greenhouse and from the greenhouse to the outside. Ventilation into the home will allow surplus heat gathered during the day to be moved into

the house where it can be used to regulate house temperature. The vents can also be used at night to move a small amount of heat from the house into the greenhouse to help keep it warm enough for sensitive plants. Ventilation to the outside is used in summer to keep the greenhouse from overheating.

Next month I'll cover the integration of these design features. Until then, one word of caution. If you're beginning to roam library and bookstore shelves searching for books on solar houses, rooms, and greenhouses, keep in mind that most of the designs you see will NOT work in the desert. Most are designed to gather more heat than what we need, and if you follow a "stock" plan, you may cook your plants right where they grow.

Don't plan to use glass or other glazings on the roof of your greenhouse. First, glass on the roof invariably leaks, and second, your greenhouse will be exposed to summer sun all day from May through September, just when you want the greenhouse to be cool. Third, don't slope the glass on the south side. Again, it will be more prone to leak and will gather too much summer sun. Think about well insulated ceilings and easy to build vertical walls. And begin gathering bricks and rocks.



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WHAT'S BUGGING YOU®

by T.J. Martin

PEST-WISE PREPARATION FOR FALL AND WINTER

Congratulations to all my fellow gardeners out there who have successfully completed yet another summer growing season in Southeastern Arizona. I hope that you enjoyed a bountiful harvest with a minimum of hassle from our local pest population. For many of us, this is the time of year that we put the garden to rest for the winter while enjoying a well deserved respite for ourselves. For others, fall is the transition time from hot to cool-season crops and is often one of the most productive seasons of the year.

For those who followed a spring and summer pest-prevention program (from the previously published *Preparation For Spring* article or useful ideas from other sources) the fall and winter program will be along much the same lines. For those just starting a prevention program, the following are some ideas that you may want to use to get a jump on next year's pest problems, and hopefully leave you more time, energy, and money to enjoy gardening and other hobbies.

KNOW YOUR PEST — Try and identify the creatures that gave you the most problems during the past growing season. Study their life cycle and try to determine where and how they overwinter. This information will give you many ideas on what to do to interrupt their breeding/feeding cycles and how to discourage them from frequenting your garden patch or orchard.

CLEAN, CLEAN, CLEAN — If the most important word in real estate is LOCATION, it's corollary in gardening is CLEAN. Garden debris, weeds, and leftover materials such as rocks, boards, *etc.* are prime overwintering and breeding places for pests and an open invitation for trouble. Pull up all your old plants and weeds and put in the trash for pick-up, burn, or compost in a HOT compost pile. Speaking of compost piles, stir yours up, wet it down, or add a little manure to get it "cooking" again. A compost pile that is too cool to properly (and quickly) decompose can become simply another pile of trash that bugs and other vermin love to set up housekeeping in.

CHANGE YOUR MULCH AND CULTIVATE THE SOIL — If you used a mulch this summer, then rake it up and add it to the compost pile. Many insects will have chosen this material for a egg-laying, pupation, or overwintering site. By removing and destroying the remains of THIS year's pest population, you can seriously reduce the number that show up NEXT spring. Other insects survive the winter by burrowing into the top 12-18 inches of soil. By digging and turning over this soil in the fall you can expose many of these critters to the weather or predators looking for a late-season snack.

"SOLARIZE" THE SOIL — Some folks have had good results with using the sun to "pasteurize" their garden soil. After letting the weather and predators have a chance at the pests (see above), moisten the soil and cover with a layer of plastic tucked in securely at the edges. Our fall and winter sunshine is hot enough to heat the soil to a significant degree and can "cook" many insect eggs or pupae that you may have missed. If you use clear plastic, you will encourage growth from any weed seeds that may be present and you may go ahead and pull these up and thus prevent problems with them next growing season.

IDENTIFY BENEFICIALS — Insect pests are not the only ones that may overwinter on your property. Learn to recognize the pupal cases and egg masses of any "good guys" that may be helping you with your pest-control duties. Look for these during your clean-up operations and put them aside in a protected place for the winter. **DO NOT BRING THEM INTO YOUR HOME!!!** Imagine the chaos if you wake up one bright, sunny January morning to find a hundred newly hatched Praying Mantids sharing your house. Not only would your spouse

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probably have a few well-chosen words to say to you, but all of these helpful creatures would die once you had transferred them back outside to the cold weather and lack of appropriate prey to eat. Leave them outside to hatch at the proper time.

ENRICH THE SOIL — Do your pH testing (if needed) and add fertilizer and humus to the soil to give your plants an extra-healthy start next growing season. Remember, anything that you can do to strengthen your plants will make them less susceptible to pests, disease, and weather stress next spring. If you will not have a winter crop, you might want to sow a cover (or “green manure”) crop. This is often a species that can be tilled under in the spring to help provide a nitrogen boost to the spring planting. Some winter plants can also provide food or shelter for overwintering beneficials. If you do plan a winter garden, be sure to practice proper crop rotation so as to not deplete any particular set of nutrients in the soil.

READ PREVIOUSLY PUBLISHED MATERIALS FOR FURTHER IDEAS — My *Preparation for Spring* and *Ecologically-Sane Pest Control* publications both contain other ideas such as dormant oils, washing your trees with soap, and the use of tree wraps and agricultural fleeces that can be used in the fall as well as spring. These and many other useful articles can be obtained at the Cooperative Extension offices in Sierra Vista or Willcox. Most, if not all of these ideas can also be used by winter gardeners as they convert their plots from summer to fall/winter use. For those taking the winter off, hopefully these ideas will take away some of the work and worry as you prepare for next year's crops, and you will be able to concentrate on ordering all those new seed catalogs and spend the winter anticipating a wonderful gardening experience next spring with far fewer pest problems than ever before.