



High on the Desert Cochise County Master Gardener Newsletter

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

Growing Food

Recently I watched a show on HGTV about growing huge vegetables. It had me laughing and remembering the times I spent gardening in Germany. A German friend once told me that “the dumbest farmers grow the biggest potatoes.” Let’s face it – what does one do with a one thousand pound pumpkin? And why do we pay a premium for ‘baby’ vegetables? Cuz they taste better–small veggies pack a lot of flavor that gets lost when they become weapons of mass destruction.

The vegetable gardening season is just around the corner – I planted warm season seeds under the grow lights in mid-March for planting into the garden around the last week of June, just in time for the summer rains.

Native Seeds/SEARCH of Tucson has a handy planting and harvesting wheel in their 2003 catalog. Here’s their seasonal planting guide:

- ✓ Early Spring (mid-January–late February) fava beans, garbanzo, lentils, peas, wheat
- ✓ Spring (early March–late April) beans, chiles, corn, cotton, black-eyed peas, gourds, herbs, melons, squash, sunflower, tomato, tomatillo, watermelon
- ✓ Monsoon (July) beans, corn, black-eyed peas, melons, squash, sunflower, watermelon
- ✓ Fall (late September–mid-November) fava, garlic, garbanzo, greens, lentils, onions, peas, wheat

In addition *The Arizona-Sonora Desert Museum Book of Answers* recognizes five seasons:

- ✓ Spring (February to April)
- ✓ Foresummer or Dry Summer (May & June)
- ✓ Summer Monsoon (July to Mid-September)

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- ✓ Fall (mid-September to November)
- ✓ Winter (December & January).

A reliable way to plant the vegetable garden is to understand that seeds need water and a certain soil temperature in order to germinate. Case in point: in 2001 I planted a salad bed in February and had wonderful germination and a good season of eatin'. So for 2002 I looked at my gardening journal, saw I planted in February and did so again. Nothing came up! I had forgotten the golden rule - soil temperature **not** calendar dates is the most important factor for planting. This year I went back to my old standby and watched for the harvester ants to emerge from their underground nests and then planted, which occurred this year mid-March. Viola! We'll be eating salad again.

Many moons ago during a conversation with fellow Master Gardener, De Lewis, he told me that whenever someone asks him what they should plant in the garden he tells them to plant food. I probably take growing food as something for granted, I was born into a family of hunters and gatherers. Every summer I worked on my grandparents fishing boat, in October our

families and friends would meet up in the Klickat Mountain for deer hunting, and both of my grandmothers had huge "victory" gardens year round. Growing your own food is the noblest thing one can do and if one is going to use water I firmly believe it should be to grow food for family and friends.

Here are my favorite resources on food for the soul.

BOOKS (the local library carries many of these books as well as the University of Arizona Bookstore, Sierra Vista South Campus)

Coming Home to Eat: The Pleasures and Politics of Local Foods by Gary Paul Nabhan

Extreme Gardening: How to Organic in the Hostile Deserts by Dave Owens

Gaia's Garden: A Guide to Home-Scale Permaculture by Toby Hemenway

Gardening for the Future of the Earth by Howard-Yana Shapiro, Ph.D. & John Harrison
Great Garden Companions by Sally Jean Cunningham

SEEDS & PLANTS

Diamond JK Nursery, 1.520.455.9262, located in Sonoita, ½ miles south of the intersection of Hwy 82 & 83
Native Seeds/SEARCH, (520)622-5561, www.nativeseeds.org
Plants of the Southwest, (800)788-7333, www.plantsofthesouthwest.com

Ronnigers Potato Farm, (208)267-7938, www.ronnigers.com
Seeds of Change, (888)762-7333, www.seedsofchange.com

Cheri Melton, Master Gardener



Geotrophin? — A New Hormone

Australian researchers at the University of Woomera have announced the discovery of a previously unknown behavior-modifying human hormone called *geotrophin*. The hormone is produced in the hypothalamus in a complex response to changing circadian rhythms, photo periods, and accumulating heat units. Although *geotrophin* is produced in all adult humans, the quantity appears to be genetically controlled. Only about 20 percent of the population exhibits a *geotrophin* deficiency.

An increased blood serum level of *geotrophin* manifests itself in an uncontrollable desire to dig in the ground, rake the soil, scatter plant seeds, and apply water to the soil, especially on late spring weekends. In addition, there may be a strong attraction to plant nurseries and garden shops. Although these behaviors may persist for a few weeks, *geotrophin* levels usually fall off quickly as the days lengthen and heat units continue to accumulate.

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• NOTICE •

This will be your last Cochise County Master Gardener Newsletter unless you have completed and forwarded the update form attached to your last newsletter to the Willcox or Sierra Vista Cooperative Extension Offices by the end of May 2003. If you did not receive an update form you do not need to do anything. Call the Willcox or Sierra Vista office for information. You may also sign up electronically on our Web Site: www.ag.arizona.edu/cochise/mg/

The Virtual Gardener—Building a Plant Database

If you are like me, you like to know as much about the plants growing in your yard as possible, especially those things that pertain to their health and happiness. How would you like to have a book that was just devoted to your plants? This month I would like to tell you how you can create such a book.

Although I own many books that contain lists and descriptions of plants, I often find that the books fall short in providing me the information I would like. A great way to accumulate information about plants is to look on the Internet. The best place to begin is by searching on the Latin name of the plant. Let's suppose you, like me, just acquired a new penstemon called *Penstemon triflorus* and would like to know more about it.

A Google® search on the name of the plant turns up 77 hits. Since the plant I bought came from Mountain States Wholesale Nursery (www.mswn.com). I decided to try their site first. Actually this was not exactly a wild guess since I knew that the Mountain States Web site has some fantastic data on plants, including photos and detailed descriptions for many plants. I was not disappointed this time. From their Web site I learned that the plant (AKA "Hill Country Penstemon") is native to the limestone

soils on rocky slopes in the Texas Hill Country. This gave me some valuable insight into the way I should plant it. It is not fussy about soil types and grows in soils ranging from clay to sand and it obviously will tolerate alkaline soils. According to the information on the Web site, it grows well in full sun to light shade, is hardy to at least 10° Fahrenheit, and, like many penstemons, is drought-tolerant. I also learned that it grows to two feet tall, has deep pink flowers, and blooms in early to late spring. In addition to the detailed description, there was also a great photo of the plant.

The page from the Mountain States Web site became a part of my Garden Book.

Recently I also developed an interest in the Jojoba plant (*Simmondsia chinensis*) as a possible addition to my garden, so...off to the Web. A Google® search on *Simmondsia chinensis* gave me 3920 hits, enough to keep me busy for a while. One of the hits was on the Mountain States Nursery site, so I decided to give it a try. This time I was not so lucky. The description gave me some basic information and told me the plant was slow growing, highly drought tolerant, and was hardy to 20° Fahrenheit. There was also a

nice picture, but the information hardly matched the superb description of the penstemon. I kept searching.

My next stop was the U.S. Forest Service Fire Effects Information System database at (<http://www.fs.fed.us/database/feis/plants/shrub/simchi/>). This is one of my favorites for a lot of technical information about plants that are native or endemic to the United States. Bingo! I hit a treasure trove of information about jojobas.

From this database I learned that jojobas like well-drained rocky soils, seem to prefer north-facing slopes in areas with 15-18 inches of annual rainfall, respond to spring-winter rains, and can tolerate temperatures as low as 15° Fahrenheit when mature.

So now that you have found the data and pictures you want on the Internet, how can you capture that data for future reference? There are several options.

Most Web sites allow you to print the pages directly from your browser. Some even offer a "printer friendly" page that you can choose. Another option is to set up a directory on your computer to contain the pages you

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want to keep about plants. For example you might create a directory called "My Plants" and then create subdirectories under that for each plant. This way you can keep several Web pages from different sources in the same directory.

To save a Web page in Internet Explorer, go to the File menu and select "Save As." This gives you a couple of choices for formats. One option is to save the site as an *html* file. This is the "Web Page, complete (*.htm, *.html)" mode. A downside to this method is that all of the images for the page are saved in separate folders. Another option is the "Web Archive, single file (*.mht)" mode. This has the advantage of storing all the images in the same file as the text.

Both of these methods save all the advertisements that might also appear on the page. Since I would prefer to have the page without the advertisements, I often copy the page by selecting "Select All" from the Edit menu of Internet Explorer and then selecting "Copy" from the same menu. I can then paste the page into a Microsoft Word document where I can selectively remove items I don't want to appear on the page. I can then save the page to a directory of my choice or print it.

Hopefully you will now be able to create your own plant database containing the plants you currently have in your garden or want to add to it.

Until next time. Happy surfing.

Gary A. Gruenhagen, Master Gardener
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Cuttings 'N' Clippings

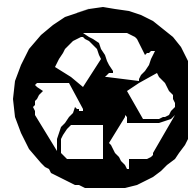
* The next regular meeting of Cochise County Master Gardeners Association is 5:00 p.m. May 7, 2003 in Room 212 at of the University of Arizona South campus.

* Saturday, June 7 from 9:00—10:30 a.m. a free *Water Wise* Workshop will be held at the University of Arizona South called *You Call This Soil* with Sandy Kunzer, Geologist, and Betsy Kunzer, Physical Scientist.

* If you missed the May 3 low water landscape **Xeriscape Tour** mark your calendar now for the fall tour scheduled for September 6 from 9:00 a.m. to 1:00 p.m. Details will be available in August from the Cooperative Extension office in Sierra Vista.

* The second season opened May 3, 2003 for the old-fashioned Farmer's Market held in the Warren District's Vista Park, Bisbee, on Saturday mornings from 8:00—noon. May 10 a spring seed and plant exchange/sale will be held. On May 17 the Sierra Vista Area Gardeners Club will hold their Spring Plant Sale at the Farmer's Market. They will have many plants grown by club members available at good prices. Other items available at the market include farm products, plants, home crafts, nature crafts, food products, yard and garden art. For more information or if you would like to be a vendor call the Market Manager, Valerie McCaffrey at 432-7066 or e-mail: vallimac@ivwnet.com

* Carr House is holding Sunday programs at the Carr House Visitor Information Center located approximately 2 3/4 miles up Carr Canyon Road (from Hwy 92 South of Sierra Vista turn right on Carr Canyon Road at the Mesquite Tree Restaurant). The May 18 program is *Mining in the Huachuca Mountains* with Joe Pais of the Huachuca Mineral and Gem Club. On June 1 Darcy Tessman 4H Club Cooperative Extension Agent, will present a new hands-on gardening and plant craft program called *You, Too, Can be a Junior Master Gardener*. This program is for ages 8 through 88! For more information on the programs contact the USDA Forest Service at (520)378-0311.



Recycling is the right thing to do!

Sierra Vista has a strong sense of environmental stewardship. Recycling is another avenue where citizens can demonstrate a commitment to the local environment.

Want to learn more?

Talk with the Environmental Services Division at 458-5775. Staff is available for:

- > assisting in school programs
- > speaking to community groups
- > providing tours of the compost facility
- > assisting with community recycling events.

The Agent's Observations

Q When my roses bloom they have brown and black petal edges and are deformed. Also the leaves are sticky. Some of the leaves are covered with yellow spots mixed with the green color of the leaves. What is causing these problems and what can I do?

A Your roses have two insect problems and a virus. The flower petals are brown or black because of a very small insect called the **Western flower thrips** *Frankliniella occidentalis* (Pergande). Adult thrips are about 1/8" (2 mm) in length, usually tan-to-dark brown-bodied, with four feather like wings. The young or nymphs are creamy white and wingless and develop into adults in about two weeks. The adults enter a rose bud and lay eggs inside the immature flower. The eggs hatch and the resulting nymphs and adults injure the plant by rasping the bud, flower, and leaf tissue of host plants and then suck the exuding sap. This causes petal tissue to die and results in brown or black petal edges. Thrips also affect other flower, fruit, and vegetable plants including apples and peaches which result in surface damage to the fruit. Onions, snap beans, chrysanthemums, gladiolus, and iris are

also damaged by other thrips species. There have been many more thrips the last couple of years because of the above normal rainfall which has provided abundant wildflower and weed crops for the thrips to live on and thus increased populations.

The other insect problem is **aphids**. These small insects are yellow to green in color and suck sap from plants that they infect. The "sugars" which they do not metabolize are excreted and fall onto the leaves of the plant. This is the sticky, shiny substance that you see. Sometimes ants and flies will "milk" aphids for this exudate and feed on it. So if ants are spotted on plants there is a good chance that aphids are present.

The yellow marks mixed with the green color of the leaves is a **virus** or a complex of several viruses. The spotted yellow-green leaf color is known as mottling and is very symptomatic of viruses. These viruses generally do not kill the plant but can weaken it.

Control: Several insects are predators of thrips and aphids including ladybird beetles and their larva, minute pirate bug, and lacewings. Thrips have alternate hosts of weeds and wildflowers. By controlling host plants thrip populations will be lowered. Because thrips do damage inside the rose buds a systemic insecticide should be used. There are several products on the market which control thrips and aphids

systemically. Sometimes disystox, a systemic insecticide, is included in rose fertilizer. **Always follow label directions when applying pesticides.** To reduce the problems of viruses in plants purchase virus-indexed or certified virus free plants. Virus infected plants can be a source of infection that can be transmitted to healthy plants by aphids or other insects. Therefore, control the aphids and other insects vectors to control the spread of virus diseases.

Source: *Insect Pests of Farm, Garden and Orchard*. 7th Ed. 1984. R. H. Davidson and W. F. Lyon. pp. 305-6, 311-12.

Several of my fruit trees, in particular cherry and pear, have distorted leaves and holes in them. In fact some of the blossoms did not open up and were not pollinated and fell off the trees. What is causing this?

A Western flower thrips are the cause of these problems. There have been quite a few this year. They prefer to feed on flowers and can cause enough damage that they will not open prop-

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erly for bee pollination. If populations are high, thrips will feed on young succulent leaves. When I tapped one flower cluster and leaves over 20 thrips fell onto my palm. I did this several times per tree and on several separate trees with the same results. Again controlling winter flowering weeds is the best way to keep thrips at bay. There are few products for homeowners that are effective and approved for thrip control on fruit trees. Insecticidal soap can offer some relief. There are several predatory insects that feed on thrips including minute pirate bugs and flower bugs, along with *Trichogramma* wasps. Larvae of the Western flower thrips can be predators of spider

mites. There is a whole world of “eat or be eaten” out there!

Sources: *Common Sense Pest Control*. 1995. William Olkowski et al. Tauton Press, Newtown, CT. pp. 40, 45.

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May Reminders

- ⇒ Deep water
- ⇒ Plant warm-season crops
- ⇒ Check tree ties
- ⇒ Control pests
- ⇒ Control weeds (The bulletin *Controlling Weeds* is available from the Cooperative Extension offices.)

Quick Gardening Tips:

1. **Line a clay or plastic flowerpot with a coffee filter before filling the pot with potting soil. The filter prevents the soil from going through the drainage holes.**
2. **Sow small seeds like carrot or lettuce with a salt shaker for more even distribution.**
3. **To avoid dirt under your fingernails, rub them against a bar of soap before beginning garden work (or wear gloves!).**