



The Virtual Gardener—The First Garden

Home vegetable gardening got a boost this year with the installation of a vegetable garden at the White House. The White House garden is both practical and symbolic.

As a working garden it had already produced over 200 pounds of food for the White House kitchen by early last summer. Produce from the garden has found its way to the Obama family table, state dinners for international VIPs, and local food banks.

As a symbol, the First Lady is hoping the garden will introduce Americans to a new way of thinking about food and nutrition. With two young children of her own, Michelle Obama wants her daughters to learn good eating habits and appreciate the value of fresh, home-cooked vegetables. As First Lady she wants to see these values instilled in all children and help reverse the epidemic of childhood obesity.

The Obamas' vegetable garden is not the first in White House history. Although development of gardens at the White House started early—Washington bought the property now known as the South Lawn for the purpose of establishing a botanical garden. It was Thomas Jefferson, third president of the United States, himself an avid gardener who

kept detailed notes about his gardens for 58 years, who hired a White House gardener and specifically charged him with maintaining a *kitchen* garden. The gardens continued to develop under succeeding presidents and reached a peak under John Quincy Adams, who personally enjoyed puttering around in the vegetable garden.

White House vegetable gardens continued on and off over the years. Abraham Lincoln had a vegetable garden but it was removed by Ulysses Grant to make room for construction. Franklin Roosevelt had a “victory garden” planted to set an example for the rest of the country during World War II. But aesthetics took precedence during the Bush and Clinton administrations when it was believed that a vegetable garden was not appropriate in the formal White House landscape (but fresh veggies were “secretly” produced on-site from gardens on the roof—http://www.nytimes.com/2008/12/31/dining/31lett_THPRESIDENT_LETTERS.html?_r=4&partner=permlink&exprod=permlink).

The current White House garden covers 1,100 square feet, which seems very large until you take the square root

(Continued on page 2)

Inside this issue:

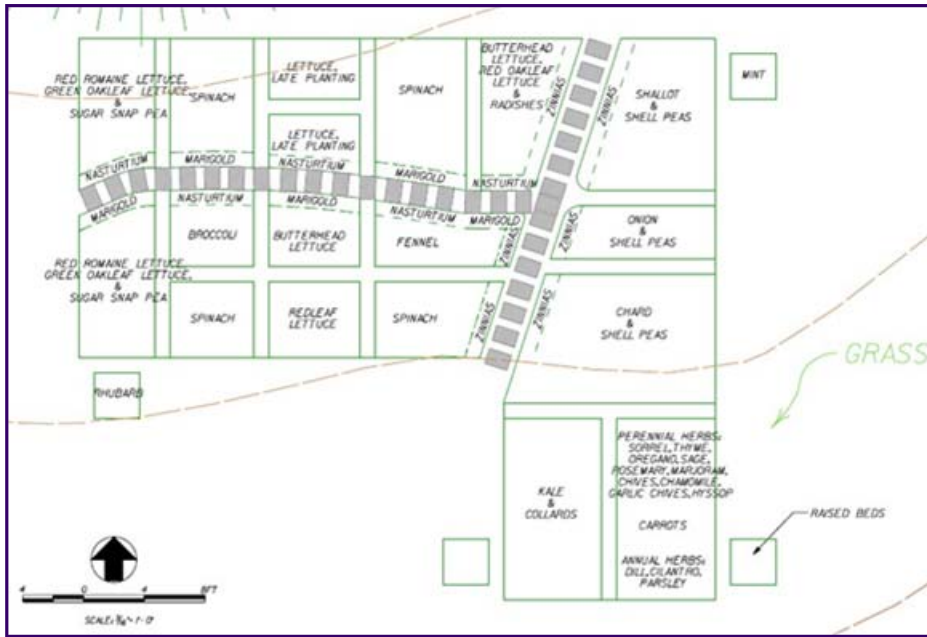
February Reminders	2
Fruit Tree Demo/MG	2
Relax	4
In a Desert Garden	4
Cuttings 'N' Clippings	4
Agent's Observations	5

Cochise County Cooperative Extension

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the Food Network show, *Iron Chef America*, which paired White House Executive Chef, Cristeta Comerford with celebrity chef, Bobby Flay, against celebrity chefs, Emeril Lagasse and Mario Batali, in a culinary battle royal preparing dishes featuring garden vegetables. Unfortunately the show generated much controversy when it was discovered that the shooting schedule did not allow the actual vegetables shown being picked by the competing chefs in the First Garden to be used in the competition. Food Network allowed viewers to conclude that the First Garden veggies were the ones actually used. Of course the pundits had a field day.

(Continued from page 1)

and find that a 32-foot square covers a little more than that much space. I realize that many of us don't have gardens that are 32 feet square, but then neither do most of us entertain on the same scale as the Obamas, so 32 feet is probably pretty conservative.

The garden comprises 55 different kinds of vegetables, including lots of greens, as well as berries and herbs and two bee

hives to produce honey— http://www.whitehouse.gov/assets/documents/garden_layout.pdf. The selection was put together by the White House chefs, including Assistant Chef, Sam Kass, long-time advocate for the local food movement and current policy advisor to the president on food and nutrition.

The White House garden got exposure on national television on January 3rd when it was featured on

No matter the source of the vegetables, the recipes using them sound delicious. Chef Comerford posted winning recipes for broccoli chowder and sweet potato pie on the White House blog (<http://www.whitehouse.gov/blog/2010/01/05/iron-chefs-and-healthy-eating>). Give them a try.

Until next time, happy surfing.

Gary A. Gruenhagen, Master Gardener
virtualgardener@cox.net

Fruit Tree Pruning Demo

February 27 from 10:00 a.m.—Noon

2010 Master Gardener Class

Classes begin March 3

For information contact the Extension Office at
(520) 458-8278, Ext. 2141

February Reminders

- ◆ Winter prune
- ◆ Prune roses
- ◆ Cold-moist stratify seeds
- ◆ Plant bare-root trees
- ◆ Prepare spring planting beds
- ◆ Clean and repair drip irrigation systems
- ◆ Finalize spring garden plans
- ◆ Keep watering!



Relax: See A Movie—Read A Book!

If you're looking to get ahead on your garden work, check out the online Cochise County Master Gardener calendar for monthly garden chores:

<http://ag.arizona.edu/cochise/mg/gardencalendar.htm>.

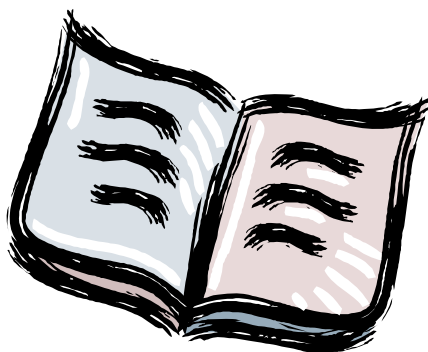
On the other hand, not doing anything can be pretty appealing on occasion! In just that spirit, my wife and I caught the recent showing of the documentary film entitled *Fresh, The Movie* at the Sierra Vista Library. Shown by the Sierra Vista Food Co-op and Baja Arizona Sustainable Agriculture, the movie is a disturbing look at some of the unintended consequences of modern agriculture and the encouraging efforts of some that are attempting to overcome those problems.

Only about an hour long, *Fresh* briefly examines many of the issues that face agriculture today, among them: declining soil fertility, pollution, food contamination (*E. coli*, etc.), and evolving microbial and insect resistance to antibiotics and insecticides. The film also features farmers and ranchers across the country who are pioneers in the "local and seasonal" movement, as recently popularized in Barbara Kingsolver's book, *Animal, Vegetable, Miracle*.

I don't know when, or if, the movie will be shown locally again, but there is a book that is an excellent substitute for the movie. I'm not sure, but the book may well even have been the inspiration for the movie. That book is *The Omnivore's Dilemma* by Michael Pollan.

Pollan is, at least for my money, an excellent writer. He's easy and entertaining to read and he packs his books full of well researched information. The general "plot" of his book is to examine four different "food chains." He looks at

"industrial" or "conventional" agriculture, "industrial" organic agriculture, the "local and seasonal" (aka "beyond organic") movement, and even makes a real effort to try his hand at being an old fashioned "hunter-gatherer."



Some of the information in the book is startling. After a lifetime of hearing the virtues of "Iowa corn-fed beef," I learned that cows shouldn't really eat corn. They're grass eaters by nature and a steady, exclusive diet of corn actually causes them serious health problems. That's why they're only "finished" on corn for a few months before slaughter. Another shocker: the odds are that you've rarely eaten an actual kernel of Iowa corn, despite the fact that the state is planted in little but corn and soybeans. Virtually all of Iowa's corn crop today is inedible and goes to making cattle feed and myriad food "ingredients" such as xanthan gum, maltodextrose, ascorbic acid, lecithin, and the ubiquitous high fructose corn syrup.

Another surprise is Pollan's negative opinion of what he calls "industrial" organic, the organic food you might buy at the supermarket. Pollan believes that many folks buy organic meat and eggs because they believe the animals are treated better, but his investigation shows that is often not the case. Most large scale organic chicken farms raise their

chickens in spaces as tightly cramped as the big industrial processors. Surprisingly, "free range" and similar terms don't mean much. In the end, "organic" chickens don't really get outside too often.

I'm not by any stretch anti-business and I don't ascribe any "evil" motives to modern agriculturists, organic or conventional, for the way our food supply system has developed. Farmers and scientists have done an absolutely remarkable job feeding the world, the population of which is nearly seven billion people. Nonetheless, the book and the movie make a powerful case for beginning to re-examine our approach to providing food for ourselves and for attempting to eat more locally and seasonally.

If you have a chance, go see the movie. Definitely read the book. Then, get out there and patronize your local farmer's markets and food co-ops, try some locally grown vegetables, or grass fed beef. Even better yet, grow some of your own food! Almost everyone has enough space to at least raise a containerized tomato plant or grow a few herbs. And don't forget, the Cochise County Master Gardeners are available to help answer your gardening questions.

Bill Schulze, Master Gardener

Robert E. Call

Robert E. Call
Area Horticulture Agent
Carolyn Gruenhagen
Editor

In a Desert Garden

Beebalm – Wild Bergamot – *Monarda fistulosa*

Monarda is native to the Eastern part of the US, but wild bergamot is native to Arizona and is considered one of its wildflowers. It is also called horsemint as *Monarda* is in the mint family. Here *Monarda* is not as showy as the readily available red *Monarda didyma* that you might find in the nurseries, but it is a beautiful candidate for a natural wildlife garden.

My plant was given to me by a friend who dug up a start in her garden more than a decade ago. I planted it against the wall that separates my property from my neighbors. Over the years this area changed. My husband built a more sturdy support for the Tombstone rose (*Rosa banksias*) we planted, which gave afternoon shade for my *Monarda*. As it self-seeds freely, the plant slowly moved towards the more open space and I still have a nice stand of it.

Wild bergamot is a plant one finds in a riparian area, 5,000 feet and higher and on moist mountain slopes. It can be found all the way up to 8,000 feet. I am not willing to provide that much moisture, but I don't have to worry as my heavy red clay soil holds enough moisture to sustain this plant.

When in bloom, this plant will light up the corner of the yard with its pale lavender blooms. The flowers come in round clusters on the end of square stems that can be three feet tall. The small flowers are tubular with elongated lips and attract hummingbirds. The flowers are strongly scented and attract various insects, but the leaves, when crushed, give up an even stronger scent. The name bergamot is taken from a small citrus tree that has a similar smell. The Native Americans used the leaves to make mint tea to cure digestive and respiratory problems. A little "tidbit" on the side—the oil of bergamot is used to flavor Earl Grey Tea.

Beebalm is not a long-lived plant where winters are mild and summers are long and hot, but as it self-seeds it will prevail for a long time. Of course, not always in the same place.

M. didyma is the basic species and has scarlet flowers that get pollinated by hummingbirds. I tried to grow it in my yard, but never for long, due to my heavy clay soil and the summer heat.

There are several hybrids available in the trade. They bloom over a long period starting in early summer.

Angel Rutherford, Master Gardener



Monarda fistulosa



Monarda didyma

Cuttings 'N' Clippings

* The next CCMGA meeting is 5:00 p.m. Thursday, **February 4** at the University of Arizona South Campus Public Meeting Room. It's not too early to think about getting ready for spring planting. Three local backyard vegetable growers will have a panel discussion to share their tips about what works and what doesn't in our high desert gardens. Elly Stavarek has grown vegetables without chemicals for several years and teaches a gardening class at Cochise College. Her garden has been featured on garden tours. Jim Woodruf uses dozens of raised beds to grow vegetables almost year round and recently constructed a greenhouse in his backyard. His yard was featured on a rainwater harvesting tour. The last of this terrific trio is DeForest Lewis, a Certified Arborist and Cochise County Master Gardener who grows a variety of vegetables and has given public presentations on composting. You'll find each of these speakers as friendly and helpful as a good neighbor.

* On **February 6**, 9:00—10:30 a.m. *RainScapes—Landscaping with Rainwater* will be the topic of the next FREE Water Wise presentation at the UAS Public Meeting Room. Come learn the basics of creating a beautiful landscape irrigated only with rainwater (and graywater if possible). *RainScapes* rely on good design, plant selection, and water harvesting techniques. The presenter will be Cado Daily.

The Agent's Observations

Q We would like to build or buy a kit to construct a greenhouse. What type of structure materials should we be looking for? What type of covering is best for a greenhouse in Southern Arizona?

A There are several materials that are used for greenhouse construction and coverings. Each has advantages and disadvantages. Framing materials and coverings are somewhat inter-dependent.

Structure materials: Greenhouse frames are traditionally made from wood that is resistant to rot like redwood, cedar, or pressure treated lumber. Metal tubing, polyvinyl chloride (PVC), and aluminum are materials that are also used. Wood frame structures are more expensive and not as strong as other materials. Metal tubing is bent to form arcs. Arcs are spaced 24 inches apart with stays. Single or double layers of plastic sheeting can be placed over the tubing. Also, rigid coverings can be bent to cover the metal tubing. PVC greenhouses are available but seem somewhat flimsy. Over time the PVC will sun rot in the southwest heat and the wind can tear them apart. However, there are plans available to make homemade PVC structures using standard 2 inch PVC pipe and fittings. Aluminum is durable

and strong and a very good choice as a greenhouse framing material.

Covering materials-Glass: The traditional covering for greenhouse is glass and is the preferred material for light transmission and permanence. It lasts indefinitely although it does become brittle with age. Since glass is breakable it is more difficult and dangerous to install. It also requires a much sturdier frame than plastic covered greenhouses. Many improvements have occurred in recent years. Among the most important is increased strength (double and triple strength ratings) to resist breaking. It is the most costly greenhouse covering. Hail glass is also available and should be a consideration because of the summer monsoon season, but will increase the cost of the glass by 15-25%.

Film plastic: A greenhouse covered with film plastic is one sixth to one tenth the cost per square foot of a glass covered structure. Although less permanent than glass, film plastic covered greenhouses can be heated as efficiently as glass houses. Previously, film plastic had a life span of about one year. (I am not talking about Visqueen, but rather plastic manufactured specifically for greenhouses.) Newer, clear types are engineered to resist yellowing and may last three to five years while allowing up to 89% light transmission. Sold under many trade names, they are available in many thicknesses—from 2 mils to 15 mils. The thicker the film the more expensive. Weather resistant polyethylene film

plastic, 4 mils thick, is perhaps the least expensive and makes a satisfactory covering for a hobby greenhouse. However, wind can be a factor with plastic film and rip it apart quickly. When choosing a plastic film, purchase one that is UV light protected. You can also buy plastic film with an infrared inhibitor; it cuts heat loss inside the greenhouse by up to 20% on cloudless nights. Another way to reduce heat loss is to double layer the plastic and create an air pocket as insulation. A small fan runs constantly blowing air between the two sheets of plastic inflating them. This space can be 3/4 to 8 inches thick depending on how tightly the plastic is installed. Although there is some light transmission loss, heating costs are reduced by about one third.

Rigid coverings: Rigid coverings include fiberglass, acrylic, polycarbonate and polypropylene. They come in corrugated and flat forms. Shatterproof, they resist hailstone damage to varying degrees (polycarbonate being the strongest). Some types of rigid plastics get dirty and do not quite let the same amount of light in as glass. However, a good wash with detergent and water will remove dirt and/or smudges. Plastic films and panels have fewer lap joints through which heat can escape. All rigid plastics retain heat well. For example, fiberglass retains heat 4.4 times more efficiently than glass and 70.8 times more efficiently

(Continued on page 6)

Just four weeks until the
17th annual High Desert Gardening & Landscaping Conference!
This year we have an exciting new Rain Water Harvesting track as
well as our Basic High Desert Gardening Series.
Registration forms are available at our web site or call the
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High on the Desert

February 25 & 26, 2010

458-8278 Ext 2141 or

www.ag.arizona.edu/cochise/mg/

for more information!

(Continued from page 5)

than a single layer of polyethylene film. The total amount of light transmitted through fiberglass rigid panels is roughly equal to that transmitted through glass. Fiberglass actually has the advantage over glass because it transmits less heat. During the summer a fiberglass covered greenhouse requires less cooling than a glass greenhouse of the same size. Fiberglass with PVC is a relatively lightweight, durable material that resists damage from weather, ultraviolet radiation, and light hail. Fiberglass over a 10 to 15 year period will become brittle, discolor, and turn yellow. This decreases light transmission. Corrugated types of rigid coverings makes very tight fitting lap joints, thus saving heat. Recent improvements in plastics include the introduction of structured

sheets. Available in both acrylic and polycarbonate, they may be "double skinned" (for insulation purposes) or may be corrugated. The double skin types come in different thicknesses, 4, 6 and 8 mm being most common. Either of these materials can be used on curved surfaces. Light transmission is reduced with some of these coverings. Of the rigid coverings polycarbonate is the strongest material and resistant to impact and fire. Polycarbonate is used to make bullet-proof vests and glass. When purchasing polycarbonate panels make sure they are UV coated to guard against premature yellowing.

Other considerations: Whatever greenhouse framing or covering materials are chosen be sure to build the structure as tight as possible. Roof vents will greatly aid with natural cooling of the green-

house. Besides manual roof vents, automatic types that open using electrical motors or gas filled cartridges are available. Lower wall ventilation, as well as entrance doors need to be considered. With the heat of summer, shading materials like whitewash or shade cloth can be place on the roof to decrease heat build up. Cooling and heating are other concerns that need to be addressed, depending on the seasonal use of the greenhouse. Make sure that the greenhouse is well anchored to the ground because they can be destroyed by heavy winds.

Source: <http://www.hobby-greenhouse.com/coverings.htm>
(Viewed Jan. 25, 2010)

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