



# Master Gardener Newsletter

- Doña Ana County Cooperative Extension Service
- U.S. Department of Agriculture
- NMSU College of Agricultural, Consumer & Environmental Sciences

Doña Ana County Extension Office  
 530 North Church Street  
 Las Cruces, NM 88001  
 Phone: (575) 525-6649 Fax: (575) 525-6652  
 Editor: Ann Shine-Ring, Certified Master Gardener

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## Plant-of-the-Month

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### CHILE PEPPERS

Peppers, *Capsicum* species, are a genus of flowering plants belonging to the nightshade (*Solanaceae*) family that are closely related to eggplant, potato, petunia, tomato and tobacco. Pepper fruits are considered to be vegetables, but botanically speaking, they are berries. Pepper types are usually classified by fruit characteristics, i.e., pungency, color, fruit shape, as well as by their use. When mature red pepper pods are dried and ground, they become the most consumed spice in the world.

Although there are five species of *Capsicum* in cultivation in the U.S. today, the most common chiles are all *C. annuum*. The most familiar exceptions are the Habañero types *C. chinense*, Tabasco, and a number of Asian hot peppers designated *C. frutescens*. (See Page 3)

There are five domesticated species of chiles: *Capsicum annuum* which includes bells, New Mexicans, serranos, jalapeños and piquins; *Capsicum chinense* which includes habañeros and the infamous 'Datil', *Capsicum frutescens*, which includes Tabasco® and the original 'Malagueta'; *Capsicum baccatum*, which includes the 'Christmas Bell' and true ajis; and *Capsicum pubescens*, which includes rocotos and manzanos.

Peppers are commonly divided into two groups, pungent and nonpungent, also called hot and sweet. Sweet peppers include the bell pepper, paprika, pimiento and the sweet yellow wax peppers.

Article Continued on Page 2

#### June 2010 Hotline Client Data

# Total Contacts	31	Subject of Inquiry	
# Telephone Calls	31	Animals	0
# Issues Addressed	65	Disease	5
		House Plants	0
		Insects	12
<u>Geographic Area</u>		Lawns	5
Anthony	1	Shrubs	9
Chaparral	1	Soil	0
Deming	3	Trees	12
Doña Ana	1	Vegetables	0
El Paso	0	Water	10
La Mesa	1	Weeds	5
Las Cruces	24	Misc.	7
Mesilla Park	0		

#### July 2010 Hotline Client Data

# Total Contacts	37	Subject of Inquiry	
# Telephone Calls	37	Animals	0
# Issues Addressed	71	Disease	7
		House Plants	0
		Insects	10
<u>Geographic Area</u>		Lawns	6
Anthony	2	Shrubs	9
Chaparral	2	Soil	0
Deming	4	Trees	13
Doña Ana	1	Vegetables	0
El Paso	0	Water	12
La Mesa	1	Weeds	6
Las Cruces	27	Misc.	8
Mesilla Park	0		

Thank you to MGs Janie Elliott, Joan Lane & Valice Raffi for compiling the above data.

### Chile Peppers—Continued from Front Page

These are the most popular types of pepper in the U.S. today, with more than twice the acreage planted to sweet types as to pungent peppers.

In the Southwest, chile pepper is synonymous with the New Mexican type pepper. This pepper is also called "long green" or "Anaheim". It's pungent, usually red when mature, and is adapted to the warm, dry conditions of the Southwest. However, the term chile pepper can include many other types such as jalapeño, ancho and serrano. The different types are usually distinguished from one another by a descriptive adjective following the word chile, such as chile ancho, chile verde, or chile pasilla.

Although chile peppers are grown throughout New Mexico, most pepper acreage is in southern New Mexico where it is delivered to processors for canning and dehydrating. In other areas of the state, chile is grown in home gardens and/or on small acreages, mostly for local sales and roadside stands. Fresh green New Mexican chiles are shipped nationwide. Chile ristras, strings of mature chile peppers, are an important item in the tourist trade.



New Mexico "Long Green" or Anaheim Chile Peppers

**Origin & Spread of Chiles**—*Capsicum*, known to us as chile pepper, is indigenous to America. It was discovered by Christopher Columbus, who misidentified chili as black pepper from India. Thus, the name stuck and now we call this wonderfully fiery fruit chile pepper. The fiery or sharp taste is attributed to a chemical component called *capsaicin*, which stimulates the skin membrane with sensation of "pain" or "hotness". The more *capsaicin* in a chile, the hotter it tastes. A scientist called Wilbur Scoville devised a test called the Scoville Organoleptic Test to measure the amount of *capsaicin* in a chile, thus rating its sharpness or hotness. (See page 11)

**Peppers in New Mexico**—Chile pepper improvement in New Mexico began in the summer of 1907 when Fabian Garcia began to improve the local chile peppers grown around the Las Cruces area. In 1908, he released Bulletin 67 entitled "Chile Culture." Other NMSU researchers have made significant contributions to the development of chile pepper varieties through the years. NMSU has produced more of the chile pepper cultivars currently in production in the U.S. than any other university.

A favorite chile pepper of backyard gardeners in New Mexico is 'NuMex Big Jim'. This variety has varying heat levels, but the pods are large and are used for chile rellenos.

Three New Mexico State University cultivars, 'NuMex Sunrise', 'NuMex Sunset' and 'NuMex Eclipse', are yellow, orange and brown, respectively, when mature. They are used to make multicolored ristras.



### CHILE PEPPER FACTS

**Q.** Where did chile peppers originate? It is thought that they made their first appearance around 7,000 BC in Mexico. The first European to "discover" chile peppers was Christopher Columbus in America in 1493. It is said that he was actually looking for an alternative to black pepper. What he found was a small hot pod in which he called the "pimiento" after the Spanish word for black pepper. Within a century, chile peppers' popularity had spread worldwide.

**Q.** What makes chile peppers hot? Their pungency is derived from a compound called *capsaicin*, which is a substance located in the internal partitions of the fruit, that causes acrid vapors and a burning taste.

**Q.** Won't I avoid the burn if I don't eat the seeds? Seeds are not the source of heat in a pepper, as most people believe. The *capsaicin* is produced in the glands and the most heat is found in the placenta of the pepper that attaches the seeds to the pod.

**Q.** What's the best way to cool your mouth after eating a chile pepper? Immediate consumption of dairy products like milk, sour cream or ice cream. The more fat in the product the better. Also, starchy foods tend to absorb the heat! A popular Mexican cure is to consume beer to cool the burn!

**Q.** Why won't good old-fashioned ice water cool your mouth down? Pure *capsaicin* is a whitish powder, which is insoluble in cold water, which is why drinking water won't help to ease your burning tongue! Pure *capsaicin* has been rated at 15-16 million Scoville Units!

**Q.** What is the mildest pepper I can eat? The mildest peppers are bell peppers, cherry peppers and yellow peppers.

**Q.** I like it HOT! What are the more macho peppers? Hotter categories of peppers include the jalapeño and cayenne peppers.

**Q.** What is the hottest pepper ever? The Bhut Jolokia pepper was rated in 2004 at an astonishing 1,041,427 Scoville Units and is believed to be the hottest pepper on record!

**Q.** What are Scoville Units? Scoville Units are what the heat intensity of a pepper is measured in. The more milder pepper, like the bell peppers, range from 100-1,000 Scoville Units. While some of the hottest peppers, like the jalapeño and habañoero, range from 5,000-300,000 Scoville Units.

**Q.** Are eating chile peppers good for your health? Chiles are high in Vitamin A and Vitamin C and are reported to help lower blood pressure!

**Q.** Is there a rule of thumb about chile peppers that I should know? The smaller and thinner the pepper, the hotter it will be!

Chile Peppers—Continued from Page 2

### CAPSICUM CULTIVAR TYPES

**(C. annuum)** Includes many common varieties such as bell peppers, paprika and jalapeños. This is the most common species and is used throughout the world.

**(C. chiense)** Includes the hottest peppers such as habañeros and Scotch bonnets. This species, like all *Capsicum* species, originated in the New World. Unfortunately, the taxonomist who named the species, thought it came from China, mislabeling it forever. While grown mainly on the Yucatan Peninsula, it is thought to have come from the Caribbean. It is popular in Jamaica. Although green when immature, at maturity the fruit may be orange, yellow, red or white. It is extremely pungent and aromatic, with the pungency being persistent when eaten. Other names for this pepper are "Scotch Bonnet" and "Bahamian". It is dried and used as a spice in many Caribbean dishes. It is also used to make hot sauces that compete in heat with Tabasco® sauce. While a hot pepper, heat sensation is reported to disappear rapidly. In Guatemala, the Indians swallow the tiny fruits as pills to cure a stomach ache. Other names are "Chilepiquin", "Chiletepin", "Chile tepin" and "Chiltecpin." Shape can be used to differentiate the round tepin from the oval piquin. This pepper, like de Arbol, is reported to have distinct flavors that add to dishes in which it is used. The green fruits are pickled, while the red fruits are dried and ground.

**(C. Chacoense)** This plant is often referred to as the *Mother* of peppers. Believed to be found only in Argentina, Bolivia and Paraguay. A white flowered species. Known to be susceptible to pepper mild mottle tobamovirus. Very scarce.

**(C. pubescens)** This is the black seed species and includes South American rocoto peppers. These plants originated in the mountainous regions of Mexico and Central America. It also has lovely purple flowers, instead of the usual white flowers. It is most common in the Andes of Columbia, Ecuador, Bolivia and Peru where it is known as "rocoto" or "locoto". Other common names are "manzano", and "peron", because the fruit can have the characteristic shape of an apple or a pear. Grown exclusively in courtyards and gardens of cool regions, it is said that rocoto combines the suavity and juiciness of the bell pepper with the heat of a habañero. This pepper is a perennial, adapted to cool areas and is said to tolerate frost. It grows at cooler temperatures, 40° to 60°F, than most peppers. For example, it grows better in Albuquerque than in Las Cruces during the summer. Known to reach 17 ft high and 14 ft wide in Guatemala, it has a special flavor and unique heat profile.

**(C. baccatum)** Horticultural classification known as "aji" in South America and the U.S. Includes the "chiltepin" which is the favorite South American pepper. Probably originated in northern Argentina and Bolivia. This species was once known as *C. pendulum*. There are two recognized varieties of *C. baccatum*; *C. baccatum* var. *baccatum* and *C. baccatum* var. *pendulum*. The flowers of *C. baccatum* have dark green, yellow or brown spots on the petals of the corolla. There are as many different types of peppers in relation to shape, color, and size in *C. baccatum* as there is in the *C. annuum* species. Fruits vary in heat from mild to very hot within this species. The fruits embody unique aromatics and flavors that to the uninitiated may be overpowering. This is the pepper of choice when making ceviche, or marinated fish. Unfortunately, no commercial cultivars are available.

**(C. frutescens)** Includes cayenne and Tabasco peppers which probably originated in the Amazon basin.

### CHILE PEPPER TYPES & VARIETIES

(G.W. Dickerson, Guide H-240)

Link: [http://aces.nmsu.edu/pubs/\\_h/h-240.pdf](http://aces.nmsu.edu/pubs/_h/h-240.pdf)

**Bell Types**—Sweet, large blocky-shaped fruit with thick flesh and 3 to 4 lobes; 3-4" in diameter and 4-5" long; normally harvested at mature, green stage, although some may turn yellow or red to brown when mature; can be stuffed, used in salads, relishes or cooked vegetable dishes; recommended varieties include: Bell Boy, Gypsy Hybrid and California Wonder.



**Pimento Types**—Sweet, slightly pointed, conical-shaped fruit with thick walls; 2" in diameter at shoulder and 3" long; red when ripe; some recommended varieties include: Early Pimento and Pimento Select.



**Sweet Wax Types**—(Shown above) Fruits are yellow when immature with a waxy gloss, turning orange to red when mature; conical shape; 1" in diameter and 2-6" long; may be pickled, made into relishes, or used fresh in salads; some recommended varieties include: Sweet Banana and Hungarian Sweet Wax.

**Long Green Types**—Fruit vary in length from 4-12" and 1-2" wide with relatively thin flesh; also called 'New Mexico' or 'Anaheim' types; fruit harvested either in the mature green stage or mature red stage, although some varieties may turn yellow, orange, or brown; pungency may range from sweet (paprika types) to hot; green pungent pods can be used fresh, canned, or frozen; longer-podded varieties are often used as chile rellenos; red pods can be ground into powder; both red and green pods can be used in various salsas; some recommended varieties include 'New Mexico 6-4' (mild), 'NuMex R Naky' (mild), 'NuMex Big Jim' (mild to medium), 'Sandia' (hot), and 'Española Improved' (hot).

**Jalapeño Types**—Fruit conical, 3" long and 1-1-1/2" wide with thick flesh and tapered blunt tips; immature fruit are dark green turning red at maturity and are highly pungent; used fresh, in salsas, canned, pickled, or on nacho chips; recommended varieties include 'Jalapeño', 'Jalapeño M', and 'TAM Jalapeño'.

Article Continued on Page 4

Chile Peppers—Continued from Page 3

Chile Pepper Types & Varieties - Continued

**Other Types**—Pepper choice for the garden depends on the type of cuisine you enjoy. Those liking truly hot salsas may prefer either the 5-10" red 'Cayenne' or the 2" long red, orange, brown, or yellow-colored 'Serrano'. 'Piquin' is a very small red pepper that characteristically tastes hot, but the heat sensation soon dissipates. Refer to specific recipes for type of pepper recommended. For more information on pepper varieties refer to NMSU Circular 530 Capsicum Pepper Varieties and Classification, Paul W. Bosland et al (available at the MG Hotline Library) and at Link:

<http://www.reocities.com/wstarron/circ530.pdf>

**COMMON CATEGORIES OF CHILE PEPPERS**

(Rosalind Creasy, National Garden Bureau, 2010 on About.Com)

Link: [http://gardening.about.com/od/vegetables/a/ChilePepper\\_2.htm](http://gardening.about.com/od/vegetables/a/ChilePepper_2.htm)

Here are the eleven most common categories of chile peppers, classified by their fruit shape and their heat listed in Scoville Units:



**Asian/Thai**—Small slender, thin-walled fruits; green ripening to red; no distinct pepper flavor; high to extreme heat (8,000 to <60,000 Scoville Units). Very attractive plants are heavy producers. Use red ripe, fresh, or dried, to add heat to curries, marinades, soups, and stir-fries.



**Cayenne**—Long, curved peppers with two cells and thin wrinkled skin; generally green but can be yellow or purple; medium to high heat (5,000 to <60,000 Scoville Units). 'Super Cayenne' (1990 AAS Winner) is especially vigorous. Harvest red ripe; use fresh or dried to add heat to marinades, pizza, stews, soups, stir-fries, and curries.



**Chile/Anaheim/New Mexico/Paprika/Pasilla**— Long and tapered, with fairly thin walls; ripen from green to red; mild to medium heat (1,000 to <8,000 Scoville Units). There are many varieties that have mild pepper flavors; can be roasted and stuffed, chopped and added to ethnic dishes; good for drying when ripe. Add to stews and soups and use as a garnish.

Common Categories of Chile Peppers - Continued



**Habañero**—Small lantern shape; thin-walls; fruity taste and extreme heat (8,000 to <60,000 Scoville Units). Fruiting may be erratic in northern gardens. Use sparingly when fresh in fruit salsas, ceviche, jerk sauces, and Caribbean curries.



**Hot Cherry**—Tomato-shaped, thick-walled green peppers; ripen to red; medium heat (5,000 to <8,000 Scoville Units). They have a rich, sweet flavor; use for pickles or poach them and stuff with meat or cheese.



**Hungarian Wax/Banana**— Long and conical, tapering to a point; medium thick walls; ripen yellow to red; mild heat (1,000 to <5,000 Scoville Units). Plants are adaptable to many climates. Use yellow or red ripe for pickles and chutney, or add them to salsas and fried dishes.



**Jalapeño**—Short and stubby with thick meaty walls; deep green; medium to high heat (5,000 to <60,000 Scoville Units). Numerous varieties include jalapeños for short northern climates, selections with yellow and orange stages of ripeness, and others that are highly productive. Harvest jalapeños green; use fresh in salsas, pickle, and grill and add to tacos or burritos. Smoke dry—either green or red ripe—to make chipotles. *Article Continued on Page 4*

*Chile Peppers—Continued from Page 4***Common Categories of Chile Peppers - Continued**

**Ornamental/Hot Edible**—Upright, small, round or tapered, and thin walled; medium to high heat (5,000 to <60,000 Scoville Units). Bred in a variety of colors and with different shaped peppers: 'Black Pearl' (2006 AAS Winner with black fruit), and 'Super Chili' (1988 AAS Winner; small red chiles borne in large numbers). Taste these peppers cautiously first, as some are bitter, some are exceptionally hot; pickle to add heat to salsas, marinades, and soups.



**Poblano (called Ancho when dried)**—Flat and round, slightly tapered with a blunt end; thin walls with three cells; dark green; mild heat (1,000 to <5,000 Scoville Units). Harvest green for roasting and stuffing; dry when red ripe and grind up for basic salsas and moles.



**Santa Fe Grande**—Medium-sized, tapered and conical; medium thick walls; yellow-to-red; medium to high heat (5,000 to <60,000 Scoville Units). Use fresh when ripe; pickle or roast and add to quesadillas and tacos. A new Santa Fe Grande type is 2006 AAS Winner 'Mariachi,' a mild chile pepper with outstanding flavor when yellow or red.



**Serrano**—Slim, slightly club-shaped with medium thick walls; green; rich flavor; medium to high heat (5,000 to <60,000 Scoville Units). Use fresh in the green stage or fry or grill and use as a garnish or add to salsas, tacos, guacamole, and other traditional Mexican dishes.

**CHILE PEPPERS IN FOOD**—There has been a marked increase in the consumption of Southwestern ethnic food products in recent years. Public interest in learning more about the peppers used in these delicious entrees is also increasing. Many native Southwestern dishes require specific types of peppers to reproduce the authentic flavor of the dish. New Mexico is the leader in the U.S. in pungent pepper production, an important ingredient of Southwestern food.

The degree of pungency (heat or bite) is determined by the amount of compounds called *capsaicinoids* in the fruit.

**Chile Peppers in Food-Continued**

Non-pungency (sweetness) is determined by a single gene, but the varying levels of heat are conditioned by many genes. The relative hotness of green or red chiles depends on the variety chosen and the location where it is grown.

Chile peppers are well known for their red, hot reputation. Many are fiery, but many others are sweet, mild, or richly flavored. No matter what end of the spectrum you prefer, you can't escape chile peppers in Mexican cooking. There are over 140 different types of chile peppers grown from the extremely hot habañero to the sweet bell pepper.

The burning sensation that makes chile peppers so appealing to culinary thrill-seekers comes from a chemical called *capsaicin*. *Capsaicin* develops in the placenta or cross-ribs of the pepper. Since the ribs have the highest concentration of *capsaicin*, this naturally makes them the hottest part of the pepper.

Jalapeños and other hot chiles can bite you before you bite them. *Capsaicin* can irritate your skin and especially your eyes. Cover your hands with plastic bags or thin rubber gloves, or wash your hands well and scrub under your nails after handling hot chiles; otherwise, an inadvertent rub of the eye could cause a three-alarm mishap.

**When It's Too Hot:** If you ever find yourself eating a chile pepper that is way too hot, do not drink water!

*Capsaicin*—which is an oil will not mix with water but instead will distribute to more parts of the mouth. Drink milk, rinsing the mouth with it while swallowing, or eat ice cream or yogurt. Eat rice or bread which will absorb the *capsaicin*. Drink tomato juice or eat a fresh lime or lemon (the acid will counter act the alkalinity of the *capsaicin*).

**CHILI PEPPER ADDICTION**—Studies have shown that, yes, eating spicy food is addicting. What happens after eating something hot, is your body nerves feel pain. These pain signals are immediately transmitted to your brain. Your brain interprets this signal and automatically releases endorphins (the body's natural pain killer). The endorphins kick in and act as a painkiller and create this temporary feeling of euphoria. Hot and spicy food lovers soon begin to crave this feeling and are hooked! So if you know someone who can't enjoy tortilla chips with out heaps of salsa, or who can't find a salsa hot enough you may want to inform them that they are suffering from an addiction.

**GROWING PEPPERS IN YOUR GARDEN**—There is an overwhelming amount of chile pepper varieties available to the gardener. Many seed companies claim that all varieties grow well everywhere, this is not true. New Mexican varieties grow better in the southwest while bells and habañeros do not grow as well and grow better in other, more humid regions. (Be sure to check out the Chile Pepper Institute here in Las Cruces as they sell many seeds that are compatible with our weather/temperature conditions).

All peppers grow on 1 1/2 to 2-ft.-tall handsome, bushy plants. Use plants as temporary low informal hedge, or grow and display them in containers. Sweet peppers always remain mild, even when flesh ripens to red. This group includes big stuffing and salad peppers commonly known as bell peppers, best known of these are 'California Wonder' and 'Yolo Wonder'. *Article Continued on Page 6*

## Chile Peppers—Continued from Page 5

*Growing Peppers in Your Garden—Continued*

Hybrid varieties have been bred for early bearing, high yield, or disease resistance. Big peppers are also available in bright yellow and purple (purple types turn green when cooked). Other sweet types are thick-walled, very sweet pimientos used in salads or for cooking or canning; sweet cherry peppers for pickling; and long, slender—Italian frying peppers and Hungarian sweet yellow peppers, both used for cooking.

Hot peppers range from tiny (pea-size) types to narrow, 6-7 inch long forms, but all are pungent, their flavor ranging from the mild heat of Italian peperoncini to the near-incandescence of the 'habanero'. 'Anaheim' is a mild but spicy pepper used for making canned green chilies. 'Long Red Cayenne' is used for drying; 'Hungarian Yellow Wax (Hot)', 'Jalapeno', and 'Fresno Chile Grande' are used for pickling. Mexican cooking utilizes an entire palette of peppers, among them 'Ancho', 'Mulato', and 'Pasilla'.

Buy started plants at a nursery, or sow seed indoors 8-10 weeks before average date of last frost. Set out when weather becomes warm, spacing plants 11/2 ft. apart. Feed once or twice with commercial fertilizer after plants become established, before blossoms set. Sweet peppers are ready to pick when they have reached good size but keep their flavor until red ripe. Pimientos should be picked only when red-ripe. Pick hot peppers when they are fully ripe. Control cutworms with baits. Control aphids, whiteflies with all-purpose vegetable garden dust or spray.

One key to growing chiles successfully is adding compost; this improves workability, water-holding capacity, drainage, and fertility.

Even under optimal conditions the germination process can be slow and irregular. Chile seeds need warmth, oxygen, and moisture to germinate. Higher germination rates occur between 70-80°F, while faster germination occurs between 90-100°F

Soaking seeds for 2-3 days can also aid in the speed of germination. Fertility: Most gardeners can grow great chiles by simply adding compost and aged manure to their existing soil conditions, of course you have to manipulate the soil if it is excessively sandy or clay. Chiles are usually considered to be a self-pollinating crop, however, within species, will readily cross-pollinate. If you're planning to save seed take measures to protect your plants from cross-pollination.

**Flower and Fruit Development:** The key to flower set is nighttime temperature, which ideally should be between 65-80°F. Fruit set is enhanced by increased sunlight, however fruit will not set when night temperatures are above 86°F. Some varieties will take 130 days or more to complete maturation. New Mexican pods ripening at temperatures between 86-95°F have twice as many *capsaicinoids* as pods ripening between 59-72°F.

**Helpful Hints (from the Chile Pepper Institute):**

- Select early-maturing varieties.
- Start seed indoors 8 to 10 weeks before the last expected frost.
- Before transplanting to a garden, "harden off" your seedlings by exposing them to outdoor temperatures (not freezing) for increasingly longer periods of time each day.
- Transplant when daytime temperatures average 70°F and nighttime are around 55°F.
- Soil pH should be 6.5 and use of a balanced fertilizer is recommended (5-10-5 or 10-10-10.) Go easy on the Nitrogen.
- Water during dry spells, at least 2 inches a week, especially after fruit set. *Article Continued on Page 7*

**CHILE TERMINOLOGY** (The Chile Pepper Institute© 2006)

<b>Adobo Sauce</b>	Tomato based sauce used to can chipotles
<b>Aji</b>	South American term for chile
<b>Anaheim</b>	Cultivar of the New Mexican pod type
<b>Ancho</b>	Pre-Columbian pod type from Mexico maturing to red (dried form)
<b>Campanulate</b>	Shaped like a bell
<b>Capsicum</b>	Genus name for chiles
<b>Capsaicin</b>	One of the alkaloids in chile that makes it hot
<b>Capsaicinoids</b>	One of the groups of alkaloids in chiles that make them hot
<b>Chile</b>	Anything consisting of the <i>Capsicum</i> plant or the fruit from the plant
<b>Chili</b>	A culinary dish consisting of chile powder, beans, tomato and ground beef
<b>Chile Pasado</b>	Dehydrated green chiles that can be reconstituted for cooking
<b>Chile Wilt</b>	Often refers to Phytophthora wilt caused by a fungus, can also refer to the fungal disease Verticillium
<b>Chiltepin</b>	Wild variety of piquins also called bird peppers, wild bird peppers and birdseye peppers, usually round in shape
<b>Chile Piquin</b>	Wild red pepper that normally has a "bullet" shape
<b>Chipotle</b>	A smoke-dried red jalapeno
<b>HPLC</b>	High Performance Liquid Chromatography used to machine analyze pungency
<b>Long Green</b>	New Mexican pod type also called Anaheim; cultivars include NuMex Big Jim, NuMex Joe E Parker and Sandia
<b>New Mexican</b>	Pod type developed by Fabian Garcia of NMSU in the 1880's, sometimes mislabeled as 'Anaheim'
<b>Mole</b>	Spicy sauce made of chiles & unsweetened chocolate
<b>Mulato</b>	Similar to the ancho but brown at maturity
<b>Paprika</b>	Any non pungent, red at maturity chile that is used as a spice or for color
<b>Poblano</b>	In U.S. produce markets, an green ancho or mulato (fresh form)
<b>Pod Type</b>	A horticultural division of a species
<b>Pungency</b>	The heat of chiles
<b>Rellenos</b>	Culinary dish of stuffed fresh New Mexican chiles
<b>Ristra</b>	A long "string" of New Mexican chiles used for storage and decoration
<b>Scoville Heat Unit (SHU)</b>	A measure of chile pungency named after Wilbur Scoville based on the dilution of chile samples until heat is no longer detected by a "taster".
<b>Variety</b>	A subdivision of a species consisting of naturally occurring or selectively breed populations or individuals.

## Chile Peppers—Continued from Page 6

**Growing Peppers in Your Garden—Continued**

(The following information is from an article entitled [Growing & Harvesting Hot Peppers](#), by Rosalind Creasy, National Garden Bureau)

**Diseases & Pests**—Chile peppers are generally quite healthy and pests are only an occasional problem. Tiny green aphids sometimes cluster on the tips of branches. Aphids can also spread deadly viruses. A strong spray of water from the garden hose can knock aphids off plants. Caterpillars, including corn earworms and corn borers, destroy the fruits; hornworms eat both fruits and leaves.

Chile peppers are prone to a few virus diseases. There are quite a few viruses in peppers; the most common is tobacco mosaic virus, which causes mottled yellow leaves and misshapen fruits. There are no cures for viruses so the plants must be destroyed. Prevent the disease from spreading by controlling aphids.

Chiles, like other fruits, lure birds and other animals to eat them and disperse their seeds. But chiles also attract rodents that crush seeds and make germination impossible. Researchers, Tewksbury and Nabhan, suspect that the *capsaicin* in chiles protects them from rodents. The *capsaicin* production is dramatically increased as the chile fruit ripens.

**Cautions**—In the garden, *Capsaicin*, an alkaloid compound unique to chile peppers, which gives them their heat also creates a pleasure/pain response in the mouth, but it burns the skin and eyes. Always use caution when handling hot peppers. To protect your hands, use disposable latex gloves. Never touch your face near your eyes, mouth, or nasal passages. If you accidentally get pepper juice in your eye immediately wash it out with clean cool water.

**Harvesting Peppers**—Most chiles are green when unripe and turn yellow, orange, red, or brown when fully ripe. Individual chiles are considered most flavorful at different stages. For instance, in Mexico, jalapeños and serranos are preferable when green, and cayenne types when red ripe. For fresh eating, it is a matter of personal taste; for drying, fully ripe peppers are best. Harvest chiles once they feel firm and get a glossy sheen. Cut the fruit off with clippers, as the branches of pepper plants are brittle and break off readily.

**Preserving**—Dry thin-walled chiles in a warm, dry place or dehydrator until brittle dry. Store the dried chiles in airtight containers. If meal moths frequent your kitchen, store the peppers in zipper-style freezer bags in the freezer. Roast Poblano, Anaheim, and New Mexico chiles and then peel and put in zippered plastic freezer bags and freeze for up to six months.

**Containers**—All types of chile peppers can be grown in containers. Large poblano, New Mexico, Anaheim, and most hybrids are best grown in large containers, such as a half wine barrel. Grow smaller, more compact ornamental peppers in 10" to 12" containers. ■



## BHUT JOLOKIA— THE WORLD'S HOTTEST KNOWN CHILE PEPPER!



The *Bhut Jolokia* (also known as *Naga Jolokia*) is a chile pepper generally recognized as the hottest in the world. It is a naturally occurring interspecific hybrid primarily from Bangladesh, but also from the neighboring Assam region of northeastern India. It can also be found in rural Sri Lanka where it is known as *Nai Mirris* (Cobra Chili).

Initially there was some confusion and disagreement about whether the Bhut/Naga was a *C. frutescens* or a *C. chinense* pepper, but DNA tests showed it to be an interspecies hybrid, mostly *C. chinense* with some *C. frutescens* genes. In 2007, the Guinness World Records certified the *Naga Jolokia* as the world's hottest chile pepper, 400 times hotter than Tabasco® sauce—it measured at 1,041,427 million Scoville Heat Units.

Seed of 'Bhut Jolokia' is available for purchase through the Chile Pepper Institute, P.O. Box 30003, MSC 3Q, NMSU, Las Cruces, NM 88003 or

Link: <http://www.chilepepperinstitute.org/>

Also, Holy Jolokia, a chile sauce that made from *Bhut Jolokia*, is available for purchase. You can order a bottle and support the Chile Pepper Institute. This sauce is produced by CaJohn's Fiery Foods and a portion of its sales helps to fund research and education at the Chile Pepper Institute.



A scientific review of *Bhut Jolokia* written by Paul W. Bosland and Jit B. Barai, is also available at the following link: [http://www.chilepepperinstitute.org/files/tiny\\_mce/file\\_manage/educ\\_info/BhutJolokiaHortSciArt.pdf](http://www.chilepepperinstitute.org/files/tiny_mce/file_manage/educ_info/BhutJolokiaHortSciArt.pdf)

## Plant-of-the-Month: Chile Peppers

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- The Year of the Chile Pepper by Rosalind Creasy, National Garden Bureau, 2006 on Link: <http://gardening.about.com/od/vegetables/a/ChilePepper.htm>
- What's So Hot About Chili Peppers?, by Brendan Borrell, in Smithsonian Magazine, April 2009
- Which Chile Pepper is Which? by Judy Hedding, on About.com Guide Link: <http://phoenix.about.com/od/foodanddrink/ss/chilepepper.htm>

(Research and compilation of information for this article provided by Ann Shine-Ring, Certified Master Gardener)

### BRANIGAN MEMORIAL LIBRARY "LUNCH & LEARN" PRESENTATION

Date: Thursday, September 16<sup>th</sup>  
Time: 12:00-1:00 p.m.  
Place: Branigan Memorial Library  
Location: Roadrunner Meeting Room  
Speaker: Sabine Green, NMSU Floriculture Program  
Coordinator  
Topic: **VEGGIES ON THE RITZ**



Synopsis: Learn how to create innovative and fun autumn decoration with items that you have around your home. Join the NMSU Floral Team for a show of autumn decorations that anyone can make, no matter your training or budget!

Jeff Anderson has approved a one-hour education credit for MGs attending this presentation.

Information provided by  
Sylvia Hacker, Certified Master Gardener



### September Events at the Mesilla Valley Bosque State Park

Every Saturday at 8:15AM a Birding Tour is available, depending on the availability of a Volunteer Guide. Bring binoculars, water, closed-toed shoes and insect repellent.

Saturday, September 11

"Pots and Pails, Berms and Swales" talk at the park. Learn simple ways to harvest rainwater for your garden and landscape, presented by Master Gardener Sylvia Hacker. Talk starts at 10 AM in the classroom.

Saturday, September 25

"Aquarium Science" Join Naturalist Richard Quick from the Museum of Natural History and learn how to care for your own aquarium. Talk starts at 10 AM in the classroom.

Winter Hours (Sept. 1 – March 31): Mon-Sun 8 AM – 5 PM

ADDRESS: 5000 Calle De Norte (physical address)

Phone: 575-523-4398 Fax: 575-523-0742

**All Events are Free with a Valid Park Pass**

Information provided by Sylvia Hacker, Certified Master Gardener



## —PROCESSING FRESH CHILE—

Nancy C. Flores, Extension Food Technology Specialist  
NMSU Guide E-324

Flores states that, “many people consider green chile peppers to be a staple in the New Mexican diet”. She emphasizes that the most important step in processing fresh green chiles is the removal of the outer skin which is necessary for further cooking or canning.

Flores covers the following topics in this Resource Guide:

- Selecting Chile Peppers
- Blistering the Skin
- Heat Source Methods for Blistering
  - ...Range Top Method
  - ...Outdoor Grill Method
  - ...Microwave Oven Method
- Peeling
- Chilling & Freezing
- Commercial Chile Roasting Precautions

A chart outlining the Chile Roasting Process is also included. This Guide is available in the MG Hotline library and a copy can also be downloaded at:

Link: <http://aces.nmsu.edu/pubs/ e/E-324.pdf>

There are also a couple of online resources for roasting fresh chile peppers. Check out the following websites:

[How To Roast Fresh Chile Peppers](#) on GourmetSleuth.com,  
(Includes a video demonstration)

Link: <http://www.gourmetsleuth.com/Articles/Cooking-Tips--Techniques-642/how-to-roast-fresh-chile-peppers.aspx>

[How to Roast Chile Peppers](#), Easy Home Cooking Magazine  
(Includes step-by-step directions with photos)

Link: <http://recipes.howstuffworks.com/tools-and-techniques/how-to-cook-chili-peppers.htm/printable>



## —USING CHILE—

### Making Ristras & Making Chile Sauce

NMSU Circular 533

This Circular is provided by the NMSU Home Economics Program through the Cooperative Extension Service. It gives us a step-by-step guide to making our own chile ristras. The following information is provided:

- List of materials needed
- Selecting dried chile pods
- Preparing chile pods for stringing
- Importance of good ventilation

Source Cited: [Making Chile Ristras](#), by James R. Sais, 1989

This Circular also provides a recipe for Red Chile sauce that can be made from dry chile pods.

This resource can be downloaded at:

Link: <http://aces.nmsu.edu/pubs/ circulars/Circ533.pdf>



### Seed/Plant Exchange Suggestion

Hope Movsesian, Certified Master Gardener, has suggested that we do a seed exchange at our monthly meetings. Anyone with seeds, bulbs, or extra plants to share is encouraged to bring them to our next monthly meeting.



—GROWING CHILES IN NEW MEXICO—

Paul W. Bosland, Regents Professor, and  
Stephanie Walker, Vegetable Specialist, NMSU Guide H-230

The authors state that chile peppers (*Capsicum*) have been grown in New Mexico for at least four centuries and as of 1970 they have become an important cash crop for farmers. In 2002, almost 17,000 acres of chiles were harvested in New Mexico.

Topics Included in this Research Article:

- Varieties and Cultivars
- Preparing the Land
- Fertilizing
- Planting
- Row Spacing and Plant Population
- Transplanting
- Cultivating
- Fruit Set and Development
- Irrigation
- Pest and Disease Control
- Harvesting

This research article is available in the MG Hotline library and a copy can be obtained. You can also download this article at:

Link: [http://aces.nmsu.edu/pubs/\\_h/h-240.pdf](http://aces.nmsu.edu/pubs/_h/h-240.pdf)



GROWING PEPPERS  
IN NEW MEXICO GARDENS

George W. Dickerson, Extension Horticulture Specialist,  
NMSU Guide 240

Dickerson states that chile peppers (*capsicum* sp.) exhibit a wide variety of shapes, sizes, colors and tastes. He states that in general peppers can be classified into two groups: mild-or sweet-tasting fruit (bell, pimento, sweet wax) and fruit with hot or pungent flesh (long green and jalapeño).

Further, he discusses "pepper pungency" as being determined by the amount and types of *capsaicinoids* found in the fruit, "These chemicals are produced by glands associated with the placenta in the center of the pod where seeds are produced. Seeds are not sources of pungency, although they may absorb some of the *capsaicinoids* when cooked.

"Environmental factors that can affect pungency include water stress that increases pungency and cool growing conditions that decreases pungency." (See pages 3-4 in this newsletter for further detail from this Guide about Chile Pepper Types & Varieties)

Topics Included in this Research Article:

- Types and Varieties of Peppers
  - ...Bell Types
  - ...Pimento Types
  - ...Sweet Wax Types
  - ...Long Green Types
  - ...Jalapeño Types
  - ...Other Types
- Climatic Requirements
- Soil Preparation
- Fertilization
- Planting
- Mulches and Row Covers
- Irrigation
- Pest Control
- Harvesting

This research article is available in the MG Hotline library and a copy can be obtained. You can also download this article at:

Link: [http://nmwater.nmsu.edu/pubs/\\_h/h-240.html](http://nmwater.nmsu.edu/pubs/_h/h-240.html)



LARGEST & HEAVIEST HAILSTONE EVER!

NOAA's National Climate Extremes Committee, the agency responsible for validating national weather records, has declared a hailstone found on July 23, 2010 in Vivian, South Dakota, to be the largest in diameter and heaviest ever recovered in the U. S. The hailstone is 8.0 inches in diameter and weighs 1.9375 pounds (1 lb, 15 ounces) with a circumference of 18.62 inches.

The hailstone was found by Vivian resident Les Scott after a severe thunderstorm. It surpasses the previous hailstone record for weight, previously 1.67 lbs. for a stone in Coffeyville, Kansas in 1970. It also surpasses the record for diameter, which was 7 inches for a hailstone found in Aurora, Nebraska in 2003. The Aurora hailstone still holds the record for circumference of 18.75 inches.

Information Provided by Dale Petzold, Certified Master Gardener

## —MEASURING CHILE PEPPER HEAT—

Paul W. Bosland & Stephanie J. Walker, February 2010  
NMSU Guide H-237

Bosland and Walker state that most people that eat chile peppers do so because of the peppers' "heat, bite or pungency". Further, the authors state that the common references to chile heat as "mild, medium or hot" are very broad and tend to be more subjective than other more accurate scientific methods used to measure and rank heat.

"Heat in chile peppers is caused by chemical compounds known as *capsaicinoids*. There are more than 22 known *capsaicinoids*. The major ones—*capsaicin* and *dihydrocapsaicin*—normally occur in the highest concentrations", state the authors.

This Guide covers the following topics:

- Genetics & Environment
- Methods To Determine Chile Pepper Heat
  - ... Scoville Organoleptic Test (See chart below)
  - ... High-Performance Liquid Chromatography

Bosland and Walker summarize the need for more accurate measurement of chile pepper heat, "As the demand for chile peppers increases, the heat level of the crop is more important, and an accurate and precise measurement of heat is necessary."

This research article is available in the MG Hotline library and a copy can be obtained. You can also download this article at:

Link: <http://aces.nmsu.edu/pubs/ h/h-237.pdf>

Scoville Rating	Type of Pepper
15,000,000–16,000,000	Pure capsaicin
8,600,000–9,100,000	Various capsaicinoids (e.g., homocapsaicin, homodihydrocapsaicin, nordihydrocapsaicin)
5,000,000–5,300,000	Law Enforcement Grade pepper spray, irritant ammunition
855,000–1,075,000	Bhut Jolokia (Naga Jolokia)
876,000–970,000	Dorset Naga
350,000–580,000	Red Savina haba <span>ñ</span> ero
100,000–350,000	Guntur Chilli, Habanero chili, Scotch Bonnet Pepper, Datil pepper, Rocoto, African Birdseye, Madame Jeanette, Jamaican Hot Pepper
50,000–100,000	Bird's eye chili/Thai Pepper/Indian Pepper, Malagueta Pepper, Chiltepin Pepper, Pequin Pepper
30,000–50,000	Cayenne Pepper, Aji pepper, Tabasco pepper, Cumari pepper (Capsicum Chinese)
10,000–23,000	Serrano Pepper, Chichen Itza
2,500–8,000	Jalape <span>ñ</span> o Pepper, Guajillo pepper, New Mexican varieties of Anaheim pepper, Paprika (Hungarian wax pepper), Tabasco <sup>®</sup> Sauce
500–2,500	Anaheim pepper, Poblano Pepper, Rocotillo Pepper, Peppadew
100–500	Pimento, Peperoncini
0	No significant heat, Bell pepper, Aji dulce

Chart Source: Wikipedia Link: [http://en.wikipedia.org/wiki/Scoville\\_scale](http://en.wikipedia.org/wiki/Scoville_scale)



## RED CHILE & PAPIKA PRODUCTION IN NEW MEXICO

Stephanie J. Walker, November 2009  
NMSU Guide H-257

Walker states that, "New Mexico is the leading state in chile acreage (non-bell pepper) and that red chile and paprika represent approximately 40% of the state's overall production." Further, she mentions that paprika is a type of red chile and that 15% of the paprika crop is processed into oleoresin paprika, a natural red food colorant.

Walker addresses the following topics in this Guide:

- Cultivar Selection
- Land Preparation
- Fertilization
- Harvest
- Processing
- Harvest Aids

In summary, Walker states that red chile and paprika are used extensively in many food products and that New Mexico's crop is known for its consistent quality. This is achieved by careful cultivar selection and the use of best production practices.

This research article is available in the MG Hotline library and a copy can be obtained. You can also download this article at:

Link: <http://aces.nmsu.edu/pubs/ h/H-257.pdf>



## Community & School Gardens Report

By Darrol Shillingburg, Certified MG and Christine Chavez, MG Intern



Hermosa Heights Raised Beds in May 2010



Hermosa Heights Raised Beds in late July 2010

We can all agree as Master Gardeners that gardening has brought some level of great satisfaction and happiness into our lives. Part of our work in the community should be to encourage young children, parents, grandparents and teachers to discover the art of gardening for themselves. Part of your participation in the school gardening effort could include serving as a mentor for a particular school and project, helping develop a teacher in-service training program or help in acquiring funding for chosen projects. The initiative should have all of us excited and can serve as an excellent way for all of us to utilize our various talents. There will be more to come in way of specific involvement and committee development but please feel free to offer comments or communicate interest at [chrchavez@las-cruces.org](mailto:chrchavez@las-cruces.org).

**COMMUNITY GARDENING:** Master Gardeners have had no program contact with the local community gardens in August, although there are changes happening in some community garden programs that I will be able to report on next month.

**SCHOOL GARDENING:** The School Garden Partnership Group met at City Hall on Aug 25<sup>th</sup>, with 18 people from Las Cruces Public Schools, City of Las Cruces, NMSU, Extension, Master Gardeners and participating citizens attending.

LeeAnn DeMouche, NMSU professor, will be heading up the grant writing for USDA's People's Garden School Pilot Project Grant. One-time maximum \$100,000 dollar grant offered through USDA's Food and Nutrition Services Department to develop a school/community garden in high poverty schools. The grant must establish new gardens and cannot be applied to maintenance or expansion of existing garden programs. Gardens created under the grant must serve at least two schools.

Subcommittees have been formed to develop a School Garden Resources Manual, to develop working agreements between the City of Las Cruces and the Las Cruces Public Schools and to develop the People's Garden School Pilot Grant application.

The Curriculum Committee has met twice to begin outlining content for the resource manual that will include a start-up guide, a community resources guide and sources of classroom curriculum. The committee work is on going and Master Gardeners interested in participating are welcomed.

The School Garden Partnership Program Group will continue meeting monthly with additional projects carried out by subcommittees. This is an open community group that would welcome and appreciate your participation. Meeting times vary so let us know if you wish to participate in the group or in any of the committee work.

[chrchavez@las-cruces.org](mailto:chrchavez@las-cruces.org) or [darrols@earthlink.net](mailto:darrols@earthlink.net)

**COMMUNITY SUPPORT:** Mountain View Market is now supporting school gardening programs with Mo Valko from the Market joining the School Garden Partnership Program group with a particular interest in "Garden to Cafeteria" programs.

Respectfully,

Christine Chavez, MG Intern  
School Garden Project Coordinator

Darrol Shillingburg, Certified Master Gardener  
Community Garden Project Coordinator

## BOOSTING ROUNDUP'S POTENCY:

### Adding Ammonium Sulfate to RoundUp®

By Dr. James Altland, Oregon State University  
North Willamette Research & Extension Center

Often, the hard water prevalent in the Southwest reduces the potency of RoundUp® spray. [Help is offered by Dr. Altland:](#)

Can you add ammonium sulfate (AS) to RoundUp? Yes, the label allows you to add up to 17 lb. AS to a 100-gallon spray tank. The label also correctly warns that adding AS does not preclude you from using the proper surfactant. So you are legally allowed, but should you? Does it make any difference in the level of control?

Yes it does, under two situations.

1) RoundUp uses the active ingredient *glyphosate*. Different formulations of RoundUp (and mimics from other companies) utilize different surfactants and other additives, but in every case it is *glyphosate* doing the dirty work. *Glyphosate* kills plants by binding to an enzyme called EPSP synthase. This prevents the normal functioning of the enzyme, and when the enzyme is blocked, the plant cannot form three critical amino acids and soon dies.

2) 'Hard water' is water with high levels of calcium (Ca), magnesium (Mg), and/or sodium (Na). Other cations can cause hard water, but these are the usual suspects.

Hard water in the spray tank will reduce RoundUp's effectiveness. **But adding ammonium sulfate (AS) to RoundUp, it will alleviate problems caused by hard water.** To determine how hard your water is, have it analyzed by a laboratory. When you get your results, use the following equation developed by North Dakota State University to determine how much AS to add to the spray tank.

$$\text{AS (lbs./100 gal)} = 0.005 \cdot \text{ppm Na} + 0.002 \cdot \text{ppm K} + 0.009 \cdot \text{ppm Ca} + 0.014 \cdot \text{ppm Mg}$$

So, why does hard water interfere with RoundUp? Ca, Mg, or Na can form a complex with the *glyphosate* molecule. When this happens, the molecule is rendered ineffective in the plant because the *glyphosate* molecule is unable to bind to EPSP synthase. Therefore, the ability of RoundUp to kill plants is reduced when hard water is used. When adding AS, the ammonium preferentially attaches itself to the *glyphosate* molecule and thus prevents Ca, Mg, and Na from doing so. When ammonium is attached, the molecule can function normally, thus the effects of hard water are neutralized by adding AS.

Let's suppose your water is not hard. Is there still a reason to add AS to the spray tank? Yes again, but only in some situations. Some plants contain high levels of Ca in their intracellular spaces. Just like hard water in a spray tank, high Ca levels between plant cells can reduce RoundUp's effectiveness.

Some plants have natural defense mechanisms for reducing RoundUp's effectiveness. Upon misting the leaf surface of Velvetleaf (*Abutilon theophrasti*), the plant will release Ca from within the leaf onto the leaf surface! ([Hall et al., 1999](#)) Nobody knows why this happens, but the effect is the same, Ca interferes with the ability of the *glyphosate* molecule to function properly inside the cell. Again, adding AS to the spray tank alleviates this physiologically-induced Ca interference.

Velvetleaf (lambquarter) and a few other weeds have specialized trichomes (hairs) called chalk glands on the leaf surface. These are a source of Ca and other cations, which will interfere with RoundUp if AS is not added.

Article Continued on Page 17

## A GREAT FILM ABOUT GARDENING



### GREENFINGERS FILM

*Greenfingers* is a 2000 film directed by Joel Hershman. It is loosely based on a true story about the award-winning prisoners of HMP Leyhill, a minimum-security prison in the Cotswolds, England. It's one big (green) thumbs-up for this affecting true-life tale about Colin Briggs (Clive Owen), a small-time criminal who gets a new lease on life -- behind prison bars -- as an award-winning gardener. Standing out in supporting roles are David Kelly as a prisoner chum of Briggs's who coaxes him out of his shell and Helen Mirren as a world-class horticulturalist who worries when her daughter falls for Briggs.

When Colin Briggs is placed in an experimental program to finish off his prison sentence, all he wants is peace and quiet. But after his wise, elderly roommate Fergus introduces him to gardening, Colin uncovers a talent and passion for plants. Teaming up with his fellow inmates, Colin gets the attention of celebrated gardener Georgina Woodhouse. Soon, the unexpected gardeners are preparing to compete for England's premier flower show award, the Hampton Court Flower Show. And when Colin meets Georgina's beautiful daughter Primrose, he discovers another reason to fight for his freedom: true love.

Bonnie states that, "I just watched a wonderful gardening movie and thought it would be nice to recommend it to the other MGs". I also watched it and found it a refreshing reminder of how gardening has enriched all our lives (A. Shine-Ring).

Recommended for viewing by Bonnie Eisenberg, Certified MG

## Dixie's Honey-Do List for September



Many of our suggested garden tasks is information coming directly from [Month-by-Month Gardening in the Desert Southwest](#) by Mary Irish (2002). We wanted you to know that this is an outstanding gardening resource book.

**GENERAL:** Now is the time of year when the days are still hot and it's tempting to just kick back in a lawn chair or hammock, but take time to remain involved in your yard and garden. Plants are thirsty and many are at the critical stage of peak production or almost ready to harvest. ([Backyard Living](#), August/September 2008).

### ORNAMENTALS

- Sow seeds of California poppy, columbine, calendula, candytuft, and alyssum.
- Depending on the temperature, plant winter annuals such as dianthus, stock, snapdragons, pansies, bachelor buttons, nemesia, statice, wall flower, and forget-me-not.
- Continue planting mums this month.
- Continue dividing irises and other clumping perennials such as Shasta daisy, wood violets, Mexican feather grass, and other ornamental grasses.
- Buy big, fat, healthy spring flowering bulbs now as selection is best early in the season. Refrigerate them in paper sacks until time to plant. Add super-phosphate or bone meal to planting holes. Look for daffodils, crocus, freesia, tulips, narcissus, grape hyacinth, hyacinth, cape tulips, harlequin flower, butterfly iris, and bugle flower.
- Begin forcing bulbs of amaryllis and narcissus now for Christmas bloom.
- Kalanchoes can also be forced into bloom using 12 hours of darkness per day for 4 to 6 weeks.
- Begin inspection, repotting, and pest control of patio plants before bringing them in for the winter.
- Keep plants watered deeply but frequency may be reduced as temperatures fall.



### FRUITS, NUTS, CITRUS & SHADE TREES



- In the Southwest, fall is the best time to plant trees and shrubs as roots grow well in our warm fall soil but canopy stress is lessened by cooler temperatures and reduced wind speeds.
- When planting, dig hole only as deep as the soil depth is the container but make hole 2 to 3 times wider than the container. Do not add soil amendments other than phosphorus to the backfill.
- Start root pruning established trees you plan to move in midwinter. Severed roots will begin to regrow making a tighter root ball.
- Reduce your frequency of irrigation to succulent trees such as willows in preparation for winter.
- Continue deep watering pecans as nuts are still filling.
- Black pecan aphids can cause premature leaf drop and reduce nut quality so control them with an appropriate insecticide.
- Harvest fruit promptly and maintain good sanitation practices.
- Remove suckers from base of trees at the point of attachment.

### VEGETABLES, FRUIT AND HERBS

- Finish planting leaf lettuces, collards, and mustard greens.
- Plant spinach seed this month.
- Continue to divide mints, marjoram, oregano, and chives.
- Prepare beds for onion and garlic planting in early October.
- Plant perennial herbs such as rosemary, lavender, sage, and thyme.
- Prune summer damages stems from rosemary, sage, thyme and others.
- Fertilize perennial herbs with a side dressing of compost or regular fertilizer.



### LAWNS / TURF / ORNAMENTAL GRASSES

- Time to seed cool season turf grasses now.
- There is still time to lay sod of warm season species.
- Fertilize both cool and warm season grasses. This will likely be the final fertilization for warm season types so use a 2-1-1 formulation or something higher in P & K.
- Apply a pre-emergent herbicide to established turf to control cool season weeds.
- Reduce your irrigation frequency to once a week, depending on temperature.



## Dixie's Honey-Do List for September—Continued

### ROSES

- This is a good time to evaluate the roses you already have and how well they endured the summer. Plants that lost over half their canes or had numerous yellowed or dying leaves, need to be located in a shadier or cooler place in your garden.
- This is also a good time to plan where new bushes will be planted in early spring.
- In shopping for new roses, look for plants that are rated for good heat tolerance or are highly recommended by local rose experts.
- You can begin to plant container-grown roses. Since our days are still hot, be prepared to water deeply and often in order to establish the plants.
- Roses will continue to be stressed due to continued high temperatures. Continue to water regularly and deeply so that your plants will recover quickly when our temperatures cool down.
- If you discontinued fertilizing your roses over the summer, resume a regular fertilization schedule this month. When using a granular fertilizer on roses, water the plant thoroughly before applying the fertilizer, then scatter it evenly around the plant. Then scratch it into the soil around the bush, but be careful not to disturb the plant's roots. Water the plant deeply when finished.
- Go ahead and prune lightly when the temperature dips below 100°. Be sure to take out all dead canes and remove any diseased or deformed canes with severe tip damage. Take off any yellowed or diseased leaves and pick up all fallen leaves around the plant. Be sure to discard the leaves and do not put them into your compost pile. Take out any canes that arise from below the union bud, but leave those that begin just above it.
- Do not prune any healthy or growing rose bush canes at this time. They will begin to grow later in September in order to put on a strong fall bloom.
- As you prune, look for signs of can borers. A stem infested with this insect or its larvae will be hollow. Cut the cane until there is no further sign of borers, then coat the cut with white Elmer's glue or clear nail polish in order to prevent re-entry.



### CACTI & SUCCULENTS

- Most warm-season succulents grow fastest in late spring and slow down in the hottest summer weather, and then resume growing in the fall when temperatures are cooler. Therefore, this is an ideal time to plant most succulents, especially agaves, yuccas and cactus.
- Fertilize container-grown warm-season succulents now. This will be the final fertilization of the year for these plants.
- Spread out a layer of compost or mulch and scratch it lightly into the soil. This should be all the enrichment your succulents will need for the remainder of the year.

### PESTS

- If you have agaves that have been infected with agave snout weevil, you will experience sudden drooping of leaves with only the tight bud erect on the plant. If this has occurred, the plant is dead and should be removed. Prevention is difficult and there is no cure for this weevil, so replant with a less-susceptible species of agave.
- If any diseases have ravaged your prickly pear or cholla, cut them back severely this month to an uninfected portion of the plant. Keep the plants well watered to encourage new growth.
- Whiteflies may still be active, but as temperatures fall their numbers will decline. Spray with water or soapy water solution to keep the populations under control. Light floating row covers can also prevent large infestations on plants.
- Continue to hose off plants frequently, once or twice weekly, to control aphids and spider mites.
- If the humidity rises, powdery mildew (a fungus disease) may show up. To prevent rampant infestation, apply a sulfur-based fungicide at first evidence of mildew and repeat applications as necessary. You can also make your own fungicide spray with 1 teaspoon baking soda, 1 quart water and a few drops of liquid soap. Before treating your plants, test the spray on a few leaves to make sure they are not too sensitive (GardenGuides.com).
- Mary Irish suggests some organic pesticides you can make yourself:
  - For annual weeds, use 50% alcohol/50% water solution or full strength white vinegar. For invasive weeds such as Bermuda grass, use 12.5% white vinegar, 12.5% lemon extract in 75% water. These are contact herbicides so spray weeds thoroughly and avoid contact with desirable vegetation.
  - To kill ants, cut up the rind of 1 or 2 oranges and blend in blender with enough water to make slurry. Pour slurry onto anthill. The volatile oils permeate the hill, killing the ants.



### MISCELLANEOUS

- Depending on the weather, continue a deep watering schedule for everything.



photo by Mol@ByExample.com

## ORGANIC GARDENING— NATURAL INSECTICIDES

By L. M. English, Extension Entomologist  
NMSU Guide H-150

English states that, "In spite of our best efforts, non-chemical methods often fail to prevent excessive insect damage in the garden. The author provides the following information in order to help New Mexico gardeners select a natural insecticide for our specific needs.

### BOTANICAL INSECTICIDES

- Neem (extracted oil from Neem tree)
- Nicotine (40% liquid concentrate of nicotine sulfate)
- Pyrethrum (derived from flowers of a specific species of chrysanthemum)
- Rotenone (extracted from roots of derris plants in Asia and from cube plants in South America)
- Sabadilla (obtained from seeds of a lily-like plant)

### OTHER INSECTICIDES

- Use of soaps and detergents
- Spray mixture of onion, garlic and pepper

### SAFE USE OF PESTICIDES

- Seven tips to help us make better use of insecticides.

In summary, English states that, "In most control situations it is helpful to use several control techniques to reduce insect pest populations to low enough levels that insecticides are not required, or are needed only sparingly. With reduced insecticide use, biological control agents can become more effective, insecticide costs will be saved, and you will have the satisfaction of knowing that few, if any, poisons were applied to edible crops."

This research article is available in the MG Hotline library and a copy can be obtained. You can also download this article at:

Link: [http://aces.nmsu.edu/pubs/\\_h/h-150.pdf](http://aces.nmsu.edu/pubs/_h/h-150.pdf)



## WEED CONTROL FOR THE GARDEN & LANDSCAPE

By Rosie Lerner & Steve Weller  
Purdue University Cooperative Extension Service  
February 2003

Lerner and Weller state that "Weeds are the gardener's enemy because they compete with desirable plants for light, nutrients, water, and space." Weeds also can bring insect and disease pests that spread to plants and may pose a health hazard to humans. Therefore, the authors' definition of a weed is "Any plant growing where it is not wanted."

### The following topics are discussed in this article:

- Cultural Weed Control
- Chemical Weed Control
  - ...Pre-emergence, selective herbicides
  - ...Post-emergence, selective herbicides
  - Non-selective, post-emergency herbicides
- Vegetable gardens
- Flower, Shrub Tree and Fruit Plantings
- Walks, Patios, and Drives
- Soil Sterilants
- Label Clearance
- Precautions

In summary, Lerner and Weller state, "The best strategies for controlling weeds in the home garden and landscape include mulching, hand-pulling, using tools such as the hoe and rototiller, and preventing existing weeds from going to seed."

This research article is available in the MG Hotline library and a copy can be obtained. You can also download this article at:

Link: <http://www.hort.purdue.edu/ext/HO-217.pdf>



## FISH EMULSION: An Organic Fertilizer

Fish emulsion is in great demand as a rich source of organic fertilizer. It is one of the best soil conditioners around and is great as a foliar spray if the emulsion is strained properly. One of the major benefits is its high nitrogen content which is hard to get from other organic fertilizer sources. The other thing that makes it particularly good is the array of other trace minerals, vitamins, amino acids and essential oils.

Fish emulsion is an organic fertilizer. It is a liquid fertilizer made from byproducts of the fish oil and fishmeal industry. It is appropriate for many uses in the garden, but is especially useful as a lawn fertilizer in early spring and to feed leafy green vegetables, due to its higher nitrogen content. The N-P-K ratio for fish emulsion is generally 5-1-1 or 5-2-2. Fish emulsion is a concentrate, which you dilute with water and apply to your lawn or garden. It can have a strong fishy odor, but deodorized fish emulsion is commonly available as well.

Remember though, like all fertilizers, not all fish emulsions are the same. Things to look for in a good fish emulsion:

1. Made from ocean water fish that have fed on mineral rich plankton and been exposed to essential sea salts.
2. Made from whole fish not fish byproducts.
3. Most fish emulsions do not have any fish oils left in them. It is an essential component for reducing insect damage and for feeding beneficial fungi and bacteria.
4. Make sure that if you are foliar spraying or putting through an irrigation system that it is strained well enough so your nozzles don't get clogged.
5. Make sure it has a large array of trace minerals to get as much variety of goodness available to your crops. Some fish emulsions have as low as 19, some has as high as 40.
6. Also remember that when foliar feeding, it always works best if you have a spray enhancer that can help it stick to the leaf and absorb through the sheen.

*Article Continued in Next Column*

In general, mix 6 tablespoons per gallon of water but be sure to follow product directions.

Fish emulsion is also great when used in conjunction with a good quality ocean water seaweed emulsion because seaweed has every beneficial ingredient known to man. It is always good to get as much different elements as possible available to your plants.

There are deodorized types of fish emulsion, but they can still carry a distinct smell, especially in a warm enclosed environment like a greenhouse. ■

### SOURCES:

Definition of Fish Emulsion, Link: <http://davesgarden.com/guides/terms/go/350/>

Fish Emulsion, on [http://en.wikipedia.org/wiki/Fish\\_emulsion](http://en.wikipedia.org/wiki/Fish_emulsion)

Fish Emulsion, by Colleen Vanderlinden, on About.com--Organic Gardening Link:

<http://organicgardening.about.com/od/organicgardeningglossary/g/fishemulsion.htm>

Organic Fertilizers, Colorado State University Extension, Publication 234

Link: <http://cmg.colostate.edu/gardennotes/234.pdf>

### *Increasing RoundUp's Potency—Continued from Page 13*

Adding AS (assuming water is not hard) only improves effectiveness against plants that have elevated Ca levels described above. For plants with inherently low levels of Ca, adding AS has no noticeable effect. Velvetleaf is the plant most notably affected by adding AS. Another weed in which control is also improved, is quackgrass (*Agropyron repens*).

Most weeds have not been tested for their response to RoundUp plus AS, so I can't provide many details on specific weeds. It will improve control for some, not for others (again, assuming hard water is not an issue).

If hard water is an issue in your area, AS will improve control when using RoundUp. If you're not sure, AS is pretty cheap, and might be a good insurance policy.

Dr. James Altland

Oregon State University

North Willamette Research & Extension Center

### Literature Cited:

Hall, G.J., C.A. Hart, and C.A. Jones. 1999. Twenty-five years of increasing glyphosate use: the opportunities ahead. February, Pest-Management-Science. 56: 351-358.

**NOTE:** This subject of using a "recipe" to improve the potency of RoundUp® in southern New Mexico came up at a recent IPM Workshop sponsored by NMSU held on June 27, 2010. MG Intern, Charlotte Duttie, Master Gardener Intern, stated that a relative in agricultural sales in California had developed such a recipe which is listed below and offered here, at your own risk, for fellow Master Gardeners:

### Recipe for Increasing RoundUp's Potency in Southwest Gardeners

- 1) Mix 3/4 cup ammonium sulfate in water
- 2) Then add 1/2 cup of surfactant (dish soap or detergent) to this mixture
- 3) Then add RoundUp to this mixture
- 4) Fill mixture into a garden sprayer

## MG Intern Profile: Christine Chavez



Christine has discovered the many joys of gardening. A member of the 2009 Master Gardener class, Christine was inspired to start her first garden in the summer of 2009 when her six year-old daughter, Belicia, brought home a bean plant from a school science project and wanted to put it in the ground. "We had to cut a space in the Bermuda grass but now we are working to convert our lawn into a garden for vegetables and flowers," says Christine.

Their home near Mayfield High School was probably once part of a farm. "We have really good soil for a garden." Although Christine is just beginning her gardening adventure, she really likes to grow tomatoes—all different kinds of them.

Christine is the Water Conservation Coordinator for the City of Las Cruces. She enrolled in the Master Gardener Program because she thought it would wonderful way to gain technical experience that is very relevant to her job as well as to collaborate with other MGs and their work throughout the community.

"My favorite part about being a gardener is learning and teaching my daughter all the fascinating wonders of a garden, the behavior of plants and the changes that you can observe every single day, how everything is integrated, the soil, the water, the pollinators," Christine says. "It's a peaceful time together. My favorite part would have to be when Belicia fills her pockets with cherry tomatoes and eats them with her muddy hands."

For Christine, the benefits of the MG Program relate directly to the opportunity to learn from others. "Gardening, like life really is a learning process that never ends. I'm excited to learn from those in the MG group and to teach those things to other people as well," she states.

Christine is an enthusiastic teacher. "Fellow Master Gardener, Darrol Shillingburg, and I just wrapped up a school garden project at Hermosa Elementary that we both learned so much from. I'm hoping to get other MGs more involved in the effort so that we can all be a part of teaching children, parents, grandparents and teachers all the joy and benefits they can gain from starting a garden as well as understanding the connectivity to nature and its limited resources."

Christine teaches classes at Dona Ana Community College in Water Chemistry and Water and Wastewater Microbiology and she wants to develop a series of community education courses related to rainwater harvesting, gray water use, xeriscaping and efficient irrigation.

Gardening has opened new doors for learning for me. "Somebody once told me that you should always stop to smell the roses. Our garden has allowed my daughter and me to stop and "smell the roses", and to find wonder in all those things that bloom and buzz in our ears. It's a moment where all is peaceful and where all of our hard work yields immediate results. I can't think of anything or another place where that is true."

*MG Profile provided by Ann Palermo, Certified Master Gardener*



## Green Infrastructure Conference

Las Cruces, New Mexico

August 26, 2010

Christine Chavez served as Coordinator of this important conference. She wishes to extend a genuine thank you to the many Master Gardener volunteers who helped out with the Conference.

Christine states that there are so many talents within the MG group. The MGs listed below specifically offered the "organization and people" skills to really keep things running smoothly.

Christine greatly appreciated your help and on behalf of the Planning Committee, they would like to extend a gracious thank you to:

Susan Blank	Marcella Newman
Kelly Covert	Dale Petzold
Laurie Davidson	Mary Thompson
Sylvia Hacker	Joan Woodward
Joan Lane	



## Mesilla Valley Iris Society Annual Rhizome Sale

**Dates:** Saturday & Sunday, Sept. 11 & 12

**When:** 9am to 9:00pm on Saturday  
12-5:00 pm on Sunday

**Where:** Mesilla Valley Mall, Theatre Entrance

The sale will include hundreds of iris rhizomes in every color at excellent prices. Proceeds from the sale benefit the Society and its projects. The locally grown rhizomes thrive in southern New Mexico gardens. One gardener said last year stated that the irises sold out on the first day of the sale, so plan to go to the event early for best selection.

For more information and photos of irises, check out the website for the Mesilla Valley Iris Society:

Link: [www.zianet.com/mvis](http://www.zianet.com/mvis)



## MG Fall Garden Expo

On Saturday, September 25th, the Doña Ana County Master Gardeners are holding a Garden Expo at Enchanted Gardens, 270 Avenida de Mesilla in Las Cruces. The event is free and open to the public.

Presentations will be held hourly from 10 a.m. to 4 p.m. Two topics will be discussed each hour. Subjects to be covered are listed below. In addition, a complete workshop schedule is available at:

<http://aces.nmsu.edu/county/donaana/mastergardener/>

Additionally, there will be Master Gardeners on hand to answer other gardening questions. Fall is a great time for planning and planting in New Mexico. If you are new to the area, this event will help you garden successfully and appropriately in this region.

The Master Gardener Program is an outreach service of the Doña Ana County Cooperative Extension Office.

Ann Palomo, Certified Master Gardener  
 Email: [apalomo@nmsu.edu](mailto:apalomo@nmsu.edu) Phone: (575) 644-4277

### GARDEN EXPO CLASS SCHEDULE

<u>TIME</u>	<u>TOPICS</u>
10:00 – 10:45	Roses Cacti/Succulents Master Gardener Questions Table
11:00 – 11:45	Xeriscape & Grasses Iris & Daylilies Master Gardener Questions Table
12:00 – 12:45	Year-Round Gardening Attracting Birds/Butterflies Master Gardener Questions Table
1 – 1:45 PM	Year-Round Gardening Herbs Master Gardener Questions Table
2 – 2:45 PM	Planting Trees and Shrubs Native and Ornamental Grasses Master Gardener Questions Table
3 – 3:45 PM	Pruning Trees and Shrubs Efficient Water Use in the Garden Master Gardener Questions Table

The deadline for submitting articles and information for inclusion in the October 2010 newsletter will be Monday, September 27<sup>th</sup>.  
 Contact Info: Ann Shine-Ring, Editor  
[asring@hughes.net](mailto:asring@hughes.net)  
 (575) 640-7177

## VEGGIES: A To Z



### —RADISHES—

Cruciferae Family, *Raphanus sativus*

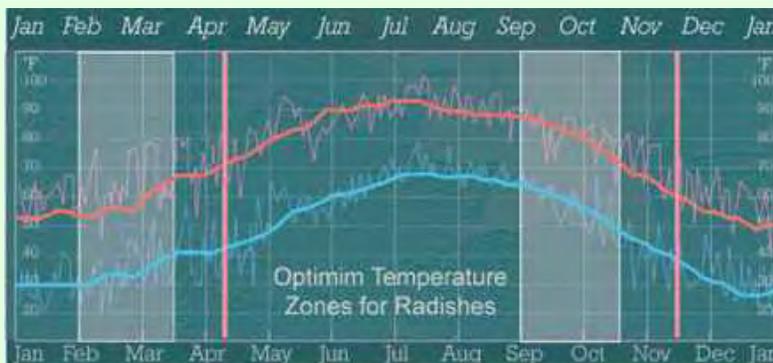
Spring radishes, the first crop recommended for most children's gardens, may be one of the easiest foods to grow, but not easy to grow well. Most varieties germinate quickly and success or failure at harvest time comes within 20 to 40 days, often as not with disappointing results. Because quickness rather than inherent taste appeal is the primary reason for recommending radishes for all children's gardens, let's look at the conditions required to grow the kind you want to eat, or offer to someone else.

Quickness cuts both ways, for and against the gardener. If all conditions are optimum for sprouting, growing, bulbing, and maturing, the rapid growth rate produces a flavorful, edible radish root. If all conditions are not met, the resulting bulb (if there is one) can quickly become far from palatable.

**Germination:** Seeds will germinate in three-to-ten days with soil temperatures between 45-95°F. For normal-sized radishes, plant seeds 1/2" deep and 1 1/2" apart. For larger-sized roots, plant seeds 1 1/2" deep and 2" apart. If seeds are planted too close together, you will have to thin the young plants to get good root growth.

**Growth:** Once the seeds have germinated, the temperature range required for quick, edible bulb growth becomes quite narrow. Optimum temperatures for growth are 60-75°F, with some varieties able to tolerate temperatures in the low 80's. Colder temperatures (below 55°F) will result in slow growth and produce small, bitter and inedible bulbs. Warm temperatures (above 80°F) accelerate growth, prevent cell tissues from sticking together, and result in pithy, inedible bulbs.

**Timing:** I have seen radishes planted in starter gardens at all times of year with a large percentage of inedible roots as the result. A look at the temperature charts (see *top of next column*) for southern New Mexico reveals only two short planting windows that are optimum for radishes. If you grow spring radishes at other times of year, your radishes may be less than palatable.



**Soils:** For good growth, radishes need soil that is moderately rich in nitrogen, phosphorus and potassium. The potassium level in our local soils is naturally adequate, but adding nitrogen and phosphorous is advisable. For organic growing, a combination of compost, fish emulsion, and bone meal will suffice.

**Harvest:** Because they are fast growing root crops, radishes do not hold well in the ground. Pay attention to the 'days to maturity' as listed on the seed packet and be ready to harvest. A few days too late will reduce flavor and texture. Without their green tops radishes will store longer in the refrigerator than in the ground, so go ahead and harvest on time.

#### Problems

- Flea beetles will attack the young plants making small holes in the leaves. The solution is to make sure the radishes can outgrow the flea beetle feeding.
- Little or no root bulbing can be caused by crowding, too compact a soil (as in heavy clay soils), insufficient phosphorous, or by lack of adequate sunlight. The solution is to start over and correct the problem in the next planting – you cannot rescue spring radishes!
- Bolting – going to flower instead of bulbing is caused by plants being exposed to more than 12 hours of daylight. Stay within the spring and fall planting schedules for best results.

**Other Types of Radishes:** Not all radishes fall into the spring radish category. Daikon radishes are more heat-tolerant than the spring varieties and take 40-70 days to mature. Their flavor is milder than most small radishes and they are commonly used in Asian recipes. The Black Spanish radish is a winter radish that can be planted in late summer and takes about 70 days to mature. It is a 'storage' radish, meaning it needs to be stored for a couple of months to become edible. Both daikon and winter radishes are biennials that bloom in their second year of life.



After more than 2,000 years of cultivation, the radish is still top of the list for young gardeners to learn the lessons of sowing and reaping. Now that we are equipped with an understanding of the plant's requirements for optimum growth, our children's and our own gardens will more dependably produce tasty radishes for the table.

Good growing and good eating,

Darrol Shillingburg, Doña Ana County Extension Master Gardener  
August 2010

# MASTER GARDENER MATTERS

—Monthly Meeting, August 18, 2010—

▣ **WELCOME**—(Juliet Williams) The meeting began at 9:05am. Jeff Anderson was out of town on business and could not attend our meeting. Jeff has asked that we do not use the color printer without permission.

▣ **COMMITTEE/PROJECT REPORTS**

**MG Hotline**—(Pam Crane) Pam stated that thanks to Sylvia Hacker, we have two new resource books for the MG office—What's Wrong with My Plant and a new edition of the Sunset Western Garden Book. Many thanks to Sylvia. We need more volunteers to help on the hotline for September (see page 23). Juliet stated we need volunteers for many upcoming activities in September as well.

**Newsletter**—(Ann Shine-Ring) Ann said the Plant-of-the-Month for September will be Chile Peppers in honor of the International Chile Pepper Conference that will be held in Las Cruces this year. Natural insecticides and fertilizers will also be discussed. Darrol's article on vegetables will feature radishes.

**Farmer's Market**—(Barb Sallach) Barb said we need one more person for the 10:30-12:30 time slot on August 21.

**Lunch & Learn Presentation**—(Sylvia Hacker) Sylvia reported that the August 19<sup>th</sup> presentation will feature bats. Also, Sylvia spoke with people at the Branigan Library about using their new meeting room for our monthly meetings, but we would have to change our meeting date to the second Wednesday or third Monday. We will have to check with our October and November monthly meeting speakers to see if the change of dates will work for them. Joan Woodward will check with our October speaker and we will confirm with the library as soon as we know. Because of the large number of MGs we have and the small meeting room we currently use, we really need a larger meeting room. Next month we are planning to have our Sept. 22<sup>nd</sup> monthly meeting at Fabian Garcia Science Center so any date change would take place in October or November if we decide to do it.

Leigh Matthewson raised the issue of moving our meeting place and date as well as the process for making the decision. She asked that we put it on the agenda for more discussion next month. Juliet said that this issue will be put on the September monthly meeting's agenda so there can be discussion and a vote on any change to our meeting place and date.

**Mentoring Program**—(Sylvia Hacker) Sylvia stated that we need certified MGs to sign up to be a mentor for next year's interns.

**Fall Garden Expo**—(Ann Palermo) Ann said that the Fall Expo will be held on one day only on Saturday, September 25, from 10-4.

The workshops will be 45 min each. We still need volunteers for the general info table during Expo. Jodi Richardson made a flyer to advertise the Expo which will be circulated and posted around town. (See page 19)

**Fall MG Plant Sale**—(Dixie LaRock, Betty Tomlin & Barb Sallach) We're on schedule for Sept 18 for the Plant Sale. We have enough volunteers to help out at this time. Bring plants at 7:00am to set up, same location as last time.

**Graduation and Awards**—(Valice Raffi) Valice announced that the Graduation and Awards Luncheon will be held on Saturday, January 15, 2011. Planning for this important event is on schedule.

▣ **OLD / CONTINUING BUSINESS**

**Volunteers & Coordinators List**—(Ann Shine-Ring / Juliet Williams) This list had been updated and copies were passed out at the meeting. If anyone has any changes or additions let Ann know ([asring@hughes.net](mailto:asring@hughes.net)).

**2012 State MG Conference**—Doña Ana County MGs will be hosting the 2012 New Mexico Statewide Master Gardener Conference. Dale Petzold has volunteered to co-chair this event and he would appreciate an associate. A signup sheet was passed around for other volunteers for this important event.

**National Night Out (August 3)**—(Juliet Williams) Unfortunately, we were given a poor location, so there was not much activity.

**Green Infrastructure Conference (August 26)**—Christine Chavez, Conference Coordinator, planned to call or contact those who had volunteered to give out assignments. Volunteers did receive meals and snacks. (See page 18)

**EFNEP Open House (August 5)**—(Juliet Williams) This event which was held at the County Government Center was a big success. County employees were unaware and surprised about all the services that the Extension Office provides. Unfortunately, none of the County Commissioners attended.

▣ **NEW /CONTINUING BUSINESS**

**Butterfly Flutterby (August 21)**—(Juliet Williams) Juliet stated that we had enough volunteers, but a few extra people could be used to come early to help with setup at 7:30am.

**Southern NM Fair**—(Val Fernandez) Val reported that volunteers were needed and asked MGs to please sign up to be a monitor for our booth. Volunteers will get one or more free tickets to the fair for working a 2-hour shift. MGs are encouraged to bring veggie entries as there are cash prizes for winning entries. Intake will be held at the MG office on Tuesday, Sept. 28, 9-12:30 and then at the fairgrounds. Judging is Wednesday morning. Volunteers on the last day get to take home left over vegetables.

**Fall MG Education Class**—(Juliet Williams) There are still many openings and more students will be needed. Class orientation begins on Aug 26 and the first education class begins Sept. 2. More helpers needed and several people volunteered--Bonnie Eisenberg, Linda Morgan, Dixie LaRock and Frank Connor.

**Hatch Chile Festival (Sept 4 & 5)**—(Mary Thompson) Volunteers are needed and a signup sheet was passed around. Next year, we will need a new chairperson as Mary Thompson would like to retire from this position. Mary will need a co-chair this year to help her.

**Pecan Short Course (Sept 8 & 9)** Volunteers needed to help with this event that will be at Hotel Encanto. It's primarily a "meet and greet" and gofer activity. We'll need four volunteers each day.

# MASTER GARDENER MATTERS-Continued

—Monthly Meeting, August 18, 2010 Continued —

International Chile Conference (Sept 12 & 13)—Four volunteers will be needed for each day in the morning and afternoon. Times may change.

2012 New Mexico MG State Conference (Dale Petzold)—A few people have signed up to work on the Planning Committee. Dale has agreed to serve as Co-Chair but would like to have a Co-Chair. We will also need people to serve as Committee Chairs.

Mesilla Valley Iris Society (Sept. 11 & 12) The Society is hosting its annual fall Iris Rhizomes sale from 9-5 each day in the Mesilla Valley Mall near the theater entrance.

**Other Issues:**

Dixie asked for help to try to figure out why her grass is dying. Several people give suggestions and Bonnie says she will research the problem and get back to Dixie.

Valice Raffi said that she is very concerned about everything falling on Juliet's shoulders. Valice asked that more MGs volunteer to help support our MG Program activities and projects.

Our September monthly meeting will be at the classroom at Fabian Garcia Science Center located at 224 West University. This meeting will be held on the fourth Wednesday, Sept 22, instead of our regular meeting date. More details will be forthcoming. Mona Nelson stated that our guest presenter will be Dr. Paul Bosland. Please bring your favorite salsa to taste—chips will be provided.

**Snacks:** Thanks to Doug Brown, Laurie Davidson and Sherry Hulsey for providing snacks for our meeting. Next month, the good providers will be Mona Nelson, Joan Woodward and David Hutchinson.

▣ **EDUCATIONAL PRESENTATION:** BEE READY FOR THE BUGS! By Dr. Carol Sutherland

Next MG Business Meeting—Wednesday, September 22, 2010 which will be held at Fabian Garcia Science Center  
224 West University Avenue, Classroom, Las Cruces, NM

Bonnie and Juliet



SEPTEMBER MG BIRTHDAYS	
Joan Woodward	September 3
Yvonne Kinn	September 4
Leigh Matthewson	September 6
Evicta Harvey	September 7
Barb Sallach	September 13

**MANY THANKS FOR THE GOODIES**  
We appreciate your thoughtfulness

<u>Sept. Goodies</u>	<u>October Goodies</u>
Mona Nelson	Ina Goldberg
Joan Woodward	Juliet Williams
David Hutchinson	Mike Lee

(Hotline assignments listed were current as of 8/31/10)

MGs & Interns please notice that there are plenty of open spots in September & October

Please remember to be present on your assigned date for the Hotline. If another Master Gardener forgets, please give him or her a "reminder" call. Thank you.

MG Hotline Assignments for September

Friday, September 3     **Alberta Morgan**  
 Linda Morgan (I)  
 \_\_\_\_\_ (I)

Tuesday, September 7     **Leigh Matthewson**  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Friday, September 10     \_\_\_\_\_ (MG)  
 Linda Morgan (I)  
 Sylvia Hacker (I)

Tuesday, September 14     **Bonnie Eisenberg**  
 Sylvia Hacker (I)  
 \_\_\_\_\_ (I)

Friday, September 17     **Mary Thompson**  
 Ann Palormo  
 Russ Boor (I)

Tuesday, September 21     **Leigh Matthewson**  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Friday, September 24     **Ina Goldberg**  
 Joan Lane  
 \_\_\_\_\_ (I)

Tuesday, September 28     **Mary Thompson**  
 Sylvia Hacker (I)  
 \_\_\_\_\_ (I)

MG Hotline Assignments for October

Friday, Oct. 1     **Alberta Morgan**  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Tuesday, Oct. 5     **David Hutchinson**  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Friday, Oct. 8     **Dale Petzold**  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Tuesday, Oct. 12     **Leigh Matthewson**  
 Jodi Richardson (I)  
 Russ Boor (I)

Friday, Oct. 15     **Pat Anderson**  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Tuesday, Oct. 19     \_\_\_\_\_ (MG)  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Friday, Oct. 22     **David Hutchinson**  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Tuesday, Oct. 26     **Leigh Matthewson**  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Friday, Oct. 29     \_\_\_\_\_ (MG)  
 \_\_\_\_\_ (I)  
 \_\_\_\_\_ (I)

Next Monthly Meeting of the  
 Doña Ana County Master Gardeners

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Sept. 22 @ Fabian Garcia Science Center Classroom  
 224 West University Avenue, Las Cruces, NM  
 9am-11am