Doña Ana County Master Gardener Monthly Magazine

- **Doña Ana & Luna Counties**
- U.S. Department of Agriculture
- NMSU College of Agricultural, Consumer and Environmental Sciences

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Beginning our 8th Year of Providing Gardening-Related Information & News

• FEBRUARY 2017 •
PLANT-OF-THE-MONTH

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CONTENTS:

OLIVE TREES

Olive *trees (Olea europaea)* are evergreens with pale grey bark and gnarled trunks. Tree height ranges from 12 to 30 feet, depending on the cultivar (and pruning, of course.) The trees can live for hundreds of years. Their wood can also be used for furniture.

Most Olive trees are man-made cultivars, rather than true botanical varieties, and won't reproduce true to seed; they are propagated by grafting.

Seeds are planted, though, being cracked before planting to help them germinate. When seedlings grow up from them, they are either used as rootstock to which cuttings from other trees are grafted, or let grow and examined to see whether they might be a new variety that is worth developing.

Olive trees can withstand some cold: in fact, they need some or they won't produce fruit. They are not, though, trees meant for where a real winter happens. At 17°F, frost-damage occurs to the trees. At 12°F, the damage is severe. Below 10°F, most of the tree above ground may die, though the tree might grow back overtime from its roots.

Olive trees generally start to bear fruit at 5 years of age, though this can vary by cultivar. Olives grow on branches from the previous season.

Article Continues on Page 2

Master Gardener Hotline Contact Data

(January 1, 2017 through January 31, 2017)

# Total Contacts	5
# Total Issues Addressed	**19**

Ethnicity of Contacts

Hispanic Females	0
Hispanic Males	**1**
Non-Hispanic Females	**2**
Non-Hispanic Males	**2**
Asian Female or Male	0
Black/African Male	**0**

Geographic Area

Las Cruces	3
La Mesa	1
Mesilla Park	1

Subject of Inquiry

Animals	0	Irrigation	3
Disease	1	Lawns	0
Fertilizer	3	Shrubs	1
Flowers	0	Soil	1
General Info	1	Trees	2
Herbicides	0	Veggies	2
Insecticides	2	Weeds	0
Insects	1	Misc.*	1 *(*Pruning)*

Thank you to Certified Master Gardener Laurie Davidson for collecting this data.

Olive Trees—*Continued From Front Page*

GROWING OLIVES IN THE SOUTHWEST

Fruit-bearing Olive trees do not fair too well here in the desert Southwest, the winter temps get too low and the tree freezes back to the ground, but it does seem to come back from the roots in the spring.

There are some fairly large fruitless **Olive trees in Las Cruces**, NM, but with the recent below zero temps, they died and are coming back as shrubs.

It is very hard to find fruit-bearing trees in any of the local nurseries because of the pollen they produce and related allergy issues. Arizona has a lot of Olive trees, but they are non-bearing.

If you really want a fruit-bearing Olive tree and have a well-protected place to plant it, buying one on-line is your best choice.

There is a variety of Olive that will grow here and it is the NM Olive or NM Privet. They are more like a shrub with very small berry-like fruit. They do very well here in the desert Southwest and can even be found growing wild in some arroyos. Birds love the berries this plant produces

PLANTING AN OLIVE TREE

An Olive tree, or *Olea europaea*, is an evergreen tree native to many parts of the Mediterranean region. Planting Olive trees can be done using either seeds, known as pits, or seedlings sold in pots at most nurseries. Olive trees planted from seeds may not produce much fruit, though, if any. These trees must be planted in the right type of climate and soil, and special care should be taken during planting and during the first few years for the tree to thrive.

As Olive trees are native to the Mediterranean, they prefer milder climates. Warm, sunny regions are best, and planting Olive trees in wet regions or where the temperature drops below 15 degrees F (-7 degrees C) is not recommended. Also, these types of trees have a shallow root system, and areas with our frequent periods of high winds may not be the best place to plant an Olive tree. The winds can uproot the tree and, possibly, cause the fruit to drop too early, resulting in a poor crop.

Olive trees can often grow in a variety of soil types. It is believed that mildly fertile soil is best. The soil should be well-draining because these trees prefer a somewhat dry environment.

Regularly watering Olive trees is recommended until the tree is established. To ensure that the trees are not over-watered, gardeners can install a drip irrigation system. After new growth begins to appear on the trees, they do not need to be watered as much. Gardeners can then gradually reduce the amount of water given to the trees and, afterward, only water them during dry spells.

When planting Olive trees from a pot, the hole should be dug approximately the same size as the pot. Without disturbing the rootball too much, roots that are tangled or circling the outside of the root ball should be untwisted or cut, and the tree can be placed in the hole just below the surface. It is recommended that the root system be placed no more than 1 inch below the surface, and the rootball should fit snugly into the hole.

To ensure proper growth, many experts agree that pruning and shaping of the tree should be kept to a minimum in the first few years. One strong main trunk should be left, along with five or ten of the strongest top branches. If, after planting Olive trees, they seem to lean or fall over, the top branches can be pruned, or they can be staked until they are able to stay upright.

If a gardener were planting Olive trees simply for the crop, to make Olive Oil, for example, more than one tree would be ideal. Depending on a number of factors, an average Olive tree will produce between 10 and 500 pounds of Olives each season, and it takes roughly 40 pounds of olives to make one gallon of oil. Younger trees will generally produce fewer olives. If a person is planning to produce a few gallons of Olive Oil, a small Olive tree garden is usually preferred. In this case, many experts agree that the trees should be placed no less than 20 feet apart to allow for maximum growth.

ENVIRONMENTAL CONDITIONS

Climate is the most important limiting factor in the distribution of the Olive in Texas and elsewhere. Temperature controls growth, reproduction, and survival of the olive. Growth begins after mean temperatures warm to 70°F in the spring and continues until temperatures drop below this point in the fall. Unlike the fruit trees that we are familiar with, such as the peach, the Olive does not set fruiting buds in the fall. Instead, the Olive will only set flower buds after being exposed to cool night (35°F-50°F) and mildly warm day temperatures.

Survival and freeze damage of Olives depends on how long the temperature stays low as well as how well the trees are hardened off, i.e. gradual temperature decline as opposed to going from 95ºF to 25ºF; high wind and low humidity can also make the freeze injury worse. Rapidly growing trees in the fall from too much water and fertilizer are particularly sensitive to subfreezing temperatures. The Olive may be grown as an ornamental in those areas which do not receive enough cold to set fruit. *Article Continues on Page 3*

Olive Trees—*Continued From Page 3*

CURING OLIVES Botanically, the Olive is a fruit classed as a "drupe" - a fruit with a single large pit (aka stone) inside. Green Olives and Black Olives will be fruit from the same tree, just picked at different stages. It is pale green when immature, darker green when it has reached its full size, then purple or black when ripe. Green Olives have more zing and more bitterness than Black Olives; Black Olives lack the zing, but have a richer, mellower flavor.

The five methods of curing table Olives are:

- Dry-Cured Olives
- Brine-Cured Olives
- Lye-Cured Olives
- Fresh-Water Cured Olives
- Oil-Curing

It's often difficult to know what variety or cultivar of Olive you are actually eating. Olive Oil jars almost never say what type of Olives the oils were made from, and only rarely does a jar of Olives prove any more helpful. The list of "types" of Olives that you can buy is actually a mix of actual names of actual Olives, and names of various classes and methods of preparing them for table use.

The size of an Olive depends more on the tree it is from than how young it is picked. While the pulp of most fruit is water -- with Olives, it's oil. Most Olives grown in the world are used for Olive Oil.

Olives are actually quite bitter when eaten straight off the tree. The method of "curing" them to draw out the bitterness helps determine the flavor and texture of the finished product, which is called "Table Olives" (also referred to as "prepared Olives" or "Pickled Olives." Olives for Oil are not cured.

How an Olive is cured actually has more impact on the taste of the final product than what cultivar it was or where it was grown. Some cures will produce juicier, plumper Olives than other types of curing. After curing, Olives are then finished off in a variety of ways: brine, vinegar, oil, etc. Spices and herbs may or may not be added. The brine that Olives are placed in after curing is called the "mother brine." They will ferment in this. They will also ferment a bit in any brine they are ultimately packed in afterwards. Sometimes, Olives are pasteurized to prevent this, which lets them be shipped more easily, but the "pasteurization" does affect the flavor.

HISTORY Harvesting of Olives in New World countries such as America, Australia and New Zealand is largely done with machines. The Israelis are also big on mechanized harvesting. Producers in Southern Europe would like to go this way, but the cultivars of Olive trees that they grow, which produce the prized oil they are famous for, don't always lend themselves to harvesting by machine either because the branches grow too high, or the Olives cling too tightly to the branches.

In America, Olives are grown in California, and to a small extent in Arizona, New Mexico and Texas. California only produces .5% to 1% of the Olives in the world. *Article Continues on Page 4*

OLIVE TREE FACTS

Source: Olives, Authors: Larry Stein, Jim Kamas & Monte Nesbitt, Extension Fruit Specialists, Texas AgriLife Extension, at link: http://aggie-horticulture.tamu.edu/fruit-nut/files/2010/10/olives.pdf

Botany: The Olive (*Olea europaea L.*) is a subtropical evergreen tree or shrub with opposite leaves. The leaves are lance-shaped, waxy green on top and grayish green on the bottom. Young bark is green, but older bark is gray. In the Mediterranean, Olive trees are known to live for over a thousand years. If the top is damaged, a new tree will sprout from underground parts.

Climate: Climate is the most important limiting factor in the distribution of the Olive in Texas and elsewhere. Temperature controls growth, reproduction, and survival of the olive. Growth begins after mean temperatures warm to 70°F in the spring and continues until temperatures drop below this point in the fall.

Soil Adaptation: The Olive has a wide adaptability with regard to soils; it will tolerate a variety from sands to clays with a pH of 5.5 to 8.5. Olive trees have fairly shallow root systems so they do not need a deep soil, but the soils must be well-drained. Three to four feet of unstratified soils is optimum for production.

Site Prep: Orchard sites should be prepared 12 to 18 months prior to planting the trees. This involves killing perennial weeds and grasses and deep chiseling or ripping down the planting rows to insure breakup of any hard layer. Soil sample(s) should be taken from the area, and any needed amendments applied prior to planting, so that they can be more easily incorporated around the planting site.

Cultivation: The Olive is drought-tolerant, but grows best when it has sufficient water. Overwatering should be avoided. Water regularly, but do not allow waterlogging to take place. An ideal water amount to apply would be an inch of water a week. It is critical to continue to water mature trees as the crop is maturing. The Olive is very efficient at extracting nutrients from the soil, and nitrogen is usually the only element that must be applied. Mature trees need from 1/2 to 2 pounds of actual nitrogen per year, depending on tree size. Deficiencies of potassium and boron are rare but possible. Fertilize in the spring when new growth begins.

Pruning: Pruning should be delayed until early spring. Because the tree does not go dormant, any increase in temperature after pruning will stimulate growth that might be damaged by freezing temperatures. Prune Olives by thinning out dead or otherwise unproductive wood. It should not be topped.

Pests/Disease: Stress has been the main culprit of tree death to date, as opposed to bacterial and fungal pathogens. However, there are numerous potential problem diseases of which *cotton root rot* (*Phymatotricopsis omnivora*) would be one of the most important. Olive trees are quite susceptible to *cotton root rot* and many trees have been lost to this soil-borne fungus in Texas. This disease is prevalent in high pH soils in the Southwest where Olives are climatically best adapted in Texas. Because *cotton root rot* more readily affects plants that are not adequately supplied with water, it is essential to keep the area around the tree weed-free to reduce water stress from competition.

Deer have been a serious deterrent to tree growth in many areas, making high fences a necessity for commercial production.

Varieties: ***See Page 4 for a list of Olive Tree varieties.***

Olive Trees—*Continued From Page 3*

'Arberquina'

'Arbosano'

VARIETIES OF OLIVE TREES

Numerous varieties of Olive have been tried in Texas with cold-hardiness being the key selection factor. The varieties that have had the most success to date with survival and production are listed here.

Not all varieties perform the same at all locations. Most of the Olives grown in Texas have been pressed for oil. However, various growers and hobbyists have produced table olives by brining them as well.

'Arberquina' (shown on left above) is probably the most planted cultivar in Texas to date. It originates from Spain and is widely planted there. It has very good cold hardiness, is self fertile, and reaches 12 to 15 feet at maturity. The fruit is quite small but the trees tend to produce fruit that yields oil that is very sweet with a delicate almond overtone. The fruit could be brined as well.

'Arbosano' (shown on right above) has done well in many locations though it only has moderate cold tolerance. It originates from Spain and is pollinated by Arberquina. Trees get 12 to 15 feet tall and the fruit can either be pressed for oil or processed.

'Frantoio'

'Manzanilla'

'Frantoio' (shown on left above) originates from Italy and only has low cold tolerance, however the trees have grown well in many areas of Texas. Still in some areas the trees have been productive and in others only a handful of Olives produced per tree. It is self-fertile with trees reaching 20 plus feet in height, and the fruit is used for oil.

'Manzanilla' (shown on right above) also came from Spain, but is widely planted in the U.S. and Middle East in addition to Spain. The fruit is primarily used as a table Olive and has moderate cold tolerance. Most canned Black Olives are of this variety, though it can be pressed for its oil. The tree requires a pollinizer, but if you have a series of varieties in the orchard fruit set should not be a problem. Manzanilla fruit are usually pressed for oil in Texas.

'Mission'

'Pendolino"

'Mission' (shown on left above) was developed in the United States and has good tolerance to cold. It is self-fruitful with a tree height under 20 feet. It can either be processed into oil or brined for table olives.

'Pendolino' (shown on right above) is a universal *pollinizer* variety from Italy with moderate cold tolerance, however to date it has performed poorly in many areas. Trees can get 20 feet tall or greater, and it is used for oil. The only reason to plant this variety to date would be to have an exclusive *pollinizer* for Manzanilla.

'Picual' Fruit

'Picual' Tree

'Picual' (fruit and tree shown above) is the number one planted variety in Spain for oil. The tree is vigorous and adaptable with moderate cold tolerance. Even though the fruit is larger than some of the other varieties, yields in Texas have been disappointing to date. The oil tends to be quite pungent, with a long shelf life.

HARVEST Olive harvest typically begins in mid to late September or early October. The maturity of an Olive at harvest can be anywhere from completely green to totally black, depending on variety. Most are harvested as fruit begins to color. Harvest is delayed to allow the crop to reach the desired size and weight, however crop value will be lost if one waits too long to harvest. In most cases the crop is removed from the tree by hand though mechanical harvest of the fruit is a necessity in larger operations. The challenge of mechanical harvesting is to remove the fruit from the tree without damaging the tree or fruit. Most of the Olives grown in Texas have been pressed for oil. However, various growers and hobbyists have produced table olives as well.

ECONOMICS The high cost of Olive Oil in the grocery stores and the great health benefits associated with eating Olive oil has led many to believe that producing "Extra Virgin Texas Olive Oil" is financially lucrative. However, the costs to produce Olive oil are high and the competition fierce. It takes anywhere from 75 to 125 pounds of Olives to produce one gallon of oil depending on the cultivar.■

WATER-WISE PLANTS


Blue Fescue (*Festuca glauca*)

Sources: *Blue Fescue in 'Water-Wise Plants for the SW by N. Sterman, M. Irish, J. Phillips and J. Lamp'l, Cool Springs Press, 2007. And NM Gardener's Guide, by J. Phillips, Cool Springs Press, 2004*

Zones: 4 through 11

Form: Clumping

Growth & Mature Size: Moderate-growing evergreen grass to 4 to 12 inches x 12 inches.

Uses: Meadow, mass, understory, accent, rock garden, dry streambed

Soil: Well-draining soil; no soggy soils

Pests: None

Description: Fescue is a perennial bunching grass that forms rounded tufts of narrow blades. In summer, the tufts are topped with wands of wheat-like flowers that blow in the breeze. Some members of these evergreen, cool-season grasses have handsome deep green blades, but the Blue Fescues are the ones that always catch your eye. They look lovely planted as a sea surrounding the trunk of a pine or other deep green-leaved shrub or tree. If you are trying to create an Asian feel to your garden, plant Blue Fescue in a large, rectangular area, setting plants out on a diagonal grid. Keep the Fescue trimmed to maintain its geometry.

Cultivation:

- Spacing depends on the variety.
- Water deeply and mulch well at planting. After that, water every three to four days for a month though the first summer.
- If needed, apply time-release fertilizer in spring.
- Cut back established plants to within a few inches of the ground in early spring.
- Divide overgrown clumps in fall.

Shared Spaces

- Blue Fescue tone softens the garden. Plant in clusters of odd number of plants (3,5,7) for a natural look, or mass plant for a meadow.
- Plant Blue Fescue into garden borders or mass on hillside to control erosion.
- It's an excellent choice for edging a walkway or flowerbed, or planting between pavers.


'Sea Urchin'


'Boulder Blue'


'Siskiyou'


'Meerblau'


'Azurit'


'California Fescue'

Other Species and Cultivars:

- 'Sea Urchin' is compact, to 8 inches x 12 inches with brighter steel-blue foliage.
- 'Boulder Blue' is intense blue; upright at 15 inches x 12 inches.
- 'Siskiyou Blue' (18 inches x 15 inches) prefers part shade in cooler gardens.
- 'Meerblau' grows 8 inches x 12 inches, has blue-green foliage, and no flowers.
- *'Azurit' has silver-blue foliage on 12-inch mounds.*
- California Fescue *(Festuca californica)* is a 2-foot mound, silvery to greenish blue with blue flowers.
- Atlas Fescue (*F. mairei*) produces 2½ foot-tall gray-green mounds.
- Do not plant tall fescue, *Festuca arundinacea,* in California. It is an invasive weed.■

TROPICAL PLANTS of INTEREST

Monkeypod / RainTree

(Pithecellobium saman)

Source: Link:

https://www.na.fs.fed.us/pubs/silvics_manual/volume_2/pithecellobium/saman.htm

DESCRIPTION

Monkeypod tree *(Pithecellobium saman),* samán in Spanish, is a fast-growing tree that has been introduced to many tropical countries throughout the world from its native habitats in Central America and northern South America.

The Hawaiian common name, Monkeypod, is used because it is a logical derivation of the scientific name *Pithecellobium* (*monkey earring in Greek*). Besides Monkeypod, Raintree, and Saman, which is its name throughout Latin America, the tree is called Mimosa in the Philippines.

The most widely used common name for the species is Raintree, from the belief that the tree produces rain at night. The leaflets close up at night or when under heavy cloud cover, allowing rain to pass easily through the crown. This trait may contribute to the frequently observed fact that grass remains green under the trees in times of drought. However, the shading effect of the crown, the addition of nitrogen to the soil by decomposition of litter from this leguminous tree, and possibly, the sticky droppings of cicada insects in the trees all contribute to this phenomenon.

In general, planted as a shade tree and ornamental, it has been naturalized in many countries and is greatly valued in pastures as shade for cattle. It has a spreading crown when grown, and it forms a long, relatively straight stem when closely spaced. Its wood is highly valued in some locations for carvings and furniture.

Monkeypod Flower

REPRODUCTION & EARLY GROWTH

... *Flowering and Fruiting*

The Monkeypod tree may flower at any time of the year in Hawaii, but it usually flowers from April to August, with the peak of flowering occurring in May, flowers are perfect and form in umbels. The clusters, with their numerous pink stamens, 1.5 inches long, look like powder puffs in the tree crown.

The flowers are insect-pollinated. Seedpods develop in from 6 to 8 months and fall to the ground intact, usually between December and April in Hawaii. The dark brown and relatively straight pods are usually 6 to 8 inches long and contain from 5 to 20 seeds.

... *Seed Production and Dissemination*

Seeds are reddish-brown beans about 0.5 inches long that drop from the pods when they open on the ground. Although the seeds are hard coated and long lived, some germinate soon after moistening by soil contact, resulting in a short period of prolific reproduction even under lawn and garden trees. Most or all of the reproduction dies or is destroyed by insects, rodents, and lawn mowing.

Seeds are easily collected by gathering pods on the ground and drying them under cover until they open. Natural dissemination is by birds and rodents.

... *Vegetative Reproduction*

The Monkeypod tree can be rooted in moist soil on a site without use of mist or shade. In Honolulu, it is common practice to transplant huge trees by cutting away almost all the roots and all the branches. Trees grown at close spacing in the forest frequently have branch-free stems 13 to 16 feet tall and are transplanted to parking lots and parks as "instant" full-size shade trees.

... *Seedling Development*

Seedlings are usually grown from seed planted in containers. In Hawaii, polyethylene bags are now the most commonly used containers for this purpose. Monkeypod seedlings have also been grown in seedbeds and successfully planted bareroot in Hawaii, but not on a large scale.

SPECIAL USES

- Monkeypod wood has been reported as hard and heavy, and sometimes difficult to work. The wood (shown above) is considered easy to work, particularly because low shrinkage during drying allows it to be machined while green.
- Articles made from green wood can be dried without serious drying degrades. In Hawaii, Monkeypod has been the premier craftwood used for carved and turned souvenir bowls since 1946. As labor costs increased, however, the industry has spread to the Philippines and Thailand, which now supply most of the Monkeypod bowls for which Hawaii is famous.
- The pods contain a sweet edible pulp that supplies nutritious food for animals. Children also chew on the pods, which have a licorice-like flavor). ■

COMBATING WEEDS

Source: Link: http://www.gardengatemagazine.com/49weed01/

Any plant out of place can become a garden enemy. Here are strategies for fighting the battle against weeds.

When you ask gardeners what their favorite part of gardening is, most will tell you it's enjoying the beautiful flowers and fresh vegetables. What's the worst part? Almost everyone agrees it's weeding. Gardeners are always looking for ways to get rid of weeds. And a good attack plan has two prongs: 1) prevention, such as removing seedheads before they develop or using a pre-emergent herbicide, and 2) removal, pulling, digging or hoeing out established weeds or using an herbicide to kill them.

Weeds can be divided into roughly two categories — annual and perennial — with the difference being how they reproduce. They each have a different life cycle. Once you know which a weed is, you can determine the best way to control it.

As the old saying goes, "Seeds one year, weeds for seven." If you can prevent plants from producing seeds, you'll have fewer to remove in the future. But once they start, there are several ways to get rid of them. The method depends on the weed, its maturity and its situation. Let me show you how to plan the battle against weeds in your garden.

◈ Preventing Weeds

The easiest way to deal with a problem is to prevent it from occurring. All weeds spread by seeds. Some seeds can live for many years in the soil. Every time you till, you bring more of them to the surface where sunlight prompts them to sprout. Since seeds often need light to sprout, one good way to shade weeds out is with close planting of ornamental plants.

Close planting shades the soil so seeds can't sprout easily. Even many creeping, perennial weeds don't like the shade and competition — they won't spread into these areas. Leave enough space between your plants so they just touch, as shown in the photo at the bottom of Column One, and don't compete with each other.

In open areas, such as flower or vegetable gardens, **spreading a pre-emergent herbicide helps**. After it's applied, make sure you don't disturb the barrier or weeds will be back. Corn gluten, the organic pre-emergent control being scratched into the soil in the photo above, won't stop the spread of perennial runners or roots. It'll last several months depending on the product and weather conditions and releases nitrogen into the soil as it breaks down.

Pulling weeds, as I'm doing in the photo above, before they produce seeds is a good way to spend the afternoon. I call it "weeding therapy" because it's so satisfying once my garden is spotless and free of pesky weeds. Just make sure to get every piece of root if your pulling perennial weeds or they will regrow.

Thick Layer of Mulch

Article Continues on Page 8

Eradicating Weeds—*Continued From Page 7*

Even putting down a thick layer of mulch like the photo at the bottom of Column Two on Page 7 will prevent weeds. **Mulching** shades the surface of the soil and keeps weed seeds from germinating. Even if a few seeds do happen to sprout, they can be easily pulled because the soil underneath stays loose. It also helps conserve moisture and keep the soil cooler on hot summer days. To be effective, it needs to be at least two inches thick or have a weed-barrier fabric underneath. No matter how diligent you are, weed seedlings and sprouts will appear and get established in your garden somehow. That's when it's time to begin removing weeds.

◈ Removing Weeds

Once a weed has sprouted, you have a few ways of dealing with it. The sooner you catch it, the easier it will be to remove.

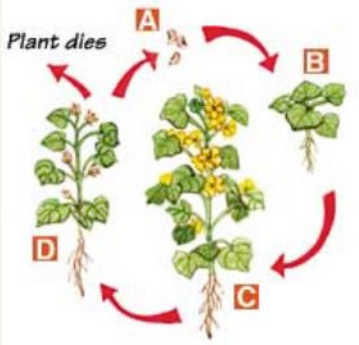
Hoeing is a quick and efficient way to remove tender, young seedlings, especially annuals. It'll slice them off just below the soil's surface so they can't regrow. Working the hoe at the shallow angle used in the photo at right won't bring many more seeds to the surface, ready to sprout. Notice how the hoe is almost parallel to the soil?

Be careful: Chopping into the soil deeper might expose more weed seeds.

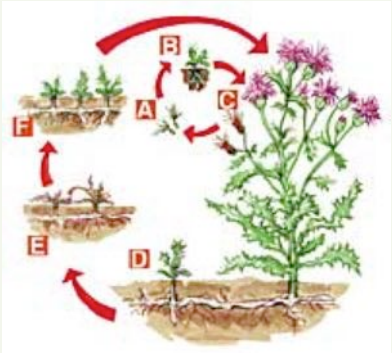
Digging works well for removing large, well-established weeds from the ground. Aim the blade straight into the soil and pry the weed out. Make sure to remove all of the roots of perennial weeds or they might sprout and begin growing again.

Using herbicides is a better solution for weeds in a lawn or closely planted perennial garden where pulling or digging may not be practical. Make a wick like the one here from a rag wrapped around a stick to put the herbicide just where you want it. You can saturate the rag and carefully brush it over the weed without harming desirable plantings. Spraying herbicides on seedlings that could be hoed or pulled is probably overkill. On the flipside, once a perennial weed becomes established, cutting off the top or pulling at it might not be enough. Many have deep or extensive root systems.

◈ Life Cycles of Annual and Perennial Weeds



Annuals — In one season, a seed (A) sprouts. The seedling (B) grows to maturity and flowers (C). After it flowers, the seeds ripen (D) and the plant dies. Seeds drop to the ground and the process starts over again when soil conditions are right.



Perennials — Just like annuals, perennials can spread by seed (A, B and C). But roots or runners from the parent plant can also sprout (D). They go dormant in winter (E). The following spring they grow (F), reach maturity, send out more runners and spread more seed.■

'Bugsy' Miniature Dwarf Bearded Hybrid Iris

DYNAMIC DWARFS

Source: GardenGate eNotes

Don't miss out on all that dwarf plants have to offer! First of all, they fit into just about any garden scheme. Since they're smaller, you can get more plants into the same space as one or two regular-sized ones. Just think about the color impact that'll have. And many dwarfs are especially suited for containers. They're lower maintenance, too — you'll never have to stake them.

'Bugsy' (shown above) flowers early, often at the same time as some early to midspring-blooming bulbs. Feed it with a light application of bone meal, super-phosphate or a 6-10-10 fertilizer in very early spring and again about a month after it blooms. It's perfect in a rock garden or at the front of a border.

Type:	Rhizome
Blooms:	Bright yellow, falls (lower petals) have a burgundy thumbprint in early spring
Light:	Full sun
Soil:	Rich, well-drained
Size:	6 to 9 in. tall, 5 to 8 in. wide
Cold-hardy:	USDA zones 3 to 8
Heat-tolerant:	AHS zones 8 to 1
Source:	Schreiner's Iris Gardens

'Professor Anton Kippenberg' Aster

(Aster novi-belgii)

Unlike a lot of asters that need staking, this one does fine even if you ignore it. And since it doesn't get rangy, you don't need to cut it back early in the season.

Grow **'Professor Anton Kippenberg'** at a woodland's edge, or if it's in a container, transplant into the garden in late fall.

Type:	Perennial
Blooms:	Pale purple flowers with bright orange centers from late summer to midfall
Light:	Full sun to part shade
Soil:	Well-drained
Size:	12 to 16 in. tall, 12 to 18 in. wide
Cold-hardy:	USDA zones 3 to 9
Heat-tolerant:	AHS zones 9 to 1
Source:	Joy Creek Nursery

'Lilliput' Astilbe

(Astilbe x crispa)

Plant **'Lilliput'** in a woodland or shade garden, but don't deadhead it — the seedheads add winter interest. In summer, this deer- and rabbit-resistant Astilbe attracts bees, butterflies and hummingbirds. It likes rich soil, though, so add a couple of inches of compost around the plant in fall.

Type:	Perennial
Blooms:	Plumes of salmon pink flowers from early to midsummer
Light:	Part sun to full shade
Soil:	Moist, humusy
Size:	6 to 8 in. tall, 8 to 12 in. wide
Cold-hardy:	USDA zones 4 to 9
Heat-tolerant:	AHS zones 9 to 1
Source:	Bluestone Perennials, Inc.■

'Painted Lady' Butterfly

Photo: Courtesy of Jeff Anderson

Winged Wonders of Doña Ana County

Author: S. Derrickson Moore

Las Cruces Sun News | August 18, 2016

Butterflies flutter through our gardens and our summertime lives. And they love New Mexico, which attracts more butterfly species than any other state but Texas and Arizona.

The fascinating, glamorous creatures that brighten our days are winged workers who help pollinate crops and our gardens.

They are the stuff of myths and legends and serve as inspirational symbols for many of the world's religions, not surprising when you consider that the average butterfly is born again, and again and again.

"A butterfly goes through what is known as a complete metamorphosis cycle. You could say that it is born four times," said butterfly expert Justin Van Zee. He's a soil biologist for the Jornada Experimental Range and board member for the Asombro Institute for Science Education, which sponsors the annual Butterfly Flutterby at Chihuahuan Desert Nature Park, northeast of Las Cruces.

"There are four different stages. The adult lays eggs which can winter over or be in that state for some time. Then there's the larva (caterpillar), and the pupa or chrysalis (the hard skin which appears after the caterpillar's final shedding of its skin). One day something triggers the emergence of the adult. When is a butterfly born? It's easy to say for a mammal, but which of the four stages is the birth of the butterfly?" Van Zee mused.

New Mexico Ranking

A question that's easier to answer is our state's ranking when it comes to myriad butterfly species.

"In New Mexico, 325 species of butterflies have been documented, which puts us in third place in the United States, behind Arizona (364 species) and Texas (475 species)," said Van Zee, noting that there are several ways of counting. "There is a group of butterflies that are residents year-round, plus an additional group that are 'strays,' those that fly through or are discovered around borders yet don't fulfill their life cycle in the state. "Various sources have documented up to 336 species, and we seem to have a clear advantage over fourth-place Colorado (287 species).

A 'Variegated Fritillary' Butterfly

Photo: Courtesy of Brad Cooper

What lures butterflies to the Land of Enchantment?

"There are many factors that contribute to the high numbers of butterfly species in New Mexico. We're a relatively large state (ranked fifth in size), elevation ranges from 3,000 to 13,160 feet, with many life zones and precipitation range; many land regions are represented (Great Plains, southern Rockies, Colorado Plateau, Chihuahuan desert) with proximity to other highly diverse regions nearby (Sonoran to the west and Mexico/Sierra Madre to the south)," Van Zee said.

"New Mexico is still largely rural and undeveloped, with rangeland, forest, and drainage basins still mostly intact. And 18 species have been documented in every one of New Mexico's 33 counties, which is impressive because of the incredibly wide range of environmental conditions."

A Phoblisora Catulus (Common Sootywing) Butterfly

Photo: Courtesy of Brad Cooper

Butterfly Central

Of 126 species recorded in Doña Ana County, North American Butterfly Association Butterfly Count volunteers have reported 76 species in a 12-mile radius circle centered on Oñate High School on the East Mesa of Las Cruces. The count, taken annually on one Saturday in early August, covers a 16-year period.

"That's pretty impressive for such a short amount of time and a relatively small area," Van Zee said. Though August is technically prime time for butterflies, conditions vary from year to year.

"Adults feed on nectar to be able to breed. They like blue flowered plants in general. The bee bush is a pretty common shrub there and attracts a lot of insects, bees and butterflies. They like the yellowish plants, too, like desert marigold. Places like Dripping Springs that have a lot of diversity are hot spots for butterflies. When we have good rains we get a pretty good number of butterflies," Van Zee said.

Article Continues on Page 11

Winged Wonders of DAC *(Continued From Page 10)*

Juliet Williams, DAC Certified MG

And dry years like this one can mean fewer sightings of the lovely insect. "It's been a bad year in my garden. Things are drying up and right now, nothing is flowering and there are no butterflies," **Juliette Williams** of Las Cruces reported in early August, noting that rains and subsequent blossoms rapidly increase butterfly traffic.

Williams is a longtime member of Doña Ana County Master Gardeners. She uses a lot of native plants and designs her garden to appeal to a variety of critters.

"Since 2005, I've been planning for butterflies, hummingbirds and wildlife in general. I think it's better to feed the animals naturally than to have to put out feeders for them. I'm fascinated by how animals know what they can and can't eat," Williams said.

"Butterflies like flowers that are many flowers in one, like the butterfly bush, false indigo and lantana. They can land and feed from each flower without expending energy. They have to work too hard to get much if they have to go long distances between individual flowers," she said.

"I've brought in things like the Boothill plant, which is covered with pale blue flowers, which butterflies love. I've seen Boothill plants covered like a carpet with Painted Lady butterflies," said Williams, a former school teacher who enjoys sharing her knowledge with others.

If you'd like to learn more about butterflies and the gardens that attract them, Van Zee, other butterfly experts, Williams and members of the Master Gardeners are on hand every year to answer questions at the Annual Butterfly Flutterby at the Chihuahuan Desert Nature Park, 56501 N. Jornada Road.

Activities include the Life Cycle Maze, Build a Butterfly game, the Butterfly Identification Relay, making a butterfly necklace, face painting, and a bucket auction. Admission is $3. For information, call 575-524-3334 or visit www.asombro.org, the website of Asombro Institute for Science Education, a nonprofit organization dedicated to increasing scientific literacy by fostering an understanding of the Chihuahuan Desert.■

Scorpionflies:

These Are Harmless Insects Despite Their Scary Look

Bill Johnson | Horticulture Magazine | May/June 2016

An insect's life basically revolves around two activities: Doing what it can to eat, and doing what it can to not be eaten. To illustrate this, let's look at the Scorpionfly.

Scorpionflies, of which there are more than 50 North American species, fall into the family *Panorpidae* and the order *Mecoptera* (which contains four other North American families of unique insects, too.)

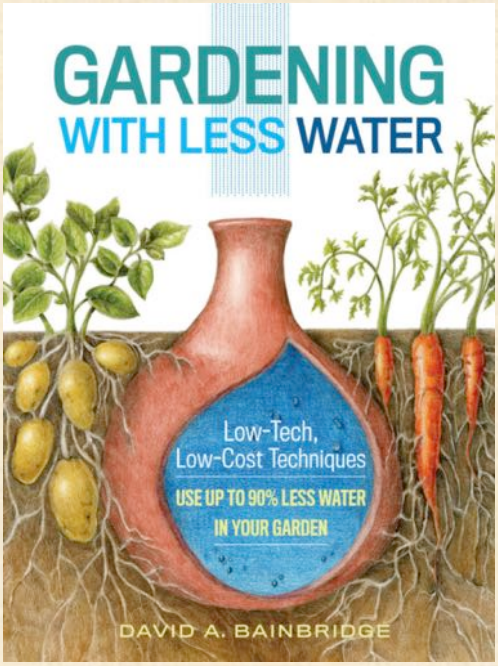
Scorpionflies cover most the eastern half of the United States, from Canada to Texas, eastward to the Atlantic. They can be found mid-summer in and near moist woodland areas and amid tall grass and shrubs. The larvae feed on dead animals as well as dead grubs and caterpillars. That feeding behavior continues into the adult stage; they're not known to go after live prey. (The other four native families within the *Mecoptera* prey on live insects.)

Scorpionflies, which can be a half or three-quarters of an inch long, possess a couple of distinctive clues for identification—namely, the front end and the back end. It's actually a beak that contains chewing mouthparts at the tip. You'll also notice large oval eyes and long antennae. (To me, this falls into the category of a "face only a mother can love.")

The other striking body part, found at the other end, can be easily confused for a Scorpion's tail at quick glance. That actually the male genitalia, which are recurved and bulbous and totally harmless—this insect cannot sting.

The female's abdomen narrows to a point and doesn't curve at all. The brown wings show very striking patterns of black spots and lines. They're long, equaling the length of the body.

Obviously, the tail's close resemblance to a Scorpion's stinger could be a defensive tactic that scares off a predator. This is true of the Deep South, anyway, but I've always wondered how it makes sense in the northern States. No Scorpions there!

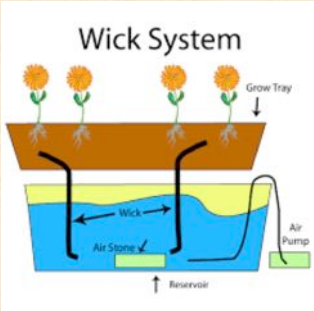


GARDENING WITH LESS WATER

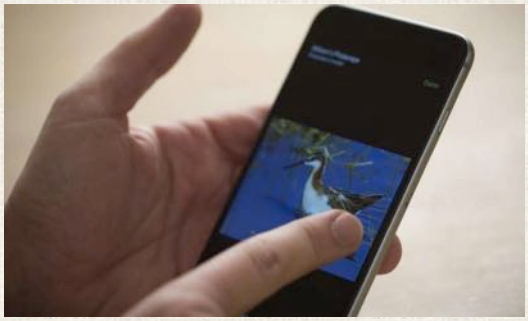
Low-Tech, Low-Cost Techniques;
Use up to 90% Less Water in Your Garden
By David A. Bainbridge
Storey Publishing | December 29, 2015 | Paperback

Are you facing drought or water shortages? Gardening with Less Water offers simple, inexpensive, low-tech techniques for watering your garden much more efficiently — using up to 90 percent less water for the same results.

With illustrated step-by-step instructions, David Bainbridge shows you how to install buried clay pots and pipes, wicking systems, and other porous containers that deliver water directly to a plant's roots with little to no evaporation. These systems are available at hardware stores and garden centers; are easy to set up and use; and work for garden beds, container gardens, and trees.



Sources: Amazon.com & Storey Publishing



Merlin Bird ID App
Cornell Lab of Ornithology

Free (Android & Apple)
Link: http://merlin.allaboutbirds.org/?gclid=CJyDipvpj9ICFRFrfgodKc0Elg

Description

What's that bird? Merlin Bird ID helps you solve the mystery in five questions, or with a photo of a bird.

First, Merlin asks you a few simple questions. Then, almost like magic, it reveals the list of birds that best match your description. Pick your bird, then delve into more photos, sounds, and ID tips about your bird!

If you have a photo, Merlin can help there as well. Take a photo, or choose one from your photo gallery, and Merlin will offer a list of birds that best match your photo.

Merlin is fun and easy to use—whether you're curious about a bird you've seen once or you're hoping to identify every bird that comes to your feeder

The answers are waiting for you with this free app from the renowned Cornell Lab of Ornithology.

Features

- Merlin will now identify a photo. Select your photo, tell Merlin where and when you took it, and you'll see a short list of suggested identifications.
- Download bird packs containing the species of your region, reducing the app size.
- Created for beginning and intermediate bird watchers, Merlin identifies the 650 most common bird species in the United States and Canada (excluding Hawaii).
- Intelligent results. No more scanning through hundreds of possibilities! Merlin shows the birds near you that fit your description.
- Customized location and date tools generate best answers for your neighborhood and time of year.
- Powered by eBird to deliver the most accurate results based on millions of sightings from bird watchers across North America
- Enjoy more than 3,000 photos of birds, including males, females, and juveniles.
- Learn ID tips from Cornell Lab of Ornithology experts.
- Listen to beautiful bird songs and calls from the Macaulay Library at the Cornell Lab of Ornithology.
- It's all free! The Cornell Lab of Ornithology's goal is to help you and millions of others to learn about birds.
- *Merlin Bird ID currently includes Bird Pack downloads for the U.S. including: Northeast, Southeast, Midwest, Rocky Mountains, **Southwest**, Texas and Oklahoma, Alaska, and West Coast. Canada is covered by Eastern Canada and Western Canada packs.*

What's New in Version 1.2.1

Merlin 1.2.1 includes many behind-the-scenes tweaks and fixes that pave the way for new features and Bird Packs in the near future including:
- Spanish language support
- New map legend to support upcoming Bird Packs

Honey-Do List for February 2017

Much of our suggested garden task information comes 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. Also, some of our recommendations come from Southwest Planting Tips by the Month and the Tucson Gardening Calendar both of which are produced by the Tucson Botanical Gardens. Another resource used in our Honey-Do Lists is The Desert Gardener's Calendar: Your Month-by-Month Guide by George Brookbank (1999.) Recommendations from Sunset Magazine's monthly Southwest Garden Guides may also be included.

GENERAL: February is typically a transition month; the worst of winter is over, theoretically. Finish up last month's chores and cool-season planting. Add the following to your list of tasks:

ORNAMENTALS

- Sow seeds of perennial and hardy annual wildflowers such as columbine, penstemon, dianthus, candytuff, larkspur, pansies, stock, and Johnny jump-ups. Later in the month check nurseries for transplants of these and other favorites.
- Start caladium tubers indoors for transplant later.
- Leave any frost-killed foliage and branches on landscape plants—this will protect the base of the plant, which should re-sprout.
- Scatter wildflower seeds including blue flax *(Linum lewisii)* firecracker penstemon *(Penstemon eatonii),* lemon beebalm *(Monarda austromontana)* and Rocky Mountain penstemon *(Penstemon strictus).*

FRUIT, NUT, CITRUS & SHADE TREES

- Fertilize citrus and fruit trees on Valentine's Day.
- Continue to plant pines and bareroot deciduous trees and shrubs (e.g. apples, apricots, Asian pears, peaches, pears, persimmons, plums and pluots.) Most desert-adapted trees can be planted toward the end of the month, but do not plant any species that are frost-tender until all danger of frost is past (late March/early April).
- Water established trees once during the month unless winter rains have been abundant. Water newly planted trees every three weeks during the winter. Provide enough water to soak to a depth of three feet.
- Mesquites may ooze a black, sticky sap in late winter. This is normal and there is rare concern for alarm.
- Harvest pecans and pick up fallen fruit to prevent pest damage.
- Pick off just enough citrus fruit to eat, leaving the rest on the tree to increase their sweetness.

VEGETABLES, FRUIT & HERBS

- Plant cool-season crops such as carrots, onions, parsnips, radishes, English peas, snow peas, fava beans, garbanzo beans, lettuces and other green leafy vegetables after mid-month.
- Sow seeds of beets, bok choy, carrots, lettuces, radishes and spinach directly in to the ground.
- Sow seeds of peppers and tomatoes in a warm, bright spot outdoors.
- Start seeds of summer vegetables indoors then transplant outdoors when threat of frost has passed.
- Sow seeds of chives, cilantro, dill and parsley. Plant marjoram, oregano, rosemary and sage.
- Sow seeds of snow peas by midmonth; and all month, sow Swiss chard and turnips, and beets, green onion, and peas.

LAWNS / TURF / ORNAMENTAL GRASSES

- Relax! Warm-season grasses are dormant and cool-season grasses are quiet; no need to mow or fertilize this month.
- Water lawns at least once a month—twice a month may be preferable depending on soil type, temperature, wind, rain and quality of turf desired.

Honey-Do List for February 2017—Continued

CACTI & SUCCULENTS

- Continue to plant cool-season succulents outside.
- Apply quarter-strength liquid fertilizer every second watering to actively growing succulents in containers. Do not fertilize any plant that is dormant or is a warm-season grower.
- Water winter-growing succulents every 10-14 days to a depth of 4"-6" for large plants and 3"-4" for smaller plants.
- If frost is predicted, cover aloe flower stalks with frost cloth—the plant won't bloom again until the following year if the candelabra-like stalks freeze.

Some of the above recommendations came from the Tucson Botanical Garden's monthly "Calendar of Care" for cacti and succulents.

ROSES

- Prune bush roses before St. Valentine's Day, but wait until after spring bloom to prune climbers.
- Renew a regular fertilization schedule for established roses mid-month.
- Water established roses weekly to a depth of 16"-18". *It is more important to water deeply than to water often.*
- Unless you have been fertilizing on a six-week schedule during the winter, do not fertilize roses this month.
- Begin to plan which new roses you'd like to plant in your garden in late March or early April after the danger of freezing has passed.

It's always important to correctly identify any pest or insect you suspect may have caused damage to your plants. If you do not know what the culprit is, collect one in a plastic bag or small jar and take it to the Doña Ana County (DAC) Cooperative Extension Office that is now located at 1170 North Solano Street, Suite M, in Las Cruces (at the corner of Spruce & Solano Streets.)

Our new Hotline Office is located in Room 1833 in Suite M. Our Hotline number remains the same. (575) 525.6649

MISCELLANEOUS

- Rake up fallen leaves and clean up perennial beds to discourage disease and insect problems later in the year.
- Continue to weed regularly to keep beds tidy and plants properly spaced.
- Add leaves and grass clippings to the compost pile.
- Begin removing extra mulch applied to insulate delicate plants but be prepared with a sheet or towel in case temperatures dip too low.
- Keep everything well watered. Spring winds are brutal. Foundation plants, turf, and ornamentals all need extra care.

REMINDER!

Our February monthly MG meeting was held on:
Wednesday, February 8, 2017

Next MG Monthly Meeting scheduled for:
Wednesday, March 8, 2017
Location: Branigan Library, Roadrunner Room
Our meeting time is 9:15am to 11:30am

FEBRUARY 2017 MG BIRTHDAYS

(Active MG's & Interns)

★ **Nancy Breard** ★ **Tracey Thompson**

In order to reduce the chances of Identity Theft for our MG's, exact birthdate info will no longer be printed in our Magazine.

2017 Special Event Notices

Organic Farming Conference (Albuquerque)	Feb. 17-18
Veggie Seedling Sale (NMSU-Gerald Thomas Lobby) *(kale, cauliflower, lettuces, spinach, nasturtiums & pak choi)*	March 1
Home & Garden Show (Las Cruces)	March 3-5
Pecan Food Fantasy (Las Cruces)	March 5
High Desert Gardening & Landscaping Conf. (Sierra Vista, AZ) *Registration due by Feb. 21* Link: https://cals.arizona.edu/cochise/mg/high-desert-conference ... $75 for one day; $110 for both days	March 8-10
SunSCAPE: Gardening the Sensible Way (El Paso) $35 registration – due by March 10th	March 11
Landscape Maintenance Workshop (Las Cruces)	March 30
International Master Gardener Conf. (Portland, OR)	July 10-14

For more info, contact DAC Cooperative Ext. Office: (575) 525.6649

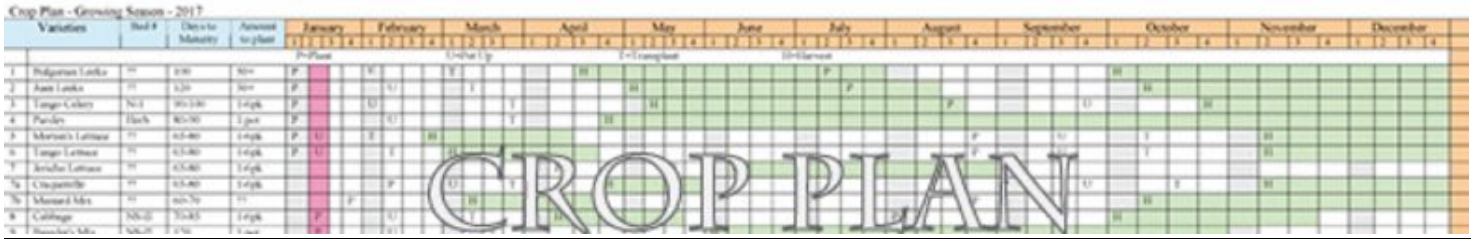
Please see Page 26 for information about the NMSU Plant Diagnostics Clinic

GOT IDEAS? If you have a gardening-related article or a suggestion about a Plant-of-the-Month, a vegetable or fruit, tree, invasive plant or weed to share for our MG Magazine, please send me a link or email your idea to me.

MG CONTACT INFORMATION Be sure your email address is current so that you will be able to receive important information throughout the month from the MG Program. I regularly update our MG Contact List. If you need a copy of this file, let me know.

MG MAGAZINE DEADLINE The deadline for submitting articles and information for inclusion in our **March 2017** MG Monthly Magazine will be **Tuesday, February 28, 2017**

Contact Info: Ann Shine-Ring, Editor
asring@powerc.net
(575) 640-7177



Crop Planning for the Kitchen Garden

A crop plan is the foundation of a successful gardening season.

Article Provided By Darrol Shillingburg, DAC Certified MG

What is a Crop Plan?

A Crop Plan is an important part of farm planning and operations. Market gardeners and those operations running a CSA also use one. The Plan varies from farm to farm and can be very inclusive with spacing and harvest data or it can be used in conjunction with other record-keeping document. Seldom will you find a Crop Plan used by home gardeners. However, if you are seriously growing for your own table, a Crop Plan will increase your efficiency, reduce your gardening time and put a more steady harvest on the table.

Why is it important?

If you are like most people you eat every day, more that once a day and thus need to harvest from the garden nearly every day or depend on the grocery store. True, most food crops can be harvested and preserved for future use, but many can be timed for use by multiple planting throughout the season.

It will also help you plan your rotations for a healthier garden. A Crop Plan will inform your seed purchasing decision as well as help you manage your use of gardening time. From your Crop Plan, you can see immediately what tasks you need to do each week and can schedule them on your calendar, with reminders, to assist you in keeping on track throughout the season.

A Crop Plan will also increase your garden production, by planting sequentially within the plan. In addition, if you track actual timing and production data and modify your crop each year, it will become a personalized and indispensible document that improves your garden each season, not to mention making gardening less time consuming.

If your garden consists of a few tomato and pepper plants that you purchase as transplants, a Crop Plan may not be for you. However, remember to consult the planting chart for the best planting windows.

What is included in a Crop Plan?

So, if you would benefit from a Crop Plan and want to proceed, here is the process that I use. My Crop Plan is a simplified version of what farmers would need, because my garden operation is less complicated and can almost be run from memory.

The information that I want included in my Crop Plan includes:

- **Variety** (named as a generic or a specific cultivar)
- **Bed space to be used** (that's not always known and sometimes not relevant)
- **Days to maturity** - critical information for a meaningful crop plan
- **Amount to plant** - (based on experience growing for a family of two adults. The listed number of six packs and pots is used only for seed starting. I may pot up two or three 6 packs from one 6 pack of started seed)
- **Planting window** - (nearly all of my planting is done from seed - your windows may differ some)
- **Pot up window** - (again based on my experience with growing under lights in my sunroom - your timing may be different)
- **Transplanting window** - (based on personal experience and seasonally dependent)
- **Harvest window** - often the most difficult to calculate because of seasonal variation. I use a long harvest window for most crops because the harvest is for the table, not for the market.

My kitchen garden Crop Plan is divided into 12 months (I eat and garden all months of the year.) Each month is divided into four sections, roughly equaling weeks. The first week of the month is highlighted in light grey for easy recognition. The current week is highlighted in color for visual ease. To identify what tasks to include in the current week all I need to do is check that column. The Crop Plan for 2017 has about 75 planting events covering 50 varieties. During the year I will enter the exact planting, pot up, transplanting and harvest dates and adjust the plan next year with that refined information. Each year the Plan will become easier to create and more accurate.

Article Continues on Page 17

Crop Planning-Continued From Page 16

	Varieties	Bed #	Days to Maturity	Amount to plant	January				February				March				April	
					1	2	3	4	1	2	3	4	1	2	3		1	2
	P=Plant		U=Pot Up		T=Transplant												H=Harvest	
1	Bulgarian Leeks	??	100	50+	P				U				T					
2	Juan Leeks	??	120	50+	P					U				T				
3	Tango Celery	N-1	90-100	1-6pk	P				U							T		
4	Parsley	Herb	80-90	1 pot	P					U						T		
5	Morton's Lettuce	??	65-80	1-6pk	P	U			T			H						
6	Tango Lettuce	??	65-80	1-6pk	P	U				T			H					
7	Jericho Lettuce	??	65-80	1-6pk														P
7a	Craquerelle	??	65-80	1-6pk						P			U			T		
7b	Mustard Mix	??	60-70	??				P						H				

Current Week — Harvest Window

How can I find out more about Crop Plans?

If you want to know more about Crop Plans, a web search of "crop plan documents" will give you many ideas of what else to include and how sophisticated to make your own plan. There are Crop Plans templates and crop plan software available from the web. They are all designed for farmers, market gardeners and growers for CSA's and are a lot more sophisticated that what I need. Most are created in Microsoft Excel for the spreadsheet function. My plan uses Microsoft Word table function because there are no numerical calculations involved. (My harvest-tracking document is in Excel)

For additional information the PennState Extension publication, "Crop Planning for CSA's" does a review of Crop Plans that they recommend, as well as other plans available over the web. (http://extension.psu.edu/business/start-farming/news/2013/crop-planning-for-csas)

Since my Crop Plan covers the entire gardening year (365 days) in Las Cruces is may meet most of your needs and can be easily modified.. If you would like to use it or start with a template of the plan (without content), email me and I will send it to you. The document is in rtf. format and will run in any word processing program. darrols@comcast.net

Tracking the dates and volume of your garden harvest is an important adjunct activity to developing and improving a Crop Plan. I will cover that subject in upcoming article.

I hope this assists you in creating a more productive and less time-consuming food garden that meets your nutritional needs throughout the year.

Good gardening and good eating,

Darrol Shillingburg
Doña Ana County Master Gardener
darrols@comcast.net

If you have comments or questions, please feel free to contact me at: darrols@comcast.com

"*Eating is an agricultural act*", Wendell Berry

How To Start Seeds:

18 Confidence-Building Tips

Source: A Way To Garden.com

Becoming a confident seed starter unlocks a garden of possibilities; you can try your hand at anything offered in any catalog, no longer limited by the local garden center's palette. As daunting as it may seem, remember this: In nature, seeds sow themselves successfully–usually emerging when the soil's moist and starting to warm up, then enjoying fresh air and plenty of sunshine, with hopefully just enough rain.

Following my 18 simple seed-starting tips below will take you to more detail, or to examples of the gear I use. I also have an FAQ page of seed-related questions and answers, if something's not covered here, plus how-to links for some popular vegetables at the bottom of this page.

Details of spacing and depth are not included, since they vary by crop. Your seed packet (or better yet, the company's website it came from) may offer specifics. My basic guidance: Except with large seeds like peas and beans and squash, which I direct sow outdoors and deeper, I make a shallow depression or furrow, press the seed gently in, and lightly cover it with more medium.

Cheat sheet: If you're only going to do one thing on the list to improve your seed-starting results, focus on the light. **Too little light is the most common reason for seed-sowing failure by home gardeners, making tip Number 12 probably the key advice of all.**

18 Tips For Starting Seeds

1) Don't be in a rush. Get your timing right for each crop (this free, printable Seed Starting Calculator is one way to pinpoint dates).

2) Don't be cheap; buy fresh seed if there's any doubt. Check on average viability (in years) of a given type of leftover seed, but also ask yourself how well you really cared for it. Seed is alive (but not if you left it in the hot, humid garage all summer).

3) Don't use just any old potting soil; some brands may be too coarse, especially for smaller seeds. A fresh bag of sterile medium labeled "germination mix" or "seed-starting mix" is a safer bet.

4) Cleanliness counts. When re-using flats, trays, cells, and pots, wash with a dilute bleach solution (1:10 bleach: water) or at least hot, soapy water, if you wish to skip the bleach.

5) Do pre-moisten the mix before putting in flats or cells, so it's barely moist and no longer powdery dust. As I said: *barely* moist, just to take the edge off; not sodden! Trick: If working indoors, I just run water from the kitchen-sink sprayer into the plastic soil bag ahead of time; massage and turn the bag to distribute; then repeat a few times.

6) Do use bottom heat, from a germinating mat, and a dome lid or plastic wrap to create a "germination chamber" of around 70F…

7) But don't leave the mat plugged in, or the lid on, once the plants have emerged. Seedlings generally don't like it as warm, or moist, as seeds trying to sprout do.

8) Don't let seeds dry out before they germinate (a recipe for death!)…

9) But don't overwater once they do. Water requirements drop dramatically as soon as they're up and growing, when letting the soil go slightly dry between waterings is generally the best practice.

10) Do invest in a watering device that's gentle enough for seeds and seedlings. (The mister I use cost a whopping $16; I also use a turkey baster and cream pitcher, among other improvised tools. If watering with a garden hose, a breaker nozzle like the Dramm Lemonhead is recommended.)

11) Don't skimp on light once seedlings have emerged, or anytime thereafter. (Don't be surprised if they get spindly if you do.) To be perfectly clear: No windowsill growing!

12) Do take advantage of fair days outside to make up for the limitations of artificial light; I carry my seedlings outside by day. Even closely spaced, super-efficient T5 bulbs might put out just one-fourth to one-fifth the light of a clear day in May outdoors, where the occasional breeze will also help toughen plants up. Between indoor and outdoor light sources, I like my plants to have 12 hours' worth daily. (The T5 lights I use.)

13) Do direct-sow crops suited to it…but not unless you are committed to keeping the seedbed free from weeds that can outcompete tiny emerging seedlings. (One expert kale grower explains why she transplants, despite how easy kale is to sow directly outside.)

14) Don't rush to transplant, especially with warm-season crops like tomatoes, peppers, eggplants. Nothing is gained by making them shiver before the weather really settles, and much can be lost in the wildest spring weather.

15) Don't transplant seedlings into the open garden that haven't been hardened off gradually, with a few hours a day outdoors over a week or so before to allow for acclimation.

16) Do sow extra, and do "cull the herd" by discarding any weak or "off-type" seedlings at any stage of the process. More is not better if they are runts. One expert seed-farmer friend even starts her careful selection process even before sowing, discarding the smallest seeds from each packet. Give yourself the best chance for success with a bit of ruthlessness.

17) Do plan for succession sowings of many crops, sowing only a short row every couple of weeks and avoiding 40 servings of lettuce or 10 pounds of green beans in a single day's harvest. Take advantage of both cool ends of the season to repeat sowing certain crops, such as peas.

18) Don't blame yourself for every failure. Old seed or poorly stored seed or just crappy seed can outsmart your best efforts. Sometimes seed was viable (had the ability to germinate) but lacked sufficient vigor (the ability to thrive). Learn the difference. And then you have the weather to invoke as the guilty party. This is gardening, remember? We can always blame the weather, and then try again.■

Article Provided By Darrol Shillingburg, DAC Certified MG

Coyotes (Canis latrines)

Source: Wildlife Notes, New Mexico Game & Fish

Adaptive and Opportunistic In the early 1900s, Coyotes were found only across the Great Plains, but during the last century humans have changed the environment. As urban and agricultural developments have increased and natural predators been eliminated, the Coyote has adapted. Today, Coyotes can be found in almost every urban, rural and wild habitat in North America.

Description Coyotes are one of the most vocal North American *canids*, having a wide vocabulary of yips, barks and howls. Often confused with wolves, Coyotes can be distinguished by their smaller size, more elongated muzzle and more pointed and prominent ears. The light-colored, thick fur of a Coyote can mask its more delicate bone structure and sometimes give it an appearance of being larger than it actually is.

Adults weigh 20–40 pounds, and males are slightly heavier than females. Overall body lengths vary between 48–60 inches, and tails measure approximately 16 inches.

Diet Coyotes are opportunistic. Readily eating carrion, fruit, seeds, berries or insects, they also will prey on a variety of mammals. Favoring rabbits, voles and mice, Coyotes will prey on deer, but usually only first-year fawns or an occasional feeble or infirm adult. Coyotes can be livestock predators and may target domestic pets, such as cats and dogs in urban locales.

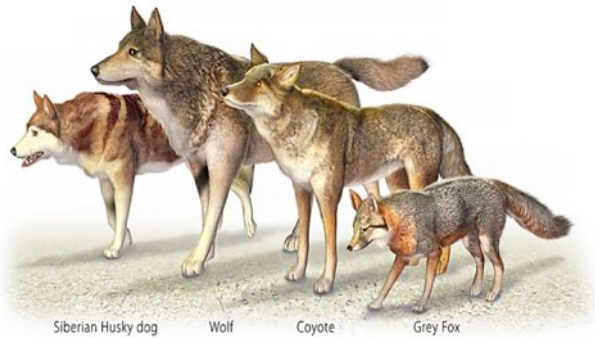
Territory and Marking Coyotes are social, living in packs of 3–8 members. Each pack maintains a territory that can be relatively small, 2–3 square miles, but may span up to 40–50 square miles. Regardless of the size of the territory, each pack maintains an intensely guarded core zone where members predominantly reside. Marking territory with a scent from fecal or urine deposits and anal-sac secretions, Coyotes communicate with one another, other packs and with their predator neighbors. Scent marking helps avoid confrontations over resources and maintains pack integrity

Coyotes have two anal musk glands, one on each side of the sphincter, that secrete a strong smelling, pasty liquid to personally identify individuals and packs.

Family Life One mated and monogamous pair forms the nucleus of each pack of 3–8 coyotes. Also known as the alpha pair, this dominant pair are the only animals in the pack that breed.

Mating occurs in early February. Following a gestation period of 60–63 days, pups are born to the dominant couple from late April to early May. The female gives birth in a den, usually modified or enlarged by the adults from existing natural shelter, such as a hollow log or abandoned burrow.

Coyote pups are born blind and helpless and cannot open their eyes for about 10 days. The pups emerge from the den in 2–3 weeks after birth. Usually, each pack has two or more young adults to protect their territory and help the nursing mother. Most often, these are siblings from the previous year who did not leave the pack when adulthood was reached.



Young Coyotes will also disperse, meet other wandering Coyotes and eventually form new packs. While the alpha female cares for the new pups, other members of the pack may care for the mother—bringing her food, babysitting and even helping move pups to another den. A pack's core area frequently contains several den sites. Pups may be moved several times a week to lessen parasites that often infest dens and to avoid discovery by potential enemies.

Fewer than half of all Coyote pups live to see their first birthday. For those who do, the pack undergoes a social reorganization and internal shuffle in fall. Some of the pups disperse to become nomads, while others remain and become helpers for the following spring.

Non-Protected Coyotes are abundant in many parts of New Mexico — a result of their high intelligence and amazing ability to adapt to a variety of habitats. A non-protected furbearer, Coyotes may be legally hunted and trapped without restrictions by residents year-round. Nonresidents must purchase a license.■

Winter Care for Your Houseplants

National Gardening Association
Link: https://garden.org/celebratingtheseasons/?page=winter-care
Article Provided By Dale Petzold, DAC Certified MG

Winter Care for your Houseplants

Everyone needs a little R and R, and for houseplants winter is the time to get it. Daylight is dramatically reduced, the air is dry, and temperatures are cool — not the perfect growing conditions. Follow these tips to keep your houseplants in shape through the winter.

Watering

Remember these words: neglect with respect. Simply put, most houseplants don't need as much water during the winter season. Once a week test the moisture level (if the soil is dry at a 2-inch depth the plant needs water). Water thoroughly and allow the water to drain completely. If the plant has a saucer, dump any excess water after an hour or so. Obviously, there are certain plants that prefer being moist at all times. If you don't know what your plants require, do some Googling.

Fertilization

Houseplants, like people, need food to perform, especially when they are actively growing. Spring and summer are necessary feeding months; however during the winter, feeding is not necessary. If you do fertilize, do it sparingly. Dilute the fertilizer by 50 percent or more. Once you see the plant setting new growth (typically in late February or March) you may start feeding again.

Keeping the plants clean

Winter is a great time to do some housecleaning on your plants. Removing accumulated dust and debris helps the plant breathe and look good. Also, a good cleaning will help wash away any unwanted pests.

A simple bubble bath by hand is all it takes. Be sure the water is tepid and use a very diluted solution of liquid dishwashing soap and water. Place the plant in a sink and sponge off the leaves with the warm soapy water. Finish by wiping the leaves once more with clean water. You can place larger plants in the shower to sponge off the leaves. Then use the showerhead to rinse the leaves! Allow the plant to drain thoroughly before returning it to its original location.

Other Tips:

- Most houseplants prefer daytime temperatures of 65° to 75°F, and night temperatures of 60° to 65°F.
- Keep houseplants away from cold drafts, vents, and radiators.
- Watch that foliage doesn't touch windows.
- Many houseplants prefer a humidity level of 40 to 50 percent. Humidifiers are an option for increasing humidity in your home. Contrary to popular belief, misting houseplants does not raise humidity.
- Fill a large saucer with gravel and add water to raise the humidity around the plant. (Be sure the bottom of the pot is not sitting in water.)
- Don't repot in winter. Wait until new growth appears in the spring.■

HEALING HERBS & PLANTS

Lavender (Lavandula angustifolia)

12 Healing Herbs You Need To Grow In Your Medicinal Garden

Sierra Bright | November 20, 2015

This herb is worth growing for the delightful fragrance of its tiny flowers alone, but it can be used therapeutically as a pick-me-up. Inhaling the fragrance of the flowers is sufficient to get relief from headache and depression. The essential oil extracted from the flowers has an important place in aromatherapy.

Add a handful of lavender flowers to the bathwater or place pouches of dried flowers under the pillow to get relaxed sleep. Make the best of the antiseptic and antibacterial properties of Lavender by infusing the flowers in water and using it to wash face and damaged skin. It can clear acne and accelerate wound healing.

◈ ◈ ◈

7 HEALTH BENEFITS OF LAVENDER

Link: https://www.organicfacts.net/health-benefits/herbs-and-spices/lavender.html

Some of the most important health benefits of Lavender include its ability to relieve stress, improve mood, promote restful sleep, reduce inflammation, lower skin irritation, prevent infections, eliminate dandruff, and soothe stomach bloating.

Nearly forty plants with the Mint family are technically classified as **Lavender**, although the most common version of lavender is ***Lavandula angustifolia,*** which is the variety on which the color "lavender" is based.

This genus of flowering plants is found in Europe, Africa, the Mediterranean, and parts of Asia, as well as other small corners of the "Old World". The reason that it is so widely used is its massive range of applications, from food and fragrance to cosmetics and herbal medicine; this plant is chock full of essential oils that can have powerful effects on the human body, as well as one of the most unique and beloved scents in the world.

One of the problems with lavender is that it can grow and spread quickly, which is why it is actually considered a weed in certain parts of the world, particularly if that varietal isn't one of those prized for their scent.

Lavender Essential Oil is highly sought after and widely available. As a culinary element, Lavender is used in salad dressings, honey, sauces, beverages, various teas, and as a flavoring spice for a number of other cultural dishes. The scent and flavor is wonderful, but the real bonus of Lavender comes from its health benefits, which we will explore in greater detail below.

Health Benefits Of Lavender

... *Anxiety and Stress:* There are a number of methods to use Lavender to soothe anxiety and stress. The natural organic compounds in the leaves and flowers of Lavender can be ground between the fingers and then rubbed into the temples. This topical application can soothe the body and mind, relieving anxious thoughts and balancing out mood. Aside from this topical application of the flowers themselves, you can also brew Lavender tea and achieve much the same effect. The antioxidant components of Lavender can impact the endocrine system of the body to lower the levels of stress hormones in the body.

... *Sleep Issues*: If you regularly struggle with insomnia, apnea, or restless sleep patterns, it can seriously impact your life. By brewing a few Lavender flowers in hot water, you can steep a wonderful tea that has been used to induce sleep and relaxation for thousands of years. This is closely linked to the flower's impact on the nervous system, and can also help to clear your mind of negative thoughts or clutter. It is commonly combined with meditation techniques, either in essential oil or aromatherapy form.

... *Anti-Inflammatory Qualities:* Everyone is looking for a reliable way to relax the body and mind, and Lavender takes care of both. If you add flowers to your bathwater and take a nice long soak, the anti-inflammatory components of Lavender can help to reduce inflammation throughout the body and easy hurting muscles. The anti-inflammatory and antioxidant properties of lavender are quite potent, and this is .one of the most trusted applications of lavender flowers

... *Skin Care:* An easy, mobile way to always take care of your skin is to fill a spray bottle with Lavender flowers. When your skin is feeling dry or irritated, simply spray some of the infused water on the area and enjoy the quick relief that it can provide. This can also work for chronic conditions, like psoriasis, eczema, and even acne.

Article Continues on Page 22

Healing Herb, Lavender—*Continued From Page 21*

... *Antiseptic Ability*: Although many people turn to Lavender to relaxation and aroma therapeutic applications, its effect on infection is impressive, to say the least. Many people apply crushed Lavender leaves on wounds and injuries to promote not only quick healing of the wounds, but also to prevent the development of infections at those sites. This has been a popular use for lavender since antiquity.

... *Hair Health*: If you suffer from hair loss or any other condition that affects the quality and health of your hair, seek out a Lavender-based shampoo. However, some of those organic cosmetic products can be quite expensive, while others may claim to be derived from lavender and still contain harsh chemicals.

One of the best options is to steep Lavender flowers as though you are brewing tea and then apply that mixture to your hair. It will function as an effective shampoo and significantly boost the health of your follicle beds and hair.

... *Heart Issues*: The relaxing qualities of Lavender, which come from its organic compounds and antioxidants, also help the heart by reducing blood pressure and easing the tension of blood vessels. This can prevent atherosclerosis and other cardiovascular issues, thereby lowering your risk of strokes and heart attacks.

... *Bloating and Digestive Issues*: The polyphenols found in Lavender have a wide range of effects on the body, including anti-aging impacts, but it can also help prevent the development of harmful bacteria in the gut. Essentially, this will prevent the accumulation of gas in the gut from the emissions of those bacteria. This will ease stomach discomfort, reduce bloating, and eliminate cramping. Either chewing on Lavender leaves or drinking a lavender tea can be effective in this way.

... *A Final Word of Warning*: Although not commonly considered an allergenic substance, if you are susceptible from allergens in the Mint family, you could experience negative side effects from Lavender as well. These are usually mild in nature and include headaches, constipation, and increased appetite, while topical application can cause mild irritation and redness.■

—U.S.D.A. INVASIVE/WEEDY PLANTS—

Black Medick

(Medicago lupulina L.) Pea Family: Fabaceae

Source: USDA Invasive Plants and Weeds of the National Forests and Grasslands in the Southwest Region, Second Edition

Description Shallow, taprooted, low, trailing winter annual or short-lived perennial forb, with prostrate or ascending stems up to 30 inches long; where thick stands develop, stems may become erect, obtaining heights of 18 to 24 inches; 4-angled stems are typically purple at the base, hairless or more rarely with some short hairs, although older stems become less hairy; they branch occasionally.

Origin Native to Eurasia and Africa

Habitat Cultivated and disturbed or degraded sites in meadows, grassland, woodland, and forest communities, and roadsides within elevation that generally range from 4,000 to 8,000 feet.

Leaves Alternate, compound leaves are trifoliate (cloverlike); younger leaves, toward the stems tips, have short hairy petioles; older leaves have long petioles (up to 1-3/16 inches long); paired stipules at petiole base are lanceolate to ovate and variable in size; leaflets are up to 9/16 inch long and about half as wide; medium to dark green, wedge-shaped or obovate, hairy or nearly hairless, finely toothed with prominent veins.

Flowers Flowers February to December; 2 to 8 small, bright yellow flowers are borne in clusters about ½ to ¾ inch long; each flower is about 1/8 inch long; when fully open, it has a pea-like floral structure with an upper standard and lower keel.

Fruit Fruit is a spirally twisted, thick-walled pod; each pod is black. About 1/8 inch long and contains a single dark seed that is somewhat flattened and kidney-shaped, less than 1/8 inch long.

Propagation Reproduces by seed; once well-developed, vigorous, plant may produce more than 1,000 seeds.

Problem Black Medick easily spreads and can form large colonies and where it is allowed to grow undisturbed, it may displace native species. Prior to fruiting, it can be confused with Burclover. This species generally occurs as a weed in wildland areas of the Southwestern region rather than as an invasive plant.■

MASTER GARDENER MONTHLY MEETING

Date: January 11, 2017 ◈ Notetaker: Rachel Gioannini, Certified MG

Welcome: The Meeting was called to order by Jeff Anderson at 9:17 am

Committee/Project Reports

MG Hotline:

- Gail and David Ross extended their Happy New Year wishes. Hotline is now in new quarters at 1170 N. Solano Public Health Bldg., the corner of Solano and Spruce.
- Always check with hotline on Internet as that is the most reliable source for signing up. Calendars in office are only a reference point. New quarters can only handle 2 people max so don't sign up if there is not room! 2/14 and 2/21 were in need of volunteers.
- An Open House for new offices was planned and working to get addresses changed everywhere they're published. The MG office still needs boxes and files to be unpacked.
- Jeff related that recently, MG, Grace Foster, brought to Jeff's attention a video from China showing chile peppers being grafted to Goji berries. Ann will send out the address to the video. This research was started in the 1950's, but was on hold for years and has only recently revisited.

Magazine:

- Ann Shine-Ring noted that Kari was at the meeting to take money and checks for MG Graduation. Graduation gifts can be taken to our Office or to Juliet.
- We have a new Notetaker, Rachel Gioannini. Darrol is back and will be giving away a free vegetable seed pack. He's contributing articles in the MG Magazine.
- Ann announced proposed articles for our next magazine. Plant of the Month will be olive trees and it was noted that olive leaves are therapeutic, have an antiviral component. New 2017 binder for MG Magazines is now available in the office.
- Discussion of forecasted weather and where temps are being taken. Official site for Las Cruces has been designated as the airport, because it's manned 24 hours. Sun-News uses the airport, which is can be colder or warmer than other areas. Temperatures can vary depending on microclimates, etc. so have to adjust based on your knowledge of your specific area.

DAC News:

- Jeff announced that the main focus this year would be school and community gardens and what we can do to make an impact. We will continue to do our other activities as well but will be stepping up activities in the schools and community gardens.
- Jeff talked about how schools can have more success with hydroponic systems because they're easier to do with regards to weather, can grow in the winter and avoid environmental impacts. A program could be implemented over the summer and get people trained and interested.
- Need to develop some materials so be on the lookout for info on this on the Internet. Also need kid's lessons and how to apply to learning to curriculum. MG volunteers will visit in the schools every 1-2 weeks to help with water changing, fertilizers, and other tasks. There is money available to help support this project and get the equipment. Jeff would like to target 5 schools, 4th grade classes, and do 2 units per school. The hydroponic units can close over the winter break or keep it going and can close in the summer as needed.
- We need a new MG Coordinator to work closely with Jeff on this. Ann knows of Junior Master Gardeners across the country; this program might be a good fit for a Junior Master Gardener program as well. Will need some space in the new offices to demo the unit, the space needs to be the size of two totes.

Luna MG News: The Luna MG's are not meeting again until Feb. 1, 2017.

Graduation/Awards:

- Juliet says the meeting room arrangements have been finalized. She is also working on door prizes and has a list of vendors.
- Dot will also make the certificates: the template is on Jeff's computer.
- Graduation will be 11am-2pm and we need to know headcount for church and food providers. Church will set up tables and chairs but we will do table clothes etc. Jeff is dealing with the food. Food will be Italian: let Jeff know if you have dietary issues. Have chicken and a vegetarian dish.
- Make checks out to NMSU and put "graduation" in memo. Get your check into Kari by next Friday.
- Ann has the list of MG volunteer hours. If you have no hours entered or if you have less than 25 hours, you'll be considered inactive. More than 25 hours, you are active. Interns: 25 hours on hotline, 25 hours of other. Certified MG's: 50 hours in whatever way you wish. Volunteer hours must be accounted for through the online site.

Minutes Continued on Page 25

MG Monthly Meeting Minutes – Continued From Page 24

Old/New/Continuing Business

- MG Volunteer Coordinator: Donna has left our Program and has moved to Missouri, so we need new coordinator. (Dot Wyckoff has volunteered to take on this responsibility.) Work done as a Volunteer Coordinator will count towards your volunteer hours.
- Program Coordinator(s): need someone to take over for Dael Goodman, who currently reserves this room and organizes the education presentations.
- Rachel has volunteered to reserve our meeting room for MG meetings. Can only reserve for 3 months at a time. Can be more than one person to organize the programs.
- **Chile Conference Feb. 7, 2017**: Jeff has not been contacted yet. In the past, we helped with registration the night before. This event is run by Danise Koons and the Chile Pepper Institute. Jeff will send info through Ann when he knows more.
- **Pecan Conference March 5-7, 2017:** In the past, MG's have worked sales tables (Ross's) and helped with the pecan food fantasy on Sunday. Jeff will check on how many people are needed. There is a brochure with rules about entries in to food fantasy at the office and Jeff will send to Ann to send out.
- **High on the Desert Conference Sierra Vista AZ March 9-10, 2017** Info on the workshops will be in the next magazine.
- **Home and Garden Show March 4-5, 2017** Tracey is organizing this again. Will set up the booth on Friday and there are also shifts available on Sat and Sun, am and pm. Sun pm will also help tear down the booth. Not sure what it will be this year. Will be at the Las Cruces Convention Center.
- **Landscape Maintenance Workshop March 30, 2017.** Jeff will be doing this, will be for both professionals and homeowners and he will see if he can get CEU's for that. Probably at MG offices and is open to MG's. Will want to know how many MG's will be there. (also Jeff's birthday) 8am-4:30pm
- **Hydroponics in Schools Program**: Covered above.

Educational Presentation

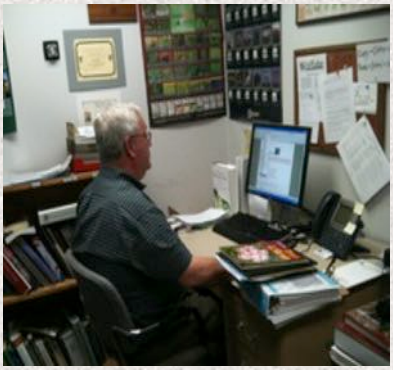
Jeff presented Sean Hogan's Western Plant Expedition PowerPoint that Sean presented at the Annual Master Gardener's Conference from September. Sean is the owner of Cistus Nursery in Portland, OR.

Next Meeting: Wednesday, February 8, 2017, Roadrunner Room, Branigan Library.
Meeting adjourned at 11:24

LUNA COUNTY MASTER GARDENER HOTLINES

Deming (At Extension Office)	Thursdays 9:00-11:00am	(575) 546-8806 **Opens March 2, 2017**
Columbus (At Library)	Mondays 10:30-11:30am	(575) 531-2612 **Opens March 6, 2017**

MASTER GARDENER HOTLINE DUTY



IMPORTANT: Please remember to be present on your assigned date for the Hotline. If another MG volunteer forgets, please give him or her a "reminder" call. Be sure to get a copy of the Subs List, for your information.

UPDATE: As of Tuesday, December 20, 2016, the Hotline will now operate in its new office located at 1170 Solano, Suite M, Room 1833. The Hotline will still be open to the public on Tuesdays and Fridays, from 9:00am through 12:00 noon. However, Hotline volunteers will continue to be on duty through 1:00pm. For your information, the Extension Office is closed daily from 12 noon to 1:00pm for staff lunches.

URGENT: We need a maximum of only 2 volunteers on each Hotline Day, as there is not enough space for additional people in the new Hotline Office located in Room 1833.

Please consider volunteering for at least one, four-hour assignment to ensure we have adequate coverage for our Hotline during the year.

As of September 11, 2013, per MG request, Hotline duty signups will no longer be listed in this Magazine. As of 1/8/14, we now can sign up for Hotline Duty online at the same website location where we now record our Volunteer Service hours.

Connect to link: http://aces.nmsu.edu/county/donaana/mastergardener/ and click on Volunteer Hours Logging and you can click on either:

"Go to my log sheets" or "Go to my Calendar"

We are very grateful to Eric Graham, Certified MG, for donating many hours to creating this great new resource for MGs. Thank you!

NEW MEXICO STATE UNIVERSITY
PLANT DIAGNOSTIC CLINIC

Link: http://aces.nmsu.edu/ces/plantclinic/index.html

The **Plant Diagnostic Clinic** is designed to provide plant diagnostic services for the State of New Mexico. Its services include analysis of plant material for plant pathogens and environmental stresses as well as suggesting appropriate control measures when available.

The Clinic also facilitates insect and weed identification through referrals to other specialists. Its clients include extension personnel, crop consultants, growers, retailers, landscape professionals, golf courses, researchers, government agencies, and homeowners.

The Plant Diagnostic Clinic works very closely with the New Mexico Cooperative Extension County offices. For initial assistance with plant problems first contact the County Extension office near you. The County Extension staff will assist you with sample submission to the clinic if needed. No diagnostic service fees will be applied to samples submitted through Extension offices.

Doña Ana County Cooperative Extension Office (575) 525-6649
Luna County Cooperative Extension Office (575) 546-8806