



CONTROLLING MISTLETOE IN TREES

Sally Livingston, U.C. Master Gardener, Solano County

Mistletoe! What thoughts occur to you when you think of mistletoe? I think of Christmas holidays and mistletoe hanging from doorways and other places. Anyone under the mistletoe was open to being kissed. Sometimes this was someone you wanted to kiss you and, other times, maybe not so much.

As a master gardener, I'm learning more about the plant, mistletoe. Mistletoes are evergreen perennial parasitic plants that grow on woody plants and absorb both water and nutrients from a host tree. All American mistletoe species are native to California.

Recently, we received some questions about what to do about mistletoe growing in landscape trees. Hopefully, this article will help if you have a problem.

Two Types of Mistletoe

☞ Broadleaf mistletoe (*Phoradendron macrophyllum*) is an evergreen parasitic plant that grows on some landscape tree species in California. This is the type of mistletoe you will find for the holidays.

Plants have green stems with thick, almost oval-shaped leaves and produce small, sticky whitish berries in the fall.

Birds disperse the seeds. They feed on and digest the pulp of the berries, excreting the living seeds that stick tightly to any branch on which the bird lands.

☞ Dwarf mistletoe (*Arceuthobium* spp.) is a smaller plant with short stems and yellow to orange scaly leaves, resembling a juniper. Seeds mature in midsummer to late autumn and eject from the plant, traveling up to 50 feet.



Dwarf mistletoe (*Arceuthobium* spp.)

Where does mistletoe grow? Broadleaf mistletoes attack broadleaf trees and some conifers. This includes alder, 'Aristocrat' flowering pear, ash (*Fraxinus* spp.), birch (*Betula* spp.), box elder (*Acer negundo*), cottonwood (*Populus* spp.), locust (*Gleditsia* or *Robinia* spp.), silver maple (*Acer saccharinum*), walnut (*Juglans* spp.), oak (*Quercus* spp.), apple (*Malus* spp.), and white fir (*Abies concolor*). Dwarf mistletoes infest pines, firs and other conifers and are usually found in forests. Mistletoe in our area is generally broadleaf mistletoe.

How does mistletoe grow? The sticky mistletoe seeds fall onto trees, especially on the branches. The seeds germinate and grow through the bark of the trees. When the mistletoe plant reaches the water conducting tissue of the tree, root-like structures called haustoria gradually develop, extending up and down the branch. There is no distinct root for mistletoe, only the fine threadlike haustoria. The plants are either female that produces berries or male that produces only pollen. The parasitic plant grows slowly and it may take years before it blooms and produces seeds.

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OKRA-A SOUTHERN FAVORITE

Pearl Eddy, U.C. Master Gardener and U.C. Master Food Preserver, Solano County

Okra is a vegetable that most people either love or hate. What many people dislike is the goo or slime present in the pods, but this helps to thicken soups or stews, such as gumbo. My grandmother always cooked okra with tomatoes, but I couldn't eat that. My family likes okra when it is fried whole or sliced. It can be shaken in a bag with cornmeal before frying as this helps eliminate the gooey texture. Dipping it into batter before frying is another option. Another favorite recipe is pickled okra.

Okra apparently is of African origin and was brought to the United States by African slaves. It grows very well in tropical and warm climates, including in our local area. It can be found almost year round in the South, and in the summer months in many other areas. The pods should be picked every two or three days, when they are no more than 4 inches long. Once picked, okra should be kept covered in the refrigerator and used within 2 or 3 days. Cooked okra can be stored (tightly covered) in the refrigerator for 3 to 4 days.

Okra can also be found frozen in supermarkets. I freeze okra either whole or cut across into 1/3-inch slices and shaken in cornmeal, which helps keep the pieces separate. I do not blanch the pods as so many preserving books suggest, and I find that they keep quite well for up to a year. This way, I can throw the pods into plastic bags during the growing season and then cook or pickle them later when I have time.

Okra is easy to grow here but is best planted when the soil has warmed up. Pick frequently to maintain production. Clemson Spineless is a vigorous, productive variety. Okra is a very nutritious food, high in dietary fiber, vitamins A, C, K, thiamin, manganese and folates. 🌱



PICKLED OKRA



In each pint jar place okra (fresh or frozen), 1 or 2 dried red peppers (or some crushed red peppers), 2 cloves garlic, 1 tsp. dill seed, and 1/2 tsp. mustard seed. Make a brine of 3 cups white vinegar, 3 cups water, and 1 Tbsp. salt. Boil to dissolve the salt. Pour in brine to within 1/2 inch of the top of the jar. Seal with 2-piece caps and process in a simmering water bath (about 180 F.) for 10 minutes. Allow to sit for a week or more to allow flavors to blend. (The above quantity of brine is enough for 8 or 9 pints.)

Recipe Courtesy of Pearl Eddy, U.C. Master Food Preserver & Master Gardener

A HISTORY LESSON: BARTRAM'S GARDEN IN PHILADELPHIA

Dottie Deems, U.C. Master Gardener, Solano County

The oldest surviving botanical garden in America is Bartram's Garden in Philadelphia, Pennsylvania. The founder was John Bartram (1699-1777). In all, three generations of Bartrams tended the garden from the time it was established in 1728. The original garden was only eight acres.

I think it's remarkable that almost fifty years before the American Revolution, when fashionable homes were built without attached kitchens due to fear of the wooden structures catching fire, and all plumbing being of the privy kind, botany was the vocation of a famous, but often forgotten American.

John Bartram built his home on land along the Schuylkill River. He was interested in the sciences and philosophy. His name is immediately below that of Benjamin Franklin in the original records of the American Philosophical Society. Carl Linnaeus, credited with developing a system for classifying organisms that is still in use today, referred to him as "the greatest naturalist in the world." He traveled widely throughout the American Colonies documenting plant life. He is credited with discovering the *Franklinia alatamaha* tree, naming it for his good friend. It survives today because of his work. He was often accompanied by his son William, who illustrated the plants the two men encountered. John Bartram was named the Royal Botanist in America by King George III prior to the revolution.

The small plot of land became Colonial America's foremost plant nursery. It was there that the first catalog of American plants was published. It contained the most varied collection of North American plants in the world. Thomas Jefferson visited the Bartram farm to purchase plants for his home, Monticello. Bartram is also credited with introducing over 200 species of plants to Europe.

Today if you visit the garden you'll be able to see the surviving *Franklinia* which is extinct in the wild, *Cladrastis kentukea* which dates back to the 1790's when William Bartram operated the farm and nursery, and what is believed to be the last of the male *Ginkgo biloba* brought from China via London in 1785.

Although not the first botanic collection in North America, by the middle of the eighteenth century Bartram's Garden

contained the most varied collection of North American plants in the world. John Bartram was at the center of a lucrative business centered on the transatlantic transfer of plants.

The original home still stands and is open to public as is the garden. It is a living example of life in Philadelphia in the 18th Century.

References:

<http://www.bartramsgarden.org/>

www.wikipedia.org

www.ushistory.org 

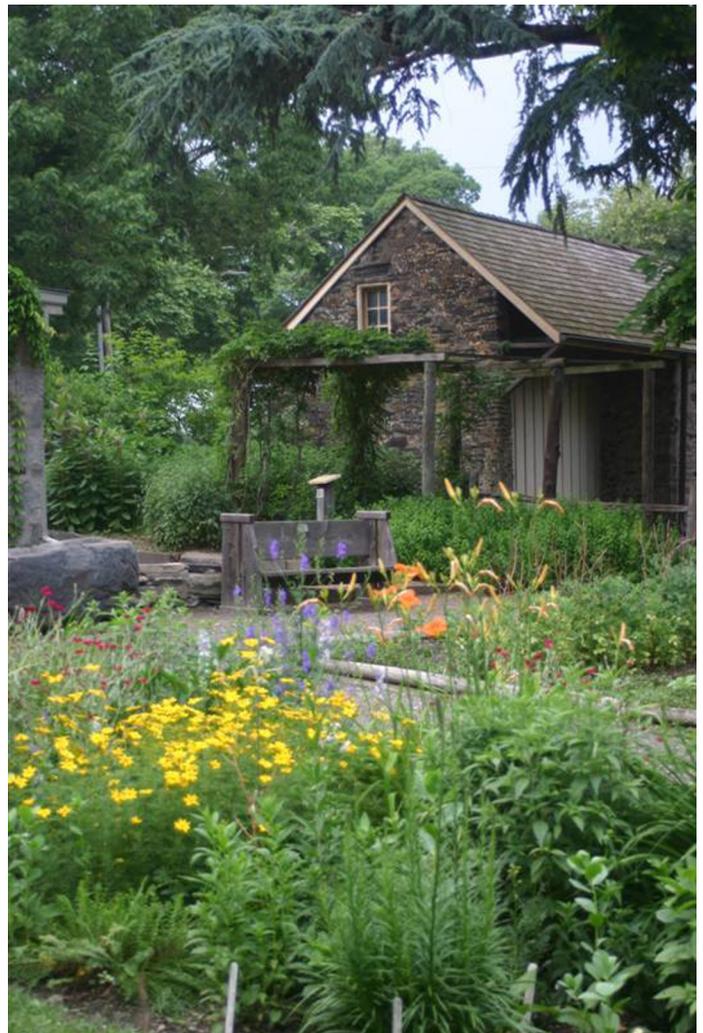


Photo from Bartram's Garden website

ASK HOTTIE!

Lauren Peters, U.C. Master Gardener, Solano County

Dear Hottie,

I have just bought a contorted mulberry tree. Does this variety bear fruit, as that is what I understood but am not sure?

Thank, you, Lynn

Hi Lynn,

The contorted mulberry, or *Morus alba* 'Unryu', is a fruitful tree. The fruit clusters start out pale and ripen to a dark purple. It is not as prolific as other mulberries, as it was conceived as an ornamental originating from Japan. It may get some fruit, but not much. Its twisty branches can grow to 15 feet but can be pruned to a smaller size.

The larger true mulberries grow to about 30 feet and can produce a mess of fruit or a fruitful mess. Many people prefer fruitless varieties for this reason such as 'Fan San,' 'Fruitless,' and 'Stribling.'

More information on care of your new 'Unryu,' can be found here:

<http://www.ipm.ucdavis.edu/PMG/GARDEN/PLANTS/mulberry.html>

Congratulations on your new tree! 🌳

Lauren Peters

U.C. Master Gardener

-Lauren

GROWING DIFFERENT FRUIT & VEGETABLES IN A HOME GARDEN IN WESTERN SOLANO COUNTY

Jerry Crumrine, U.C. Master Gardener, Solano County

Based on my experiences in our home garden in Benicia of applying what I have learned in the Solano County Master Gardener Program and from the various resources and references listed at the end of this article, I have found that quite a variety of fruit and vegetables can be successfully grown in western Solano County. My successes may not be repeatable since my particular micro-climate may be a bit different than yours and you will not have the benefit of the TLC provided by our four-year-old granddaughter in planting, caring for, and harvesting. For example, this fall I was directed not to go any closer than approximately five feet from "her" pumpkins since they were getting bigger and I should not touch them.

Garden Site Selection and Preparation

To increase your odds of having a successful garden, try to locate your garden where it will get a minimum of six to eight hours of sun a day away from trees, fences, and walls and is easy to access

and visit in order to observe what is going on. A flat area is desirable for more efficient watering. Amend your soil with organic material and keep weeds under control by hand pulling and mulching. Since our garden is in the Benicia hills, we utilize a 2-1/2 foot deep block wall terrace area backfilled with a garden soil containing approximately 40% organic material. Even though we add compost to this area, we need to add more soil every few years. Another 2-1/2 foot deep block wall terrace area, 6 feet wide x 60 feet length, cut into a hill is utilized for fruit trees and pumpkins. This area is mulched with bark and utilizes the natural soil. The fruit trees are planted eight feet apart. These areas are reachable with a long water hose for hand watering. This year I've extended a



water line to this area and will be installing a drip/low volume sprinkler system on timers for these areas.

Know Your Climate

Western Solano County can vary in climate from Sunset climate zones 14 through 17. It seems to be a combination of three University of California main agricultural districts; the Sacramento Valley, the Central Coast, and the North Coast. We can have frost to rare hard freezes, marine influence fog to 90° F summer days, and wind.

Utilizing the various references and resources listed you can find the proper planting times for your vegetables of choice and whether to plant seeds or transplants, and which fruit trees may be successful in our area. I would recommend starting with only your favorite fruit and vegetables, growing the quantity that you can tend, eat, store and/or give away.

What is Working or Has Worked for Me Vegetables:

- 🌱 *Cucumis sativus* 'Persian cucumber' planted as seed.
- 🌱 *Daucus carota* var sativus 'Danvers 126,' carrot planted as seed.
- 🌱 *Phaseolus vulgaris* 'Spanish musica,' early pole bean (62 day) with 7-9 inch long pods with scalloped edges. It is a heavy producer and is grown on lattice utilizing 8 foot long T-bars (2 ft. in ground) and concrete reinforcing wire grid. Planted as seed and is a granddaughter favorite

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SPRING GARDENING GUIDE

Nancy Duval, U.C. Master Gardener, Solano County

“The very essence of good gardening is the taking of the thought and trouble.” Gertrude Jekyll

	April	May	June
Planting	<ul style="list-style-type: none"> • Edibles: Loose-leaf lettuce, culinary herbs, chard, carrots, radishes, spinach, sorrel, beets broccoli. • Warm-season annuals: Ageratum, alyssum, bedding dahlias, impatiens, lobelia, petunia, phlox, portulaca, salvia, sunflower, zinnia. • Perennials: Ceanothus, lavender, coreopsis, penstamon, rudbeckia, dwarf plumbago, scabiosa, verbena. 	<ul style="list-style-type: none"> • Edibles: Beans, corn, cucumbers, eggplant, melons, okra, peppers, pumpkins, squash, tomatoes, watermelon. • Butterfly, bee and hummingbird attractions: Agastache, alstroemeria, bee balm, coneflower, coral bells, fuchsia, honeysuckle, penstemon, salvia. • Plant chrysanthemums for fall color. • Perennial shrubs, trees or vines. 	<ul style="list-style-type: none"> • Edibles: Melon, beans and corn from seed; tomato, squash and cucumber seedlings. • Successive plantings of basil and cilantro. • Summer annuals: Cosmos, marigolds, portulaca, sunflowers, zinnias. • Summer-blooming perennials: Daylilies, gloriosa daisy, Russian sage, salvia, yarrow.
Maintenance	<ul style="list-style-type: none"> • Control weeds – pull or hoe them as soon as they appear. • Fertilize and clean up around azaleas, camelias, and rhododendrons. Fertilize citrus. • Tune up motor and sharpen blades on lawn mower. Mow often enough that you cut no more than 1/3 the length of the grass blade in any one session. Leave clippings on lawn. • Spray olives, liquidambar and other messy trees with fruit control hormone or blast with hose to curb fruit production. 	<ul style="list-style-type: none"> • Aerate and fertilize lawns. • Fertilize citrus and established perennials and vegetables. • Deadhead spent flowers to encourage new bloom; pinch back petunias and fuchsia. • Allow spring bulb foliage to yellow and dry out before removing. • Remove extra suckers if they appear around raspberry bushes. • Watch for weeds among ground covers. 	<ul style="list-style-type: none"> • Roses: Cut back faded blooms to 1/4” above first five leaflet that faces outside bush. • Fruit trees: Thin apples, pears, peaches and nectarines, leaving about 6” between fruit. • Sprinklers: Summer heat increases water needs by 2” per week. Adjust sprinklers for adequate coverage and irrigation. • Fertilize annual flowers, vegetables, lawns and roses. • Dig and divide crowded bulbs; allow to dry before replanting. • Deep water trees to encourage deep, strong root growth.
Prevention	<ul style="list-style-type: none"> • Bait for snails and slugs, following all product instructions. • Rid new growth of aphids with blast from hose every few days. • Dump standing water to slow mosquito breeding 	<ul style="list-style-type: none"> • Tune up drip irrigation systems. • Build basins around the bases of shrubs and trees; mulch those and garden plants to conserve moisture and reduce weeds, leaving a mulch-free margin around plant crowns and stems. • Stake tomatoes and perennials. • Remain vigilant against snails, slugs and aphids. 	<ul style="list-style-type: none"> • Mulch to keep roots cool and retain moisture. • Check underside of tomato leaves for hornworms. • Spray roses with neem oil to help control aphids, black spot, whiteflies and powdery mildew. • Inspect garden for earwigs. • Remain vigilant against snails and slugs.

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Plants often develop a rounded form up to two feet or more in diameter. The small, sticky, whitish berries are produced from October to December. You can see the evergreen clumps of mistletoe on deciduous trees in the winter when the leaves have fallen.

How does mistletoe damage trees? Broadleaf mistletoe absorbs both water and mineral nutrients from its host trees. Dwarf mistletoes cause profuse branching on conifers. Tree injury varies according to the mistletoe and tree species.

Healthy trees can tolerate a few mistletoe branch infections. Mistletoe does not kill trees. However, it can weaken or kill individual branches; especially relatively small branches with large mistletoe clusters. Heavily infested trees show reduced vigor, stunted growth, swelling on branches, and dead branches.

How to prevent mistletoe in trees. The best way is to select tree species that are resistant or moderately resistant to mistletoe when you plant trees. Mistletoe rarely infests Bradford flowering pear (*Pyrus calleryana* 'Bradford'), Chinese pistache (*Pistachia chinensis*), crape myrtle (*Lagerstroemia indica*), eucalyptus (*Eucalyptus* spp.), ginko (*Ginkgo biloba*), golden rain tree (*Koelreuteria paniculata*), liquidambar (*Liquidambar styraciflua*), sycamore (*Platanus* spp.), redwood (*Sequoia* spp.), and cedar (*Cedrus* spp.). Avoid especially susceptible varieties, such as 'Aristocrat' flowering pear (*Pyrus calleryana* 'Aristocrat'), alder (*Alnus* spp.) and Modesto ash (*Fraxinus velutina* 'Modesto').

How to control or treat trees with mistletoe. To treat existing trees, it is important to remove mistletoe before it produces seed and spreads to other limbs or trees.

Mechanical control through pruning is the most effective method. Prune out mistletoe as soon as it appears. For good control, remove branches at least one foot below the point of mistletoe attachment to completely remove embedded haustoria. Simply cutting off mistletoe from trees can reduce spread, but it will not provide control. You may need to remove trees that are too severely infested to prune back.

Mistletoes infecting a major branch or the trunk where it cannot be pruned may be controlled by cutting off the mistletoe flush with the limb or trunk. Then wrap the infested area of the tree with sturdy, black, polyethylene plastic secured with twine or tape to exclude light. Leave the plastic on for up to two years until the mistletoe dies, replacing the plastic that becomes torn.



Simply cutting the mistletoe out of an infested tree each winter, even without wrapping, is better than doing nothing. However, mistletoe will resprout again if you only cut it back.



Chemical control is another method and involves using plant growth regulators, such as ethephon. To be effective, be sure to use the chemicals as directed by the label in dormant host trees. These chemicals will temporarily remove mistletoe but they provide only short-term control and do not kill the plant. The mistletoe will soon reappear at the same point, requiring treatment again. 🌱

PLANTRIGHT INVASIVE PLANT RETAIL NURSERY SURVEY

DONNA SESLAR, U.C. MASTER GARDENER, SOLANO COUNTY

Did you know that the state of California spends more than \$80 million a year to protect our natural resources from invasive plants . . . and that more than half of these problem plants escaped from home gardens and landscaping? An invasive plant is described as “an introduced species that out-competes native plants and animals for space and resources - and is often difficult to remove or control.” Besides being a threat to our state’s tremendous biodiversity, out-of-control invasives can lead to increased flooding, wildfires and destruction of productive range and timber lands.

In response to the serious ecological and economic problems that invasive plants pose, California Horticultural Invasives Protection (Cal HIP) created PlantRight, a voluntary, proactive partnership of gardeners and the horticultural industry. The PlantRight campaign works with nursery growers and retailers to voluntarily stop the propagation, distribution and sale of known invasive plants, and to promote the introduction of alternative plants that are more environmentally friendly and commercially viable.

In the spring of 2010, I was one of 66 volunteers, mostly UC Master Gardeners, who participated in PlantRight’s first annual survey of 73 California retail nurseries. Our purpose was NOT to pinpoint nurseries with invasive plants for sale. Rather, we were there to document the presence or absence of nineteen plants which had been identified as invasive in our state. A detailed report for each nursery visited included photos and was submitted to PlantRight for statistical analysis.

The results of the survey showed that 78% of retail nurseries visited WERE NOT carrying invasive plants. Small and independent retailers sold the most invasives (36%), as compared to big box stores (14%) and large retailers (13%). One nursery that I visited had three invasives for sale and the second nursery had none at all.

Eight of the nineteen plants listed as invasive were found for sale in California. Periwinkle (15%) was found to be the most commonly sold, followed by Myoporum (4%), pampas grass (4%) and Scotch broom (4%). These results seem to affirm my own observations of increasing stands of pampas grass and Scotch broom in Solano and her neighboring counties.

More detailed results of the 2010 survey can be found at <http://www.plantright.org>. As it turns out, the number of nurseries visited in 2010 was too small to produce statistically significant results, and only 27 of California’s 58 counties were surveyed. In 2011, hopefully more volunteers will be recruited so that the numbers will achieve significance. I have signed up again!

The PlantRight website also offers answers to frequently asked questions about invasive plants and alternative non-invasive plants, information on water gardens, native plants and on-going research in the field of invasive plants. It’s a great resource. 🌱

Sources

PlantRight Campaign <http://www.plantright.org>

California Horticultural Invasives Prevention (Cal HIP)

Sustainable Conservation, 98 Battery Street Suite 302, San Francisco, CA 94111



19 Invasive Plants Listed by the PlantRight Campaign

COMMON NAME	SCIENTIFIC NAME
Arundo, giant reed	<i>Arundo donax</i>
Blue gum eucalyptus	<i>Eucalyptus globules</i>
Broom, bridal veil	<i>Retama monosperm</i>
Broom, French	<i>Genista monspessulana</i>
Broom, Portuguese/striated	<i>Cytisus striatus</i>
Broom, Scotch	<i>Cytisus scoparius</i>
Broom, Spanish	<i>Spartium junceum</i>
Capeweed	<i>Arctotheca calendula</i>
Chinese tallow tree	<i>Sapium sebiferum</i>
Green fountain grass	<i>Pennisetum setaceum</i>
Iceplant, highway	<i>Carpobrotus edulis</i>
Iceplant, crystalline	<i>Mesembranthemum crystallinum</i>
Jubata grass	<i>Cortaderia jubata</i>
Myoporum	<i>Myoporum laetum</i>
Pampas grass	<i>Cortaderia selloana</i>
Periwinkle	<i>Vinca major</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Saltcedar	<i>Tamarix ramosissima</i>
Scarlet wisteria	<i>Sesbania punicea</i>

(Continued from page 5-Growing Fruit & Vegetables in)

cooked or raw. Six plants produce more than we eat, freeze and give away.

🍷 *Curcubita pepo* 'Small sugar pumpkin' planted by seed in well-drained compost enriched soil. I watered ever other day and when wilting was observed during warmer weather. I practiced deep watering after the plants grew larger. This pumpkin is great in pumpkin pies.

🍷 *Curcubita pepo* 'Black Beauty' zucchini planted as seed or transplant. I have had a longer producing period by using the purchased plants.

🍷 *Beta vulgaris* 'Detroit dark red beet' planted as seed in early spring and harvested before hot weather. The small, 1" diameter, beets have great flavor.

🍷 *Allium ampeloprasum porrum* 'Leek' planted as transplants. Leeks have a mild onion flavor and are good in cooking. We store vacuum packages of diced leeks in the freezer.

🍷 *Pisum sativum* 'Alderman' shelling pea planted as seed utilizing lattice of 8 foot T-bars (2 ft in the ground) and concrete reinforcing wire grid.

🍷 *Rheum rhabarbarum* 'Victoria rhubarb' planted from rootstock. Fertilize in June before cutting stocks. Remember that the plant is not dying in the summer, it is going dormant until winter.

🍷 *Lycopersicon esculentum* 'tomato' planted as transplants. The varieties that we prefer are 'New Girl' and 'San Marzano.' Both varieties are indeterminate and heavy producers. 'New Girl' is like 'Early Girl' but with better flavor and is a 60-65 day small to medium tomato. 'San Marzano' is an 80-day Roma hybrid and is great in sauces. We grow one plant of each utilizing a rack 4 ft. high x 4 ft. wide x 8 ft. long made with six 8 ft T-bars (2 ft in the ground) spaced 4 ft. apart with a grid of concrete reinforcing wire between each of the three pairs of T-bars. Lumber pieces (2" x 2") are laid out lengthwise and horizontally making a lattice with one foot spacing horizontally and vertically to support the tomatoes.

🍷 *Capsicum annuum* 'Cal Golden Wonder,' 'Golden Star,'

and 'Gypsy' peppers. All are mild and are planted as transplants. All start out green and can be harvested then if desired or allowed to mature, red in the case of the 'Gypsy' and golden yellow for the other two. One needs to keep them well hydrated to insure crispy thick walls. I support them with stakes.

🍷 *Cynara scolymus* 'Globe artichoke' planted as transplants. We grow ours at the front of the garden area, which gets extra watering from the lawn sprinklers. It produces a heavy spring harvest with a lighter fall harvest.

🍷 *Solanum melongena* 'Orient Express' egg plant planted as a transplant. It is a purple elongated variety. It needs to be kept well hydrated and supported with stakes.

Fruit trees:

🍷 *Malus domestica* 'Gordon' apple is a low chill early variety. It is green with red streaking and is good eating and for cooking. It is a granddaughter favorite.

🍷 *Ficus carica* 'Black Jack' fig has purplish black skin with pinkish flesh and was planted as a potted plant in 2009. This fruit is like eating candy from a tree. I had to prune back frost damaged limb tips from the 2009-2010 winter, but this did not seem to affect its first full year crop in 2010.

🍷 *Citrus limon* 'Improved Meyer' lemon was a heavy producer from the beginning. It was planted in 2009 as a potted plant.

🍷 *Prunus armeniaca* 'Royal Blenheim' apricot is the most popular grown in California and to our taste buds the most flavorful. It was planted as bare root in 2009. It produced fruit in 2010, but the scrub jay enjoyed more fruit than we did (10 versus 2).

🍷 *Diospyros kaki* 'Fuyu' persimmon has mild flavored orange fruit. Ours dropped its fruit the year it was planted as a bare root (2009). It grew so rapidly this spring, that I pruned it hard in the spring to avoid it being top heavy. With this spring pruning and its tendency to be biennial, it did not produce fruit this year. Beautiful fall foliage.

🍏 *Pyrus serotina*, Asian pear. Our tree is a multi-grafted specimen, incorporating the following varieties: 'Chojuro,' 'Hosui,' 'Nijisseiki' ('20th Century'), and 'Shinseiki.' Nijisseiki and Shinseiki are self-fruited and produced some fruit the year it was planted as a bare root (2009). All four varieties produced fruit this year. The fruit is crispy and sweet, and keeps for several months in the refrigerator. My favorite. If I could plant only one fruit tree, this would be it.

🍊 *Citrus unshiu* 'Owari Satsuma' mandarin is expected to be slow to produce. I am seeing new growth. Friends grew these commercially in Auburn. Therefore, I am giving it a try. If it produces here, it will be worth the wait. It was planted as a potted plant in 2009.

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🍎 *Punica granatum* 'Ambrosia' pomegranate planted as a small potted plant on its own roots in 2009. This will take a few years.

🥑 *Persea Americana* 'Bacon' avocado planted as a potted plant in 2010, purchased in 2009. It took awhile to find the watering and fertilizing schedule to make it happy. It is producing new growth this year. I planted this variety since it was more cold hardy. I pinched the top out when purchased to keep this tree smaller.

Pest Problems

If you garden, you will encounter pests (something that likes your produce as much as you). We do not use any pesticides. For our vegetables, the most common pests we encountered are earwigs. A method of control suggested by the University of California using a small open top tin can with a shallow layer of vegetable oil in it located near

new seedlings, proved to be adequate. For our fruit trees, the most common pest has been a scrub jay that moves from one tree to the next as the fruit ripens. It is a challenge to get more fruit than the bird. We will be trying netting this next year. 🍷



References and Resources

- "California Master Gardener Handbook," Univ. of Calif. Agriculture and Natural Resources, Pub. #3382.
- "Home Vegetable Gardening," Pub. #21444, Cooperative Extension, Univ. of Calif. Div. Of Agriculture and Natural Resources.
- "Sunset Western Garden Handbook"
- "Pruning and Training," The American Horticultural Society, ISBN 1-56458-331-7.
- Website, ucipm.ucdavis.edu
- Website, homeorchard.ucdavis.edu and various links.
- Website, Dave Wilson Nursery
- Website, Four Winds Growers
- Local Nurseries, Mid City Nursery in Vallejo, Van Winden's Nursery in Napa, and Harmony Farm Supply and Nursery in Sebastopol.

***Seeds For Thought* is produced by
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A handwritten signature in black ink that reads "Baumbach".

Jennifer M. Baumbach

Master Gardener Program Coordinator



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