

**UC MASTER GARDENER PROGRAM
OF SAN LUIS OBISPO COUNTY**



The UC Master Gardener Program is a public service and outreach program under the University of California Division of Agriculture and Natural Resources (UC ANR), administered locally by participating UC Cooperative Extension offices (UCCE). Our mission is to extend research based knowledge and information on home horticulture, pest management, and sustainable landscape practices to the residents of California.

CITRUS: CULTURAL PRACTICES 2
Charles Davis, UC Master Gardener

INTRODUCTION

1. Worldwide, more fruit is produced by citrus trees than all other deciduous fruit trees COMBINED.
2. Citrus trees can be purchased on standard, semi-dwarf and dwarf rootstocks. All fruit on all three types of trees is standard size.
3. Citrus can be planted in pots, as espaliers against a fence or a wall, or as regular trees in the ground.
4. Citrus trees are believed to have originated in China; none of the trees grown here today originated in the New World. Introduced in CA by Spanish missionaries in 1769, by 1869 their future was in jeopardy due to the cottony cushion scale, a citrus pest, which threatened to destroy all of CA's citrus trees. In what was CA's first spectacular biological control success story, the scale was conquered by the introduction from Australia of a natural predator, the Vedalia beetle, a cousin of the common ladybird beetle.

CITRUS GROWTH AND DEVELOPMENT

1. In contrast to deciduous trees, citrus leaves, along with twigs, branches and roots, store all excess food: the maximum amount is present in late February/early March just before spring bloom and new growth. Do not prune at this time. Pruning mature citrus is often limited to removing dead, diseased or broken branches. Lisbon lemons are the exception—this tree needs pruning or it will become unmanageable.
2. If pruning is needed, the top wood is the first to decline in production and fruit quality as trees age. The skirt or lower section is the most productive and pruning should be light.
3. Fall pruning produces a new flush of growth which is susceptible to frost injury.
4. Citrus fruit never needs to be thinned—excess fruit is dropped naturally: less than 5% of blossoms produce mature fruit.
5. First 3-4 years after planting are considered nonbearing years. After which, the tree has several growth flushes producing flowers and fruit in the spring, summer and fall. The biggest flush occurs in spring.
6. Citrus does best in sandy-clay loam soil, in a wind-free location, and full sun near a south-facing wall. Wind can increase heat loss.
7. Don't plant near plants with aggressive root systems. If in a lawn, remove turf in a 3-5' circle around tree.
8. Never allow the root system to completely dry out. The most important irrigation period is from initial growth flush until fruit are at least 1 inch in diameter. Do not allow irrigation water to come into contact with the base of the tree trunk, which encourages fungal diseases such as root rot.
9. Young citrus are particularly vulnerable to frost conditions.
10. Lemon trees are particularly sensitive to sunburn.
11. Fertilizing: primary nutrient needed is nitrogen, required for flowering and fruit set - apply in late winter/early spring. Oranges and grapefruit are susceptible to thicker rinds and less juice with high nitrogen if fertilized in the summer; lemons, however, benefit from it.
12. In our demo garden: Irrigation is applied two hours a day/twice a week with a 2 gallon emitter for each tree. Fertilization - we do not fertilize due to the drought and our desire to keep leaf growth to a minimum. When we did fertilize, it was twice a year - at the end of January and the end of May. Any balanced fertilizer will work, but for citrus the most important nutrient is nitrogen.

SOUTHERN CALIFORNIA CLIMATE ZONE

1. Best type of citrus to buy (harvest periods in parentheses): Oranges: Washington - eating (Jan-May) and Valencia - juice (Apr-Oct); Lemons: Eureka (Feb-Sep), Lisbon (Jan-Aug) and Improved Meyer (year-round); Grapefruit: Oroblanco (Jan-Apr) - doesn't require heat to sweeten; Limes: Bearss (Aug-May) - does not require high heat to ripen, be careful of Mexican or Key Lime (Jul-Dec) - high heat requirement and almost no tolerance to frost; Mandarins: Many varieties, Satsuma (Dec-Apr) are the most cold hardy citrus.
2. Heat requirements - lemons and limes the need the least
3. Rootstocks: Four main rootstocks - Troyer and Carrizo Citranges; Trifoliate Orange; Flying Dragon Trifoliate Orange (dwarfing); Alemow. All influence fruit productivity, size, and quality; overall tree vigor, resistance to fungal diseases, and cold-hardiness. Approx. 65% of rootstocks produced between 1950-1970 were Troyer. Nurseries are not required to tell you rootstock variety.

PESTS

1. California Red Scale - round red-brown scales on fruit, leaves and twigs: causes twig dieback and yellow leaves; most visible in late summer/early fall. Use insecticidal soap or strong spray from hose.
2. Aphids - cause distorted, curled leaves, honeydew, and sooty mold. Dislodge with strong spray or insecticidal soap.
3. Cottony cushion scale - look for fruit and leaves covered with honeydew and sooty mold; cottony secretion on scales and twigs. Hand remove, dislodge with strong spray, or insecticidal soap.
4. Citrus thrips - cause ring or partial ring of scarred tissue on fruit rind near stem end; young leaves will be deformed and scarred. Damage is cosmetic; no treatment recommended for home gardens.
5. Argentine ants - harvest honeydew from aphids, scales, mealybugs and protect them from predators. Cut tree skirt up off ground; wrap trunk with green tape and spread Tanglefoot on top of tape.
6. Garden snails - holes in leaves and fruit; slimy trails. Skirt prune, apply copper tape, or hand pick.
7. The most serious threat to California citrus trees is the Asian citrus psyllid (ACP) as it can spread the deadly disease huanglongbing (HLB). Homeowners are asked to regularly check their trees for signs of ACP. This insect is small, about the size of an aphid, and prefers the tender new growth. If you suspect you have ACP, call the CDFA hotline at 1-800-491-1899. For more information and photos of ACP, visit <http://ucanr.edu/sites/acp/>

CONCLUSION

1. If you live south of the grade, citrus is well adapted to that region. If you live north of the grade, be very careful. Citrus in pots is probably the best option.
2. Feed and irrigate properly and plant in right location to avoid problems.
3. Check trees regularly for pests and take appropriate action before they're a problem.
4. Choose a variety well-suited to your location.
5. Citrus are not difficult to manage, most need minimal pruning, no fruit thinning, and can be adapted to small spaces (pots or espaliering).

References:

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UC MASTER GARDENERS 2156 SIERRA WAY, SUITE C SAN LUIS OBISPO, CA 93401 email: anrmgslo@ucanr.edu

GARDENING QUESTIONS? CALL THE MASTER GARDENERS HELPLINE: 805-781-5939



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History	↔	Original: 7/6/16 Revised: month/year: