

Olive Tree Workshop

July 22, 2017

Section	By	Time	Content	
Introduction	Gayle	5	Welcome Napa MG background Overview of workshop Bathroom / no breaks	Website / Help Desk Demo Garden / Books Become a MG
Welcome	Dave	5	Attendee Questions - List on parking lot	
I. Selection				
Choosing the right olive tree		15	Purpose Fruiting or non-fruited Size Pollination	Choices
II. Planting				
A. Planting (site) requirements		10	Climate Site history Soil profile Soil chemistry	Water availability Water quality
B. Planting guidelines		10	When How Training	
III. Growing				
A. Fertilization	Carol	10	What to apply When to apply	
B. Irrigation			How much When	
C. Pruning		10	When How	Shape
D. Mulching			What to apply	
IV. Pests and Disorders				
A. Olive Fruit Fly	Dave	20	Infestation Monitoring Management options	Control Prevention Spraying to remove flowers
B. Peacock Spot and Cercospora		5	Symptoms Management options	
V. Harvest				
A. Curing Olives	Kathleen	10		
Wrap Up				
Q & A	Dave	20	Review questions on easel	
		120		

COMMON OLIVE TREE CULTIVARS

Varietal	Country of Origin	Description	Local Grower (1)	Cold Hardiness	% Oil	Fruit Size	Polyp-phenol Content (2)	Oil Flavor	Table or Oil	Fruit Ripening	Peacock Spot	Pollination
Arbequina	Spain	The fruit is small. Its oil is quite aromatic and fruity with very little pungency or bitterness. It has a short shelf life of about one year.	DW FW NV	Hardy	22-27	Small	Low	Mild	Oil	Early	Susceptible	Self-compatible
Arbosana	Spain	Fruit looks very much like Arbequina fruit, and the tree originates from the same region, but it matures about three weeks later and the foliage is slightly different in color. Overall, it is about 25% less vigorous than Arbequina, but re-growth from pruning cuts is more vigorous. The oil from Arbosana is more pungent and bitter than Arbequina; it is also quite fruity and pleasant. Since this variety is relatively new, there is a lack of historical data on quality and performance.	DW FW	Hardy	23-27	Small	Medium - High	Strong	Table	Medium	Very Resistant	Arbequina Koroneki
Ascolana	Italy	Mainly used for table olives. The fruit is large. It is the most cold hardy of all table varieties in California. The oil is very aromatic but the yield is very low.	FW NV	Hardy	15-22	Large	Medium	Mild	Table	Early	Susceptible	Manzanillo Mission
Coratina	Italy	Late-ripening cultivar that loves long hot growing seasons where it slowly produces excellent, large fruit. This variety can be strongly bitter and pungent if harvested green. Although it is used commercially for oil production, the Coratina olive can be picked as a green table olive. The dense, spreading Coratina tree features medium vigor. This variety is not recommended for cooler coastal locations where early frosts may occur.	DW FW NV	Sensitive	23-27	Medium	Very high	Strong	Oil	Late	Resistant	Frantoio Leccino
Frantoio	Italy	Often used as one of the main ingredients in gourmet olive oil production. The yield is quite high and the flavor is strong, with some pungency. Good container plant.	FW NV	Sensitive	23-26	Medium	Medium - High	Strong	Oil	Late	Very Resistant	Leccino Moraiolo Pendolino
Koroneiki	Greece	Primary oil variety of Greece with well-recognized quality characteristics, very heavy fruit set, but very small fruit. Oil is very high in polyphenols, generally quite green in color, very fruity with an emphasis on herbal-green fruitiness, and it has medium bitterness and pungency. It has a long shelf life of two or more years.	DW FW NV	Sensitive	24-28	Very small	Very high	Strong	Oil	Late	Very Resistant	Mastoides
Leccino	Italy	Used in gourmet olive oil blends. Its flavor is also strong. The yield is high. It ripens a little earlier than other varieties. Good container plant.	FW NV	Hardy	22-27	Medium	Medium	Mild	Oil	Early	Resistant	Frantoio Moraiolo Pendolino
Manzanillo	Spain	Main variety used for the black "California-style" olive. The fruit matures early and has a medium oil content. The oil is mild. The trees are susceptible to cold injury, peacock spot, and olive knot. Good container plant.	DW FW NV	Sensitive	15-26	Large	High	Medium	Both	Medium	Susceptible	Ascolano Sevillano

Varietal	Country of Origin	Description	Local Grower (1)	Cold Hardiness	% Oil	Fruit Size	Polyp-phenol Content (2)	Oil Flavor	Table or Oil	Fruit Ripening	Peacock Spot	Pollination
Maurino	Italy	Used in olive oil blends. The oil is very flavorful and spicy.	FW NV	Hardy	20-25	Medium	High	Mild	Oil		Resistant	Lazzero Grappolo
Mission	Mexico	Dual-purpose (table and oil) variety. The fruit is medium-sized and matures late. The oil content is high. The oil flavor varies from very bitter to quite mild depending on the maturity at harvest. Trees are very cold tolerant and grow quite tall.	DW FW	Hardy	19-24	Medium	High	Medium	Both	Medium	Very Susceptible	Ascolano Sevillano
Pendolino	Italy	Often used as a pollinizer. Though small, produces a moderate amount of good quality oil with a very mild flavor, low bitterness and delicate pungency. Good landscaping tree.	DW FW NV	Hardy	20-25	Medium	Medium	Mild	Oil	Medium	Susceptible	Frantoio Moraiolo Pendolino
Picholine	French	Elongated fruit with light green skin changing to wine red then red-black when ripe. Pulp is fleshy, firm-textured. Tree is vigorous, medium sized and bears heavy crops.	FW NV	Moderate	22-25	Medium	High	Strong	Oil	Late	Susceptible	Self- compatible
Picual	Spain	Highly productive, early variety. Easy to harvest and contains a high content of easily separated oil with pungent flavor that stores well. Popular table olive known to be high in beneficial chemicals such as oleic acid and Vitamin E	DW NV	Hardy	24-27	Medium	Very high	Strong	Both	Early	Very Susceptible	Self- compatible
Sevillano	Spain	Very large fruit and is generally used as a table olive. It has several minor problems. The oil yield is very low although the oil is very sought after, with a mild but very fruity flavor. Perfect for curing Sicilian style. Makes a great stuffing olive.	FW NV	Hardy	12-17	Very large	Low	Mild	Both	Early	Susceptible	Ascolano Manzanillo Mission
Taggiasca	Italy	Hails from Liguria. The small to medium olives yield a light, fine oil with a delicate almond flavor. For eating, the olives are cured black. They have a sweet buttery taste. Mature tree has average size and vigor, with a semi-weeping habit. Very late ripening. Leaves are green-gray on top, silver on bottom.	FW NV	Sensitive	22-27	Medium	Low	Mild	Table	Late	Resistant	Self- compatible

(1) DW = Dave Wilson, FW = Four Winds, NV = Novavine

(2) Polyphenol content - a class of antioxidants found in olive oil, red wine, green tea, chocolate, and more. Olive oil has more than 30 different polyphenols that are especially bioavailable because they are dissolved in oil, not water. These are strong antioxidants and radical scavengers, and reduce cardiovascular risk factors. They also have anti-inflammatory and antimicrobial properties that benefit a host of other conditions and chronic diseases, including skin and digestive problems, low-grade inflammation and age-related diseases, obesity and weight loss, metabolic syndrome and diabetes, and certain cancers and neurodegenerative diseases.

Yearly Calendar - A Basic Guide to Olive Trees

	January	February	March	April	May	June	July	August	September	October	November	December
Tree planting				Best time					2nd best time if frost is not a concern			
Olive Development				Bloom		Pit hardening				Verasion	Fruit ripening	
						Fruit set						
Operations		Soil nutrient analysis								Harvest		
			Leaf tissue analysis									
			Foliar fertilization						Granular fertilizer and/or compost application			
			Check irrigation	Irrigation - monthly deep watering.								
		Pruning					Pruning and suckering					
Pest and Disease Management				Monitor olive fruit fly								
							Spray GF-120 (Olive Fruit Fly)					
			Monitor for scale/apply horticultural spray									
		Gopher and vole control										
		Copper spray (peacock spot)										Copper spray (peacock spot)

**University of California
The California Backyard Orchard**

Olive (*Olea europaea* L.)

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The olive tree is an evergreen tree that performs best in hot, dry areas of California; it does not tolerate wet winter soils. It is an attractive ornamental, produces table fruit, and oil.

Crop production is irregular under cool coastal conditions. Rooted cuttings are used without specific rootstocks. Space trees 16–20 ft. apart. Olives for canning and pickling are usually harvested in September and October in California..

Commercially, heavy crops of small fruit unsuited for canning are left on the trees until January or February and harvested for their oil. Some new varieties grown specifically for oil have recently been imported into California from the Mediterranean countries.

Calendar of Backyard Gardening Operations for Olives

Winter Dormant Season

- Spray with fixed copper to prevent peacock spot especially in wet years. For oil varieties, apply just after harvest.

Spring Bloom Season

- Prune trees during the bloom period.
- To reduce alternate bearing, remove more shoots from trees with heavy bloom and skip trees with light bloom.
- Fertilize mature trees with 2 lbs. of urea or 50 lbs. of compost.
- Begin irrigating trees so there is no water stress during bloom.

Summer Growing Season

- Control weeds with organic mulch or cultivation especially on young trees.
- Fertilize young trees with 1 oz. of urea under each drip emitter every month and irrigate in.
- Apply drip irrigation every day according to water use requirements.

Fall Harvest Season

- For table fruit, harvest when the fruit is still green, just before the straw yellow stage. For oil, harvest when the fruit has turned black on the outside, but the flesh is still green/yellow.
- Continue irrigation right up to harvest if weather is dry; do not allow fruit to shrivel.
- Apply fixed copper to prevent peacock spot before first major fall rains. Wash copper off fruit prior to processing or apply after harvest.

Resources

- [Olive Fact Sheet](#), UC Fruit and Nut RIC
- [Olive Links](#), UC Fruit and Nut RIC
- [\[PDF\] 2004 Olive Fly \(OLF\) Update](#) for Table Olive Industry and OLF Management FAQs
- [Olive Fruit Fly Pest Note](#), UC IPM
- [\[PDF\] Olive Fruit Fly Pest Note](#), UC IPM
- [\[PDF\] Olive Fruit Fly](#), Paul Vossen, Lucia G. Varela, Alexandra Devarenne

- [\[PDF\] The Spanish "Olipe" Trap for Organic Control of Olive Fruit Fly](#), Paul Vossen, UCCE Sonoma
- [A Homeowner's Guide to the Olive Fruit Fly](#), The Olive Oil Source
- [Olive](#), California Rare Fruit Growers
- [\[PDF\] Olive Varieties for Planting in the Home Garden](#), Paul Vossen and Deborah Silver, Sonoma and Marin Co. UCCE
- [\[PDF\] Olives: Safe Methods for Home Pickling](#), Sylvia Yada, Linda Harris, George York, and Reese Vaughn

- [Fruits & Nuts](#)
- [Tree Selection](#)



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OLIVE TREE GROWING RESOURCES

I. Selection	
Varieties for Planting in the Home Garden	http://homeorchard.ucdavis.edu/plant_olive.pdf
Olive Varieties and Maturity - Paul Vossen, UCCE	http://cesonoma.ucdavis.edu/files/27177.pdf
Tree Selection - Olive Oil Source	http://www.oliveoilsource.com/page/tree-selection
II. Planting	
UC Davis Olive Center - Best Practices	http://olivecenter.ucdavis.edu/learn/best-practices-1
Planting Olive Trees - Devarenne & Nemcik	http://ucanr.edu/sites/scmg/files/30942.pdf
Planting Olive Trees - Paul Vossen, UCCE	http://cesonoma.ucanr.edu/files/27176.pdf
Olive Tree Planting - Olive Oil Source	http://www.oliveoilsource.com/page/olive-tree-planting
III. Growing	
Fertilizing Olive Trees - Paul Vossen, UCCE	http://cesonoma.ucanr.edu/files/27175.pdf
Integrated Weed Management - UC IPM	http://ipm.ucdavis.edu/PMG/r583700111.html
Olive Weed Control - Paul Vossen, UCCE	http://cesonoma.ucdavis.edu/files/27178.pdf
Pruning Tall or Neglected Olive Trees - Paul Vossen, UCCE	http://cesonoma.ucdavis.edu/files/27267.pdf
Pruning Olive Trees - Paul Vossen, UCCE	http://cesonoma.ucanr.edu/files/27277.pdf
IV. Pests and Disorders	
Olive Fruit Fly Pest Note - UC IPM	http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74112.html
Olive Fly Control - Olive Oil Source	https://www.oliveoilsource.com/page/olive-fly-control
Olive Fruit Fly - Vossen, Varela & Devarenne	http://cesonoma.ucdavis.edu/files/27231.pdf
Peacock Spot - UC IPM	http://www.ipm.ucdavis.edu/PMG/r583100311.html
Cercospora - UC IPM	http://www.ipm.ucdavis.edu/PMG/r583100511.html
Peacock Spot and Cercospora Foliar Diseases on Olive - Paul Vossen, UCCE	http://cesonoma.ucanr.edu/files/27173.pdf
V. Harvest	
Olives: Safe Methods for Home Pickling	http://anrcatalog.ucanr.edu/pdf/8267.pdf
General	
Organic Olive Production Manual	UC ANR Publication 3505
Olive Production Manual	UC ANR Publication 3353
Olive Fruit Facts - CA Rare Fruit Growers	https://www.crfg.org/pubs/ff/olive.html
The California Backyard Orchard	http://homeorchard.ucanr.edu/Fruits_&_Nuts/Olive/
UCCE Sonoma County - Olives	http://cesonoma.ucanr.edu/SpecialtyCrops/OLIVES/