

CALENDAR OF OPERATIONS FOR BACKYARD WALNUT TREES on the North Coast

*adapted from an original writing by Paul Vossen, UCCE Farm Advisor, Sonoma County
by Rachel Elkins, UCCE Pomology Advisor, Lake and Mendocino Counties*

General information: The most common walnut cultivars grown successfully on the North Coast are Chandler, Hartley, and Franquette. Earlier leafing cultivars are more prone to frost damage and walnut blight. Poe is a Lake County cultivar no longer being sold or planted but still being grown in some commercial orchards. It is renowned for its flavor, but bears erratically from year to year. Chandler is a later leafing, UC-patented cultivar that has done well in Lake County and produces nuts earlier in the tree's life than Hartley or Franquette. It is now the most widely planted commercial cultivar in California.

Late Fall and Winter

1. Diseased, dead, and broken branches are easily seen while leaves are still on the tree so prune them out prior to leaf fall. Then prune healthy wood by thinning out crowded areas to let light into the whole tree. Chandler needs heavier pruning than Franquette or Hartley to maintain good growth.
2. Dormant spraying may be necessary for scale insect control; if scale is present, use dormant oil at budswell. However, AVOID OIL WHEN SOIL IS DRY OR TREES MAY BE HARMED.

Spring

1. The bacterial disease walnut blight is rare in the late leafing cultivars commonly grown on the North Coast. However, if there are late spring rains, spray for blight when the female flowers appear (tiny nuts with feathery pistil) and at 7 day intervals until rainy weather stops. Use bordeaux, or other fixed copper materials and thoroughly spray the whole tree. Walnut blight appears as black lesions on male flowers (catkins), hard, shiny black, slightly sunken lesions at the blossom end or sides of hulls in June, and later as black, hollow nuts which may drop prematurely.
2. Remove excess soil and all weeds from the crown (base) of the trees. Keep this area dry in summer to avoid problems with crown rot.
3. Control weeds and grass around a wide area under non-irrigated trees to ensure enough water for the trees.
4. Each walnut tree needs about 2 lbs. of actual nitrogen per year. Fertilize mature, *non-irrigated* trees just before or during mid- to late-winter rain with about 5-7 lbs. of urea, 7-9 lbs. of ammonium nitrate or 11-13 lbs. ammonium sulfate. Composted manure should be applied in the

fall. *Irrigated* trees can be fertilized immediately prior to watering or metered through the irrigation system.

Summer

1. Water irrigated trees at the drip line, **but away from the trunks**. Drip irrigation should be timed on a daily basis during the months of June thru September. Young trees will need about 5-10 gallons of water per day and large trees about 50-60 in mid-summer. Do not water young trees past mid-September to avoid fall frost damage.

Late Summer and Autumn

1. Walnut husk fly (WHF) causes a soft rotting black hull full of maggots that stains the shells. It can be mistaken for walnut blight. WHF adults emerge from the ground in late summer and only infest the hulls, not the kernels, so control is optional. Hang yellow sticky traps with an ammonium carbonate lure between July 1 and 15 and monitor daily. If you choose to spray, use an insecticide registered for home use on walnuts, for example, spinosad (preferable). Add a bait such as Nu-Lure, Karo syrup or molasses (1 tablespoon per gallon). The syrup attracts the flies so full tree coverage is not necessary. Spray when the number of flies increases sharply. Continue to monitor traps and spray until the hulls split.

2. Harvest nuts by shaking or poling the tree when green hulls begin to break away from the shell. Nuts are fully mature at this stage. If left on the tree or allowed to fall on their own, the hulls will rot and stick to the shell.

3. Apply 90 (poultry) or 150 (steer) pounds of manure (well-rotted, no weed seeds) if no spring fertilizer was applied.

UC Online Resources

The California Backyard Orchard: <http://homeorchard.ucdavis.edu/>

Fruit and Nut Research & Information Center: <http://fruitsandnuts.ucdavis.edu/>

UC IPM Statewide Integrated Pest Management Program: <http://www.ucipm.ucdavis.edu/>

UC Publications of Interest

(available from your local UCCE office or at <http://anrcatalog.ucdavis.edu/>)

Publications	Publication #	Cost
Fruit Trees: Training and Pruning Deciduous Trees	8057	Free
Nuts: Safe Methods for Home Gardeners to Harvest, Store, and Enjoy	8407	Free
The Home Orchard: Growing Your Own Deciduous Fruit and Nut Trees	3485	25.00
Training Young Walnut Trees by the Modified Central Leader System	2471	\$1.50
Walnut Husk Fly: Biology, Monitoring & Control Strategies (DVD)	6567D	\$20.00
Walnuts: Calendar of Operations for Home Gardeners	7263	Free

UCIPM Pest Notes for Home and Landscape¹	Publication #	Cost
California Ground Squirrel	7438	Free
Phytophthora Root and Crown Rot in the Garden	74133	Free
Pocket Gophers	7433	Free
Redhumped Caterpillar	7474	Free
Scales	7408	Free
Tree Squirrels	74122	Free
Walnut Husk Fly	7430	Free
Wood Decay Fungi in Landscapes	74109	Free

¹ Pest Notes can be downloaded from the ANR Catalog website referenced above

WARNING ON THE USE OF CHEMICALS

Pesticides are poisonous. Always read and carefully follow all precautions and safety recommendations given on the container label. Store all chemicals in their original labeled containers in a locked cabinet or shed, away from foods or feeds, and out of the reach of children, unauthorized persons, pets, and livestock.

Confine pesticides to the property being treated. Avoid drift onto neighboring properties or gardens containing fruits and/or vegetables ready to be picked.

Dispose of empty containers carefully. Follow label instructions for disposal. Never reuse the containers. Make sure empty containers are not accessible to children or animals. Never dispose of containers where they may contaminate water supplies or natural waterways. Do not pour down sink or toilet. Consult your county agricultural commissioner for correct ways of disposing of excess pesticides. Never burn pesticide containers.

PHYTOTOXICITY: Certain chemicals may cause plant injury if used at the wrong stage of plant development or when temperatures are too high. Injury may also result from excessive amounts or the wrong formulation or from mixing incompatible materials. Inert ingredients, such as wetters, spreaders, emulsifiers, diluents, and solvents, can cause plant injury. Since formulations are often changed by manufacturers, it is possible that plant injury may occur, even though no injury was noted in previous seasons.

To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products that are not mentioned.

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