

California Olive Oil Council
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Best Practices for Groves: Field Notes for
Oil Quality
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An Outline...

- Field notes for oil quality: Super High Density Groves
 1. Pruning & olive tree maintenance.
 2. Disease (i.e. Olive knot) prevention practices.
- Field notes for quality: Medium Density Groves
 1. Planting considerations.
 2. Training young trees & pruning.

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Super High Density Olive Groves



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The two 'headaches' for SHD growers...

1. Slow Return of Investment, mainly due to low average price per gallon of oil on large contracted acreage (~ \$14.00-\$15.00 / gallon).
2. Low average life expectancy of the grove due to **Olive Knot**, based on existing disease remedies (~15 years).

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Some additional concerns...

- Almond growers are competing for much of the same land, with the development of new almond rootstocks for 'marginal' soil, previously suitable only for olives.
- Extended drought in the Central Valley has almond growers looking for property in the Northern Sacramento Valley.
- Land prices have quadrupled in the last 3 years.

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The Olive Knot Headache...

Bacteria enter mainly through:

- Winter frost damage wounds.
- Harvesting equipment wounds.
- Pruning-hedging wounds.

Picture taken at a 6-year grove, single incidence.

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Pruning for oil quality through...

- Maintaining the 'central leader' canopy structure.
- Stimulating new growth - following year's fruiting wood.
- Opening canopy for air, light and spray material's penetration.
- Facilitating fruit harvest with minimum possible damage for trees, as well as equipment.
- Keep trees in proper shape/control (although irrigation and fertilizer programs are equally important).

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Timing of pruning...

Growers practice both:

- Pruning right after harvest (**~November**).
 - + Done and done with the grove.
 - + Labor availability, if hand pruning needed.
 - Unstable weather – chance of rain in the process.
 - Canopy works on replenishing carbohydrates on trees' permanent structures.
- Pruning in the spring (**~late March – April**)
 - Labor scarcity, if hand pruning needed.

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Pruning Passes - Hand

- Hand labor, mainly in younger groves (< 6 years).
- Removing big limbs that compete with central leader for dominance and interfere with harvesting process.



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Pruning Passes – Hand (cont.)

- Central Leader.
- Dominance competitive lateral.
- Harvester caused wound!



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Pruning Passes – Hand (cont.)



Pruning Passes – Hand (cont.)

- Harvester Direction.
- Harvester caused wounds.



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Pruning Passes – Hand (cont.)

Missed fruit
(mummies?)



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Pruning Passes – Hand (cont.)

Sucker
removal is
part of the
pass, when
needed.



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Pruning Passes – Hand (cont.)

- Clear pruning cuts.
- 2-3 inches left at the base of the limb for new growth to emerge.



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Pruning Passes – Hand (cont.)

After the
crew pass...



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Pruning Passes – Chopping & Hedging

Chopper
ahead of the
hedger...tight
race though!



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Pruning Passes – Chopping & Hedging (cont.)

Different types
of hedgers,
this can be
used to
grapes as
well.



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Pruning Passes – Chopping & Hedging (cont.)

Enough trimming in order to stimulate new growth for next years crop .

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After the passes...trees



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After the passes...floor



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Olive knot infected wood... pull...!



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... and burn!



Finally and most importantly...

Spray application should follow immediately after pruning/hedging and prior to any potential rain event.



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Typical application tank mix...

1. Copper Hydroxide
2. Hydrated Lime
3. Zinc sulfate
4. Boron

Pruning to spray:

- 1 week for 270 acres (hopefully without rain)!

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Medium Density Olive Groves



How medium is Medium?

- Looks nice from a distance! Lets take a closer look...



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How medium is Medium? (cont.)

...Not too good:

- Not enough light penetration.
- Canopies 'shooting' upwards for growth and light.
- Limited lateral growth.



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How medium is Medium? (cont.)

Even for low vigor varieties consider row spacing closer to **17'-18'**.



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How medium is Medium? (cont.)

- Even for low vigor varieties consider tree spacing closer to **14'**.



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Medium Density Pruning & Training

Not too good:

- Scaffold branches are not properly formed.
- Lower lateral branches have been removed, pushing the growth upward.
- Not much attempt to keep the tree low and open.
- Of course, spacing plays a role here.

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Medium Density Pruning & Training (cont.)

Not too good either:

- Lots of wood and canopy without structure.
- Possibly pruned very few times, if any!

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Now, lets try to harvest these trees...

Labor intensive and expensive; not an efficient pick!



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Plenty of Material Other Than Olives

- Mainly twigs and leaves.
- Woody olive flavors.
- Possibly some mummies trapped in the canopy as well.



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Medium Density Pruning & Training (cont.)

- Pruning in such cases might have to be aggressive!
- One year's yields might be sacrificed, but trees would be rejuvenated.



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Medium Density Pruning & Training (cont.)

To reduce pruning costs and secure some yield, the grove can be done in parcels.



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Medium Density Pruning & Training (cont.)

**6-year old Manzanillo, never
pruned. Before...**



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...and after.



Medium Density Pruning & Training (cont.)

One more example. Before...



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...and after.



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Medium Density Pruning & Training (cont.)

After pruning...



...and 3 weeks later.



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Thank you

