Mechanical Topping of Nonbearing Almond Trees

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Why mechanically top young trees? The assumptions are:

- Reduce training costs
- Create a shorter, bushier, higher (earlier?) yielding tree

Conclusions after just one year:

- Mechanically topped trees were not shorter than "conventionally" hand trained trees after just one year
- Mechanical topping plus follow up scaffold selection by hand was the most expensive training strategy
- There is concern that having multiple heading cuts of scaffolds all at the same height could lead to more shading of the lower canopy unless expensive corrective pruning is implemented in the future

Stanislaus County Training Strategies Tested

1. Mechanically topped 1rst "dormant" (Nov. 2014) + minimal scaffold selection (by hand)
2. Mechanically topped 1rst & 2nd dormant + scaffold selection (by hand)
3. Mechanically topped 1rst & 2nd dormant, no scaffold selection
4. Standard "medium-long pruned" training by hand
5. "Short pruned" by hand
6. No scaffold selection / pruning

	Tree Height (ft)		Trunk Circumference (cm)	
	Nonpareil	Monterey	Nonpareil	Monterey
Untrained	12.9 A	13.9 A	36.5 A	32.8 A
Topped no scaffold selection	12.7 A	13.5 AB	34.6 B	31.3 BC
Topped with scaffold selection	12.5 A	13.6 AB	35.2 AB	31.5 B
Hand trained ("long" pruned)	12.5 AB	13.5 AB	35.6 AB	30.3 CD
Hand trained ("short" pruned)	11.9 B	13.1 B	33.2 C	30.1 D

Will having multiple heading cuts on scaffolds all at the same height cause future problems?

No scaffold selection or shoot tipping. Low branches removed for shaker access only.

Final tree height 8' – 9'

Cost: $18 / acre

"Conventional" hand training to four or five scaffolds, open centers

Final tree height ~ 7.5'

Cost: $71 / acre

Short "severe" hand pruning to 3 – 4 scaffolds.

Final tree height ~ 5.5'

Cost: $66 / acre

Mechanically topped. No scaffold selection. Low branches removed for shaker access only.

Final tree height ~ 5.5' from top of berm.

Cost: $30 / acre for topping + $18 for low branch removal = $48 total

Mechanically topped plus scaffold selection to 4 – 6 scaffolds.

Final tree height ~ 5.5' from top of berm

Cost: $30 / acre for topping + $53 for hand pruning = $83 total

*Labor valued at $12 / hour. Does not include cost of stacking and shredding brush