

Pruning Techniques to Increase Profitability of Coffee Farms: 2019 Update

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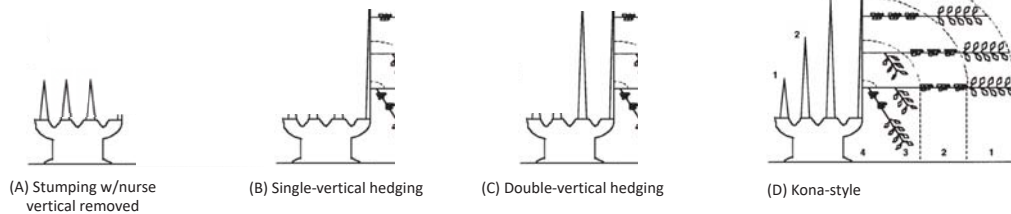
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Overview of project:

The purpose of this project is to demonstrate four hand-pruning methods: 1) Kona-style; 2) Stumping; 3) Single-vertical hedging; and 4) Double-vertical hedging at the UH-CTAHR Kona Research Station in Kainaliu, Hawaii. The impact on yields has the potential of enhancing production efficiency, economic returns, and the competitiveness of Hawaii coffee production for the long-term sustainability of this specialty crop.

Pruning methods:

(modified from Bittenbender & Easton-Smith, 2008)



A – Stumping w/ nurse vertical (post-pruning)



A – Stumping (left background) and single vertical hedging (on right) trees - 13 months later



A – Same stumped and single vertical hedging trees at 29 months after initial pruning



B – Single vertical hedging (post-pruning)



B - 9 months later



B - 17 months later



B - 29 months after initial pruning; note density of foliage

This project is sponsored by:



Timeline:

- Feb 2017 – Trees pruned by method
- Oct to Dec 2017 – Harvest (Kona-style only)
- Feb 2018 – Prune Kona-style
- Oct to Dec 2018 – Harvest
- Feb 2019 – Prune

Challenges to date:

- Labor to prune, desucker & harvest
- Hedging height considerations
- Transition from stumping to Kona-style
- Excessive lateral growth on hedged trees hamper pest control and harvesting

Preliminary results:

- Double vertical hedging eliminated
- Single and double hedged trees produced ~ 1.5x greater yield than Kona-style and 3x over stumped trees in first season of harvest
- Hedged trees require ~2x more labor to prune, desucker and harvest