



COOPERATIVE EXTENSION
UNIVERSITY OF HAWAII AT MANOA
COLLEGE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES

Off-Season Mango Production

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COOPERATIVE
EXTENSION
UNIVERSITY OF HAWAII AT MANOA
COLLEGE OF TROPICAL AGRICULTURE
AND HUMAN RESOURCES

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SUSTAINABLE AND ORGANIC
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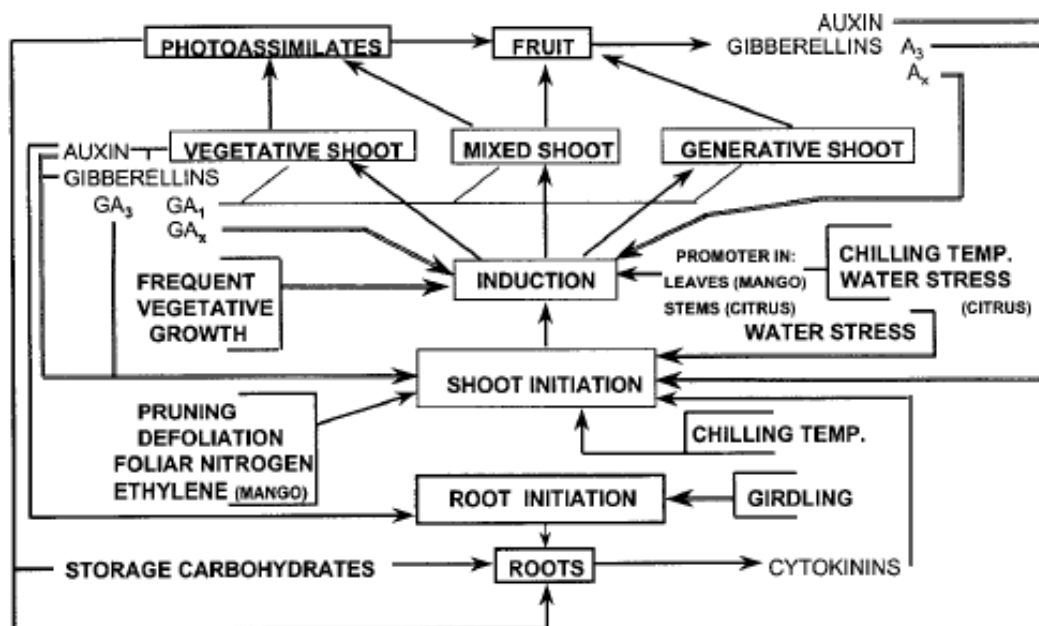


Mango

- Hawaii harvested in the Summer
 - Haden, June-July
 - Keitt, August-October
 - Rapoza, July to August
 - Pirie, July-August
- California Season: July – September
- Mexico Season: January – October
- Imports (2016):
 - July – 1,497,672lb
 - August – 20,567lb
 - September – 1,036lb
 - October – 1,285lb
 - November – 2,642lb



Flowering Model



- Initiation
 - Chilling
 - Defoliation/Pruning
 - Foliar Nitrogen (CaNO₃, KNO₃, NH₄NO₃)
 - Ethylene
 - Cytokinins
- Induction
 - Vegetative Shoots
 - High temps 86°F/77°F
 - GA₃
 - Mixed Shoots
 - Generative Shoots
 - Cool Temps 64°F/50°F



Mango Trial - Waimanalo

- **Treatment:**
 - GA3 – 300ppm (0.15g/tree)
 - KNO3 – 3% (15g/tree)
 - 500ml/tree of water
 - 0.47mL of Kinetic (Surfactant)/tree

- **Application Dates:**
 - GA3 – 2/18/21 + KNO3 – 5/27/21
 - KNO3 – 2/18/21



	<u>Control</u>	<u>KNO</u>	<u>GA3</u>
Flower	February-March	February-March	June-July
Harvest	July - August	July - August	October - November

<https://phytotechlab.com/gibberellic-acid.html>



Prior To Application – 2/18/21



GA3 Treatment



KNO3 Treatment



Untreated



5/27/21 (KNO3 application to GA3 treated Trees)



GA3 Treatment



KNO3 Treatment



Untreated





GA3 Treatment



KNO3 Treatment



Untreated



8/4/21



GA3 Treatment



KNO3 Treatment



Untreated



9/14/21



GA3 Treatment



KNO3 Treatment



Untreated



10/7/21



Summary

- Gibberellic Acid 3 and Potassium Nitrate can be used at certain times of the year to extend the fruiting season of mango.
- Timing may help meet local market demands during off season periods.
- More work needs to be done to identify if process works at other times of the year.



Thank You!

For more information contact:

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