

# Preparing New Blueberry Fields for Optional Mechanical Harvesting

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# Select cultivars that can be machine harvested if needed

- Traits for machine harvesting
  - Firm fruit.
  - Concentrated ripening.
  - Difference in detachment force between immature and mature fruit.
  - Ability for ripe fruit to hang on the bush.
  - Open clusters.
  - Narrow crown, spreading canopy that is not overly dense.

Few southern highbush cultivars are ideal for mechanical harvesting, but some are better than others.

Poor – Jewel, Springhigh, and Windsor.

Better – Farthing, Emerald (after a couple hand pickings), Meadowlark (low yields, bacterial leaf scorch).

Best – Optimus, Colossus (if needed).

- Evergreen systems present problems due to lack of concentrated ripening.

# Plant Spacing

- Minimum of 9 -10 ft. between-row spacing. 9 feet may limit choice of harvesting equipment.
- In-row spacing – 30 to 36 inches. Allow catch plates to close between plants.
  - Cultivar dependent (36 inches for spreading cultivars)
- Need a minimum of 25-30' clearance at end of rows to turn harvesters around.
- Periodic row breaks (~600 ft) for unloading, etc.

# Bed Configuration

- Raised beds bring the catcher plates closer to the base of the crown.
- Bed height – varies but should generally not exceed 18 inches.
- Beds 18 to 24 inches wide at the top (flat) with gently sloping sides allows catch plates to be lower on the plant and allows rain, irrigation, and fertilizer to enter the bed.
- Beds are typically about 4 feet wide at the base.
- Plastic mulch may require higher picking height adjustment.
- Remove suckers and low-hanging shoots.

Catch plates should make contact near base of the plant. Bed shape should allow for low point of contact.





Train to narrow crown from an early age



Fruit dropped during machine harvesting



Wide crown = fruit lost to ground drops



Cartons are used to train young plants to a narrow crown. Bamboo with solid core lasts longer. Some cartons last longer than others.



# Cartons used to train plants to narrow crowns



# Young planting with cartons



‘Farthing’ trained to narrow crown to facilitate machine harvesting



Pruning to maintain a narrow crown will be needed after cartons are removed.



Pruning to remove lower branches and maintain narrow crowns. Clean out dead wood.



Older plants that were pruned to a narrow crown.



# Summary

- Select cultivars that at least have potential for partial machine harvesting.
- Hand pick early harvests.
- Have a process outlet available.
- Train and prune plants to narrow crowns. Cartons have been used with good success. Base prune, clean out dead wood.
- 9 to 10-foot row spacing. 9 foot may limit choice of harvesting equipment.
- In-row spacing no closer than 30 inches. 36 inches for spreading cultivars.
- Shape beds appropriately, avoid wide shoulders.
- Allow 25 to 30 feet at end of rows to turn harvester around.

# Acknowledgements

- Brian Foote (Oxbo International Inc.)
- Michael and Kyle Hill (Southern Hill Farms)
- Gerard Krewer (professor emeritus, UGA)
  - Patricio Munoz (UF)
- Leonard Park (Frogmore Fresh Farm)
  - Doug Phillips (UF)
- Danny Stanaland (UGA)

Thank you!

Questions?

