

Evaluation and Production of Kiwifruit

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We have been evaluating potential kiwifruit varieties at the NWREC for commercial production since 1990.

A summary of what we have learned to date:

- Iodine staining of starch in 'Ananasnaya' hardy kiwifruit is not useful as an indicator of harvest maturity.
- Harvest Brix of 'Ananasnaya' significantly affected fruit quality – consumers did not prefer fruit harvested at low Brix (6 Brix). Aroma and flavor were rated higher on fruit that were refrigerated after harvest than on those that were not.
- 'Ananasnaya' flowers were thinned [0% (control), 15%, 30%, and 50% flower bud removal (2-5 June)]. The average yield of vines thinned 50% was significantly less than that of control vines. However, marketable yield from vines thinned 15%, 30% and 50% was not significantly different from control vines. Thinning, regardless of severity, increased average fruit volume and king fruit volume by 18% and 27%, respectively, compared to control vines. King fruit were more affected by thinning than the two adjacent lateral fruit in the cluster. Thinning before bloom had no effect on percent soluble solids, seed number or total seed weight per fruit. At the present time thinning does not seem practical.
- Pruning studies have shown that pruning hardy kiwifruit vines, relatively severely, increases fruit size and uniformity of ripening.
- Edible coatings may be used to reduce desiccation of harvested 'Ananasnaya'
- Overhead shading (~ 50%) of 'Ananasnaya' vines for 2 months prior to fruit harvest, led to the greatest reduction in flower number the following season confirming that the period before fruit harvest is an important time for flower bud development (for next year's crop) in this species.
- In 'Ananasnaya', the origination of one-year-old fruiting wood had no effect on percent fruitful shoots. One-year-old canes produced fruitful shoots along their entire length, but were most productive from nodes 6 to 26. There was no relationship between yield per vine and return bloom the following year. Fruit set was 74%.
- Leaf nutrient samples should be collected from female vines separately from male vines since they have different nutrient concentrations. Leaves from both indeterminate and



'Ananasnaya' hardy kiwifruit

determinate shoots can be collected together. Samples should be collected in mid- to late-August when nutrients are not changing as rapidly as in other parts of the season.



'Hayward' fuzzy kiwifruit



'Jumbo' hardy kiwifruit

Past faculty and students involved in this project are: Gil Buller (Senior Faculty Research Assistant, NWREC) and Chad Finn and Kim Hummer (USDA-ARS); Marieles Pescie, Chantalak Tiyyon, and Connie Landis Fisk (former M.S. graduate students, Dept. Hort.)

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