

## Possibilities for Grading Fresh Citrus Before Degreening



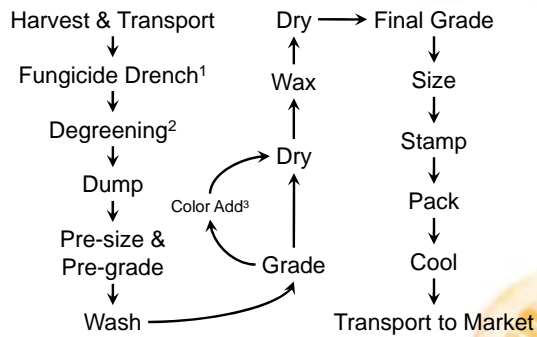
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## Background

- Two reasons to evaluate the effects of washing on subsequent degreening.
  - Interest from a commercial packer – remove unmarketable fruit before degreening.
  - Improved ability to remove fruit with canker lesions before packing.



## Fresh Citrus Handling in FL



## Materials & Methods

- Fruit tested:
  - Red grapefruits, navel oranges, and 'Orlando' tangelos
- Harvested fruit were evaluated for initial color and exposed to different washing treatments.

## Materials & Methods

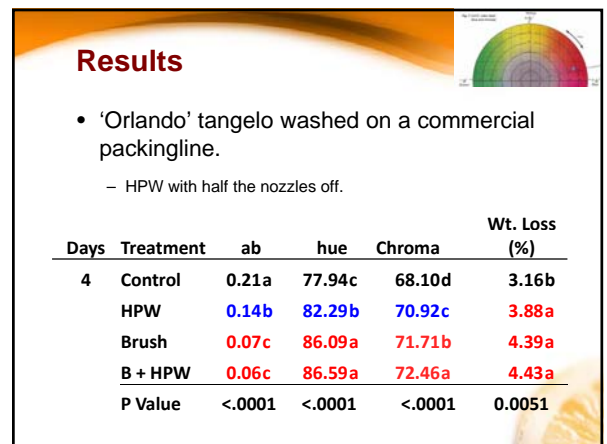
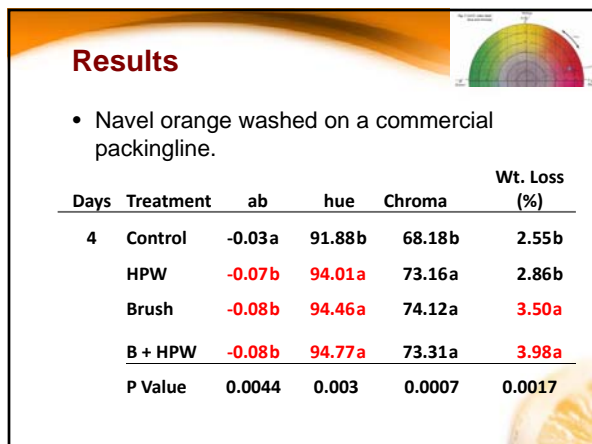
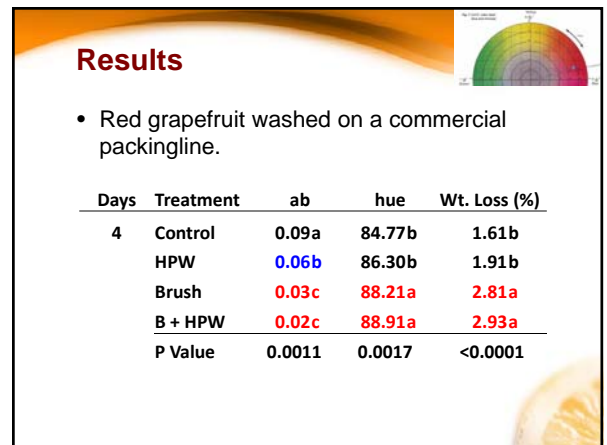
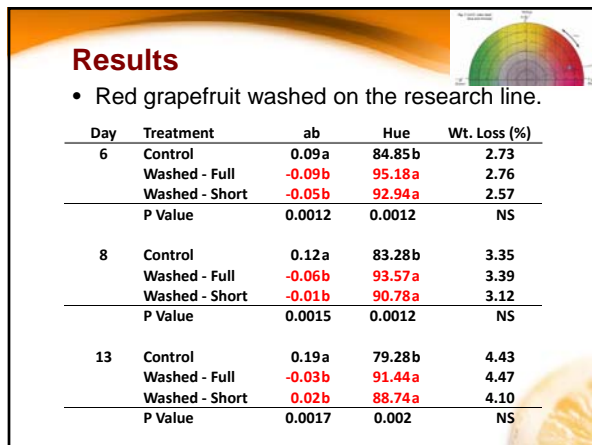
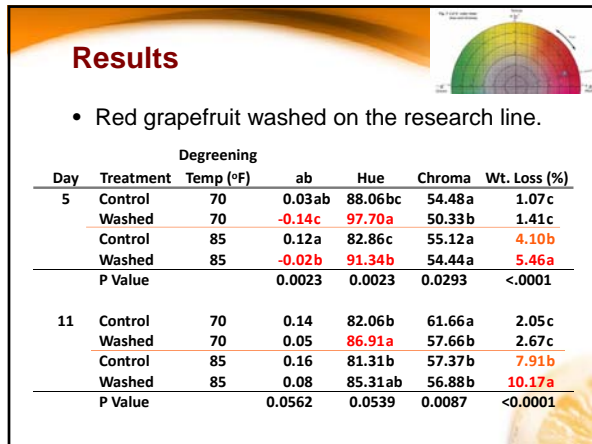
- Tests conducted on the IRREC research line.
- Or on a commercial wash line.



## Materials & Methods

- Washing treatment:
  - Brush washing
  - High-Pressure washing (HPW)
  - Both Brush & High-Pressure washing
  - Control fruit were not washed
- Afterwards degreened:
  - 70 or 85°F, 95% RH
  - 5 ppm ethylene





## Results

- Decay of red grapefruit, navel orange, & 'Orlando' tangelos.

Treatment	Grapefruit (77 d)	Orange (77 d)	Tangelo (27 d)
Control	16.66	27.78	48.35
Brush	24.44	21.11	53.98
HPW	11.11	45.56	45.56
B + HPW	16.93	41.11	56.67
P Value	0.2876	0.0833	0.2899

## Summary

- Color development of red grapefruit was significantly inhibited even if washed for only 1 minute.
- Often, washed fruit took about twice as long to degreen as did unwashed fruit.
- Using a commercial packingline, HPW washing usually delayed coloration less than brush washing or brush + HPW.

## Results

- Treatments most inhibiting fruit color development also resulted in the greatest rate of water loss during degreening and storage.
- Washing treatments had no significant effect on decay during storage.

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**Thank You!**

