

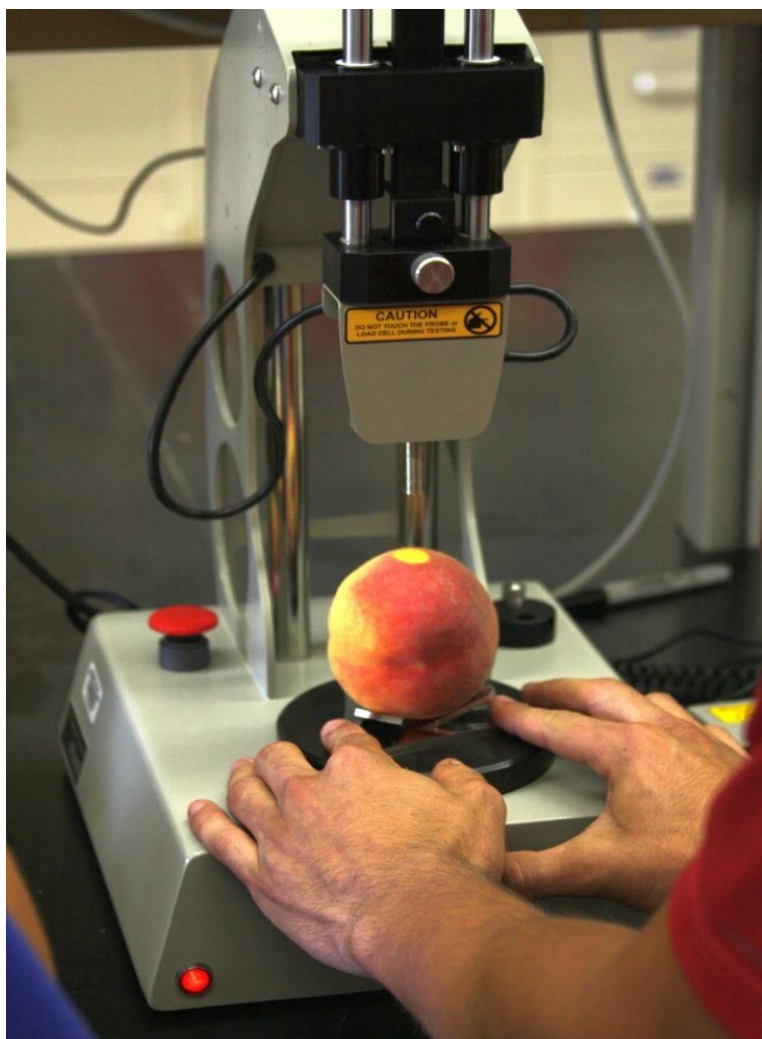
Five new peach and nectarine varieties were released from Rutgers peach breeding program. To understand how best to select and market these varieties growers need to better understand the characteristics of their fruit.

Objectives:

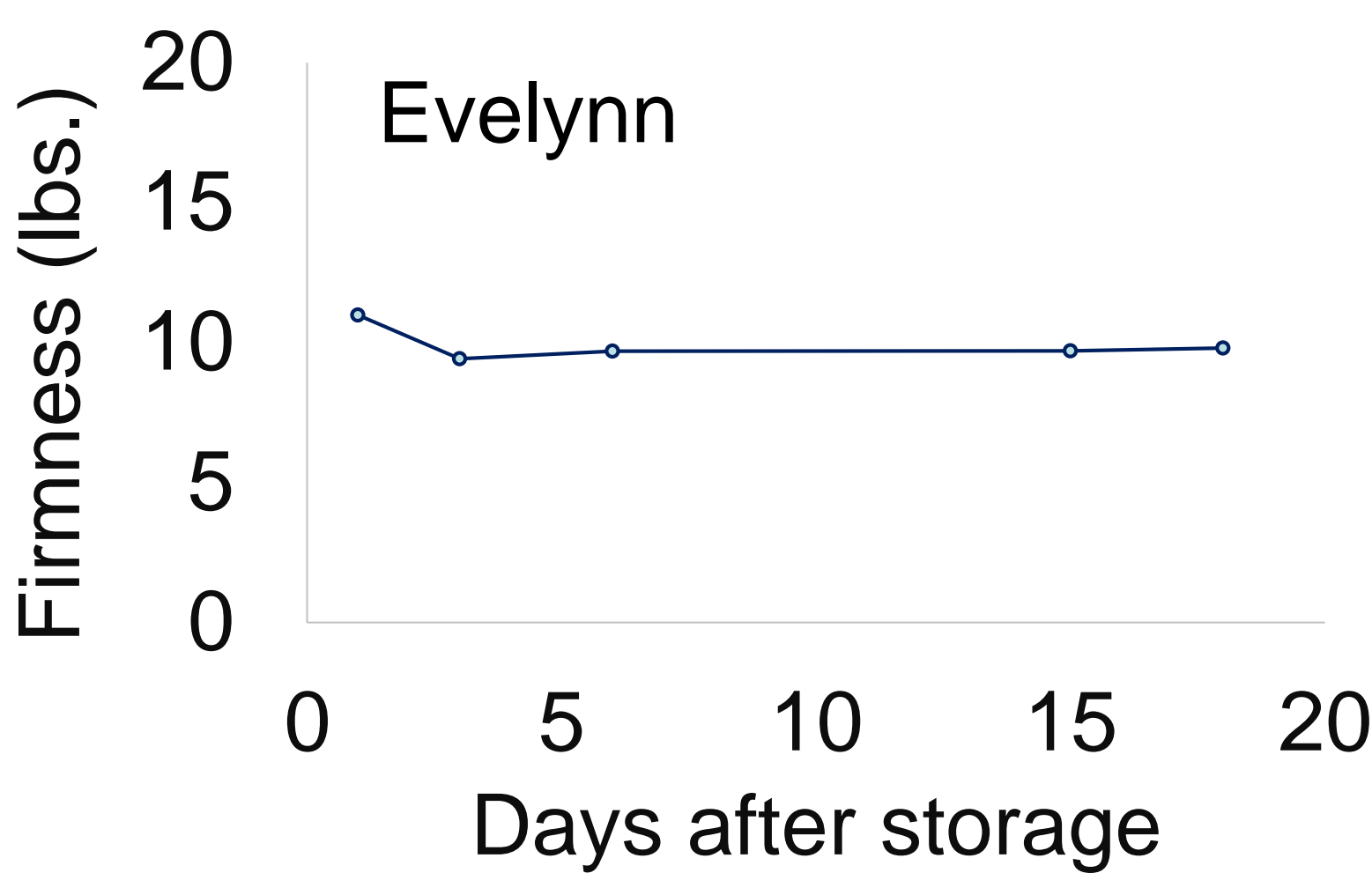
- Estimate fruit qualities, both chemical and physical at harvest, that determine much of the value of peaches.
- Evaluated three varieties for their fruit firmness during cold storage.

Procedure:

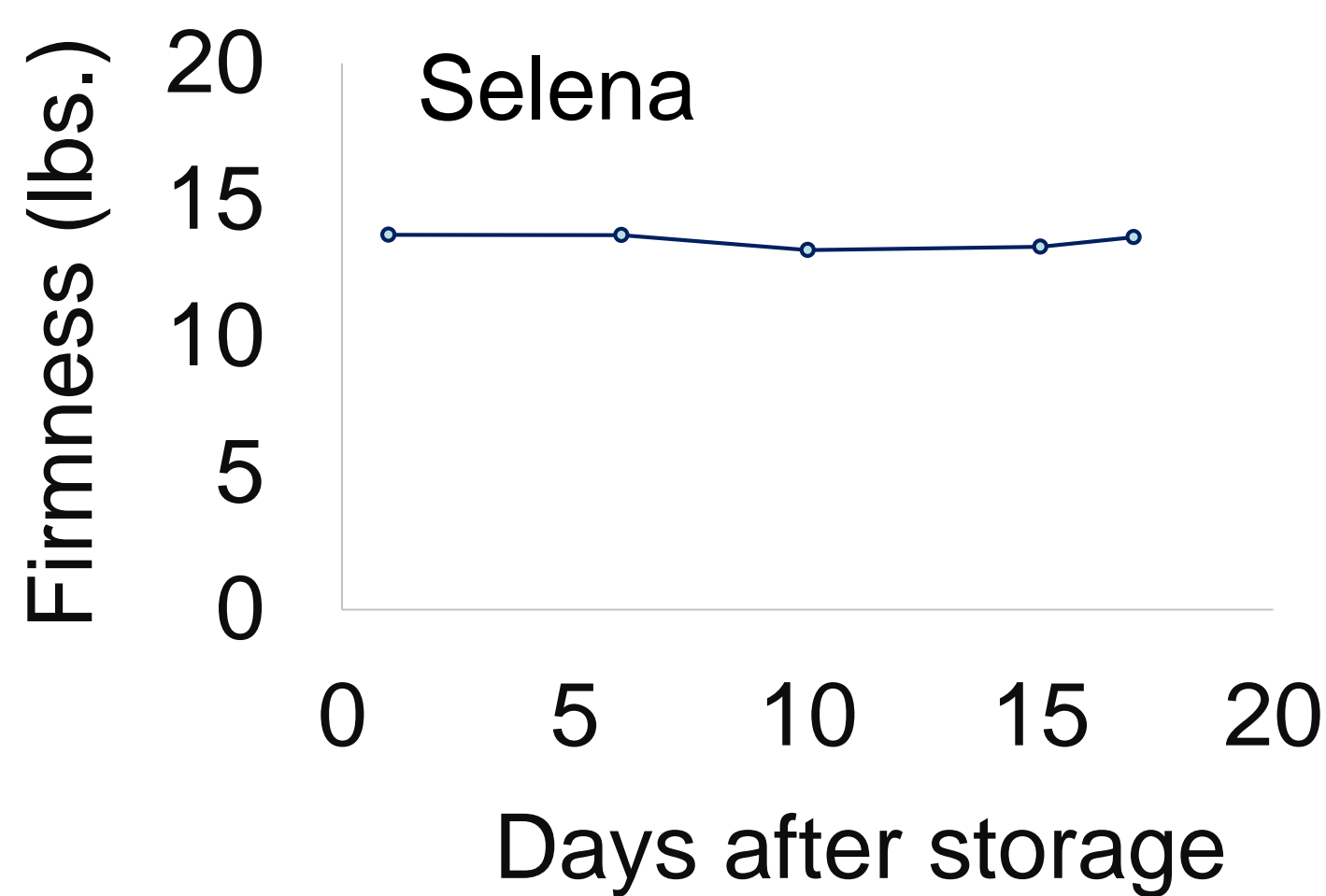
Varieties were evaluated in the field for flesh color, crop load, shape, skin color, fuzz, attractiveness, stone characteristics (free, semi-free, or cling), flesh color, and bacterial spot on fruits and leaves. Fruits were harvested based on ground color change and size and then stored in cold storage at the research station, in conventional cold storage (33°F, 95% RH). Fruit data characteristics measured as firmness (lbs.), diameter (inches), mass (g), juice total soluble solids (TSS) concentration (°Brix), pH and total titratable acidity (TTA).



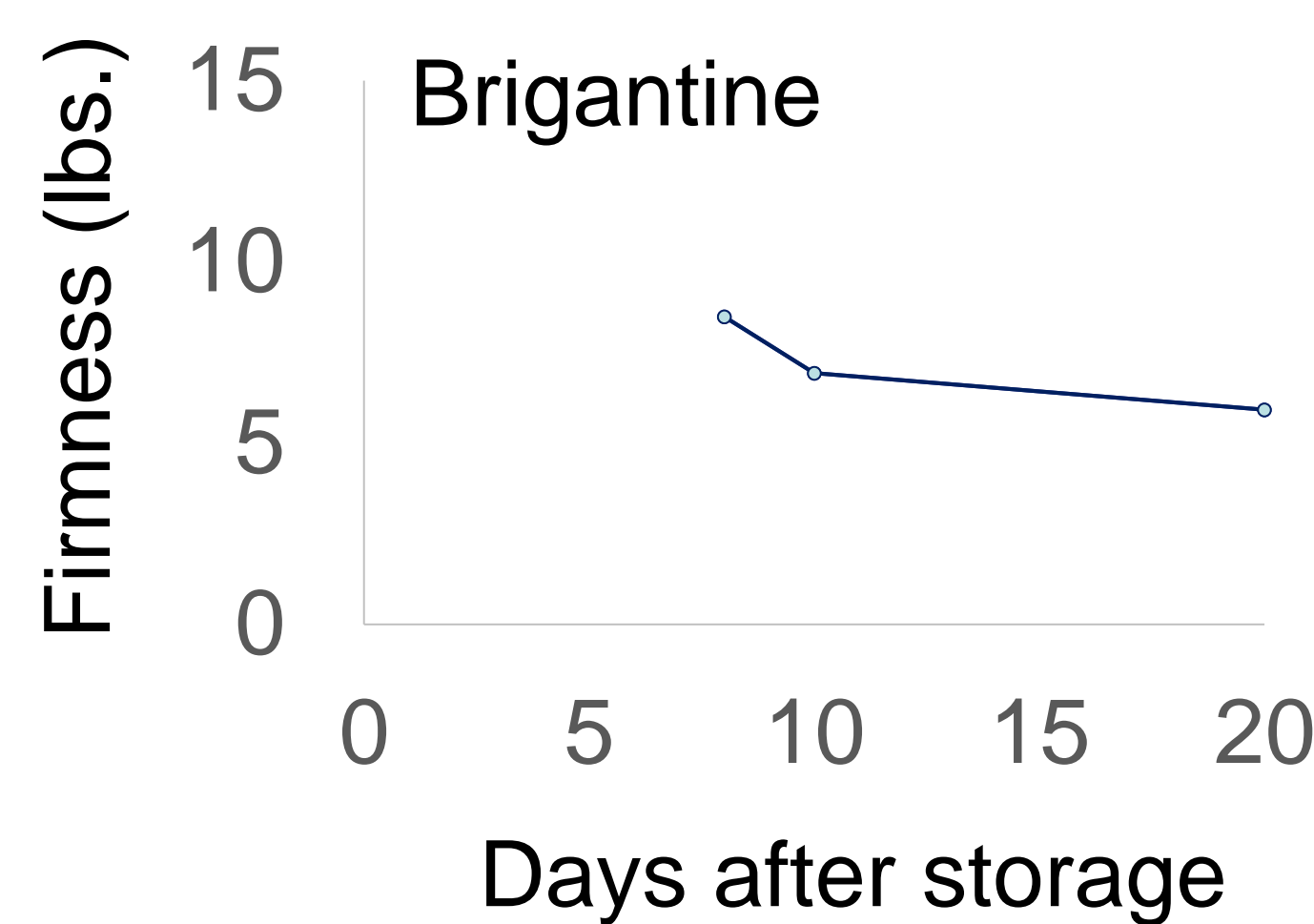
Evelynn™ NJ 357 – This is a yellow-fleshed peach with semi free stone and firm flesh. It is a low acid peach, which ripens with Redhaven. It has large size and very attractive full scarlet coloring, with smooth low pubescence and retains its firmness very well. This variety is always productive and exhibits a low susceptibility to bacterial spot. Fruit retained firmness during 18 days of cold storage.



Selena™ NJ 358 – This is a late season yellow peach with excellent firmness, ripening between ‘Jersey queen’ and ‘Encore’. Very large fruited with attractive 50-80% red-on-yellow background. The fruit hangs well on the tree and has excellent flavor and coloring. This variety exhibits a low susceptibility to bacterial spot and is a productive choice. Fruit retained firmness during 18 days of cold storage.



Brigantine™ NJN 102 – This is a yellow-fleshed nectarine with semi freestone. Ripening July 20-25 just before ‘Summer Beaut’ and ‘Redhaven’. It has a solid scarlet coloring and a nice acidic flavor and firm melting flesh. Fruit skin is consistently free from blemishes. This is a very productive tree with low susceptibility to bacterial spot while fruit has moderate susceptibility to bacterial spot. Fruit lost firmness during 18 days of cold storage.



Silverglo™ NJN 103 – This white-fleshed nectarine has a clingstone/semi free stone, and ripens between ‘Arctic Sweet’ and ‘Arctic Jay’. Its fruit is larger and more attractive than other white nectarines during that time of a season. It has nice acidic flavor, attractive color, lots of pinkish red color and very few skin blemishes. The tree is moderately vigorous with low susceptibility to bacterial spot.



Tiana™ NJ 359 – This is a late season yellow peach with free stone and very firm flesh, ripening between ‘Cresthaven’ and ‘Encore’. These large fruits have an excellent balance of acidity and sweetness. Providing exceptional flavor, with beautiful coloration (highly mottled (50-75%) red-on-yellow). This variety exhibits low susceptibility to bacterial spot.



Table 1. Three year average fruit characteristics of peach and nectarine varieties in Southern NJ evaluated in 2017-2019. TAA = Total Titratable Acidity and TSS = Total Soluble Sugars

| cultivar | firmness | diameter | mass | TTA | pH | TSS |
|------------|----------|----------|--------|-------|------|--------|
| | (lb.) | (in.) | (g) | (g/l) | | (brix) |
| Elerynn | 10.35 | 2.87 | 204.63 | 0.76 | 4.00 | 10.23 |
| Selena | 9.85 | 3.10 | 243.65 | 5.67 | 3.61 | 12.07 |
| Tiana | 11.00 | 2.67 | 270.97 | 5.71 | 3.64 | 11.72 |
| Brigantine | 9.05 | 2.60 | 172.20 | 1.46 | 3.36 | 10.05 |
| SilverGlo | 11.35 | 2.67 | 201.00 | 7.36 | 4.03 | 10.54 |

- Peach Flesh Firmness:
 - Ready to eat = 2 to 3 pounds
 - Ready to display = 6 to 8 pounds
 - Ready to pick = 10 to 16 pounds
- At 68°F (20°C), peaches lose about 2 pounds of flesh firmness per day

Impact:

- Total 483 growers in Mid-Atlantic and Mid-Eastern region were educated on, characteristics of five new peach varieties and how to optimizing fruit harvesting and storage.
- This information was also published in the trade magazine *Good Fruit Grower* (~16,000 circulations).
- *Google Form* based survey indicated that, growers adjusted their harvest and storage of ‘their new peach varieties, grown in more than 300 acres in New Jersey.

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