

Multi Year Peach Variety Screen with Accede® PGR Thinner, NJ

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Peaches/Nectarines

Accede® PGR is the first of its kind chemical thinner registered for use on peaches/nectarines. Trials have demonstrated that an application of Accede to peaches/nectarines during the period from bloom to petal fall will reduce fruit set and reduce, but not eliminate, the need for hand thinning.

Valent conducted grower demonstration trials in NJ in 2021 & 2022 with numerous peach growers and replicated research trials at grower orchards in 2023 and 2024.

See our article on [Accede Peach Grower Trials in 2021 and 2023 in New Jersey](#)
<http://www.horticulturalnews.org/103-2/HN4.pdf>

and Accede 40 SG Peach Thinning Evaluation in New Jersey-2023

<http://www.horticulturalnews.org/103-4/HN5.pdf>

2024 Accede Peach Thinning Evaluation in North Jersey

In 2024 we repeated for the second year an Accede thinning trial on peach at Melick's Town Farm, Califon, NJ (Hunterdon County). The goal was to evaluate Accede on a number of peach varieties for efficacy, two years in a row on the same 4 cultivars. We know there are varietal differences in how Accede performs as a peach blossom thinner and wanted to test the consistency of responses with multiyear applications.

The experiment was set up with single tree replications in a completely randomized design. All treatments were applied with a Reers Nursery Cart Sprayer (Photo 1) with a handgun (Photo 2), at 100 PSI at 100 GPA. Treatments were applied full bloom, (Photo 3). Accede SG was used at 300 ppm (10 oz/100 gal) and tank mixed with Regulaid at 16 fl oz/100 gal.



Photo 1. Reers Nursery Cart Sprayer with Handgun.

The effects of the treatment can start to be seen one week after application (photo 4), but it really takes until pit hardening to determine the percent of fruit that was removed by the thinning treatment. Fruit size data was



Photo 2. Handgun Application of Accede @ 100 psi.



Photo 3. Treatments applied at full bloom.

collected at first harvest from $\frac{1}{2}$ bushel of peaches per tree per replication. Fifteen of these were selected for uniformity and weight and diameter data were collected (Photos 5,6,7).

Discussion

Accede SG Plant Growth Regulator worked well across the board on all 4 cultivars tested 2 years in a row with 53% average overall thinning in 2023 and 63% average overall thinning in 2024 (Fig. 1). The sensitivity of the four varieties to Accede was nearly the same for the two years, with Gloria exhibiting the most thinning while Victoria thinned the least. Hand thinning still needed to be done for touch up. In my mind Gloria over thinned with Accede in this experiment. Our target is 40- 60% thinning.

There was an average 4 % increase in diameter and 16 % increase in weight/mass for the 3 varieties, Gloria, Big George, and Victoria in 2024. In 2023, there was an average 6% increase in diameter and 17% increase in fruit mass for all 4 varieties. Results from both years illustrate the potential increase in fruit size that can be achieved by early thinning.

We used the low rate of Accede 40 SG @ 300PPM and a higher rate of surfactant 0.125% v/v or 16 ounces/100 gal. The surfactant was Regulaid which is a NIS penetrating surfactant and therefore a bit more active. It has been my standard for use with PGR's for over 20 years.

Applications of any PGR and Accede should be done in early morning or evening to allow for slow drying. We have found that late afternoon or early evening is best with Accede. Even though our temperatures were warm on day of application, in 2023 no phototoxicity was observed.

Conclusion

Accede is a unique product filling a niche for a chemical PGR thinner for peaches. It assists with effective Crop Load Management. Of significance

it allows for reduced hand thinning labor (up to 50%), the biggest cost of production in peaches. We also see increased fruit size and mass and therefore yield and greater \$ return per acre (see Table 1).

Thank you to John Melick and Melick's Town Farm for hosting this research and providing valuable assistance in the trials as well as keen observations.



Photo 4. Hunterdon County, NJ - Peach fruit 11 days after treatment with Accede-brown sepals, % flowers/fruit aborting.



Photo 5. Data collected at Harvest, 15 peaches per tree, measured for diameter.



Photo 6. Data Collection at harvest, 15 peaches sampled per tree, weighed on scale.



Photo 7. Fruit harvested for data, $\frac{1}{2}$ bushel per each single tree replication.

Table 1. 2024 Fruit Size %Diameter Increase and % Mass (weight increase).

2024 Variety	% thinning	% Incr dia	% Incr mass
Gloria	81.1	7.3	23.2
Big George	54.3	2.4	11.3
Messina	66.5		
Victoria	50.0	4.8	14.2

Variety screen: New Jersey

- Cooperator: Win Cowgill / Consultant
- Location: Melicks Town Farm, Califon, NJ
- Handgun, 100 GPA
- 4 Varieties
- Treatments:
 - UTC
 - ACCEDE 300 ppm + Regulaid 1 pt/100
- General results: Overall % thinning
 - 2023: 53%
 - 2024: 63%

Melick	% Thinning	
Variety	2023	2024
Gloria	73.2	81.1
Big George	62.9	54.3
Messina	42.2	66.5
Victoria	32.3	50.0
AVG	52.6	63.0

Melick	% Thinning Rank	
Variety	2023	2024
Gloria	1.0	1.0
Big George	2.0	3.0
Messina	3.0	2.0
Victoria	4.0	4.0

Date	Tmin	Tave	Tmax	RhAvg	Precip
2023-04-07	39	49	54	34	0
2023-04-08	33	41	50	42	0
2023-04-09	34	44	56	50	0
2023-04-10	35	49	62	51	0
2023-04-11	43	58	70	36	0
2023-04-12	60	69	80	35	0
2023-04-13	59	72	84	40	0
2023-04-14	61	74	87	35	0
2023-04-15	58	63	70	88	0.98
2023-04-16	54	61	69	89	0
2023-04-17	50	56	62	69	0.18
2023-04-18	41	46	51	51	0
2023-04-19	37	49	62	49	0
2023-04-20	43	55	70	53	0
2023-04-21	47	57	71	70	0



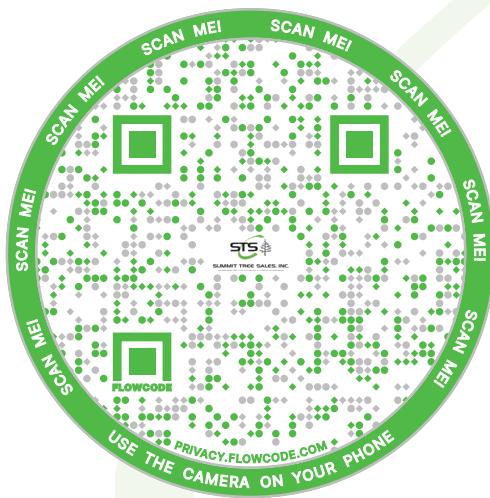
Date	Tmin	Tavg	Tmax	Rhavg	Precip
2024-04-10	50	57	64	76	0
2024-04-11	49	56	67	93	0.76
2024-04-12	50	57	60	82	1.56
2024-04-13	42	46	51	65	0
2024-04-14	41	55	70	58	0.2
2024-04-15	54	63	72	62	0
2024-04-16	47	57	68	45	0
2024-04-17	47	52	61	68	0.006
2024-04-18	42	46	49	89	0.01
2024-04-19	40	48	56	78	0
2024-04-20	41	53	62	64	0.04
2024-04-21	35	42	48	51	0
2024-04-22	35	46	58	48	0
2024-04-23	36	51	63	53	0
2024-04-24	45	54	66	56	0

Figure 1. NJ Variety Screen Data for 2023-2024 Mellick's Town Farm, Califon, NJ.



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