

A photograph of a large agricultural field in Southwest Indiana, 2017, used for watermelon and cantaloupe variety trials. The field is divided into numerous rows of plants, with some rows showing clusters of ripe, green watermelons and cantaloupes. The background features a line of trees under a clear blue sky. The text "Watermelon and Cantaloupe Variety Trials in Southwest Indiana–2017" is overlaid in the center in a bold, blue font.

Watermelon and Cantaloupe Variety Trials in Southwest Indiana–2017

Nov. 21 2017

Weather Conditions

| Month | Precipitation (inch) | | Max temperature (°F) | | Min temperature (°F) | | Mean temperature (°F) | |
|--------|----------------------|------|----------------------|-------|----------------------|-------|-----------------------|-------|
| | Average | 2017 | Average | 2017 | Average | 2017 | Average | 2017 |
| May | 5.93 | 6.49 | 76 | 74.63 | 54 | 53.75 | 65 | 63.38 |
| June | 4.19 | 2.35 | 84 | 88 | 63 | 63.90 | 74 | 75.47 |
| July | 4.64 | 4.17 | 88 | 90.71 | 66 | 68.29 | 77 | 78.19 |
| August | 3.41 | .37 | 87 | 87.37 | 64 | 63.03 | 76 | 73.73 |

Materials and Methods

❖ Varieties

| Melon types | Number of varieties |
|-----------------------------------|---------------------|
| Triploid watermelon | 37 |
| Personal-size triploid watermelon | 4 |
| Cantaloupe and honeydew | 6 |

❖ Planting and harvest dates

| Melon types | Seedling Dates | Transplanting Dates | Harvest Dates |
|------------------------------------------|----------------|---------------------|------------------|
| Triploid watermelon | April 17 | May 17 | July 27---Aug 17 |
| Personal size triploid watermelon | April 20 | May 16 | July 24---Aug 14 |
| Pollenizer | April 14 | May 16 and 17 | |
| Cantaloupe | April 18 | May 16 | July 11---Aug 4 |

❖ Fertilizers

| Fertilizer | Rate (lb/acre) |
|--------------------------------|----------------|
| Urea (46-0-0) | 250 |
| Potash (0-0-60) | 130 |
| Diammonium phosphate (18-46-0) | 100 |
| Boron 14.3% | 7 |
| Pelletized lime | 200 |
| K-Mag granular (0-0-22) | 100 |
| Ammonium sulfate (21-0-0-24) | 100 |
| Zinc 10% LS | 10 |

❖ Pest management

Fumigation: 85.5% chloropicrin (Pic Plus Fumigant[®], TriEst Ag Group, Inc.) with the rate of 150 lbs/acre at 12-inch depth

Pesticides:

Watermelon

- Diseases---Bravo[®], Inspire Super[®], Pristine[®], Monsoon[®], Tanos[®]
- Insects and Mites---Assail[®], Portal[®]

Cantaloupe

- Diseases---Bravo[®], Inspire Super[®], Pristine[®], Monsoon[®], Rally[®], and Tanos[®]
- Insects and Mites---Admire Pro[®], Assail[®], Portal[®]

❖ Spacing

- Triploid watermelon: 4' in-row spacing; 8' bed spacing; pollenizer 1:2 ratio. SP6
- Personal-size triploid watermelon: 2' in-row spacing, 6' bed spacing, pollenizers in one row of every three rows of personal-size triploid watermelons. Accomplice
- Cantaloupe: 2.5' in-row spacing, 6' bed spacing

❖ Experimental design

Randomized complete block design, 3 blocks

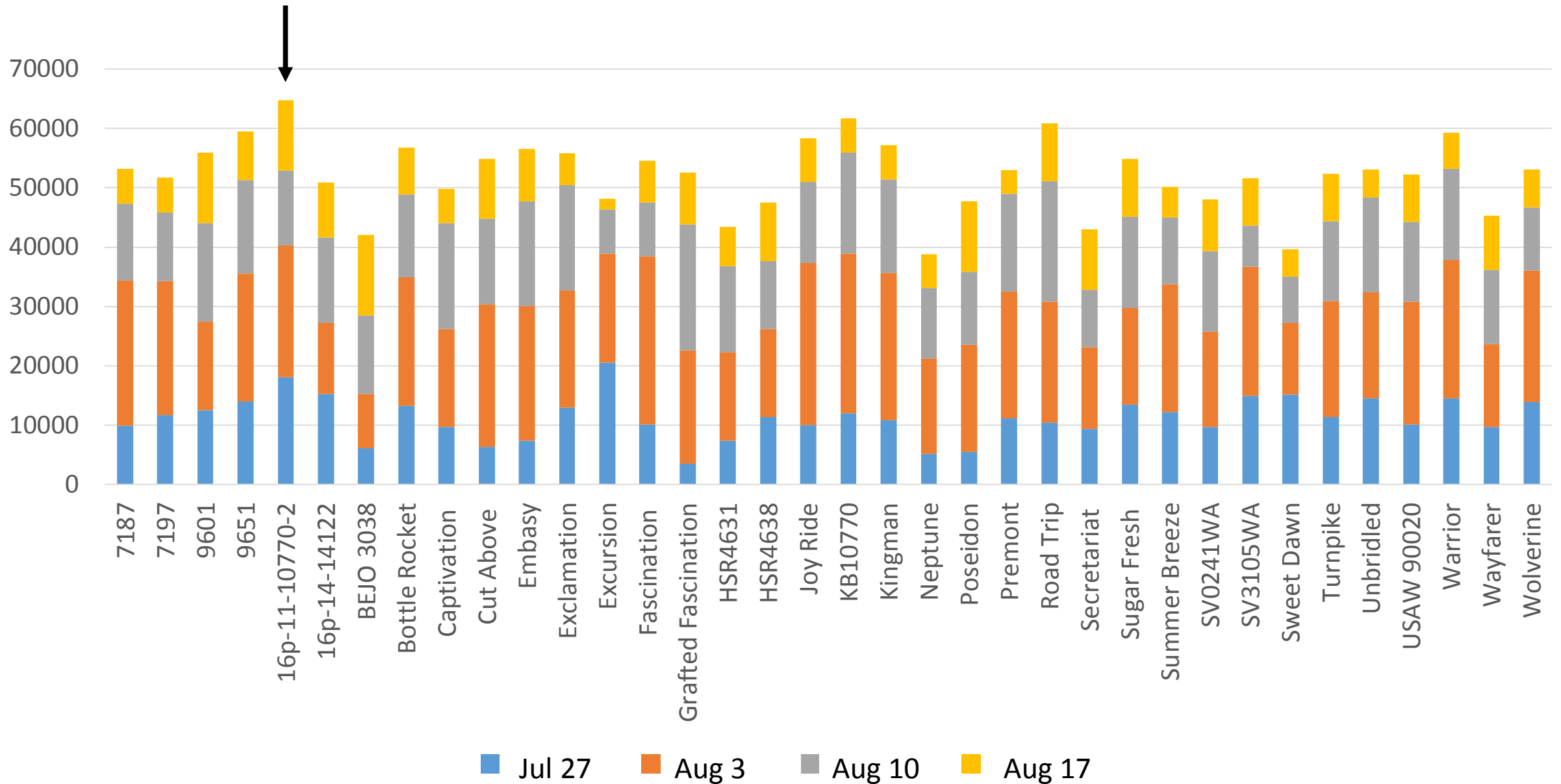
Plant number per variety per rep

| | |
|--------------------------|----|
| Triploid watermelon | 12 |
| Personal-size watermelon | 18 |
| Cantaloupe | 20 |

Triploid Watermelon



Yield of Triploid Watermelons at Different Harvest Dates in 2017 Variety trial (lb/A)



16p-11-10770-2 (Red Amber)

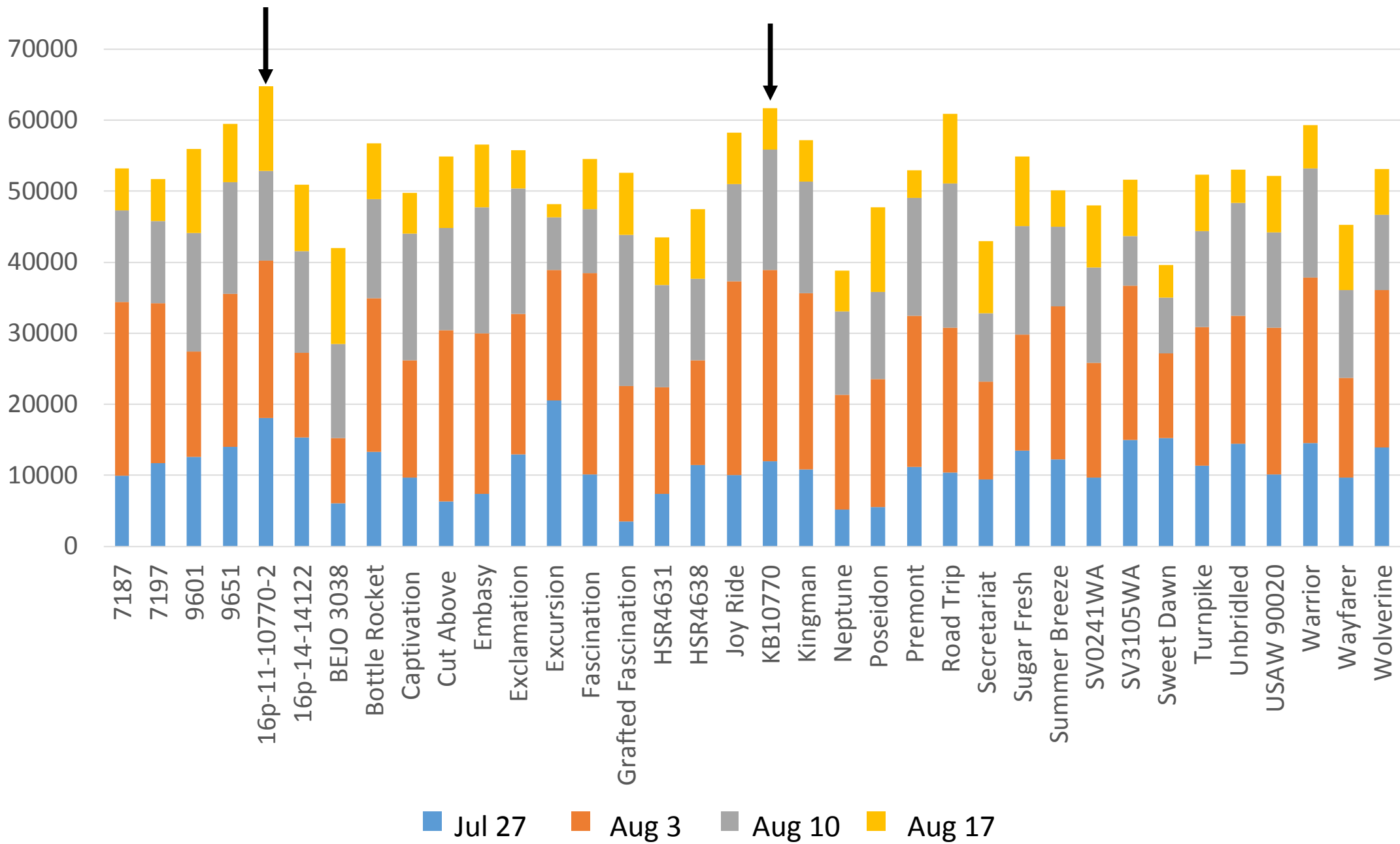


- Company: Enza Zaden
- Yield: 64,792 lb/A (1/37)
- Earliness: 18,090 lb/A (2/37)

• Size:

| Variety | < 9 lb | 9-13.5 lb (60 count) | 13.6-17.5 lb (45 count) | 17.6-21.4 lb (36 count) | > 21.5 lb (30 count) |
|----------------|--------|-------------------------|----------------------------|----------------------------|-------------------------|
| 16p-11-10770-2 | 1.89 | 22.64 | 41.51 | 22.64 | 11.32 |

- Brix: 10.3 (32/37)
- Firmness: 4.28 (8/37)



KB10770

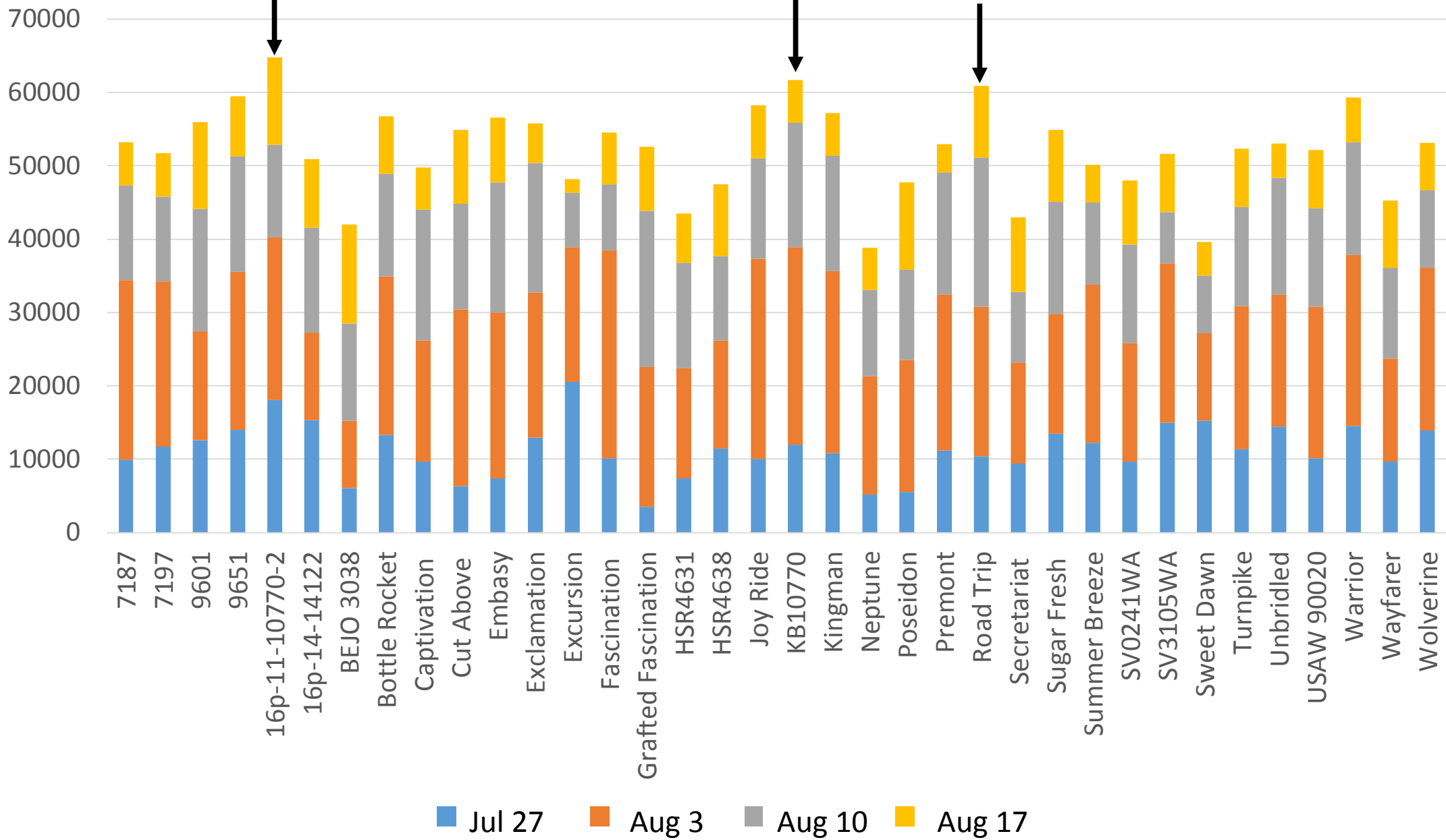


- Company: K & B Development
- Yield: 61,672 lb/A (2/37)
- Earliness: 12,024 lb/A (16/37)

• Size:

| Variety | < 9 lb | 9-13.5 lb (60 count) | 13.6-17.5 lb (45 count) | 17.6-21.4 lb (36 count) | > 21.5 lb (30 count) |
|---------|--------|-------------------------|----------------------------|----------------------------|-------------------------|
| KB10770 | 0 | 20.41 | 36.73 | 32.65 | 10.20 |

- Brix: 10.72 (14/37)
- Firmness: 4.54 (7/37)



Road Trip



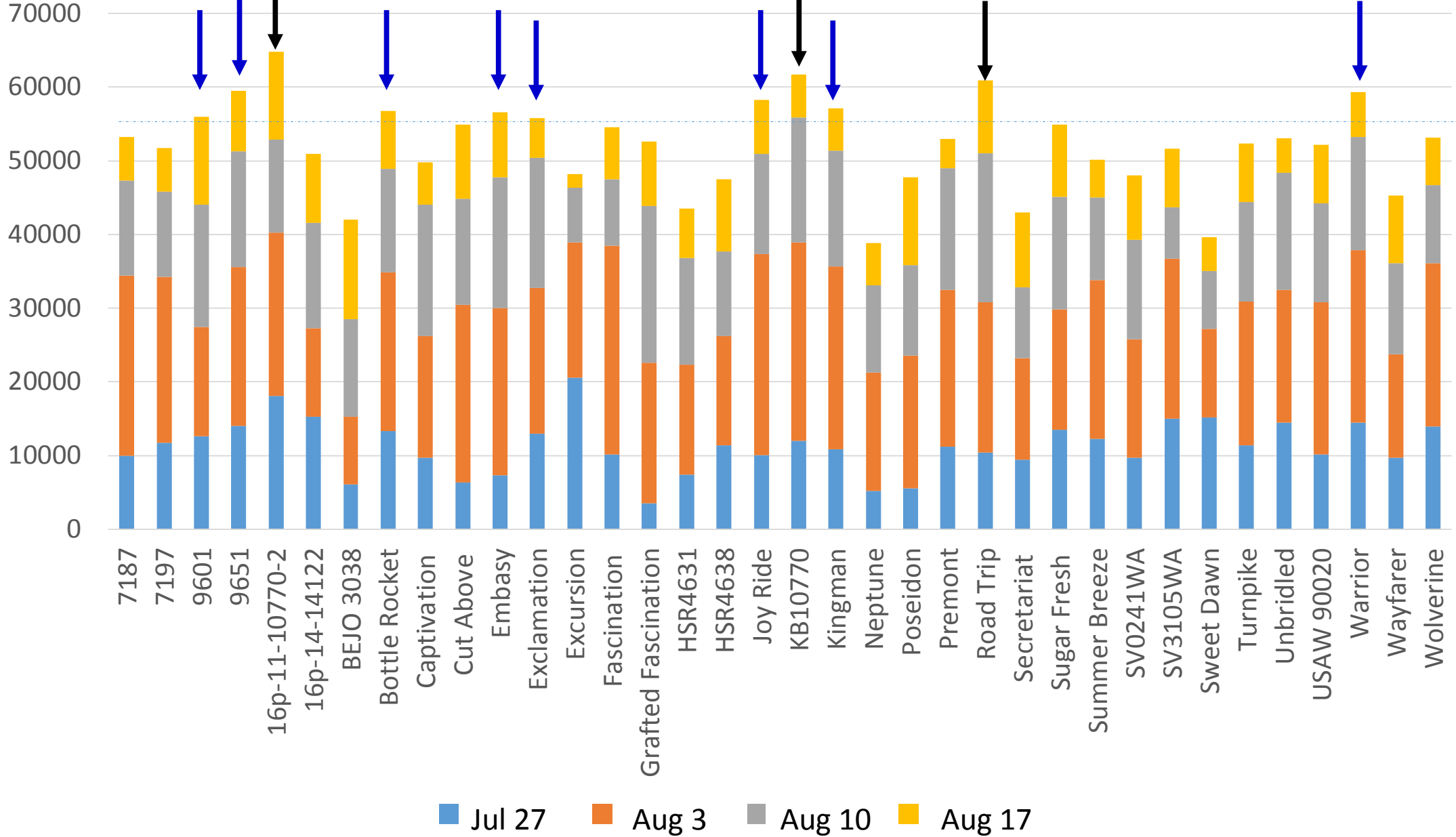
- Company: Seminis
- Yield: 60,914 lb/A (3/37)
- Earliness: 10,429 lb/A (22/37)

| Size: | Variety | < 9 lb | 9-13.5 lb (60 count) | 13.6-17.5 lb (45 count) | 17.6-21.4 lb (36 count) | > 21.5 lb (30 count) |
|-------|-----------|--------|-------------------------|----------------------------|----------------------------|-------------------------|
| | Road Trip | 0 | 39.45 | 39.45 | 15.60 | 5.5 |

- Brix: 10.44 (24/37)
- Firmness: 3.40 (31/37)

2016 Varsity trial: 34,418 lb/A (37/46), high sugar content

Varieties Yielded Above 55,000 lb/A



9651



9601



Wayfarer



- Company: Bayer
- Rind Pattern: Sugar baby, round to oval
- Yield:
 - 9651: 59,462 lb/A (4/37)
 - 9601: 55,969 lb/A (11/37)
- Size

| Variety | < 9 lb | 9-13.5 lb | 13.6-17.5 lb | 17.6-21.4 lb | > 21.5 lb |
|---------|--------|-----------|--------------|--------------|-----------|
| 9651 | 1 | 24.00 | 47.00 | 20.00 | 8.00 |
| 9601 | 1 | 36.36 | 37.37 | 22.22 | 3.03 |

- Brix:
 - 9651: 10.82 (10/37)
 - 9601 : 10.60 (20/37)

- Darker than 9651 and 9601
- Yield:
 - 2017: 45,277 lb/A (32/37)
 - 2016: 49,614 lb/A (4/46)
- Size: smaller, 52.14% < 13.5 lb

Warrior



- Company: Bayer
- Yield:
 - 2017: 59,290 lb/A (5/37)
 - 2016: 47,291 lb/A (12/46)
- Earliness:
 - 2017: 14,509 lb/A (6/37)
 - 2016: 7,243 lb/A (4/46)

Joy Ride



- Company: Seminis
- Yield:
 - 2017: 58,290 lb/A (6/37)
 - 2016: 36,217 lb/A (34/46)

Kingman



- Company: Sakata
- Yield:
 - 2017: 57,155 lb/A (7/37)
 - 2016: 43,322 lb/A (19/46)
- Uniform fruit size 61.22% in 45 count

Bottle Rocket



- Company: Seminis
- Yield:
2017: 56,776 lb/A (8/37)

Embassy



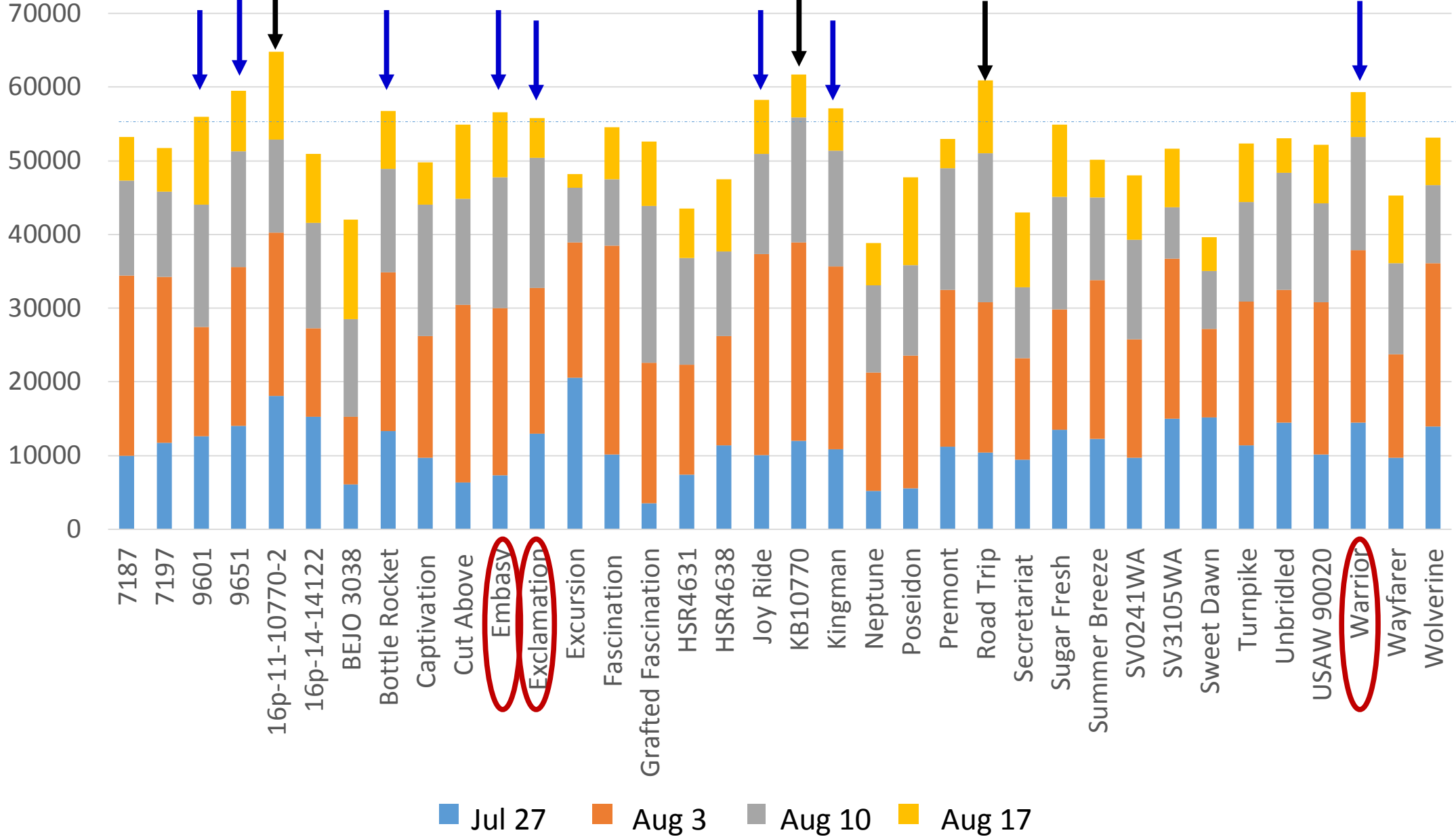
- Company: Bayer
- Yield:
2017: 56,591 lb/A (9/37)
2016: 47,347 lb/A (11/46)

Exclamation



- Company: Syngenta
- Yield:
2017: 55,804 lb/A (10/37)
2016: 47,852 lb/A (8/46)
- Size: 35.16% in 36 and 30 count

Varieties Yielded Above 55,000 lb/A



Early Maturing Varieties (>14,000 lb/A in first harvest)

Excursion



Moderate yield in 2017, high yield in 2016. 50% fruit 36 count or larger

16p-11-10770-2



High yield

16p-14-14122



Moderate yield, 47% 60 count

Sweet Dawn



Low yield, thin skin

SV3105WA



Moderate yield

Warrior



High yield

Unbridled



Moderate high yield, high Brix

Charismatic



Moderate yield

Quality

Poseidon



Highest Brix in 2017 (11.39) and 2016 (12.91); moderate low yield; flesh firmness low; majority 60 count (9-13.5 lb)

Premont



Firm flesh in 2017 and 2016. High yield in 2016, moderate high yield in 2017. 45-36 count

Personal Size Triploid Watermelon





| Personal-size triploid watermelon Variety | Weight (lb) per acre | | Number of fruit per acre | | Average fruit weight (lb) | |
|-------------------------------------------|----------------------|----------------|--------------------------|----|---------------------------|---|
| Belmont | 52,967 | c ^z | 5,344 | b | 9.91 | a |
| Extazy | 66,167 | a | 7,865 | ab | 8.41 | b |
| Ladybelle | 51,745 | d | 7,613 | ab | 6.84 | c |
| Mini Bee | 58,077 | b | 8,268 | a | 7.03 | c |

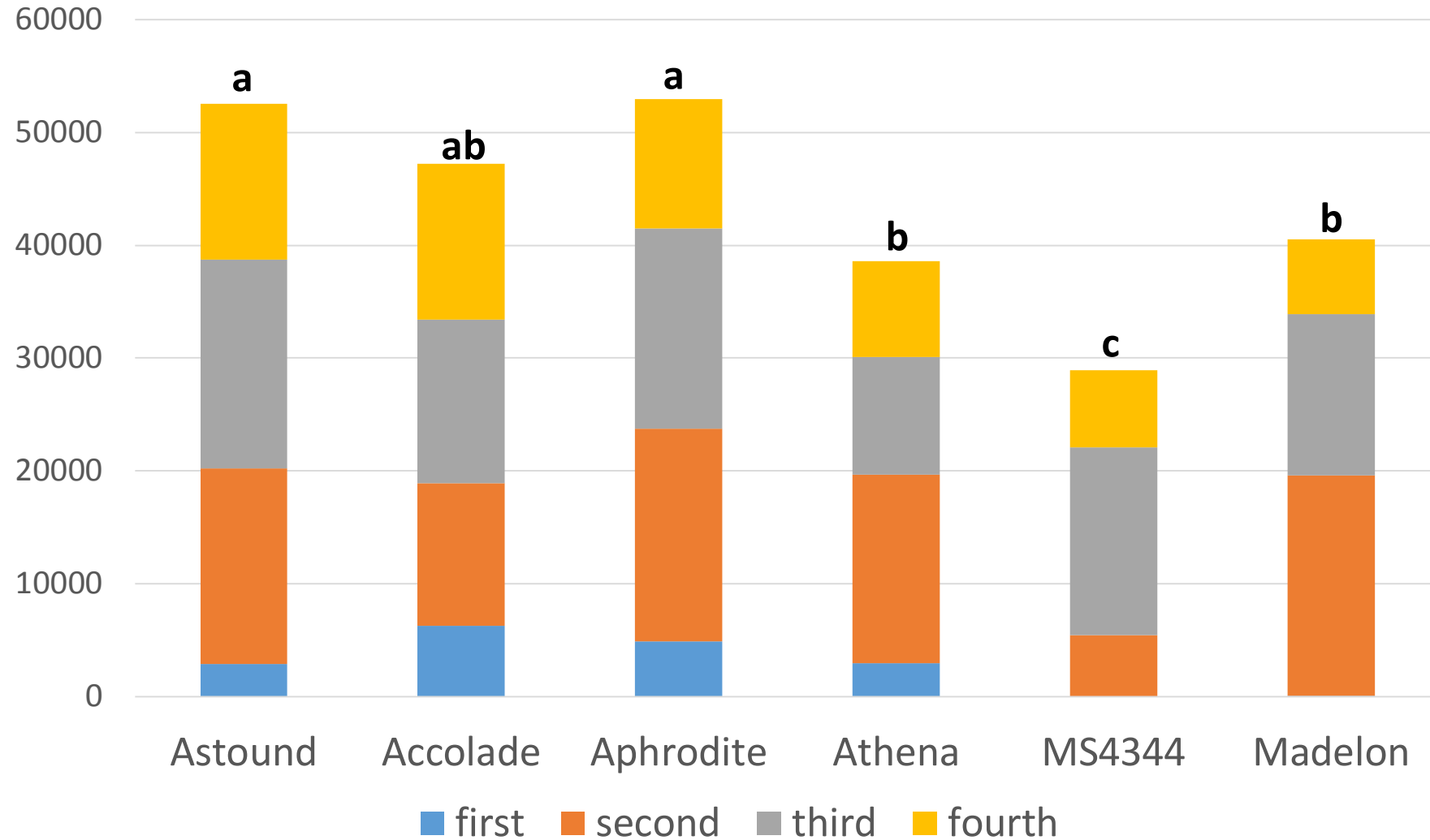
| Personal-size triploid watermelon Variety | < 4 lb | 4-6 lb | 6-8 lb | 8-10 lb | 10-12 lb | > 12 lb |
|-------------------------------------------|--------|--------|--------|---------|----------|---------|
| Belmont | 0 | 4.72 | 21.70 | 27.36 | 26.41 | 19.81 |
| Extazy | 0.64 | 6.4 | 39.10 | 39.74 | 9.61 | 4.48 |
| Ladybelle | 1.32 | 35.76 | 39.07 | 18.54 | 5.29 | 0 |
| Mini Bee | 1.83 | 24.39 | 47.56 | 22.56 | 3.05 | 0.61 |

| Personal-size triploid watermelon Variety | Length (cm) | | Width (cm) | | Rind thickness (cm) | | Total soluble solids (°Brix) | | Firmness (lbs-force) | | Hollow heart ^z | Black seeds | |
|-------------------------------------------|-------------|---|------------|---|---------------------|---|------------------------------|----|----------------------|---|---------------------------|-------------|---|
| Belmont | 23.52 | a | 21.02 | a | 1.77 | a | 9.24 | c | 5.06 | a | 0 | 0.42 | a |
| Extazy | 22.16 | a | 20.34 | a | 1.67 | a | 10.86 | ab | 6.12 | a | 0.17 | 0.50 | a |
| Ladybelle | 19.90 | b | 18.65 | b | 1.34 | b | 11.51 | a | 3.55 | b | 0 | 0.42 | a |
| Mini Bee | 19.33 | b | 18.02 | b | 1.32 | b | 10.11 | bc | 2.99 | b | 0 | 0.47 | a |

Muskmelon and Honeydew



Yield of Melon Varieties at Different Harvest Dates in 2017 Variety trial (lb/A)



Astound



**Average
fruit weight**

5.29 lb

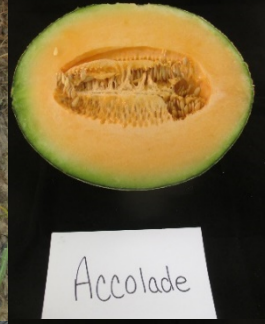
**Flesh
firmness**

4.09

Brix

9.32

Accolade



5.39 lb

4.11

9.50

Aphrodite

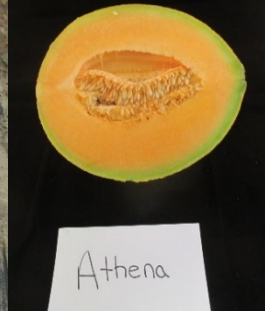


6.72 lb

3.26

10.56

Athena



4.96 lb

2.48

9.62

**Flesh
firmness**

Brix

Madelon



5.37

11.42

MS 4344



7.47

11.49

