



UC DAVIS STRAWBERRY BREEDING PROGRAM
DAY-NEUTRAL CULTIVAR ADVANCEMENT
SANTA MARIA, CA
APRIL 27, 2022

Cultivar	2020 Total Marketable Fruit Yield		2021 Total Marketable Fruit Yield		Percent Marketable Fruit	Yield Increase Over Monterey
	g/plant	trays/acre*	g/plant	trays/acre*		
16C108P060	1,718 ab	9,762	1,745 de	9,914	75-83%	+ 12-21%
17C121P097	1,751 ab	9,946	2,573 ab	14,616	77-84%	+ 23-66%
17C139P045	1,807 ab	10,265	2,197 c	12,481	73-86%	+ 27-41%
17C138P062	1,935 a	10,994	2,181 c	12,391	71-78%	+ 36-40%
17C242P023	NA	NA	2,852 a	16,202	85%	+ 84%
UCD_Valiant	1,985 a	11,275	2,358 bc	13,398	78-86%	+ 39-52%
UCD_Royal_Royce	1,759 ab	9,992	2,048 cd	11,632	78-81%	+ 23-32%
UCD_Victor	1,579 ab	8,971	2,047 cd	11,629	70-86%	+ 11-32%
Monterey	1,424 b	8,092	1,554 e	8,827	77-84%	

TABLE 1. Cumulative marketable yield for five day-neutral experimental cultivars (16C108P060, 17C121P097, 17C139P045, 17C138P062 & 17C242P023) compared to four commercial checks (UCD Valiant, UCD Royal Royce, UCD Victor and Monterey) tested in Nipomo, CA in 2020 and 2021 from April to August.

Values followed by different letters indicate significant statistical differences ($\alpha=0.05$)

*Calculations made based on a planting density of 20,633 plants/acre

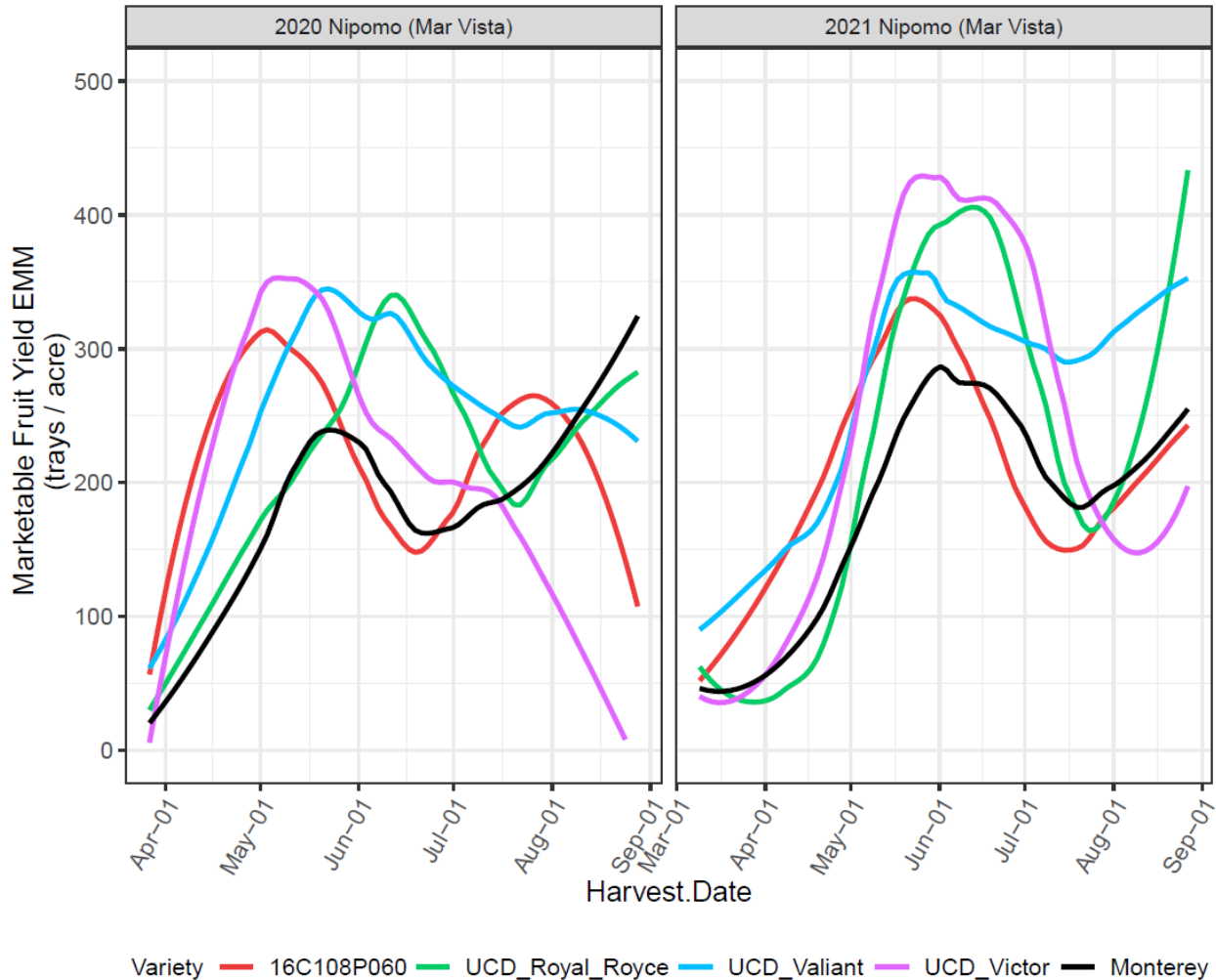


FIGURE 1. Marketable yields in trays/acre of 16C108P060 compared to UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Nipomo, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- Cumulative marketable yield of 16C108P060 was 12-21% higher than Monterey in 2020-2021.
- Starts producing early. Broad adaptability and good yield performance in different testing regions of California (Santa Maria, Watsonville & Oxnard).
- 16C108P060 is moderately resistant to verticillium, phytophthora and fusarium.
- Fruit has good brix levels ($\approx 8.6\%$) and firmness (≈ 314 gf).

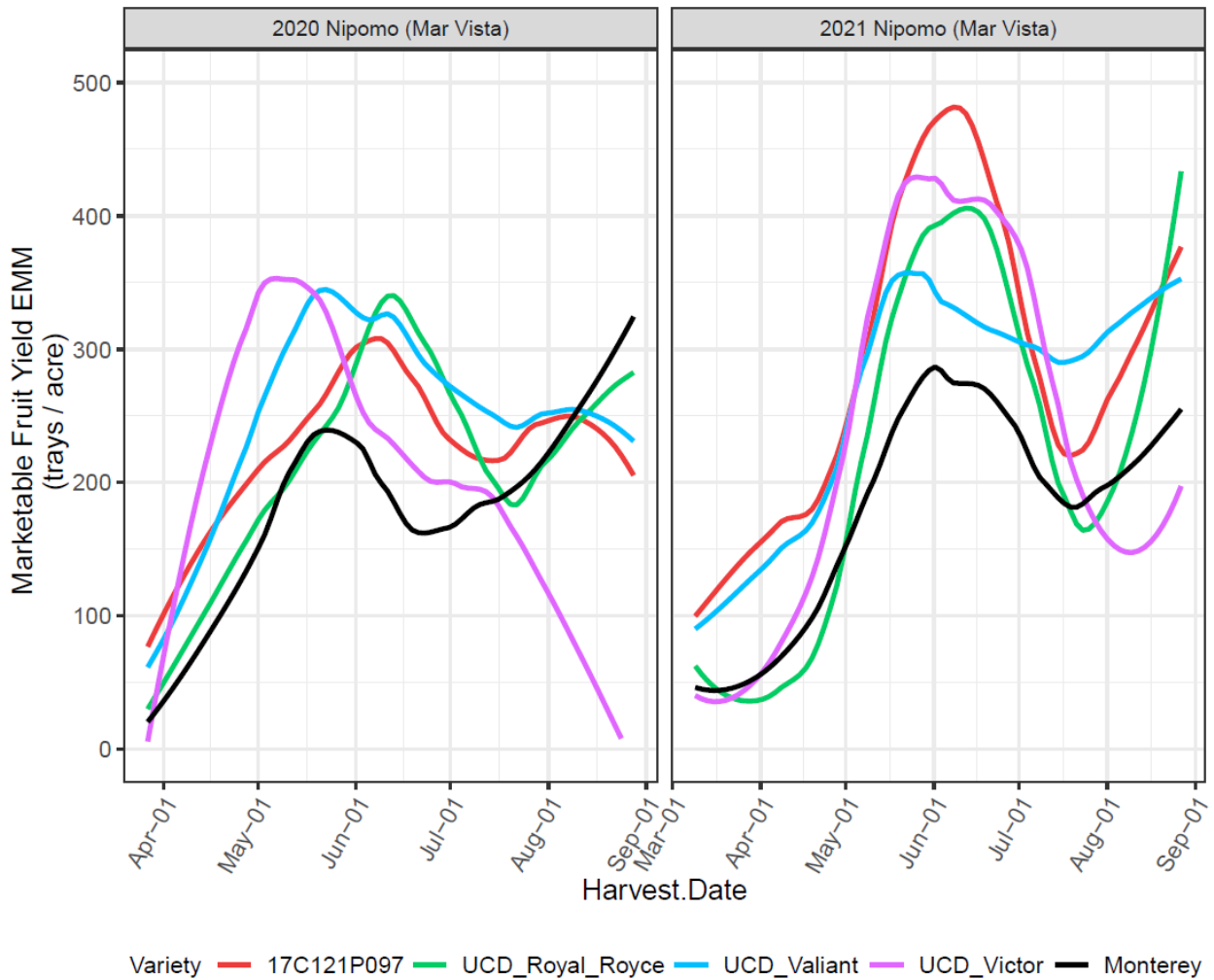


FIGURE 2. Marketable yields in trays/acre of 17C121P097 compared to UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Nipomo, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- Good yield performance. Cumulative marketable yield of 17C121P097 was 23-66% higher than Monterey in 2020-2021
- 17C121P097 is resistant to fusarium and moderately resistant to phytophthora.
- 17C121P097 has comparable fruit size (≈ 27 g) and firmness (≈ 296 gf) to Monterey.

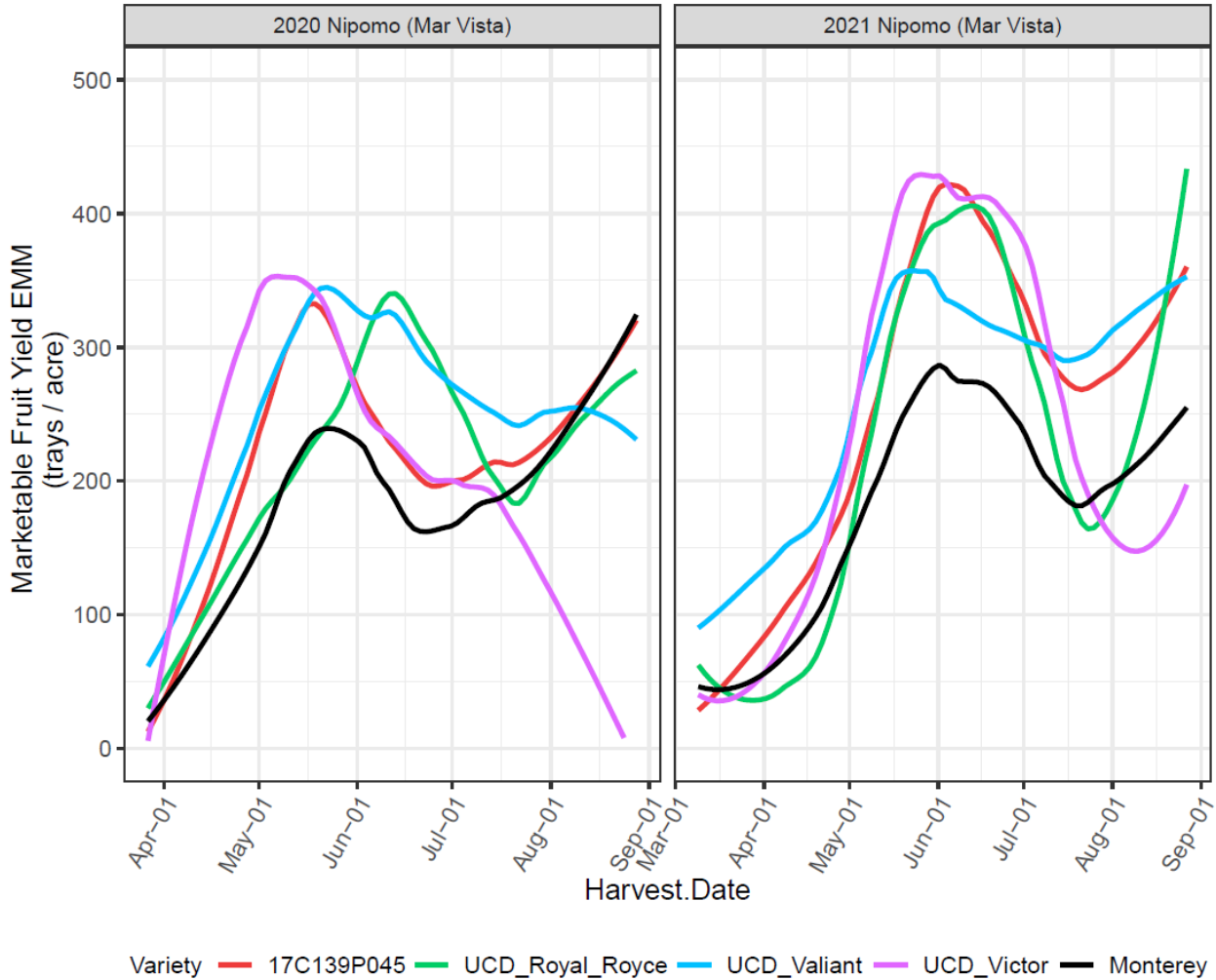


FIGURE 3. Marketable yields in trays/acre of 17C139P045 compared to UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Nipomo, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- Cumulative marketable yield of 17C139P045 was about 27-41% higher than Monterey in 2020-2021.
- 17C139P045 is resistant to fusarium and moderately resistant to phytophthora and verticillium.
- Fruit has good brix levels ($\approx 8.2\%$) and good fruit firmness (≈ 333 gf).
- Potential for mechanical harvest production systems, long trusses.

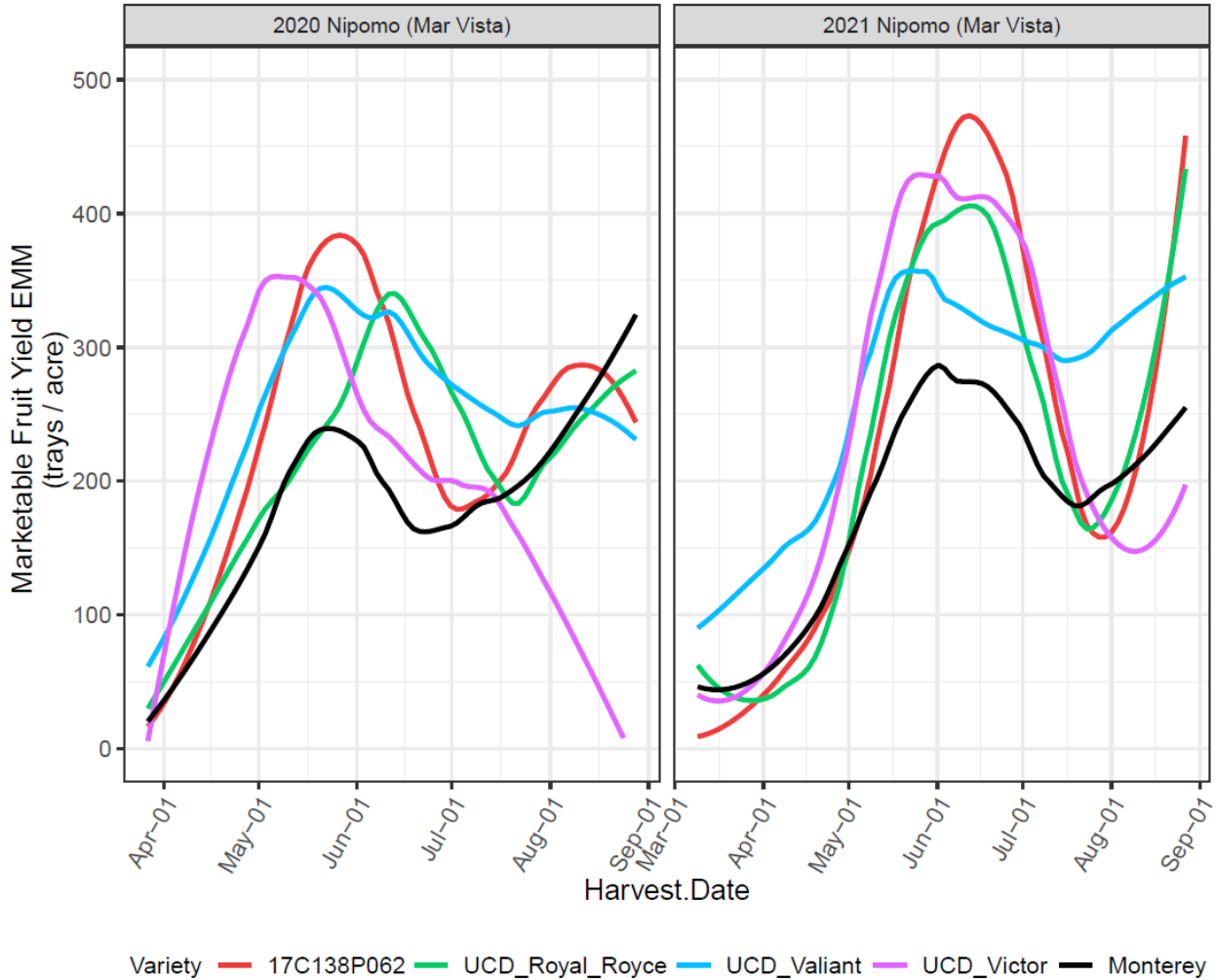


FIGURE 4. Marketable yields in trays/acre of 17C138P062 compared to UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Nipomo, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- Good yield performance in this region. Cumulative marketable yield of 17C138P062 was about 40% higher than Monterey in 2020-2021.
- 17C138P062 is resistant to fusarium and moderately resistant to phytophthora and verticillium.
- Good fruit brix levels ($\approx 8.2\%$).

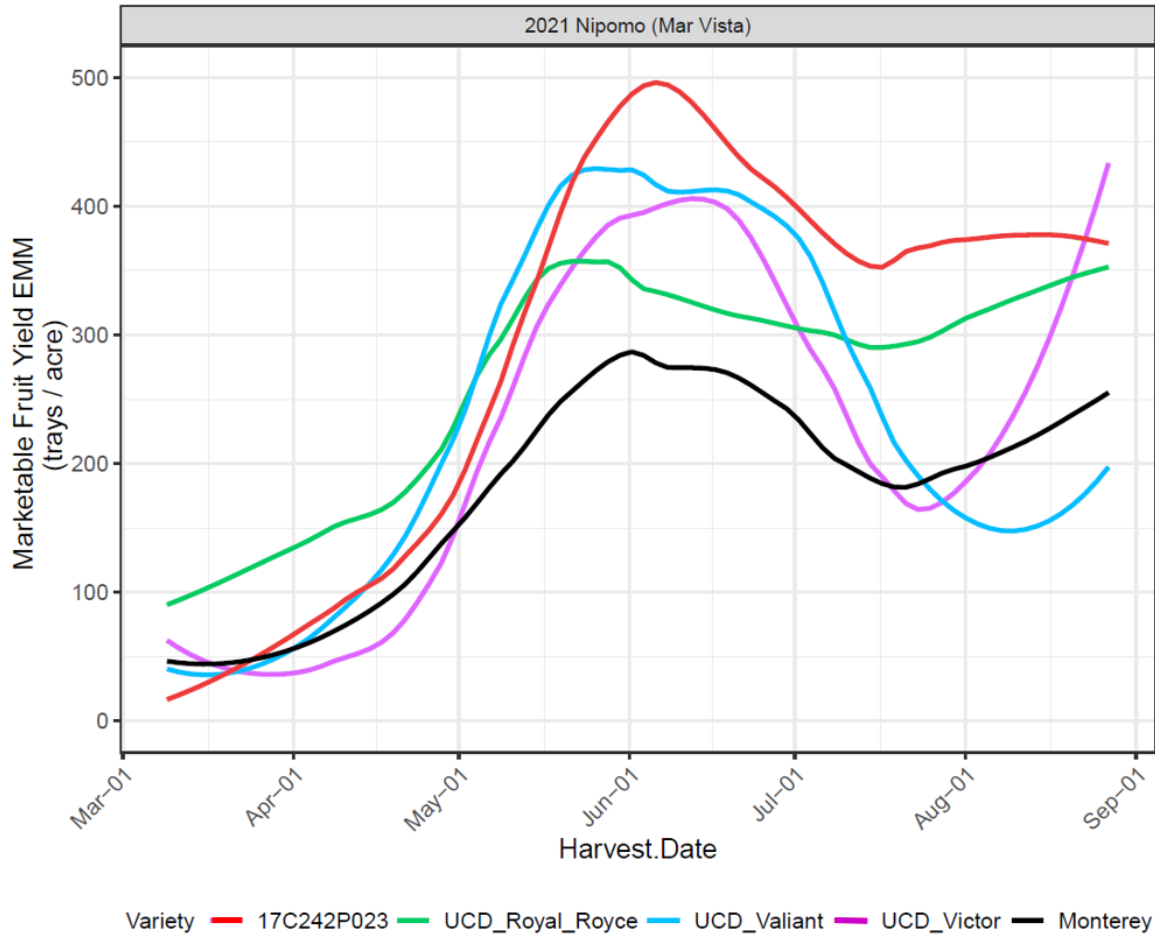


FIGURE 5. Marketable yields in trays/acre of 17C242P023 compared to UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Nipomo, CA in 2021 through the fall plant harvest season (April to August).

- Great yield potential for both, fall and summer plant production systems. Cumulative marketable yield of 17C242P023 in this region was over 80% higher than Monterey in 2021.
- 17C242P023 is resistant to fusarium and moderately resistant to phytophthora and verticillium.
- 17C242P023 has outstanding fruit size and good fruit firmness (≈ 333 gf).

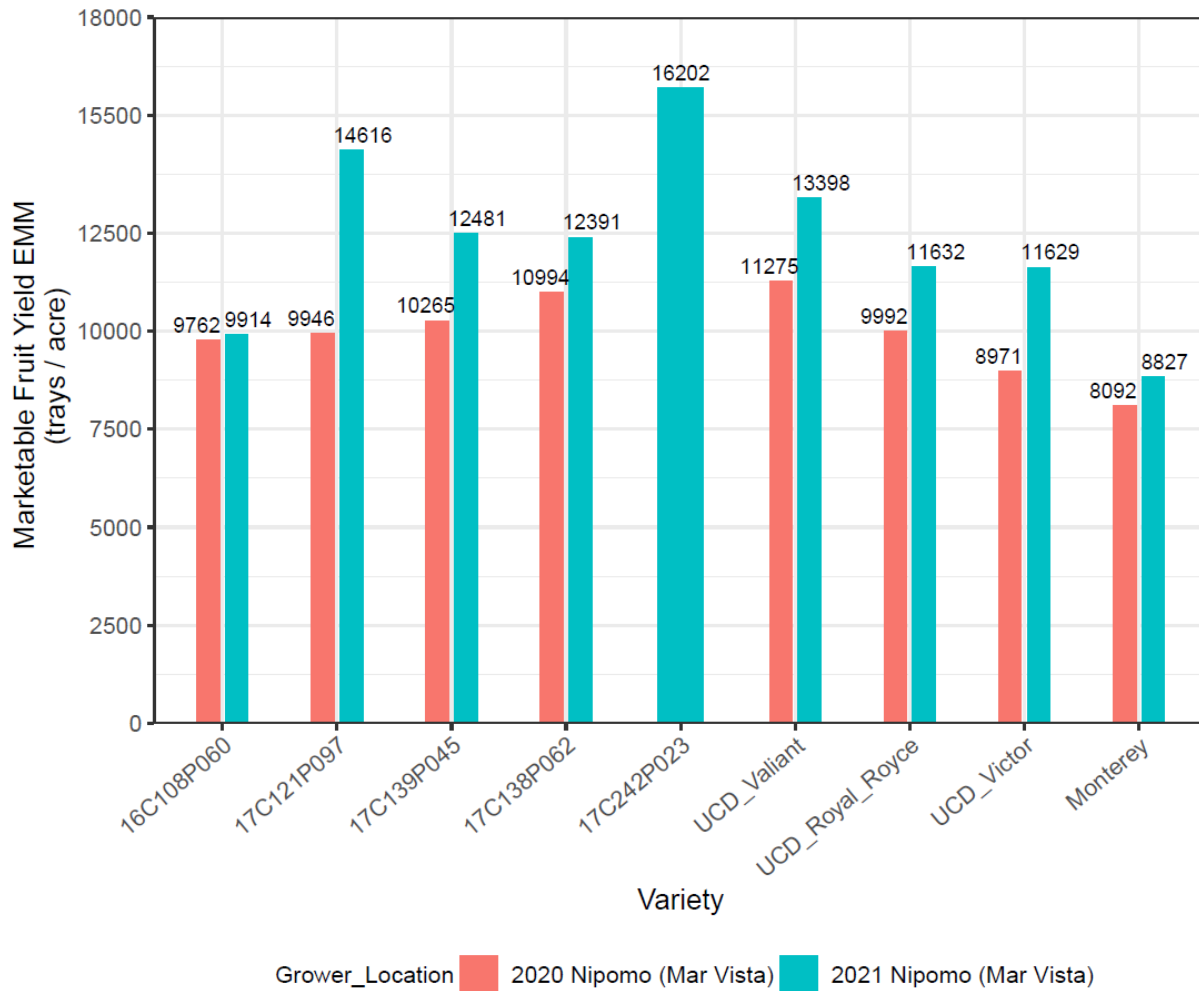


FIGURE 6. End of season cumulative yield (trays/acre) of selections 16C108P060, 17C121P097, 17C138P062, 17C139P045 & 17C242P023 compared to UCD Valiant, UCD Royal Royce, UCD Victor and Monterey tested during the harvesting season April-August of 2020 & 2021 in Nipomo, CA.

Cultivar	Firmness (gf)	Brix (%)	Brix/Acid	Fruit Size (g)	Verticillium Resistance	Phytophthora Resistance	Fusarium Resistance	Macrophomina Resistance
16C108P060	314	8.6	12.4	25.1	2	2	2	3
17C121P097	296	7.6	10.9	27.1	3	2	1	4
17C138P062	294	8.2	11.5	26.9	2	2	1	3
17C139P045	333	8.2	9.8	26.9	2	2	1	3
17C242P023	333	7.7	10.7	33.0	2	2	1	4
Monterey	280	9.2	12.4	28.3	3	3	4	4
UCD_Royal_Royce	401	7.8	10.2	27.4	3	2	4	3
UCD_Valiant	340	7.1	9.1	30.6	2	2	4	3
UCD_Victor	328	7.9	11.0	28.5	3	2	1	3

1	Resistant
2	Moderately Resistant
3	Moderately Susceptible
4	Susceptible

TABLE 2. Average firmness, brix, brix/acid ratio, fruit size measured in the 2020 and 2021 harvest seasons in Nipomo, CA. Evaluations were made in peak (May-June) and late (July-August) season. Disease resistance scores were collected from annual disease trials performed at the Cal Poly Strawberry Center and UC Davis.

Additional information about disease resistance and seasonal yields from released UC cultivars, can be found at the California Strawberry Commission website at Production research > Breeding Dashboard:

<https://www.calstrawberry.com/en-us/>