



UC DAVIS STRAWBERRY BREEDING PROGRAM
DAY-NEUTRAL CULTIVAR ADVANCEMENT
PRUNEDALE, CA
JUNE 1, 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	3,383 a	15,647	3,473 bc	16,065	81-86%	+ 14-48%
17C138P062	3,227 a	14,925	3,626 ac	16,772	83-85%	+ 19-41%
17C139P045	3,224 a	14,913	3,869 ab	17,895	84-88%	+ 27-41 %
17C121P097	3,459 a	15,999	4,202 a	19,434	79-90%	+ 38-51%
17C242P023	NA	NA	4,065 ab	18,801	90%	+ 33%
UCD_Royal_Royce	3,164 a	14,636	4,030 ab	18,643	88-91%	+ 32-38%
UCD_Moxie	3,263 a	15,092	3,969 ab	18,359	89-92%	+ 30-42%
UCD_Valiant	2,560 b	11,842	3,744 ab	17,318	69-79%	+ 12-23%
UCD_Victor	1,954 c	9,040	2,741 d	12,680	69-81%	- 10-15%
Monterey	2,293 bc	10,606	3051 cd	14,115	82-89%	

TABLE 1. Cumulative marketable yield for five day-neutral experimental cultivars (16C108P060, 17C138P062, 17C139P045, 17C121P097 & 17C242P023) compared to five commercial checks (UCD Royal Royce, UCD Moxie, UCD Valiant, UCD Victor and Monterey) tested in Prunedale, 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 16,800 plants/acre

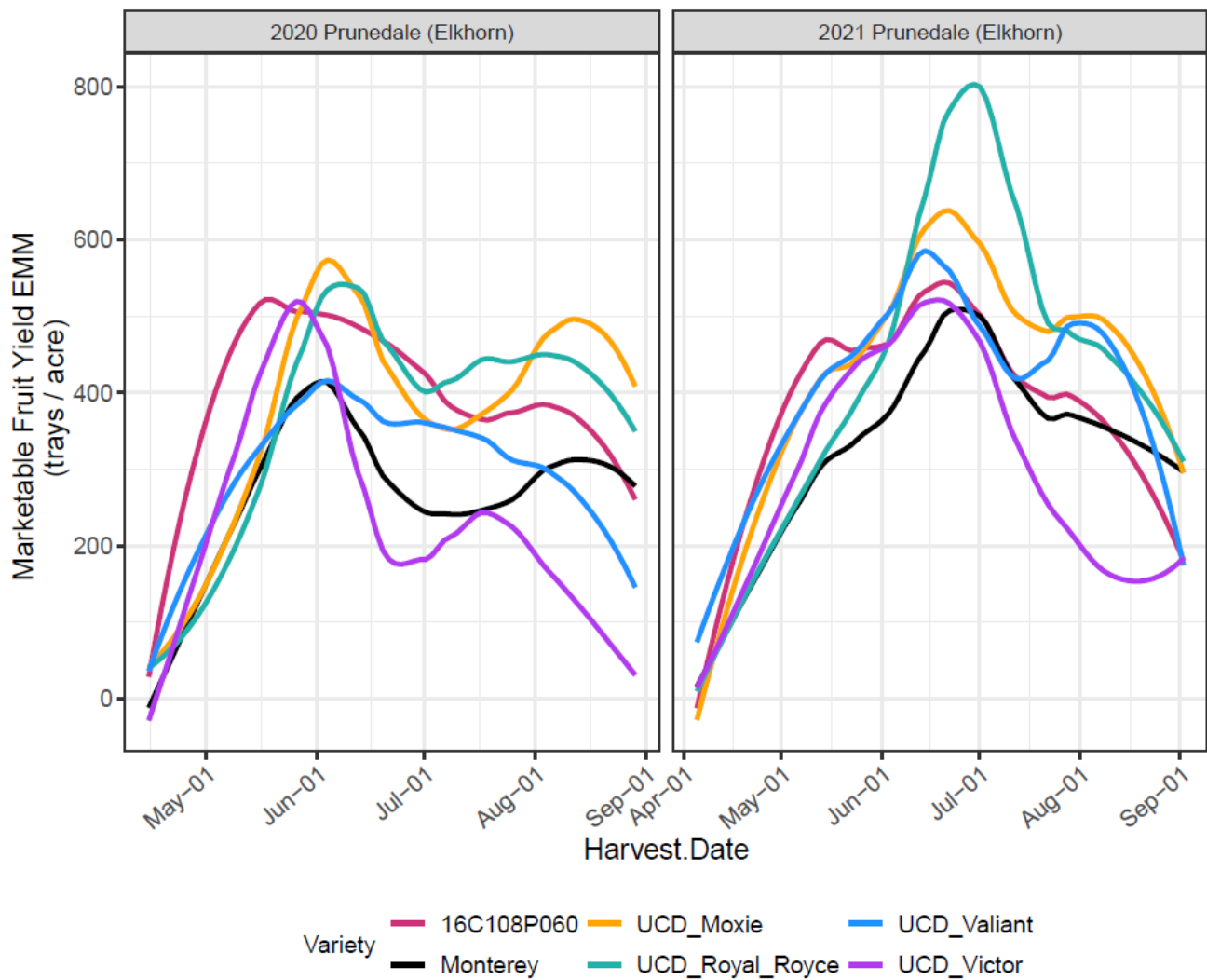


FIGURE 1. Marketable yields in trays/acre of 16C108P060 compared to UCD Moxie, UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Prunedale, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- Cumulative marketable yield of 16C108P060 was 14-48% 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 (8.0%) and higher firmness than Monterey (≈280gf).

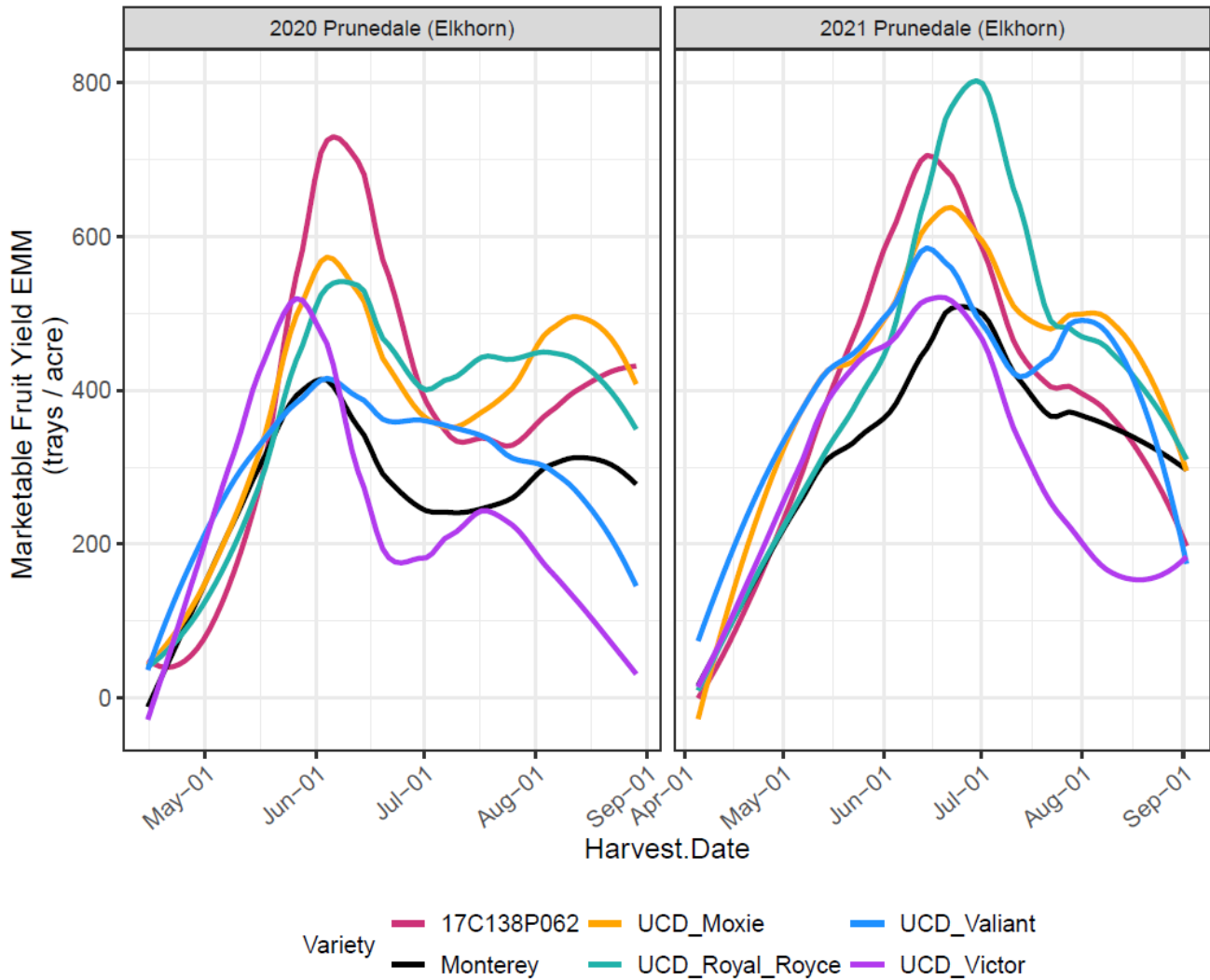


FIGURE 2. Marketable yields in trays/acre of 17C138P062 compared to UCD Moxie, UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Prunedale, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- Good yield performance in this location. Cumulative marketable yield of 17C138P062 was about 19-41% higher than Monterey in 2020-2021.
- 17C138P062 is resistant to fusarium and moderately resistant to phytophthora and verticillium.
- Good fruit brix levels ($\approx 8.1\%$) and comparable firmness to Monterey ($\approx 224\text{gf}$).

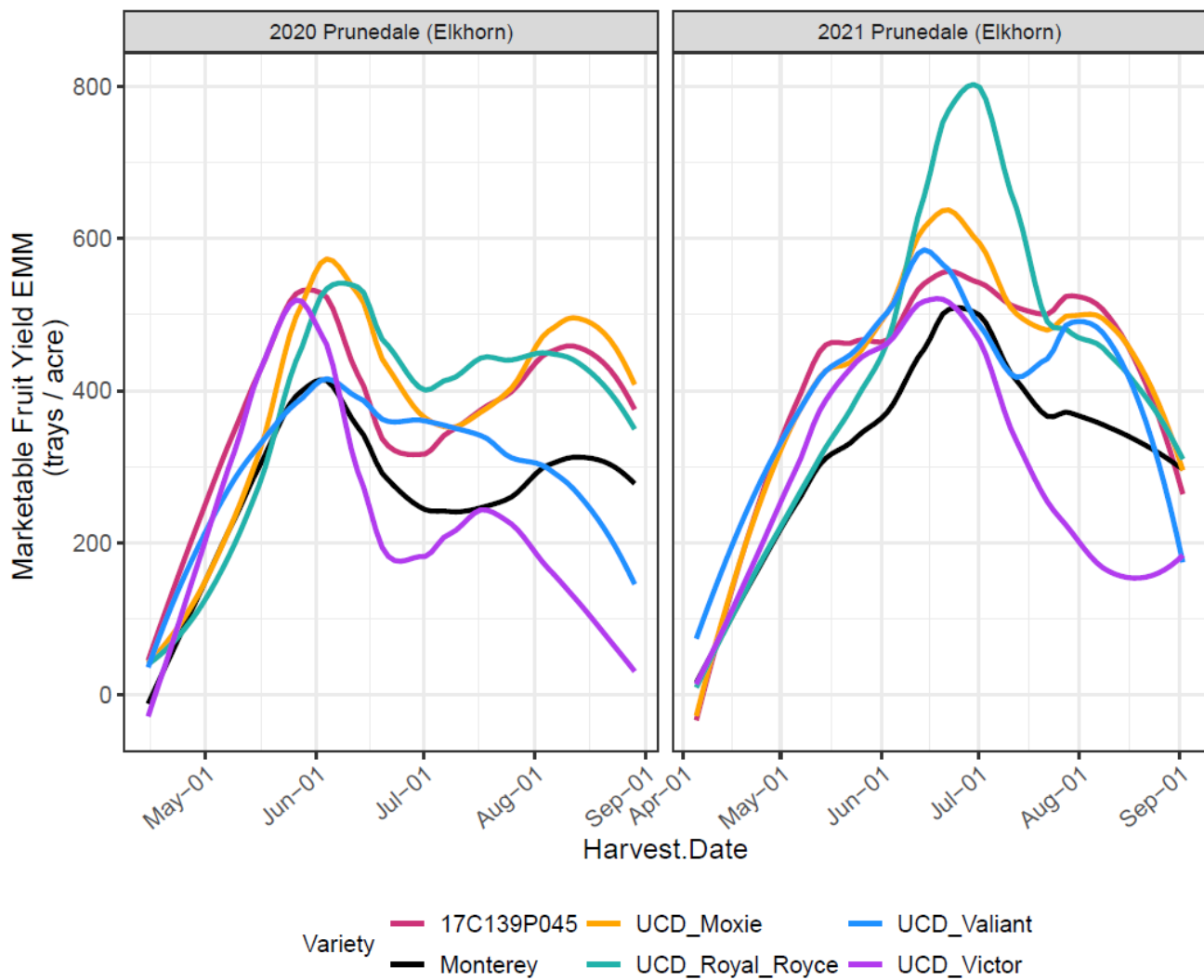


FIGURE 3. Marketable yields in trays/acre of 17C139P045 compared to UCD Moxie, UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Prunedale, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- 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 fruit firmness (≈ 287 gf), higher than Monterey.
- Potential for mechanical harvest production systems, long trusses.

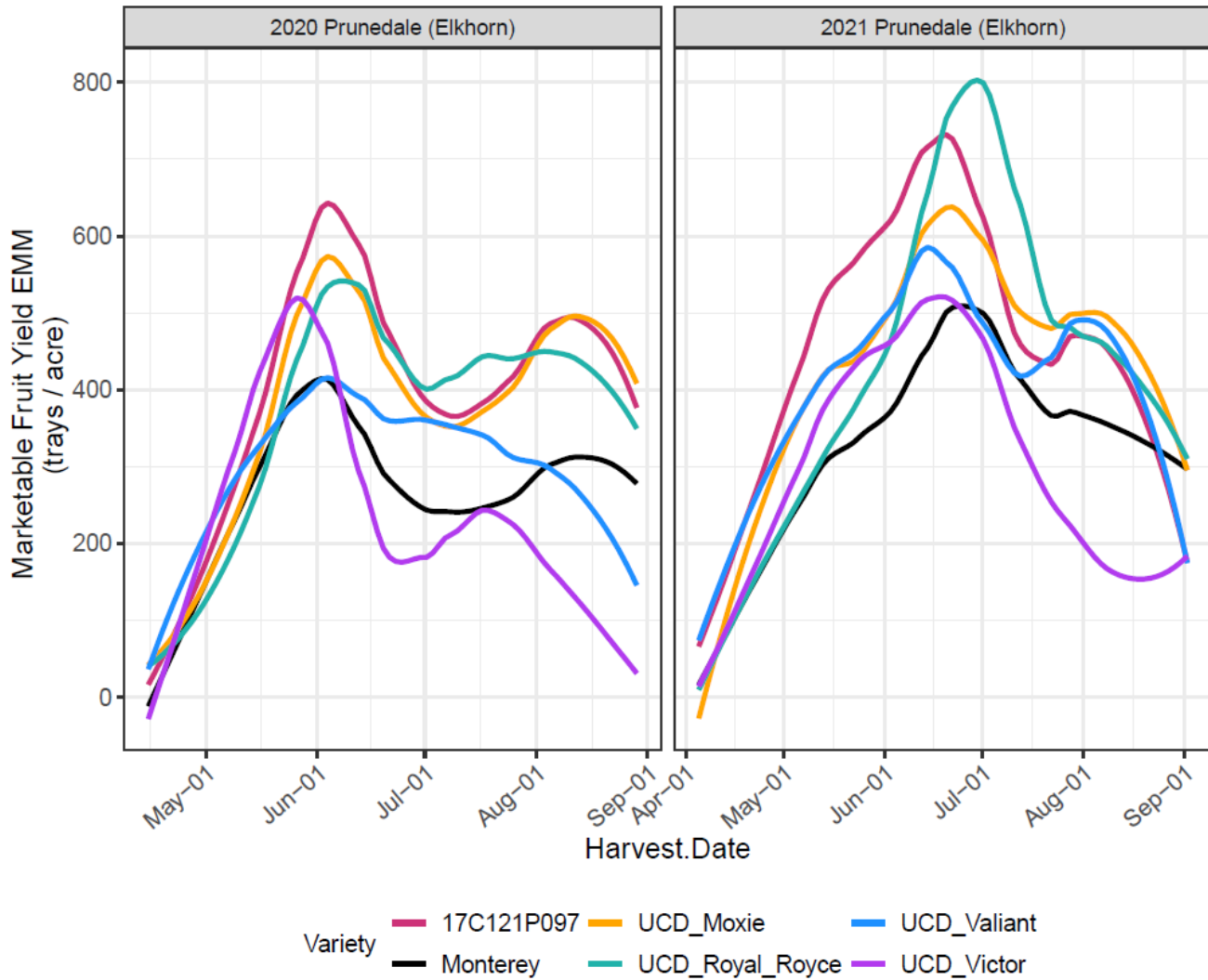


FIGURE 4. Marketable yields in trays/acre of 17C121P097 compared to UCD Moxie, UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Prunedale, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- Very good yield performance in this location. Cumulative marketable yield of 17C121P097 was 38-51% higher than Monterey in 2020-2021.
- 17C121P097 is resistant to fusarium and moderately resistant to phytophthora.
- 17C121P097 has better firmness (≈ 285 gf) than Monterey.

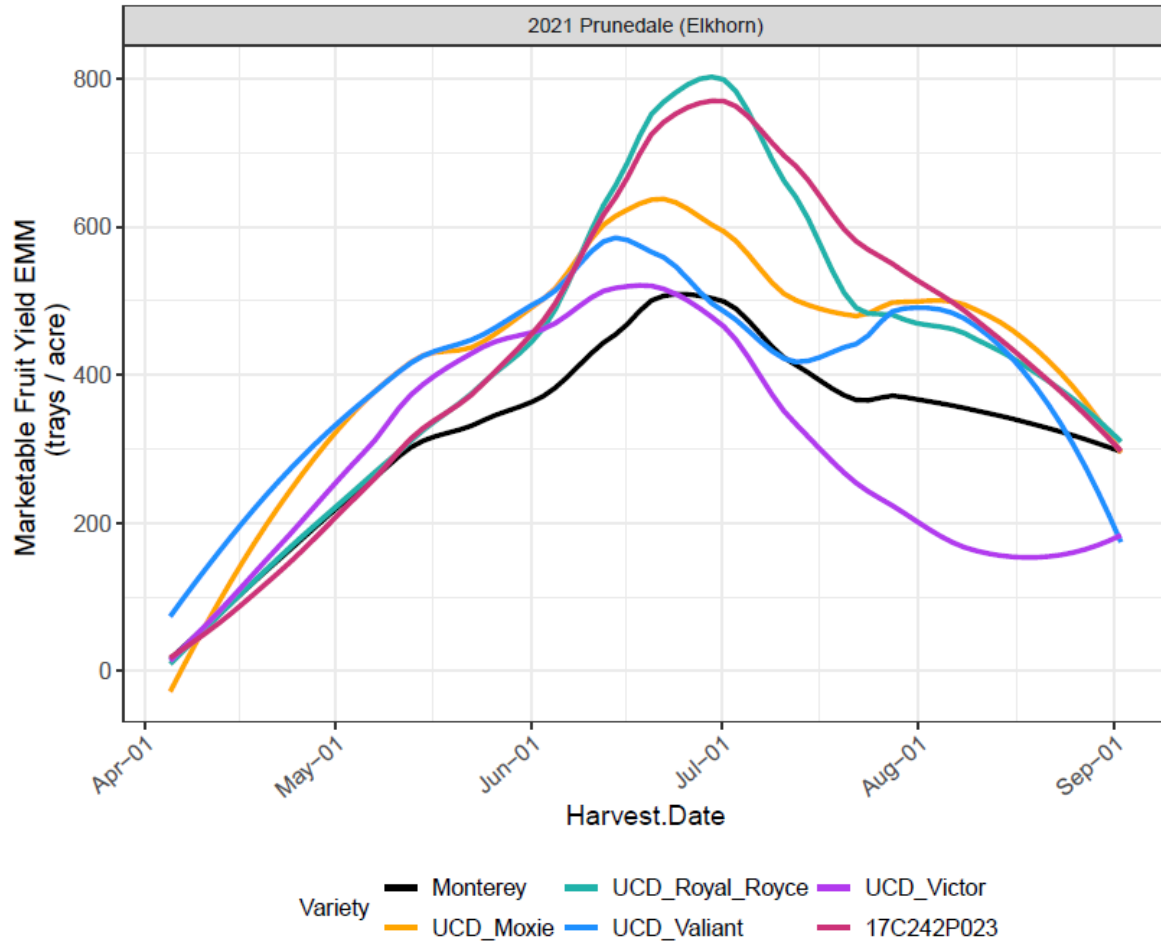


FIGURE 5. Marketable yields in trays/acre of 17C242P023 compared to UCD Moxie, UCD Royal Royce, UCD Valiant, UCD Victor and Monterey tested in Prunedale, CA in 2020 and 2021 through the fall plant harvest season (April to August).

- Great yield potential for both, fall and summer plant production systems. Performed very well in Santa Maria and Watsonville districts. Cumulative marketable yield of 17C242P023 in this location was over 30% higher than Monterey in 2021.
- 17C242P023 is resistant to fusarium and moderately resistant to phytophthora and verticillium.
- 17C242P023 has outstanding fruit size (37.8 g), superior to all checks and selections evaluated; and good fruit firmness (≈ 262 gf).

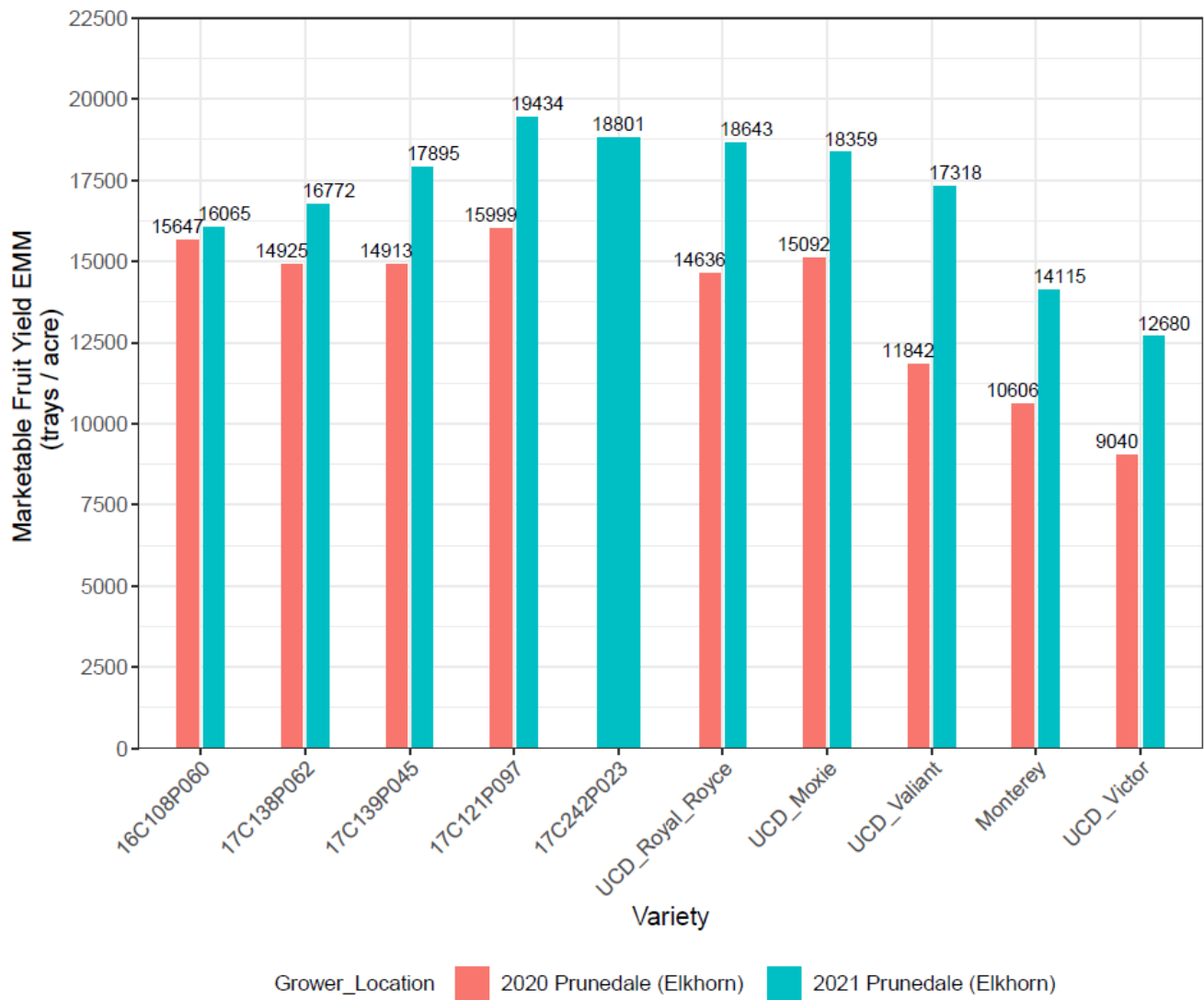


FIGURE 6. End of season cumulative yield (trays/acre) of selections 16C108P060, 17C138P062, 17C139P045, 17C121P097 & 17C242P023 compared to UCD Royal Royce, UCD Moxie, UCD Valiant, UCD Victor and Monterey tested during the harvesting season April-August of 2020 & 2021 in Prunedale, CA.

Cultivar	Firmness (gf)	Brix (%)	Brix/Acid	Fruit Size (g)	Verticillium Resistance	Phytophthora Resistance	Fusarium Resistance	Macrophomina Resistance
16C108P060	280	8.0	10.7	29.9	2	2	2	3
17C121P097	285	7.3	12.2	30.8	3	2	1	4
17C138P062	224	8.1	10.9	30.7	2	2	1	3
17C139P045	287	7.7	9.4	31.5	2	2	1	3
17C242P023	262	7.2	9.1	37.8	2	2	1	4
Monterey	245	8.7	11.6	32.2	3	3	4	4
UCD_Royal_Royce	360	7.1	9.5	31.5	3	2	4	3
UCD_Valiant	274	7.3	9.4	38.4	2	2	4	3
UCD_Victor	281	7.4	10.1	32.9	3	2	1	3
UCD_Moxie	373	7.3	10.8	34.3	2	3	1	4

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 Prunedale, CA. Evaluations were made in peak (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/>