

## UC Keystone Cultivar (2023 release)

This is a new day neutral cultivar from the UC Davis Strawberry breeding program. The initial breeding cross originated in 2017 and the selection 17C138P062 was made. It was subsequently tested as that number from 2019-2022. This cultivar is a mid to late-season day neutral variety with excellent post-harvest qualities.

UC Keystone produces equal to higher yields and % marketable fruit relative to UC's four main commercial day neutral cultivars (Monterey, Cabrillo, UCD Royal Royce, & UCD Valiant). Those four cultivars are all susceptible to Fusarium wilt whereas UC Keystone is resistant. It performs best in fall planted production systems, and it performs equally well when harvested with 400-600 chilling hours from high elevation nurseries and planted directly with no post-harvest chill versus plants given 10-17 days post-harvest chill. Fruit is firm which supports better post-harvest keeping qualities.

UC Keystone is resistant to Fusarium wilt (*Fusarium oxysporum*), moderately resistant to Verticillium wilt (*Verticillium dahlia*) and Phytophthora crown rot (*Phytophthora cactorum*), and moderately susceptible to Charcoal rot (*Macrophomina phaseolina*).

Nursery clone productivity for UC Keystone is equal or superior to that of Monterey, a well-known day neutral cultivar as a comparison.

### Performance of UC Keystone in advanced trials in Santa Maria and Prunedale 2020-2022 (Yield in lbs/acre harvested March-September)

Cultivar	2020 Nipomo Conv	2020 Prunedale Conv	2021 Nipomo Conv	2021 Prunedale Conv	2022 Nipomo Conv	2022 Prunedale Conv	Across Location Yields	Across Location Fruit Size (g/fruit)
UC Keystone	88,028	103,149	99,214	115,908	56,691	158,914	103,651	28
UCD Valiant	90,853	81,841	107,279	119,864	57,602	93,437	91,813	33
UCD Royal Royce	79,625	101,146	93,142	128,842	39,241	92,924	89,153	28.8
Monterey	64,797	73,300	70,682	97,456	69,976	152,127	88,056	29.7

**Disease Reaction of Royal Royce in trials at UC Davis and Cal-Poly SLO 2020-2022**

Cultivar	Verticillium Resistance	Phytophthora Resistance	Fusarium Resistance	Macrophomina Resistance
UC Keystone	2	2	1	3
UCD Royce	3	2	4	3
UCD Valiant	2	2	4	3
Monterey	3	3	4	4

Legend Acronym	Legend	Resistance Numerical Category
R	Resistant	1
MR	Moderate Resistance	2
MS	Moderate Susceptibility	3
S	Susceptible	4

**Fruit Quality Assessments in 2020-2022**

Cultivar	BRIX %	Firmness (g force)
UC Keystone	8.3	260
UCD Royal Royce	7.6	350
UCD Valiant	7.3	297
Monterey	8.8	239