

## 2024 Garbanzo Bean Variety Evaluation

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In 2024, UCCE began evaluating garbanzo varieties in Central Valley regional trials. In a San Joaquin County commercial field, we evaluated six advanced lines from the UC Davis garbanzo breeding program and two standard varieties (UC 27 and Sutter). The soil types at the trial site were Jacktone and Galt clays, and the soil temperature was approximately 63°F at the time of planting. Due to wet spring conditions, planting was delayed until March 15<sup>th</sup>. Each variety was planted across four 40-inch beds (two rows per bed), on an average plot length of 884 feet. Planting depth was 1.5 inches, and the seeding rate was approximately 85 pounds per acre. An industry-standard fungicide seed treatment was applied to the seed before planting. Fertility and pests were managed by the grower in the same manner as the field, where the field variety was UC 27 and the previous crop was silage corn. Preplant herbicides were applied (Goal, Dual, and Chateau), but otherwise, the field received no other pesticide or fertilizer inputs. The field was irrigated one time at flowering.

This was a non-replicated evaluation; therefore, no statistical analysis is presented (Table 1). Stand counts were made approximately two weeks after planting on April 9<sup>th</sup>. The stand was assessed as the number of plants per two-foot length. Twelve replicate counts were averaged. In early May, we observed that Sutter and advanced lines 102, 104, and 110 had slightly earlier flowering than UC 27 and advanced lines 94, 95, and 96. We are interested in knowing whether the advanced lines have tolerance to Fusarium wilt and Ascochyta blight, but no diseases were observed at this location.

We harvested on July 25<sup>th</sup>. The plots in their entirety were combined and weighed. At harvest, the grower observed that lines 104 and 110 had an upright growth habit that made them easier to harvest. We measured harvest moisture on three subsamples, which were averaged for the summary table below, and we evaluated 100-seed weight as a measure of seed size, averaging five subsamples.

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Table 1. 2024 garbanzo bean variety evaluation results, San Joaquin County.

Variety/Line	Stand Count (plants/ac)	100-seed Weight at Harvest (g)	Harvest Moisture (%)	Harvest Yield (lb/ac)
94	91476	36.4	6.9	1417
95	92565	39.7	7.0	1490
96	93654	40.5	7.1	1476
102	91476	38.3	7.0	1540
104	86031	37.0	6.7	1611
110	92565	41.8	6.9	1513
Sutter	91476	33.1	7.2	1281
UC 27	92565	34.1	7.3	1179