

Tomato cultivar performance against *F. falciforme* 2022

Cassandra Swett, Brenna Aegerter, Tom Turini, Amber Vinchesi-Vahl, AgSeeds

Performance of selected cultivars in replicated field trials conducted from 2019 through 2021 in fields infested with *Fusarium falciforme* (three trials at UC Davis Plant Pathology farm, four trials in Fresno and San Joaquin commercial fields).

| Cultivar | # of field trials | Normalized yield* | Normalized fruit damage levels ^y | Fruit damage average to very low | Normalized vine decline at harvest ^z | Tendency towards vine decline |
|---|-------------------|-------------------|---|----------------------------------|---|---------------------------------------|
| HIGH PERFORMING | | | | | | |
| H1776 | 3 | 1.26 | 0.54 | very low fruit damage | 0.96 | average tendency towards vine decline |
| SV9016 | 3 | 1.16 | 0.52 | very low fruit damage | 0.82 | more data needed |
| SV9019 | 2 | 1.15 | 0.61 | very low fruit damage | 0.54 | more data needed |
| N6428 | 7 | 1.13 | 0.65 | low fruit damage | 0.87 | less likely to decline prematurely |
| SV9025 | 3 | 1.13 | 0.39 | very low fruit damage | 0.95 | more data needed |
| H5608 | 4 | 1.10 | 0.77 | low fruit damage | 0.44 | more data needed |
| H8504 | 5 | 1.10 | 0.67 | low fruit damage | 0.80 | less likely to decline prematurely |
| DRI0319 | 3 | 1.06 | 0.96 | average damage | 0.41 | less likely to decline prematurely |
| N6434 | 3 | 1.05 | 0.73 | low fruit damage | 0.38 | more data needed |
| HM58841 | 5 | 1.05 | 0.86 | low fruit damage | 1.04 | average tendency towards vine decline |
| MEDIUM PERFORMING | | | | | | |
| BQ273 | 2 | 1.04 | 1.65 | | 0.24 | more data needed |
| H1428 | 3 | 1.00 | 0.81 | low fruit damage | 0.89 | more data needed |
| HM5235 | 4 | 1.00 | 1.39 | | 0.90 | less likely to decline prematurely |
| HM58801 | 5 | 0.97 | 1.16 | | 0.96 | average tendency towards vine decline |
| H1996 | 2 | 0.96 | 0.57 | very low fruit damage | 1.50 | more data needed |
| BQ403 | 2 | 0.95 | 1.30 | | 1.06 | more data needed |
| HM4909 | 5 | 0.92 | 0.97 | average damage | 1.13 | more likely to decline prematurely |
| SV9011 | 2 | 0.90 | 1.30 | | 0.69 | more data needed |
| H4707 | 2 | 0.90 | 0.56 | very low fruit damage | 0.95 | more data needed |
| H1310 | 4 | 0.89 | 1.07 | | 1.08 | average tendency towards vine decline |
| H1662 | 2 | 0.88 | 0.43 | very low fruit damage | 0.98 | more data needed |
| LOW PERFORMING | | | | | | |
| HM5522 | 2 | 1.04 | 1.63 | | 1.23 | more data needed |
| BP13 | 2 | 1.02 | 1.65 | | 1.32 | more data needed |
| HM3887 | 7 | 0.88 | 1.35 | | 1.33 | more likely to decline prematurely |
| SV8011 | 3 | 0.86 | 1.07 | | 1.37 | more data needed |
| H9663 | 2 | 0.86 | 1.70 | | 1.36 | more likely to decline prematurely |
| AB0311 | 3 | 0.82 | 1.07 | variable fruit damage | 1.28 | more data needed |
| N6416 | 2 | 0.77 | 1.30 | | 1.30 | more likely to decline prematurely |
| MORE DATA NEEDED (only a single trial) | | | | | | |
| UG4014 | 1 | 1.09 | 0.79 | | | |
| SV9012 | 1 | 1.00 | 1.23 | | | |

*Note that not all cultivars were represented in each trial.

x Yield is total fruit biomass, including culls. Normalized means relative to the average for a particular trial; 1.1 would indicate 10% higher than the trial average, 1.3 30% higher

y Fruit damage levels represents the proportion of harvested fruit that are damaged by sunburn, rot, limited use.

z Vine decline is based on a visual evaluation of the foliage at harvest – dead or dying plants are counted.