

Table 19. Race 4 Fusarium wilt infested field evaluation of 2012 RBTN entries in Kern county¹ (site near Shafter, CA) conducted by Univ. of California and USDA/ARS (Hutmacher, Ulloa, Wright).

Cultivar	Number of Plants Evaluated	Foliar Disease Severity Index [†]	σ	Vascular Root Staining [‡]	σ	Number of Main Stem Nodes	σ	Plant Height	σ	Plant Survival (PS) [§]	σ
		0-5 rating scale		0-5 rating scale		#		cm		%	
AU91215	15	0.80	0.86	1.93	0.70	17.93	1.53	32.53	5.60	90.70	10.84
AU90915	15	1.20	0.94	2.53	0.52	17.07	1.44	30.13	4.90	92.13	10.07
AU91411	15	1.60	1.06	2.40	0.51	17.67	1.63	34.27	3.20	98.40	2.77
AU91111	15	0.60	0.91	1.53	0.64	18.07	1.49	32.07	6.71	77.13	8.66
AU90810	15	0.80	1.01	2.20	0.56	18.40	1.55	33.33	4.43	97.67	2.40
Ark 0409-17	15	1.67	1.05	2.87	0.35	16.93	1.53	26.80	5.41	80.33	6.01
Ark 0409-16	15	0.93	1.03	2.33	0.90	18.20	0.94	30.53	2.75	91.13	5.06
Ark 0403-3	15	1.40	1.12	1.80	0.56	19.13	1.36	34.53	4.34	89.20	7.83
Arkot 0410-32	15	1.33	1.23	2.47	0.64	17.13	1.51	27.47	3.74	86.07	4.25
Arkot 0407-4	15	0.47	0.83	1.93	0.46	18.13	1.77	33.87	3.72	93.03	7.05
GA 2004143	15	1.53	0.83	1.60	0.74	18.00	1.65	30.60	3.89	89.63	10.02
GA 2008083	15	1.33	0.98	2.13	0.64	17.20	1.26	27.87	3.89	95.57	7.68
GA 2008057	15	1.00	1.00	2.40	0.63	17.47	1.30	31.40	2.87	91.47	8.98
GA 2009100	15	0.67	0.98	2.00	0.65	18.13	1.81	32.00	5.76	90.70	5.38
LA08310066	15	1.27	1.03	2.33	0.72	17.07	0.96	30.80	3.03	97.13	1.25
MD 26ne	15	0.67	0.98	1.27	0.46	17.87	1.13	38.47	3.07	92.10	7.09
MD 10-5	15	0.93	0.81	2.40	0.51	17.13	0.99	34.40	3.14	98.00	1.91
MD 87	15	1.67	1.11	2.27	0.59	17.53	1.19	35.80	2.96	93.87	2.78
NC11AZ01	15	0.87	0.99	1.93	0.59	17.80	0.86	36.13	2.90	88.60	10.89
NM11Q1157	15	0.87	0.99	1.87	0.74	17.93	0.80	32.47	4.58	93.80	7.69
NM11Q1008	15	0.60	0.91	1.93	0.80	18.27	0.70	37.27	4.73	96.43	3.11
Acala 1517-08	15	1.27	0.96	2.47	0.52	18.20	1.37	30.87	5.29	96.80	3.60
PD05064	15	1.20	1.01	2.67	0.49	17.80	1.26	31.00	3.59	83.70	11.36
PD05074	15	1.27	1.03	2.27	0.70	18.80	1.26	33.00	4.57	95.07	4.72
PD05071	15	0.87	1.13	1.87	0.83	17.60	1.06	32.80	5.09	97.70	2.01
PD06078	15	0.80	1.01	2.27	0.59	17.73	1.49	29.07	2.69	96.67	5.77
PD06001	15	1.53	0.99	2.73	0.46	17.00	1.25	28.40	5.00	92.43	6.75
Tamcot 73	15	1.80	1.15	2.20	0.77	17.40	1.45	26.93	5.78	90.47	7.97
TAM 06WE-62-1	15	0.80	1.08	1.67	0.62	17.07	0.96	33.20	3.38	96.23	3.85
DP 393	15	1.20	1.01	1.73	0.80	16.67	1.50	29.73	2.87	98.33	1.46
FM 958	15	1.60	0.91	2.00	0.76	18.07	0.70	26.00	3.78	89.43	11.03
SG 105	15	0.47	0.83	2.20	0.56	18.33	0.98	32.07	3.69	92.33	3.88
Barbren 713	15	1.07	1.03	2.40	0.63	19.13	1.25	29.93	4.13	86.17	3.82
Comparison Check varieties											
Phytogen 72 (sus ck)	15	1.87	0.83	2.53	0.52	17.60	1.06	27.13	3.89	90.37	5.62
Phytogen 725RF (sus ck)	15	1.67	1.18	2.53	0.52	16.73	1.49	26.80	4.72	88.57	10.02
Phy-800 (res ck)	15	0.53	0.92	1.07	0.46	18.20	1.15	36.93	1.94	94.07	3.74
Phy-802RF (res ck)	15	0.00	0.00	1.07	0.80	18.40	0.83	35.00	3.70	95.17	6.71

¹Kern County Fusarium wilt (FOV) race 4 field evaluation planted May 30, 2012; All evaluations conducted 7-8 weeks after emergence

[†]Disease Severity Index scale: 0 = no symptoms; 1 = epinasty and slight dwarfing; 2 = 1 to 30% of leaves chlorotic; 3 = 31 to 80% of leaves chlorotic and severe stunting; 4 = 81 to 100% of leaves chlorotic; and 5 = plant death.

[‡]Vascular Root Staining: 0 = no vascular root staining evident, 1 = light vascular root staining evident as spotty areas, 2 = more continuous than 1, but light colored staining covering an area between one quarter and one half of the stem cross-section, 3 = moderate brown/black staining evident in a band encircling most of the stem cross section, 4 = brown/black staining evident across most vascular tissue in stem cross section, and 5 = plant severely damaged or plant death with staining evident throughout a cross-section of root tissue (Ulloa et al. 2006, 2009a).

[§]The percentage of plant survival (PS) was calculated by dividing the total number of surviving plants on sample date by the initial plant count after plant establishment, and multiplying by 100.