

Tomato Variety Trial – Fall 2017

Josh Freeman

University of Florida, North Florida Research and Education Center

Quincy, FL

Single row plots containing 12 tomato plants were established on August 10, 2017 at the North Florida Research and Education Center (NFREC) in Quincy, FL. Soil type at NFREC is Norfolk loamy fine sand with pH 6.3. Experimental plots were arranged in a randomized complete block design with four replications. Tomato seedlings were transplanted into raised beds covered with white-on-black polyethylene totally impermeable film mulch. Pic-Clor 60 fumigant was applied at a rate of 200 lb/a. Beds were 30 inches wide and 8 inches tall. Row spacing was 6 feet and plants were spaced 20 inches in the row. Total fertilizer application for the season was 190-90-286 lb/acre N-P₂O₅-K₂O. Harvests were performed on October 27 and November 8. First harvest was initiated when 5-10% of fruit had reached breaker stage. Mature green and any fruit with color were harvested. Fruit were weighed and graded according to USDA standards. A rating of Bacterial spot severity and overall plant size/vigor was taken on TYLCV after the first harvest. Varieties not resistant to TYLVC were not rated for bacterial spot or vigor because of the confounding influence of Tomato Yellow Leaf Curl. Whitefly pressure was extreme during most of the season and varieties not resistant to TYLCV had 100% infection by the second tie. Experimental data was analyzed using the GLM procedure in SAS and means separation was performed with Duncan's multiple range test at the 5% level, when appropriate.

Tomato Variety Trial – Spring 2017 – NFREC Quincy – First Harvest Yields

Variety	Source	% Marketable		Avg Weight (grams)		Marketable Yield (lb/acre)							
						Med		Large		XL		Total	
Grand Marshall	Sakata	80	ab	195	ns	1085	ns	4588	ab	9080	a	14753	a
XTM 2263	Sakata	85	ab	194		783		4407	abc	7805	ab	12995	ab
BSS 3040	Bejo	89	a	189		924		3436	a-d	7110	ab	11471	abc
FL 8982	UF	73	abc	178		1067		4978	a	4865	bcd	10911	a-d
FL 8942	UF	80	ab	190		735		3650	a-d	4892	bcd	9278	b-e
FL 8971	UF	74	abc	191		479		2809	b-f	5515	abc	8803	b-f
Everglade	Seminis	74	abc	196		155		1324	e-h	7191	ab	8672	b-f
XTM 2255	Sakata	79	ab	191		414		3189	a-e	4784	b-e	8388	b-g
XTM 2256	Sakata	80	ab	175		725		3026	a-f	4434	b-f	8187	b-h
BSS 3196	Bejo	67	a-d	188		685		2649	b-g	4403	b-f	7738	b-i
FL Q7	UF	70	abc	183		414		2748	b-f	3152	c-g	6315	c-j
FL Q2	UF	75	ab	181		288		2343	d-h	3170	c-g	5802	d-j
SV 7631	Seminis	79	ab	176		410		2456	c-g	2581	c-g	5449	e-j
BSS 3096	Bejo	78	ab	158		824		1813	d-h	844	fg	3481	f-j
Red Morning	Harris Moran	39	e	147		313		1186	fgh	1705	c-g	3205	g-j
FL 8969	UF	50	cde	132		198		1162	fgh	1506	d-g	2868	hij
FL 47	Seminis	50	cde	153		410		1402	e-h	908	efg	2722	ij
Quincy	Seminis	78	ab	167		327		1117	fgh	1231	d-g	2675	ij
Dixie Red	Seminis	63	b-e	173		331		1054	fgh	1226	d-g	2612	ij
FL Q4	UF	43	de	128		133		1064	fgh	800	fg	1997	j
Resolute	Bejo	62	b-e	149		338		758	gh	654	fg	1757	j
SV 7101	Seminis	49	cde	112		189		1085	fgh	375	g	1649	j
FI 91	Seminis	66	a-d	159		49		498	h	768	fg	1316	j

Means are to be compared within columns, means not followed by the same letter are significantly different at $P \leq 0.05$, ns = not significant

Tomato Variety Trial – Fall 2017 – NFREC Quincy – Cumulative Yields

Variety	Source	% Marketable		Avg Weight (grams)		Marketable Yield (lb/acre)							
						Med		Large		XL		Total	
XTM 2263	Sakata	86	a	166	ns	8598	ab	12407	a	10345	a	31350	a
Grand Marshall	Sakata	78	abc	161		9845	a	10828	ab	9972	a-d	30645	ab
XTM 2256	Sakata	81	abc	154		10120	a	10697	ab	6745	a-d	27562	abc
BSS 3040	Bejo	87	a	164		7701	ab	9425	b	8951	ab	26077	abc
XTM 2255	Sakata	84	ab	168		7411	ab	10025	ab	6910	a-d	24346	bc
FL 8942	UF	79	abc	160		8613	ab	9498	b	6197	a-d	24309	bc
Everglade	Seminis	87	a	163		5793	bc	8463	b	9801	a	24058	bc
FL 8971	UF	79	abc	164		7895	ab	8380	b	7134	abc	23409	c
FL 8982	UF	76	a-d	151		8177	ab	8444	b	4965	b-e	21587	c
FL Q7	UF	68	b-e	151		5826	bc	4173	cd	3300	c-f	13300	d
FL Q2	UF	70	a-e	158		4520	cd	4575	c	3652	c-f	12748	de
BSS 3196	Bejo	64	c-f	162		3634	cde	3415	cde	4505	b-f	11555	def
SV 7631	Seminis	70	a-e	152		3127	cde	2815	c-f	2581	def	8524	d-g
FL 8969	UF	54	efg	140		2886	cde	2467	c-f	1506	ef	6860	d-g
BSS 3096	Bejo	64	c-f	139		3285	cde	2685	c-f	844	ef	6814	d-g
SV 7101	Seminis	64	c-f	132		3216	cde	2309	c-f	473	f	5997	efg
Quincy	Seminis	73	a-d	148		2107	de	1903	def	1321	ef	5330	fg
Dixie Red	Seminis	58	d-g	146		2289	de	1597	ef	1268	ef	5154	fg
Red Morning	Harris Moran	35	h	140		1000	e	1390	ef	1705	ef	4096	g
FL Q4	UF	42	gh	112		1345	e	1505	ef	800	ef	3650	g
FL 47	Seminis	47	fgh	144		748	e	1595	ef	908	ef	3252	g
FL 91	Seminis	66	cde	139		654	e	856	f	768	ef	2279	g
Resolute	Bejo	40	gh	148		610	e	847	f	701	ef	2159	g

Means are to be compared within columns, means not followed by the same letter are significantly different at $P \leq 0.05$, ns = not significant

Tomato Variety Trial – Bacterial Spot Severity and Plant Vigor Rating – Fall 2017

Variety	Source	Bacterial spot severity		Vigor	
XTM 2263	Sakata	21	d	8.0	a
XTM 2256	Sakata	22	d	8.0	a
Grand Marshall	Sakata	23	cd	8.0	a
FL 8971	UF	26	bcd	5.5	c
XTM 2255	Sakata	26	bcd	8.0	a
Everglade	Seminis	32	abc	6.7	b
FL 8942	UF	35	ab	7.5	ab
BSS 3040	Bejo	36	a	6.7	b

Bact. spot severity rated as % of foliage showing symptoms or blighting. Vigor rated on 0-10 scale with 10 being most vigorous. Ratings were taken immediately after second harvest. Means are to be compared within columns, means not followed by the same letter are significantly different at $P \leq 0.05$

Variety	Resistance
XTM 2263	Fusarium 1 & 2, Fusarium crown rot, TSWV, TYLCV
XTM 2256	Fusarium 1 & 2, TSWV, TYLCV
Grand Marshall	Fusarium 1&2, TYLCV
FL 8971	Fusarium crown rot, TYLCV
XTM 2255	Fusarium 1 & 2, TSWV, TYLCV
Everglade	Fusarium 1-3, Fusarium crown rot, TYLCV
FL 8942	Fusarium 1-3, TSWV
BSS 3040	TSWV, TYLCV
Red Morning	Fusarium 1 & 2, TSWV
BSS 3096	Fusarium crown rot, TSWV