

FRESH MARKET AND SALADETTE TOMATO VARIETY TRIAL

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OBJECTIVE:

To evaluate performance of seven saladette and eight fresh market tomato varieties under southwest Michigan growing conditions.

SUMMARY:

Significant differences were noted for all traits. 'Voyager' had the highest number one yield of the fresh market tomatoes at 2165 cartons/acre (c/a). 'Mountain Spring', RFT0247, and 'Paragon' had similar number one yields with 2007, 1994, and 1914 car/a, respectively. HA3603 had the highest average fruit weight at 324 grams/fruit. HA3603 also had the lowest yield of number one small fruit at 261 car/a. HA3811 had the highest number one yield of the saladette tomatoes at 2354 car/a. RFT0990 was similar with 2155 car/a. HA3813 and HA3811 had similar fruit weights at 131 and 125 grams/fruit, respectively.

METHODS:

Fertilizer: Prior to planting, 0-0-60, 21-0-0, sulphur, Solubor and Cal Fortified were incorporated at a rate of 200, 150, 25, 5 and 100#/acre, respectively. After planting, 35 gallons/acre Nitro Formula (13-0-2 + micronutrients) was applied over the following two weeks. Fertilization with Urea Mate (5-10-27 + micronutrients) at a rate of 20 pounds/acre/week began on 10 June, 2002 and continued until 29 August.

Fumigation/Herbicide: Beds were fumigated at shaping with 20 gallons/acre Telone C-35. Prior to planting, trifluralin at 1pt/acre was applied between the plastic.

Planting: Plants were started 12 April, 2002 in a greenhouse, and field planted 24 May. Plants were set in 6" high by 24" wide, plastic-mulched beds. Spacing was 5.5' between beds with 18" between plants in the row (5,280 plants/acre). Each bed was drip irrigated. The trial was planted and analyzed as a completely randomized design with four replications, 8 plants/replication. The fresh market and saladette tomatoes were planted in separate trials. Two guard plants were established between each plot. All plants were pruned to one sucker, staked and tied.

Harvest: Six harvests were done between 13 August and 16 September, 2002.

RESULTS:

Total yield was similar for all fresh market entries except 'Mountain Crest' (Table 1). 'Mountain Spring' had the highest total yield (3472 car/a), 'Mountain Crest' had the lowest (2757 car/a). 'Voyager' had the highest number one large fruit yield at 2165 car/a. However, 'Mountain Spring', RFT0247, and 'Paragon' were not significantly different with 2007, 1994, and 1914 car/a, respectively. HA3603 stood alone in average fruit weight for number one fruit at 324 grams/fruit. HA3603 was also among the leaders in total yield, number two fruit and cull fruit.

Three saladette tomatoes, HA3811, RFT0990, and RFT0933 were similar in total yield with 3483, 3331, and 2953 car/a, respectively. Only HA3811 and RFT0990 had similar number one fruit yield (2354 and 2155 car/a). HA3813 had the highest

fruit weight at 131 grams, only HA3811 was similar at 125 gms/fruit. HA3813 was among the leaders in cull fruit at 676 car/a. Fruit from HA3813 tended to be round and not the typical saladette shape. Round fruit was culled in the saladette trial.

'Mountain Spring' is the leading variety for southwest Michigan tomato production. 'Voyager' and 'Paragon' were similar in many respects to 'Mountain Spring'. 'Voyager' and 'Paragon' are slightly later than 'Mountain Spring', but growers wanting to broaden the varieties they grow should consider them for production. HA3811 and RFT0990 may have potential as saladette types for southwest Michigan.

Table 1. Yield in 25 pound cartons of eight fresh market tomato varieties grown at the Southwest Michigan Research and Extension Center in 2002. Plants were grown on raised, plastic-mulched beds with drip irrigation. Planting density was 18" in the row and 66" between rows (5280 plants/A).

Entry	SS	TY	No1	%T	Fwt	No2	%T	Crt	%T	Cu	%T
Mt. Spring	RG	3472	2007	58	259	309	9	626	18	530	15
HA3638	HZ	3416	1643	48	278	577	17	516	15	680	20
RFT0247	RG	3222	1994	62	267	321	10	629	19	279	9
Voyager	JS	3195	2165	68	270	208	6	508	16	314	10
HA3636	HZ	3181	1361	43	283	680	21	438	14	702	22
HA3603	HZ	3138	1610	51	324	650	21	261	8	618	20
Paragon	JS	3104	1914	62	266	234	8	637	21	319	10
Mt. Crest	NCSU	2757	1612	58	266	276	10	615	23	254	9
LSD _{0.05} =		505	426	8	23	163	5	264	8	185	6

SS=Seed source (RG=Rogers Seed; HZ=Hazera Seeds; JS=Johnny's Seeds; NCSU=North Carolina State University); TY=Total Yield; No1=Number 1 large fruit (2 5/8"+); %T=per cent TY; Fwt=Average No1 fruit weight in grams; No2=Number 2 fruit; Crt=Small fruit (2 1/8" - 2 5/8"); Cu=Cull fruit.

Table 2. Yield in 25 pound cartons of seven saladette tomato varieties grown at the Southwest Michigan Research and Extension Center in 2002. Plants were grown on raised, plastic-mulched beds with drip irrigation. Planting density was 18" in the row and 66" between rows (5280 plants/A).

Entry	SS	TY	No1	%T	Fwt	No2	%T	Cu	%T
HA3811	HZ	3483	2354	67	125	585	17	544	16
RFT0990	RG	3331	2155	65	115	740	22	436	13
RFT0933	RG	2953	1763	60	102	606	20	584	20
HA3813	HZ	2936	1529	52	131	731	25	676	23
Plum Crimson	HM	2848	1855	65	106	484	17	509	18
HA33033	HZ	2800	1584	56	98	583	21	632	23
LSD _{0.05} =		534	455	8	10	162	4	150	6

SS=Seed source (RG=Rogers Seed; HZ=Hazera Seeds; HM=Harris Moran); TY=Total Yield; No1=Number 1 fruit; %T=per cent TY; Fwt=Average No1 fruit weight in grams; No2=Number 2 fruit; Cu=Cull fruit.