

Heirloom Tomato Cultivar Evaluation at Saint Charles, Illinois – 2003

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As consumer demand for more flavorful fruit increases, interest in heirloom tomatoes rises. These specialty tomatoes are now being grown and offered by marketers, sold by grocery store chains and seed companies. Heirloom tomatoes are quickly gaining in popularity once again, as more consumers are actively seeking out these “old-time favorites.”

This evaluation was established at the University of Illinois, Saint Charles Horticulture Research Center to evaluate heirloom tomatoes and their characteristics. The data collected provides a comparative assessment of these characteristics.

Materials and Methods

Transplant Production

Eighty-four heirloom tomato cultivars were seeded in the greenhouse facilities on April 1. Seedlings were grown in 50 cell plastic trays. Plants were transplanted into the field on May 29 and watered in with a nutrient starter solution. (9-18-9@2gal./100 gal. H2O)

Plot Establishment

Plot was sprayed with the herbicide Treflan .8 lbs./A aia,ppi on May 13, and disked in. The trial was planted on black plastic mulch covered beds with trickle irrigation lines beneath. The evaluation had nine rows, each one hundred feet long, spaced 6 feet apart, on center. Plots consisted of two plants per cultivar, planted two feet apart with 5 feet between cultivars. Plants were supported during the growing season by five foot tall, #10 reinforced concrete wire caging. For extra support, each two cages were then staked together using wooden stakes, which were then secured together with cable ties. No additional fertilization was used throughout the growing season.

Plot Maintenance

Two fungicide treatments were applied throughout the season. The first treatment which consisted of Maneb(3lb/A) and Kocide(2lb./A) was applied on 7/16. The second treatment of Maneb(2.5lbs./A) and Kocide(2 lbs./A) was applied on 7/30. Irrigation was provided as needed through drip irrigation. No insecticides were used.

Data Collection

Fruits were harvested one time a week beginning August 1 through September 24. Data were taken on fruit number, weight, brix and pH. Three pH and brix readings were taken for each cultivar, beginning August 27. (See table 1.)

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Results and Discussions

A cool wet period after planting adversely affected plants, slowing down growth and favoring disease development. Black spots were noted in evaluation plots shortly thereafter (probably Bacterial Spot). Fungicide treatments and ensuing warm, dry weather were adequate to bring problem into check, but plants suffered a delay of fruit set, thereby setting fruit maturity date back. The trial experienced little pressure from insect pests.

Table 1. Harvest Data, Heirloom Tomato Cultivar Evaluation

Name	Total Wt/Lbs.	Total # of Fruit	Avg. Fruit Weight/Oz.	Brix	PH
Abe Lincoln	23.4	77.00	4.86	4.4	4.20
Amana Orange	64.3	67.00	15.36	5.6	4.42
Amish Paste	48.8	105.00	7.44	6.6	4.41
Anna Banana	50.9	137.00	5.94	6.1	4.35
Antique Roman	62.1	144.00	6.90	6.6	4.43
Arkansas Traveler	37.8	126.00	4.80	5.2	4.37
Bianco Great White	71.5	125.00	9.15	5.7	4.16
Big Rainbow	33.0	33.00	16.00	6.1	4.71
Bisignano #2	20.5	45.00	7.29	5.6	4.52
Black	82.2	343.00	3.83	5.3	4.59
Black From Tula	64.0	103.00	9.94	4.9	4.35
Black Krim	96.2	164.00	9.39	4.7	4.48
Bloody Butcher	48.9	302.00	2.59	5.7	4.31
Brandywine, Pink	59.8	68.00	14.07	6.3	4.45
Brandywine, Yellow	16.5	20.00	13.20	6.7	4.37
Brandywine, OTV	64.7	97.00	10.67	5.6	4.38
Brandywine, Red	20.9	34.00	9.84	6.3	4.66
Bull's Heart	72.1	124.00	9.30	5.3	4.26
Burbank Red Slicing	46.3	178.00	4.16	4.5	4.49
Caspian Pink	48.8	63.00	12.39	5.9	4.27
Cherokee Purple	55.2	103.00	8.57	5.2	4.38
Costoluto Genovese	77.6	253.00	4.91	4.7	4.36
Delicious	44.3	115.00	6.16	5.8	4.39
Di Santos	48.8	102.00	7.65	6.0	4.37

Ellis Island	84.3	92.00	14.66	5.3	4.35
Ernie's Plump	62.5	144.00	6.94	6.0	4.34
Federle	51.5	126.00	6.54	6.3	4.59
Giant Syrian	77.7	117.00	10.63	5.8	4.29
Goliath	82.5	82.00	16.10	5.8	4.40
Grandma Mary's Paste	69.4	323.00	3.44	4.5	4.47
Hillbilly	17.2	17.00	16.19	7.0	4.79
Homestead	53.3	96.00	8.88	5.5	4.43
Howard German	34.3	135.00	4.07	5.4	4.40
Hungarian Heart	75.9	86.00	14.12	5.7	4.44
Ingegnoli Gigante *	12.1	58.00	3.34	6.3	4.61
Italian Plum Canning Type	46.1	249.00	2.96	6.1	4.39
Jersey Devil	51.5	158.00	5.22	6.0	4.55
Joe's Plum *	29.9	47.00	10.18	5.9	4.41
Juane Peach	76.4	758.00	1.61	5.9	4.41
Jubilee	12.5	29.00	6.90	5.5	4.31
Kavalarovo Plum	41.9	593.00	1.13	6.4	4.44
Landino di Panocchia	68.6	311.00	3.53	5.3	4.29
Large Polish Paste	104.0	203.00	8.20	5.2	4.53
Laurano	51.6	334.00	2.47	4.9	4.28
Le Case di Puligia	53.2	835.00	1.02	5.4	4.46
Marglobe	46.7	129.00	5.79	4.6	4.47
Martino Roma	57.0	480.00	1.90	5.0	4.38
Mortgage Lifter	63.8	80.00	12.76	5.1	4.28
Moskvich	53.5	139.00	6.16	5.3	4.39
Napoli	58.3	544.00	1.71	4.6	4.38
New Hampshire Surecrop	16.9	269.00	1.01	4.9	4.23
New Jersey	61.6	185.00	5.33	4.5	4.55
Opalka	58.4	159.00	5.88	6.1	4.51
Oscar	40.4	102.00	6.34	6.1	4.21
Pantano Romanesco	60.7	124.00	7.83	4.7	4.28
Persimmons	27.0	48.00	9.00	5.7	4.27
Pete's Italian Plum	76.1	261.00	4.67	5.8	4.56
Platillo	81.7	316.00	4.14	4.9	4.02
Polish Linguisa	72.8	193.00	6.04	5.8	4.40
Pomodoro Grosso	40.2	119.00	5.41	5.2	4.22
Popovich	41.4	213.00	3.11	3.9	4.38

Prairie Fire	14.6	104.00	2.25	4.6	4.10
Purple Calabash	38.4	155.00	3.96	5.3	4.07
Red Rose	35.8	62.00	9.24	5.8	4.71
Rio de Fuego	52.3	340.00	2.46	5.0	4.45
Rio Grande	29.3	154.00	3.04	4.3	4.47
Ropreco Plum	41.6	377.00	1.77	5.1	4.24
Rose de Berne	33.7	100.00	5.39	6.4	4.40
Russian Big Roma	78.7	188.00	6.70	5.7	4.74
Russian Rose	69.1	87.00	12.71	5.3	4.61
Rutgers	73.6	174.00	6.77	5.6	4.51
San Marzano *	25.0	195.00	2.05	5.0	4.34
Santiam	16.2	81.00	3.20	4.7	4.38
Saucy	28.8	252.00	1.83	5.2	4.36
Silvery Fir Tree	31.5	133.00	3.79	3.8	4.21
Soldacky	33.8	40.00	13.52	5.8	4.46
Spitze Russia	79.1	174.00	7.27	5.8	4.54
Striped Stuffer	88.5	368.00	3.85	4.6	4.31
Stupice	58.1	417.00	2.23	5.5	4.35
Super Italian Paste	51.9	155.00	5.36	6.1	4.33
Super Sioux	65.6	211.00	4.97	5.2	4.47
Ten Fingers of Naples	64.8	552.00	1.88	5.5	4.46
Tondo Fario	48.8	136.00	5.74	5.8	4.49
Watermelon	68.5	77.00	14.23	5.5	4.34
Zapotec Pink Pleated	63.8	161.00	6.34	6.6	4.56

*Data taken from only one plant in plot