

## **Heirloom Tomato Cultivars Evaluation at Saint Charles, Illinois - 2002**

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Due to a renewed interest in the need for genetic diversity, much attention has been drawn to the Heirloom Tomato (OP). These specialty tomatoes have started to develop a niche for commercial growers, seed companies and consumers.

During the 2002 season, an heirloom tomato trial was established at the University Of Illinois, Saint Charles Horticulture Research Center to evaluate heirloom tomato cultivars and their characteristics. The data collected provides a comparative assessment of these characteristics.

### **Materials and Methods**

#### Transplant production

One hundred Heirloom tomato cultivars were seeded in the greenhouse facilities on April 3, 2002. Seedlings were grown in 50 cell plastic trays. Plants were transplanted into the field on June 5, 2002 and watered in with a nutrient starter solution. (20-20-20@100ppm/N)

#### Plot Establishment

Plot was disked with the herbicide Treflan 0.9 lbs. aia, ppi on May 28. The trial was planted on black plastic mulch-covered beds with trickle irrigation lines beneath. Evaluation had ten rows, each one hundred feet long, spaced 6 feet apart, on center. Plots consisted of two plants of each cultivar, planted 2 feet apart with 6 feet between each 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 through out the growing season.

#### Plot Maintenance

Preventative insect pest management strategies were used with the application of Baythroid at 2.3oz/A on 7/30 and 8/27. Preventative fungicide treatments consisted of Flint at 4oz/A on 7/ 30 and Quadris at 5.60z/A on 8/27. Irrigation was provided as needed through drip irrigation.

#### Data Collection

Fruits were harvested one time a week from July 2 through October 6. At harvest, fruits were counted and weighed. Four Ph and Brix readings were taken, beginning August 31.

### **Results and Discussions**

Overall tomato cultivars performance was extremely favorable under the hot, dry growing season of 2002. Results are shown in Table1. Most cultivars continued with fruit production and plant growth until frost (October 14). A few cultivars experienced inherent radial and concentric cracking as well as some cat facing but overall fruit quality was exceptional. Trial experienced little pressure from pests or disease.

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Table 1. Results of 2002 Heirloom Tomato Cultivars Trial

Cultivars	Total # of Fruit	Total Wt. Lbs.	Average Fruit wt. oz	Brix Average	Ph Average
Abraham Lincoln	185	59.7	5.16	4.20	4.45
Amana Orange	63	45.5	11.6	5.65	4.42
Amish Paste	196	45.9	3.75	6.15	4.68
Anna Banana	100	30.9	4.90	6.33	4.51
Antique Roman	142	57.0	6.42	6.10	4.36
Aunt Ruby's German Green	52	30.3	9.32	5.88	4.32
Beefsteak Extra Large	366	102.1	4.46	4.98	4.50
Big Rainbow	54	44.8	13.27	5.88	4.42
Bisignano #2	198	68.0	5.50	5.98	4.37
Black	217	44.4	3.27	5.75	4.58
Black from Tula	121	76.5	10.11	5.38	4.41
Black Krim	135	63.2	7.49	5.85	4.39
Brandywine, pink	154	51.4	5.34	4.95	4.34
Brandywine, red	105	68.6	10.45	5.38	4.31
Brandywine,yellow *	11	9.50	13.81	5.65	4.15
Caspian Pink	65	44.5	10.95	5.75	4.35
Cherokee Purple	121	80.7	10.67	5.33	4.48
Climbing L Trip	36	25.5	11.33	5.95	4.39
Costoluto Fiorentino	220	57.5	4.18	4.85	4.57
Costoluto Genovese	310	87.9	4.54	4.68	4.47
Currant Tuscan Bombolino	585	21.0	0.57	7.90	4.32
Delicious, Burpees	51	54.7	13.4	4.70	4.46
Ernie's Plump	192	73.8	8.14	6.03	4.44
Evergreen	80	33.4	6.68	5.43	4.48
Federle	155	54.8	5.66	5.93	4.62
Giant Sryian	94	66.6	11.34	5.75	4.20
Goliath	75	44.7	9.54	6.03	4.25
Grappoli D' Inverno	1554	68.0	0.70	5.65	4.34
Hillbilly	7	6.30	14.4	5.90	4.34
Homestead	104	51.7	7.95	4.73	4.62
Howard German	167	66.1	6.33	6.35	4.59
Ingegnoli Gigante Liscio	135	75.7	8.97	4.93	4.46
Italian Giant Beefsteak	128	46.1	5.76	5.92	4.41
Italian Heirloom	98	55.7	9.09	5.23	4.36
Italian Plum Canning	315	61.4	3.12	5.83	4.56
Jersey Devil	274	74.3	4.34	6.13	4.75
Joe's Plum	91	50.7	8.91	6.13	4.51
Jubilee	110	45.5	6.62	5.42	4.46
Kellogg's Breakfast*	43	31.3	11.65	5.20	4.38
Kootenai	102	13.6	2.12	5.00	4.38
Large Polish Paste	166	75.7	7.30	6.13	4.56
Laurano	413	54.7	2.12	5.23	4.36
Le Case Di Apulia	1019	69.9	1.10	5.20	4.44
Long Keeper	125	37.9	4.85	4.20	3.98
Lillians Yellow Heirloom	640	52.4	1.31	5.58	4.40
Lycoperscon Cheeseman	709	20.0	0.45	6.85	4.30
Marglobe	111	40.1	5.78	5.28	4.40

Cultivars	Total # of Fruit	Total Wt. Lbs.	Average Fruit wt. oz	Brix Average	Ph Average
Martino's Roma	428	47.8	1.79	4.75	4.60
Mortgage Lifter	71	48.8	11.0	5.43	4.39
Moskvich	178	50.5	4.54	5.85	4.50
Mr. Stripey	673	61.7	1.47	5.38	4.42
Napoli *	414	41.5	1.60	5.38	4.50
Nebraska Wedding	69	26.9	6.24	5.25	4.21
New Hampshire	400	24.4	0.98	5.63	4.17
New Jersey	170	62.5	5.88	4.38	4.50
Old German	3	2.4	12.8	-	-
Opalka	75	22.9	4.88	6.35	4.45
Oregon Spring	152	41.5	4.37	4.33	4.29
Oscar	156	47.8	4.90	6.05	4.49
Pantano Romanesco	167	42.9	4.11	4.80	4.45
Persimmon	94	41.0	6.98	6.02	4.18
Pete's Italian	123	42.0	5.46	5.68	4.71
Pineapple	40	30.1	12.04	5.73	4.62
Platillo	333	81.9	3.94	4.70	4.30
Polish Giant	147	71.8	7.81	5.85	4.51
Polish Giant Paste	111	51.7	7.45	5.80	4.64
Pomodoro Grosso	178	54.8	4.93	5.10	4.33
Prairie Fire	155	27.6	2.85	4.94	4.34
Principie Borghese	406	35.8	1.41	5.45	4.32
Red Rose	56	34.1	9.74	5.88	4.73
Riesentraube	255	38.4	2.41	7.15	4.50
Rio de Fuego	437	70.9	2.60	5.13	4.57
Rio Grande	127	23.4	2.95	5.53	4.52
Roman Candle	281	50.5	2.88	5.53	4.41
Russian Big Roma	231	75.4	5.22	5.18	4.76
Rutgers	151	65.0	6.89	3.90	4.54
San Marzano *	268	50.5	3.01	5.20	4.41
Santiam	125	22.8	2.92	4.64	4.32
Saucy	96	31.8	5.30	5.00	4.50
Sausage	128	15.49	1.94	6.10	4.60
Siletz	80	28.8	5.76	5.08	4.18
Silvery Fir Tree	153	28.2	2.95	4.90	4.33
Soldacky	96	58.6	9.76	5.70	4.22
Striped Stuffer	80	14.2	2.84	5.65	4.43
Stupice	592	75.8	2.05	5.88	4.32
Super Italian Plum	69	20.9	4.85	6.45	4.39
Super Sioux	187	66.2	5.66	4.98	4.42
Ten Fingers of Naples	873	100.0	1.83	5.08	4.63
Tondino Di Manduria	318	20.8	1.05	4.98	4.26
Tondo Fario	185	55.8	4.83	5.88	4.66
Tyboroski *	49	14.3	4.67	6.95	4.37
Watermelon Beefsteak	54	39.9	11.82	5.80	4.28
Yellow Pear	76	1.8	0.38	6.53	4.36
Yellow Perfection	509	41.9	1.32	5.78	4.39
Zebra	123	26.2	3.41	5.25	4.28
Zogola	147	67.5	7.35	5.65	4.38

*\*Data taken from only one plant in plot.*