

2004 HEIRLOOM TOMATO TASTE TESTING

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Introduction

Heirloom tomatoes come in different shapes, sizes, colors and flavors. Flavor is one of the most important aspects for consumer acceptance for any tomato variety. This is the third year that the project has held tomato taste evaluations for the general public. The objective is to expose consumers to the different types of heirloom tomatoes that can be grown in New Jersey and use this as a one of the evaluative criteria for recommending varieties to growers.

Materials and Methods

Three-tomato tastings were held in 2004 at the Rutgers Agricultural Research and Extension Center (RAREC), Cooperative Extension in Cumberland County (CECC) and at the Food Fest at Camden County College (FFCCC). In a strict evaluative program, it is difficult and expensive to collect a large amount of data. At the four locations, consumers and growers were allowed to taste cultivars available at that time. Ripe tomatoes were selected, cut in pieces and placed on paper plates. Each plate was labeled with a number and participants were given data sheets to allow them to evaluate flavor, sweetness, moisture (juiciness), texture, appearance and an overall rating on a 1 (poor)-5 (excellent) scale. The data is summarized in the attached tables (1-3).

Results and Discussion

The data was not analyzed since the number of participants and cultivars varied among locations. The data does provide some general information as to which cultivars would be worth pursuing in a more formal taste panel. In addition, the data can be compared with yield and fruit characteristics to reduce the number of cultivars for further study.

RAREC – twenty-six varieties were available for tasting and fifteen of those were rated good or better as an overall rating. They were Apple Tomato, Better Boy, Brandywine Black, Brandywine Red, Carmello, Hawaiian Pineapple, Lemon Boy, Marizol Purple, Mortgage Lifter, Mule Team, Paul Robeson, Prudens Purple, Santa Clara Canner, Southern Night and Ugly. (Table 1)

CECC – Twenty-two varieties were evaluated and three of those rated good or better. They were Mule Team, Marizol Purple and Thessaloniki. (Table 2)

FFCCC – Nine varieties were evaluated and all except one rated good or better. The good varieties were Box Car Willie, Carmello, Cherokee Purple, Eva Purple Ball, Lemon Boy, Mortgage Lifter, Ramapo and Santa Clara Canner. (Table 3)

Conclusion

The varieties that were rated as good or better in 2004 will be planted and reevaluated in 2005 at similar events.

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NOTES

Table 1. August 2004 Heirloom Taste Panel Results. Rutgers Agricultural Research and Extension Center

Heirlooms														
Variety	# Participants	Overall Rating		Flavor		Sweetness		Moisture (juiciness)		Texture		Appearance		Comments
		Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	
Apple Tomato Seed	15	29	3.22	39	3.00	40	3.08	43	3.07	36	3.00	34	2.83	Good flavor; tough skin. Interesting.
Arkansas Traveler	14	36	2.77	37	3.08	38	3.17	44	3.38	32	3.20	31	2.82	Not bad. Very good flavor.
Better Boy	7	19	3.17	19	2.71	20	2.86	24	3.43	22	3.14	24	3.43	
Black from Tula	10	22	2.44	25	2.78	24	2.67	31	3.44	25	2.78	21	2.33	Fair, nothing fancy. Unusual.
Box Car Willie	12	33	2.75	30	2.73	29	2.64	38	3.45	30	3.00	41	3.73	Nice neat appearance.
Brandywine Black	8	24	3.00	21	3.50	22	3.14	23	3.29	21	3.00	18	2.57	
Brandywine Red	11	34	3.09	32	2.91	29	2.64	35	3.18	32	2.91	38	3.45	Nice. Too hard.
Burgess Stuffing Tomato	5	7	2.33	5	1.67	5	1.67	6	2.00	7	2.33	8	2.67	Not taste. Not much flavor, great.
Carmello	12	31	3.10	29	2.64	28	2.55	38	3.17	36	3.00	52	4.33	Good taste, attractive, a little soft.
Cherokee Purple	14	39	2.79	37	2.85	39	3.00	40	3.08	37	2.85	32	2.46	Frying tomatoes.
Costoluto Genovese	9	16	2.67	20	2.22	20	2.22	26	2.89	26	2.89	24	2.67	Ugly.
Eva Purple Ball	12	30	2.73	27	2.45	27	2.25	35	3.18	30	3.00	38	3.45	
Hawaiian Pineapple	13	37	3.36	31	2.82	31	3.82	37	3.08	41	3.42	44	4.00	Attractive-disappointing flavor. Novel color.
Lemon Boy	10	30	3.75	30	3.33	32	3.20	38	3.80	39	3.90	45	4.50	Looks nice; good balance of texture. Good flavor for a yellow tomato.

Ratings Scale

1=Poor, 2=Fair, 3=Good, 4=Very Good, 5=Excellent

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Marizol Purple	8	20	3.33	24	3.43	23	3.29	23	3.29	24	3.43	24	3.24	
Mortgage Lifter	13	36	3.27	37	3.08	35	2.92	42	3.82	35	3.50	46	3.83	Solid core with outer ring of juice. Nice color.
Mule Team	5	13	3.25	8	2.00	8	2.00	13	3.25	14	3.50	18	4.50	
Nepal	7	17	2.83	14	2.80	13	2.60	23	3.83	18	3.00	21	3.50	Good salad or canner.
Pantano Romanesco	6	13	2.17	8	2.00	8	2.00	19	3.80	11	2.75	8	2.00	
Paul Robeson	11	28	3.11	33	3.30	31	3.10	38	3.80	32	3.20	29	2.90	Good one. Unusual.
Prudens Purple	10	28	3.11	25	3.13	30	3.33	37	4.11	33	3.67	30	3.33	
Ramapo	10	22	2.75	26	2.89	24	2.67	33	3.67	28	3.50	36	4.00	Real good.
Santa Clara Canner	10	26	3.25	25	3.13	28	3.11	30	3.33	29	3.22	27	3.00	Good canning, maybe not fresh.
Southern Night	6	13	3.25	17	2.83	20	3.33	21	3.50	19	3.17	12	2.00	
Thessaloniki	6	14	2.80	13	2.17	15	2.50	19	3.17	16	3.20	20	3.33	Mayo, salt & pepper.
Ugly	5	13	3.25	12	3.00	12	3.00	15	3.75	10	2.50	13	3.25	

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Table 2. August 2004 Heirloom Taste Panel Results. Rutgers Cooperative Research & Extension of Cumberland County

Heirlooms														
Variety	# Participants	Overall Rating		Flavor		Sweetness		Moisture (juiciness)		Texture		Appearance		Comments
		Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	
Apple Tomato Seed	9	15	2.14	16	1.78	14	1.56	29	3.22	24	2.67	31	3.44	Very good; Use as slicing tomato or in salads. Bad flavor. Earthy, not in a good way.
Arkansas Traveler	9	25	2.78	19	2.38	15	1.88	25	3.13	22	2.75	27	3.38	Mild. OK. Average. Tough skin. Bland taste, use in salads.
Better Boy	10	15	1.88	15	1.50	14	1.40	24	2.40	26	2.60	24	2.40	Bland; Use in sauces or casseroles. Mild, non-descript.
Box Car Willie	9	21	2.33	19	2.38	20	2.50	23	2.88	20	2.50	23	2.88	Pale flesh, not memorable. Sweet/not very good looking; too bland, use for sauces.
Brandywine Red	9	19	2.38	11	1.38	10	1.25	16	2.00	16	2.00	23	2.88	Nasty, nasty. Bad internal appearance, pithy. Tasteless and looks bad. Bland.
Burgess Stuffing Tomato	10	17	1.89	16	1.60	17	1.70	17	1.70	21	2.10	22	2.20	Mealy. Mild. Appearance was poor; Use this only in a cooked sauce.
Carmello	10	25	2.50	19	2.11	17	1.89	28	3.11	22	2.44	24	2.67	Mushy. Did not like this one very much. Blah, use them as stewed. Good, use sliced & in salad. Not good to eat.

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Cherokee Purple	9	13	1.44	14	2.00	12	1.71	21	3.00	17	2.43	11	1.57	Unusual appearance. Tastes like dirt. Too much internal green. Would not eat a tomato that looks like that.
Costoluto Genovese	8	15	1.88	14	2.00	13	1.86	17	2.43	16	2.29	24	3.43	Cute but tough skin. Tough skin, meaty meat. Mushy. Cute but bland. Nasty. This one is ok; serve it broiled.
Eva Purple Ball	7	17	2.83	12	2.00	10	1.67	16	2.67	17	2.83	21	3.50	Mild flavor. More traditional. Soft with no taste.
Hawaiian Pineapple	8	12	1.71	11	1.57	11	1.57	18	2.57	15	2.14	16	2.29	Yuck. Too soft, short with no flavor. Like the color but did not like the after taste.
Marizol Purple	9	28	3.11	30	3.00	26	2.60	34	3.40	30	3.33	34	3.40	I would buy these. Nicely acidic. Mushy; Use in soup, juice & sauce.
Mortgage Lifter	8	20	2.86	14	2.33	12	2.00	22	3.67	14	2.80	20	3.33	No taste. Tasty, use in sauces & stewed. Ugly but good.
Mule Team	9	22	3.14	23	2.56	21	2.33	27	3.00	27	3.00	18	2.00	Bad; Did not like this. Rough looking. Did not like the flavor.

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Nepal	10	21	2.63	23	2.30	23	2.30	34	3.40	28	2.80	24	2.40	It's a Jersey of NJ! I like these. Good tomato. Tasty & juicy. Bland; Casseroles, sauce and juices.
Pantano Romanesco	10	14	1.75	12	1.20	14	1.40	24	2.40	23	2.30	20	2.00	Bad. Nasty; use this in sauce.
Prudens Purple	8	15	2.14	12	1.71	10	1.43	18	2.57	15	2.14	16	2.29	Taste is bland, use in salads. Yuck. Earthy. Can't describe. Did not like it too much.
Ramapo	9	22	2.75	22	2.75	19	2.38	25	3.13	24	3.00	28	3.50	Mediocre. It is ok; use it in salads, sliced or in sauce. Real tomato taste. Was pretty good, but no taste.
Santa Clara Canner	9	26	2.89	24	3.00	22	2.75	27	3.38	24	3.00	19	2.38	No way. Strong flavor, tough skins. Like a jersey should. Yellow/orange.
Southern Night	10	17	2.83	22	2.20	21	2.10	27	2.70	27	2.70	16	1.78	Not too sweet. Use as peeled slices; Mild, interesting stripes.
Thessaloniki	10	27	3.00	26	2.60	25	2.50	32	3.20	30	3.00	30	3.00	Tasty. Used sliced in salads or in sauces; Good color, juicy.
Ugly	8	12	2.00	13	1.63	16	2.00	24	3.00	19	2.38	14	1.75	Bland. Use in salad; Forget it.

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Table 3. August 14-15, 2004 Heirloom Taste Panel Results. Food Fest-Camden County College

Heirlooms														
Variety	# Participants	Overall Rating		Flavor		Sweetness		Moisture (juiciness)		Texture		Appearance		Comments
		Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	
Box Car Willie	52	152	3.23	129	3.31	115	3.03	123	3.32	117	3.25	126	3.60	Tied for best with Carmello. Bland, too sweet. Tasty zing. Mealy. Excellent taste, Jersey tomato taste. More acidic. Dull. Tough skin. No flavor. Just blah. Very good. Mild flavor, sweet, but only slight, good Texture. Great. Rich & tasty. Mealy.
Carmello	231	789	3.78	668	3.59	628	3.36	683	3.73	656	3.69	682	3.90	Not sweet, but flavorful. Tied for best with Box Car Willy. Sweet & watery. Tart, acidic, good for cooking. Excellent taste, jersey tomato taste. Sweet but firm-yummy! Juicy, good flavor. Watery. Just blah. This is my favorite. Very good. Bright highly acidic, good flavor. Most excellent flavor. Too sweet for me but nice juiciness & texture. Good excellent body. Nice tomato. Watery. Very nice but smaller. Tart. Good. Good, but kind-of-normal. High flavor, practically the perfect fruit. Sweet, very good. Pleasant. Good taste. full bodv. Tastier-still

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Carmello (cont)														needs spices. Not too sweet but a very tart finish. Very good tomato. Meaty. Lots of flavor...GREAT. Only one I liked. I loved this. Pretty, light (sustained) flavor. Home grown. Great. Tastes like a real jersey. Very good. Tasty. Tasty. I like this one. A beautiful tomato that does not taste as good as it looks. The best texture & juiciness. Awesome. Not very flavorful. Acidic, tastes like a greenhouse tomato. Extremely sweet & juicy. Sweet. A little bitter. Does not taste like a tomato. Best overall. I don't think these were properly ripened.
Cherokee Purple	93	258	3.19	233	2.99	212	2.79	249	3.36	246	3.19	209	2.82	Ok, not favorite-husband loved it. Watery. Great flavor/great color/low texture. Looks kind of ratty but tastes good. Excellent, great body flavor is sweet, #1. Bland. Good but a little too juicy. It looks rotten. Not that juicy, would enjoy more flavor. Interesting color.

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Cherokee Purple (cont.)														Excellent. The Best! My Favorite. Mushy, not much flavor. Very mild. Good. Tasteless. Old style. Great looking tomato-good flavor. Beautiful but kind of bland. Ugly when cut. Very flavorful-very good. Very sweet. Sweet/good, I like sweet tomatoes. Too mild. Bland. Did not care for it. No tomato taste. Best flavor, but worst texture.
Costoluto Genovese	89	234	2.89	182	2.64	157	2.34	207	3.00	198	3.05	195	3.15	Good. Very nasty, not sweet. Very good, doesn't look pretty but nice acid & less juice. Good texture, tart, good salsa type. Ugly but good. Interesting & intriguing. Would like more flavor, texture & moisture perfect. Mealy. Mild flavor. Okay. Fair. Too acidic-better for cooking. Texture not so good. Looks strange-tastes good. Flesh too thick, bland taste. Not crazy about it. Pumpkin shaped. No tomato taste. No taste.

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Eva Purple Ball	146	461	3.44	382	3.50	347	3.24	387	3.65	347	3.51	385	3.67	Obviously, I love this tomato. Tastes good, looks not so good. Explosive. Too dry. Very sweet & tasty, would use it at a BBQ. OK. A little mushy. Favorite. Not as sweet. A little coarse. Good. Meaty w/right balance of acidity and sweetness, YUM. Interesting good texture & flavor. Fresh. Most like I expect a tomato to taste. Looks are deceiving. Kind of bland. Average taste-good texture. Different, a little mealy. Pretty tomato. AWESOME! Too light of flavor, fades away. Store bought. Firm. Seedy. Very juicy. Very bland taste. Looks good. Very subtle. A touch of savoriness. No flavor. No taste.
Lemon Boy	97	341	3.88	294	3.68	256	3.24	297	3.71	301	3.91	313	4.01	Not sweet, but flavorful. Sweet with a kick. Has punch. Bland. 1 st choice. A little bland. Very mild. Appearance surprising, flavor fantastic. Very good, attractive color. OK-not too much flavor. Juicy with a

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		Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	
Lemon Boy (cont.)														nice tangy flavor-Terrific! A little too mild for my taste (even for a yellow). Soft sweet flavor. Beautiful yellow will look great in a salad. Crisp, refreshing-yet a tinge of sweetness. Bland. Bright to the palate. Excellent! Sweet. Okay, not as much flavor as Mortgage Lifter. I like this one. Excellent balance of taste/texture/appearance. Mild a bit mealy. Lacks flavor. Fantastic. Great. My favorite. Very mild. Does not taste like a tomato. Very very nice.
Mortgage Lifter	253	891	3.74	726	3.59	675	3.43	751	3.81	718	3.68	728	3.75	Very nice, sweet & juicy. Less sweet & watery. Very red, (vs. orange), sweeter, excellent plain. Bland. Average. Sweet & good. Bland. Not much flavor, but good texture. Make a good beef steak tomato. Salty and sweet. Watery. Less flavor, but juicy with good texture. Just blah. This is my second favorite. Very good. A little bland, but okay. Not strong flavor, excellent texture, moisture. Juicy but

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Mortgage Lifter (cont.)														watery. Tart & mealy. Delicious. Not the most attractive but nice size. Not very flavorful. 2 nd choice. All round good tomato. Great combination of flavor, juice & texture. Sweet with pleasant texture. Great for salad. Really didn't have any taste. Ordinary. Needs spices. Slightly mushy, a take your head off flavor. Best-just like the jersey of old. Very good. Outstanding. Hearty thick flavor. Great. Fair. My favorite, delicious-tender. Excellent flavor. Very "tomatoey". Taste like homegrown. Very good. Great. Looks better than it tastes. Unique flavor, good texture. Too big & mushy. Not much flavor. Very flavorful. Real tomato. Excellent-the best. Tastes & looks like a NJ garden tomato. Best on table. Nice soft texture. Very sweet & juicy. Rich. Taste like a tomato. Prefer real red color. Lousy name. Not fullv. Have had far superior

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														Mortgage Lifter.
Ramapo	110	374	3.67	310	3.48	281	3.23	315	3.62	307	3.57	298	3.55	Good sauce tomato. Good, tangy-sweet. Looks and tastes great. Average. Tasty. Good. Bland. Sweet & juicy. Awesome. Dry and bland. Dull. Juicy, less taste. Just blah. Rich, sweeter & meaty. Pasty. European taste at an American size. Looks good not sweet. Tasteless. Excellent. Attractive. Average taste. Needs oil & spices. Meaty. A little flat in flavor. Sweet & nice.
Santa Clara Canner	62	178	3.30	160	3.08	155	3.04	167	3.34	168	3.23	146	2.92	Kind of mealy. Excellent. Excellent. Did not care for this one. Not that great. Complicated taste. Good texture not sweet enough-too green. Great for sauce. Tasteless, bitter undertones. Looks like a real tomato. Almost has a smokey flavor. Taste better than it looks. Best. Too mushy, soft, no real taste. Blah. Sweet & tender. Not pretty but functional for cooking. A little bitter. The best.

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