

Pepper Research for Adaptation to the Delmarva Region 2017

Peppers have been produced for the processing industry in the Delmarva region for many decades; however, there have been no replicated university variety trials on Delmarva on processing peppers for well over 20 years. Seed companies do put out observational trials for their varieties in the region, but these do not include a full complement with competing company's varieties. A third year of research was conducted to evaluate new and existing processing pepper cultivars (non-bell types).

Pepper Variety Trials

A total of 52 pepper varieties for processing and fresh market use including sweet and hot banana peppers, hot and no heat Jalapeno peppers, and hot and sweet cherry peppers were grown as transplants in the greenhouse in 128 cell trays and then planted in the field on June 2, 2017. Peppers were grown on black plastic mulch with drip irrigation. A total of 180 lbs/a of nitrogen was applied to the crop. S-metolachlor was applied as the herbicide between plastic beds. Plots consisted of 14 plants each at a spacing of 12" in the row and 24 inches between rows in double rows of 7. These plots were replicated 4 times. Plants also had a simple pepper staking to prevent flopping into the row (one string to the outside of the bed on either side). Weekly fungicide sprays of chlorothalonil and copper were made from the first week in June through the middle of September and Quintec was applied twice for bacterial spot. Weekly insecticide applications of bifenthrin were made starting in July. All peppers were picked twice in July/August and September.

Variety entries were requested from pepper breeding companies including HM Clause, Seminis, and US Agriseeds Voloagri and resellers (Siegers, Stokes, Johnny's, Holmes). Only varieties currently available were used. Experimentals were also requested and provided by some companies. Historical standards were also included (those previously grown in the region). Varieties were requested based on their use for processing. Some fresh market types were also included for comparisons. Varieties tested are presented in Table 1.

Table 1. Pepper varieties and company entries

	Type	Variety	Source	Entered by Breeder	Notes
1	Banana - Sweet	Doblon	Lark		
2	Banana - Sweet	Ducado	Lark		
3	Banana - Sweet	Goddess	US Agriseeds Voloagri	Yes	
4	Banana - Sweet	Gold Rush	Orsetti (via Siegers)		
5	Banana - Sweet	Sopron	Siegers		
6	Banana - Sweet	Superette Sweet	Stokes		Historic Standard
7	Banana - Sweet	SV3782PP (Sweet Sunset)	Seminis	Yes	
8	Banana - Sweet	SV4338PP	Seminis	Yes	
9	Banana - Sweet	SV7685PP	Seminis	Yes	
10	Banana - Sweet	Sweet Arrow	Stokes		Fresh Market

11	Hot Banana	Blazing Banana	USAgriseeds Voloagri	Yes	
12	Hot Banana	Inferno	Seminis	Yes	
13	Hot Banana	Lightning Banana	USAgriseeds Voloagri	Yes	
14	Hot Banana	SV3301HW (Hot Sunset)	Seminis	Yes	
15	Hot Banana	SVHW4851	Seminis	Yes	
16	Cherry - Hot	Capperino	Johnny's		
17	Cherry - Hot	Fireball	Orsetti (via Siegers)		
18	Cherry - Hot	Time Bomb	Seminis	Yes	
19	Cherry - Sweet	Cherry Pick	Seminis	Yes	
20	Jalapeno - Hot	13-0544	HM Clause	Yes	
21	Jalapeno - Hot	14-3043	HM Clause	Yes	
22	Jalapeno - Hot	14-3522	HM Clause	Yes	
23	Jalapeno - Hot	Ciclon	USAgriseeds Voloagri	Yes	
24	Jalapeno - Hot	El Jefe	Sakata (via Stokes)		
25	Jalapeno - Hot	HMX52J1226	HM Clause	Yes	
26	Jalapeno - Hot	Lexus	USAgriseeds Voloagri	Yes	
27	Jalapeno - Hot	Major League	Seminis	Yes	
28	Jalapeno - Hot	Mucho Nacho	Harris		Fresh Market
29	Jalapeno - Hot	PX 207	HM Clause	Yes	
30	Jalapeno - Hot	PX 216	HM Clause	Yes	
31	Jalapeno - Hot	Rayo	Lark		Historic Standard
32	Jalapeno - Hot	Regalo	Orsetti (via Siegers)		
33	Jalapeno - Hot	Spicy Slice	Sakata (via Holmes)		
34	Jalapeno - Hot	SV3198HJ	Seminis	Yes	
35	Jalapeno - Hot	Tormenta	USAgriseeds Voloagri	Yes	
36	Jalapeno - Hot	Unique	HM Clause	Yes	
37	Jalapeno - Hot	USAPX 0843	USAgriseeds Voloagri	Yes	
38	Jalapeno - Hot	USAPR 10937	USAgriseeds Voloagri	Yes	
39	Jalapeno - Hot	USAPR 11762	USAgriseeds Voloagri	Yes	
40	Jalapeno - Hot	USAPR 14765	USAgriseeds Voloagri	Yes	
41	Jalapeno - Hot	USAPR 16280	USAgriseeds Voloagri	Yes	
42	Jalapeno - Hot	USAPX 15314	USAgriseeds Voloagri	Yes	
43	No Heat Jalapeno	Dulce	Stokes		Historic Standard
44	No Heat Jalapeno	Felicity	Johnny's		
45	No Heat Jalapeno	HMX52N4260	HM Clause	Yes	
46	No Heat Jalapeno	HMX5675	HM Clause	Yes	
47	No Heat Jalapeno	P114	HM Clause	Yes	
48	No Heat Jalapeno	P115	HM Clause	Yes	
49	No Heat Jalapeno	Pace 103	HM Clause	Yes	
50	No Heat Jalapeno	Pace 105	HM Clause	Yes	
51	No Heat Jalapeno	SV8066 (Tricked You)	Seminis	Yes	

52	No Heat Jalapeno	USAPR 11762	USAgriseeds Voloagri	Yes	
53	No Heat Jalapeno	USAPX 0843	USAgriseeds Voloagri	Yes	

Results

Overall yields of processing peppers in 2017 were similar to 2016. There was excessive moisture during some periods of the growing season (July, Early-September). There were higher numbers of culls due to cracking and edema (water blistering) in Banana peppers and severe checking in Jalapenos and Cherries.

Banana Peppers

Banana pepper size and quality data are presented in Table 2. Banana peppers suffered from water blistering (edema) that scarred many fruits in 2017 thus increasing cull amounts. The most uniform peppers were Sopron, Doblon, and SV7685PP in the sweet pepper (SB) group and Blazing Banana and SVHW4851 in the hot (HB) group. Width, length, and taper information are also presented for comparison. The longest peppers were SV3301HW (HB 6.45 in.) and SV4338PP (SB 7.26 in.). Those 1.75 inch or wider in diameter were Sweet Arrow (SB) and SV4338PP (SB). The peppers with the least amount of taper (most uniform diameter down the fruit) were Blazing Banana (HB), Doblon (SB), Ducado (SB), and SV3782PP (SB). SVHW4851 was the heaviest HB (69 g/fruit) and Sopron (83 g) and SV4338PP had the heaviest fruit weights for the SB group. For defects, edema was greatest in SV3301HW (HB 17%) and SV7685PP (SB 22%). Blossom end rot was limited in all varieties (less than 5%). Crooks were a major defect in Inferno HB (>30%) and SV4338PP SB (25%).

Yield information is presented in Tables 3 and 4, by weight per plant and estimated yield based on weights per plant by harvest and over both harvests. In the HB group, SV3301HW had the highest yields (47153 lbs/a total, 38719 lbs/a useable). However, it was not significantly different from Inferno, Lightning Banana, or SVHW4851. Blazing Banana had the lowest yields. In the SB group, Sopron and Sweet Arrow had the highest useable yields (43996 lbs/a and 44552 lbs per acre respectively) followed by Gold Rush, Doblon, and Ducado (39702, 38370, and 37558 lbs/a useable). These results were similar to 2016 trials (all were in the top group both years). Those varieties with greater than 25% culls were Lightning Banana (HB 27%), Superette Sweet (SB 23%), SV4338PP (SB 32%), and SV7685PP (SB 35%). Yields in the first harvest were greatest in SV3301HW (HB, 40%) and SV3782PP (SB, 50%) indicating that they are potential candidates for machine harvest.

Pictures of banana peppers are also shown after the tables.

Hot Jalapeno Peppers

Hot jalapeno size and quality data are given in Table 5. The most uniform hot jalapenos were 14-3043, El Jefe, Lexus, Rayo, Spicy Slice, and USAPR14765. All varieties tested were less than 1.5 inches in diameter. The longest varieties were SV3198 (4.04 inch), Regalo (3.99 inch), Unique (3.86 inch), 14-3043 (3.74 inch), and 52J1126 (3.74 inch). Those varieties with the least taper (less than 3%) were 13-

0544, 52J1126, Ciclon, and Unique. Unique and 52J1126 were well suited for producing uniform rings for processing. Those varieties with the heaviest fruits were USAPR14765 (47 g/fruit), Lexus (42 g/fruit), PX 207 (40 g/fruit), and PX 216 (40 g/fruit). Checking (fruit cracks) were a problem in 2017. Those varieties with greater than 25% checking were 14-3522, 52J1126, Mucho Nacho, SV3198, and USAPR14769. Highest numbers of useable fruit were found in USAPR16280 and Rayo (both 86%).

Yield information is presented in Tables 6 and 7, by weight per plant and estimated yield based on weights per plant by harvest and over both harvests. The varieties with the highest yields of useable and total fruit per acre respectively were: PX207 (33779, 38083), PX216 (25788, 40190), Rayo (28872, 39613), Regalo (25153, 38493), Ciclon (24457, 37692), and Lexus (29230, 36244). The varieties with the highest yields for the first picking were Spicy Slice (13614 lbs/a) and Lexus (13302 lbs/a).

Pictures of some hot and all of the no heat and mild Jalapeno peppers follow the hot Jalapeno tables.

No-Heat and Mild Jalapeno Peppers

No heat and mild jalapeno pepper data are given in Table 8. The most uniform varieties were Felicity, P115, SV8066 (Tricked You), and USA11762. All peppers were less than 1.5 inches in diameter. Those longer than 4 inches on average were HMX52N4260, HMX5675, P114, Pace103, and Pace105. HMX52N4260 had very little taper and would produce high yields of uniform rings. Felicity and Pace 105 both had over 90% useable peppers. Dulce had unacceptable checking. All varieties were 45 grams or greater in g/fruit, with the exception of Dulce and Felicity.

Yield information is presented in Tables 9 and 10, by weight per plant and estimated yield based on weights per plant by harvest and over both harvests. The varieties with the highest yields of useable and total fruit per acre respectively were: Pace 105 (49104, 52972), Felicity (46170, 50341), Tricked You (40690, 46330), Pace103 (41930, 48912), and HMX5673 (41908, 49293). The varieties with the highest yields for the first picking were HMX5673, P114, P115, USA17981 (all greater than 17500 lbs/a). Yields of no heat and mild Jalapenos were higher than hot jalapenos in this trial.

Cherry Peppers

Processors require cherry peppers of 1.75 inches or less diameter. This limited the varieties entered into the trial in 2017.

Cherry pepper data is presented in tables 11 and 12. All peppers tested were less than 1.75" in diameter. Cherry Pick was the only sweet cherry tested as a control. As with past trials and grower experience, yields were low and there was excessive checking in Cherry Pick. All hot cherry peppers had greater than 85% useable fruit. Capperino and Time Bomb had the highest yields (31554 and 31755 lbs per acre respectively).

Table 2. Banana Pepper Size and Quality Data, Georgetown, DE 2017

Type	Variety	Uniform	Diam.	Length	Width	Taper	Fruit	Edema	BER	Crook	Crack
		1-10	Inch	Inch	mm	mm	g	%	%	%	%
Hot	BLAZING BANANA	8.0	1.38	6.15	35	27	55	7.5	3.4	3.9	0.8
Hot	INFERNO	7.1	1.52	6.32	41	21	65	9.1	1.5	30.3	0.0
Hot	LIGHTING BANANA	6.5	1.49	6.23	38	27	58	5.8	1.0	21.5	0.5
Hot	SV3301HW	6.8	1.44	6.45	36	26	56	16.9	0.4	15.4	2.2
Hot	SVHW4851	7.8	1.65	5.54	46	36	69	12.0	4.1	11.3	0.5
Sweet	DOBLON	7.9	1.58	6.79	36	33	75	4.9	1.1	4.8	2.2
Sweet	DUCADO	7.5	1.52	5.73	36	27	61	15.5	1.1	3.6	0.0
Sweet	GODDESS	6.8	1.58	6.52	42	31	70	19.7	0.8	6.5	0.0
Sweet	GOLD RUSH	6.1	1.49	5.98	42	26	58	4.5	3.5	14.8	0.6
Sweet	SOPRON	8.0	1.68	6.84	43	30	83	6.4	1.5	7.9	0.1
Sweet	SV3782PP	6.8	1.58	6.64	39	31	60	8.9	3.4	14.0	0.0
Sweet	SUPERETTE SWEET	6.5	1.66	5.71	47	33	52	6.0	0.9	16.6	0.0
Sweet	SV4338PP	6.0	1.81	7.26	49	33	77	12.9	1.3	24.6	0.2
Sweet	SV7685PP	7.9	1.59	6.94	42	24	69	21.8	1.4	11.7	0.8
Sweet	SWEET ARROW	7.5	1.75	5.86	46	34	71	3.3	1.9	19.7	0.4
All values are expressed as means from samples taken											
Uniformity on a scale of 1-10 with 10 being totally uniform											
Width measurement was taken at the widest part of the fruit in mm											
Taper measurement was taken at 1 inch from the bottom of the fruit in mm											
Fruit weight average from 10 samples in grams											
Edema = water blisters, BER is blossom end rot, Crook = fruit > 25% curve from straight, Cracks in fruit											

Table 3. Banana Pepper Yields Per Plant, Georgetown, DE, 2017								
Banana Pepper Yields Per Plant								
		Useable	Total	Useable	Total	Useable	Total	Fruit
	Harvest	1	1	2	2	1+2	1+2	1+2
		lbs	lbs	lbs	lbs	lbs	lbs	No.
Type	Variety							
HB	BLAZING BANANA	0.66	1.07	1.08	1.26	1.74	2.08	17
HB	INFERNO	0.88	1.35	1.36	1.78	2.24	2.79	19
HB	LIGHTING BANANA	0.87	1.32	1.32	2.08	2.19	2.99	23
HB	SV3301HW	1.05	1.62	1.62	1.95	2.67	3.25	26
HB	SVHW4851	0.98	1.46	1.47	1.77	2.45	2.99	20
SB	DOBLON	0.98	1.61	1.61	1.96	2.59	3.01	18
SB	DUCADO	1.18	1.46	1.46	1.75	2.64	3.15	24
SB	GODDESS	1.00	1.34	1.35	1.7	2.34	2.87	21
SB	GOLD RUSH	0.85	1.83	1.84	2.26	2.69	3.22	25
SB	SOPRON	1.22	1.81	1.81	2.17	3.03	3.47	19
SB	SUPERETTE SWEET	1.01	1.32	1.32	1.92	2.33	3.05	23
SB	SV3782PP	1.27	1.01	1.01	1.4	2.28	2.82	22
SB	SV4338PP	0.97	0.84	0.84	1.53	1.81	2.67	29
SB	SV7685PP	0.72	0.63	0.64	1.13	1.35	2.08	14
SB	SWEET ARROW	1.18	1.88	1.89	2.21	3.07	3.47	23
	p	0.04	0.04	0.01	0.01	0.02	0.03	NS
	LSD	0.35	0.62	0.65	0.92	0.61	0.82	NS

HB = Hot Banana Pepper, SB = Sweet Banana Pepper

Yields of Useable (total – Cull) and total peppers by harvest and over all harvests

p probability values less than 0.05 are statistically significant

LSD Least significant difference. Means for varieties are significantly different if the difference is = or > the the LSD value.

Table 4. Banana Pepper Yields Per Acre, Georgetown, DE 2017							
Banana Pepper Yields per Acre							
		Useable	Total	Useable	Total	Useable	Total
	Harvest	1	1	2	2	1+2	1+2
		lbs/a	lbs/a	lbs/a	lbs/a	lbs/a	lbs/a
Type	Variety						
HB	BLAZING BANANA	9625	11817	15665	18364	25290	30181
HB	INFERNO	12770	14640	19690	25819	32461	40459
HB	LIGHTING BANANA	12621	13242	19199	30130	31820	43372
HB	SV3301HW	15175	18784	23544	28369	38719	47153
HB	SVHW4851	14280	17745	21325	25670	35606	43415
SB	DOBLON	14220	15365	23338	28403	37558	43768
SB	DUCADO	17159	20303	21211	25453	38370	45757
SB	GODDESS	14486	16936	19530	24733	34017	41669
SB	GOLD RUSH	12372	13828	26700	32874	39072	46703
SB	SOPRON	17647	18927	26349	31525	43996	50452
SB	SUPERETTE SWEET	14638	16392	19199	27832	33837	44223
SB	SV3782PP	18472	20630	14648	20273	33120	40904
SB	SV4338PP	14026	16506	12189	22286	26215	38792
SB	SV7685PP	10428	13847	9239	16397	19667	30244
SB	SWEET ARROW	17155	18306	27397	32062	44552	50369
	p	0.11	0.13	0.01	0.01	0.01	0.03
	LSD	NS	NS	9557	8925	12694	11897

HB = Hot Banana Pepper, SB = Sweet Banana Pepper

Yields of Useable (total – Cull) and total peppers by harvest and over all harvests

p probability values less than 0.05 are statistically significant

LSD Least significant difference. Means for varieties are significantly different if the difference is = or > the the LSD value.





Table 5. Hot Jalapeno Size and Quality Data, Georgetown, DE 2017

Hot Jalapeno Size and Quality Data											
Variety	Uniform	Diam.	Length	Width	Taper	Taper	Useable	Check	Purple	Other	Fruit
	I-10	Inch	Inch	mm	mm	%	%	%	%	%	g
13-0544	7.0	1.30	3.57	26.9	26.4	1.9	73	24	1	2	38
14-3043	7.8	1.12	3.74	27.6	26.4	4.5	82	13	2	3	33
14-3522	6.1	1.21	2.81	31.3	28.6	8.4	67	28	2	3	26
52J1126	6.8	1.06	3.74	23.9	23.4	2.1	73	30	0	7	38
CICLON	7.4	1.19	3.40	25.9	25.9	0.2	82	14	2	1	33
EL JEFE	7.8	1.19	2.81	30.6	28.0	8.6	82	13	2	2	27
LEXUS	7.9	1.31	3.40	32.9	30.3	8.0	81	18	0	1	42
MAJOR LEAGUE	6.6	1.01	3.49	24.0	22.3	7.3	71	22	1	4	23
MUCHO NACHO	7.6	1.22	2.85	32.3	31.1	3.5	56	33	8	4	32
PX207	7.6	1.28	3.22	31.5	30.1	4.4	82	10	6	4	40
PX216	6.8	1.13	3.37	24.4	23.3	4.6	80	13	2	7	40
RAYO	7.9	1.22	3.20	29.1	28.1	3.4	86	12	1	4	34
REGALO	7.4	1.08	3.99	25.1	23.9	5.0	81	15	0	3	35
SPICY SLICE	8.0	1.27	3.35	29.5	26.0	11.9	78	13	8	2	36
SV3198	6.3	1.10	4.04	26.5	24.9	6.1	67	26	0	5	36
TORMENTA	7.3	1.23	3.10	30.4	28.4	6.6	74	23	3	2	35
UNIQUE	6.5	1.08	3.86	24.4	23.8	2.6	82	22	2	5	32
USAPR10937	6.8	1.19	2.61	29.8	28.1	5.5	72	23	2	4	28
USAPR14765	8.0	1.47	3.44	35.4	34.0	3.9	75	23	0	2	47
USAPR14769	7.5	1.23	2.88	31.8	29.4	7.5	59	35	4	4	32
USAPR16280	6.8	1.18	3.49	28.6	26.4	7.9	86	11	0	4	33

All values are expressed as means from samples taken
 Uniformity on a scale of 1-10 with 10 being totally uniform
 Width measurement was taken at the widest part of the fruit in mm
 Taper measurement was taken at 1 inch from the bottom of the fruit in mm
 % taper - the lower the value the more uniform diameter down the fruit
 Check = % cracks, Purpling %, Other cull % as defects
 Fruit weight average from 10 samples in grams
 % useable fruit = total minus culls

Table 6. Hot Jalapeno Yield Per Plant, Georgetown, DE 2017

Hot Jalapeno Yield Per Plant							
	Useable	Total	Useable	Total	Useable	Total	Fruit
Harvest	1	1	2	2	1+2	1+2	1+2
	lbs	lbs	lbs	lbs	lbs	lbs	No.
Variety							
13-0544	0.57	0.71	0.56	1.14	1.13	1.85	38
14-3043	0.71	0.84	0.93	1.67	1.63	2.51	47
14-3522	0.57	0.80	0.52	0.97	1.08	1.76	49
52J1126	0.75	0.90	0.33	0.95	1.07	1.85	35
CICLON	0.53	1.07	1.15	1.53	1.68	2.60	44
EL JEFE	0.61	0.81	0.86	1.51	1.47	2.32	51
LEXUS	0.92	1.04	1.10	1.45	2.01	2.50	42
MAJOR LEAGUE	0.53	0.82	0.83	1.23	1.35	2.05	61
MUCHO NACHO	0.53	0.87	0.68	0.85	1.21	1.72	50
PX207	0.58	0.83	1.74	1.79	2.33	2.62	53
PX216	0.75	1.08	1.02	1.69	1.78	2.77	39
RAYO	0.66	1.02	1.32	1.71	1.99	2.73	46
REGALO	0.80	1.12	0.93	1.54	1.73	2.65	39
SPICY SLICE	0.94	1.19	0.95	1.51	1.89	2.70	42
SV3198	0.56	0.71	0.71	1.27	1.27	1.98	41
TORMENTA	0.55	0.86	0.98	1.22	1.53	2.08	48
UNIQUE	0.67	0.83	0.83	1.17	1.50	2.00	50
USAPR10937	0.68	0.88	0.82	1.39	1.49	2.27	49
USAPR14765	0.69	0.86	0.62	1.33	1.31	2.18	31
USAPR14769	0.78	1.09	0.50	0.98	1.28	2.07	42
USAPR16280	0.61	0.93	1.34	1.76	1.96	2.70	49
p	0.51	0.93	0.001	0.001	0.001	0.003	0.001
LSD	NS	NS	0.37	0.31	0.53	0.63	11.3

Yields of Useable (total – Cull) and total peppers by harvest and over all harvests

p probability values less than 0.05 are statistically significant

LSD Least significant difference. Means for varieties are significantly different if the difference is = or > the the LSD value

Table 7. Hot Jalapeno Yield Per Acre, Georgetown, DE 2017

Hot Jalapeno Yield Per Acre						
	Useable	Total	Useable	Total	Useable	Total
Harvest	1	1	2	2	1+2	1+2
	lbs	lbs	lbs	lbs	lbs	lbs
Variety						
13-0544	8281	10276	8176	16551	16457	26827
14-3043	10285	12216	13436	24193	23721	36409
14-3522	8259	11570	7478	14030	15737	25600
52J1126	10856	13134	4734	13785	15590	26919
CICLON	7694	15511	16763	22180	24457	37692
EL JEFE	8901	11755	12498	21993	21399	33748
LEXUS	13302	15157	15928	21087	29230	36244
MAJOR LEAGUE	7630	11936	11995	17847	19625	29783
MUCHO NACHO	7733	12631	9828	12293	17561	24924
PX207	8486	12055	25293	26029	33779	38083
PX216	10911	15644	14876	24546	25788	40190
RAYO	9639	14745	19233	24867	28872	39613
REGALO	11603	16195	13550	22298	25153	38493
SPICY SLICE	13614	17305	13790	21924	27404	39229
SV3198	8160	10246	10257	18461	18416	28707
TORMENTA	8004	12459	14158	17718	22162	30178
UNIQUE	9793	12074	12052	16999	21845	29073
USAPR10937	9832	12821	11835	20148	21666	32969
USAPR14765	9966	12436	9010	19251	18977	31687
USAPR14769	11300	15795	7307	14214	18606	30008
USAPR16280	8930	13565	19462	25572	28391	39138
p	0.51	0.93	0.001	0.001	0.001	0.001
LSD	NS	NS	5207	4478	7718	9007

Yields of Useable (total – Cull) and total peppers by harvest and over all harvests

p probability values less than 0.05 are statistically significant

LSD Least significant difference. Means for varieties are significantly different if the difference is = or > the the LSD value

Hot Jalapeno Peppers



Non-Hot and Mild Jalapeno Peppers





Table 8. No Heat and Mild Jalapeno Size and Quality Data, Georgetown, DE, 2017

No Heat or Mild Jalapeno Size and Quality Data											
Variety	Uniform	Diam.	Length	Width	Taper	Taper	Useable	Check	Purple	Other	Fruit
	1-10	Inch	Inch	mm	mm	%	%	%	%	%	g
DULCE	6.9	1.20	2.81	30	28	7.1	64.4	39.2	2.6	0.7	31
FELICITY	8.1	1.29	3.91	34	30	10.1	93.6	7.7	1.6	2.6	39
HMX52N4260	7.9	1.19	4.26	29	28	3.1	74.1	21.2	8.5	3.2	45
HMX5673	7.3	1.46	4.48	38	32	15.3	85.6	11.3	4.5	0.4	50
HMX5675	7.6	1.26	3.74	31	29	6.1	79.8	22.4	6.4	0.0	47
P114	7.5	1.08	4.21	30	28	6.3	78.6	19.5	2.3	1.4	48
P115	8.1	1.34	3.96	32	29	11.6	80.7	20.5	4.6	3.5	47
PACE103	7.8	1.45	4.16	37	30	18.3	86.5	15.2	0.4	2.5	48
PACE105	7.9	1.47	4.53	38	30	21.2	92.7	4.2	1.5	3.8	48
SV8066*	8.4	1.39	3.27	36	36	1.1	82.9	15.8	1.7	2.6	45
TRICKED YOU*	8.3	1.39	3.30	35	33	5.7	83.8	23.5	1.6	2.9	45
USA11762	8.1	1.41	3.81	34	31	9.8	88.2	10.1	2.5	2.0	45
USAPX0843	7.4	1.20	3.72	31	24	22.3	85.3	15.5	1.3	3.0	46
All values are expressed as means from samples taken											
Uniformity on a scale of 1-10 with 10 being totally uniform											
Width measurement was taken at the widest part of the fruit in mm											
Taper measurement was taken at 1 inch from the bottom of the fruit in mm											
% taper - the lower the value the more uniform diameter down the fruit											
Check = % cracks, Purpling %, Other cull % as defects											
Fruit weight average from 10 samples in grams											
% useable fruit = total minus culls											
* SV8066 and Tricked You are commercial and home garden versions of the same variety.											

Table 9. No Heat and Mild Jalapeno Yield per Plant, Georgetown, DE, 2017							
No Heat and Mild Jalapeno Yield Per Plant							
	Useable	Total	Useable	Total	Useable	Total	Fruit
Harvest	1	1	2	2	1+2	1+2	1+2
	lbs	Lbs	lbs	lbs	lbs	lbs	No
Variety							
DULCE	0.56	0.77	0.99	1.67	1.55	2.44	36.2
FELICITY	1.02	1.03	2.16	2.44	3.18	3.47	40.56
HMX52N4260	1.02	1.18	0.99	1.62	2.01	2.79	29.11
HMX5673	1.21	1.34	1.68	2.06	2.89	3.39	32.5
HMX5675	0.95	1.08	1.6	2.19	2.55	3.27	32.16
P114	1.27	1.46	1.05	1.49	2.32	2.95	27.9
P115	1.28	1.32	1.07	1.65	2.35	2.96	29.3
PACE103	1.18	1.3	1.71	2.07	2.89	3.37	31.67
PACE105	1.11	1.19	2.27	2.46	3.38	3.65	35.18
SV8066	0.67	0.83	1.86	2.24	2.53	3.07	31.42
TRICKED YOU	0.68	0.72	1.73	2.31	2.41	3.03	30.37
USA11762	1.24	1.33	1.56	1.86	2.8	3.19	31.99
USAPX0843	0.58	0.65	1.78	2.17	2.36	2.82	28.97
p	0.001	0.001	0.001	0.001	0.001	0.013	0.204
LSD	0.319	0.35	0.46	0.486	0.553	0.582	NS

Yields of Useable (total – Cull) and total peppers by harvest and over all harvests

p probability values less than 0.05 are statistically significant

LSD Least significant difference. Means for varieties are significantly different if the difference is = or > the the LSD value

Table 10. No Heat and Mild Jalapeno Pepper Yield per Acre, Georgetown, DE, 2017

No Heat and Mild Jalapeno Yield Per Acre						
	Useable	Total	Useable	Total	Useable	Total
Harvest	1	1	2	2	1+2	1+2
	lbs	lbs	lbs	lbs	lbs	lbs
Variety						
DULCE	8146	11203	14430	24230	22576	35432
FELICITY	14811	14975	31359	35367	46170	50341
HMX52N4260	14740	17085	14396	23498	29137	40583
HMX5673	17636	19392	24333	29901	41968	49293
HMX5675	13826	15725	23189	31782	37015	47507
P114	18407	21236	15221	21585	33628	42822
P115	18613	19114	15522	23908	34136	43022
PACE103	17122	18862	24807	30050	41930	48912
PACE105	16127	17297	32977	35676	49104	52972
SV8066	9697	12025	27048	32520	36746	44545
TRICKED YOU	9857	10522	25087	33492	34945	44014
USA11762	17981	19324	22709	27014	40690	46338
USAPX0843	8381	9406	25836	31496	34218	40902
p	0.001	0.001	0.001	0.001	0.001	0.013
LSD	4637	5070	6664	7036	8016	8447

Table 11. Cherry Pepper Size and Quality Data, Georgetown, DE, 2017

Cherry Pepper Size and Quality Data							
Type	Variety	Uniformity	Diameter	Length	Useable	Check	Fruit
		1-10	Inch	Inch	%	%	g
Hot	CAPPERINO	6.88	1.57	1.72	97	1	24
Sweet	CHERRY PICK	6.75	1.24	4.85	50	45	14
Hot	FIRE BALL	6.00	1.44	1.48	83	14	19
Hot	TIME BOMB	6.13	1.43	1.89	89	9	19

Uniformity rating on a scale from 1-10 with 10 being all uniform

Useable percent (total – culls)

Check % cracking

Fruit weight in grams

Table 12. Cherry Pepper Yield Per Plant and Per Acre, Georgetown, DE, 2017

Cherry Pepper Yield per Plant								
		Useable	Total	Useable	Total	Useable	Total	Fruit
	Harvest	1	1	2	2	1+2	1+2	1+2
		lbs	lbs	lbs	lbs	lbs	lbs	No.
Type	Variety							
Hot	CAPPERINO	1.26	1.29	0.91	0.99	2.17	2.28	47
Sweet	CHERRY PICK	0.34	0.67	0.33	0.62	0.67	1.30	44
Hot	FIRE BALL	1.07	1.15	0.55	0.69	1.61	1.85	43
Hot	TIME BOMB	1.36	1.42	0.83	0.95	2.19	2.37	55
	p	0.001	0.003	0.031	0.086	0.001	0.001	0.399
	LSD	0.29	0.33	0.40	NS	0.38	0.42	NS
Cherry Pepper Yield per Acre								
		Useable	Total	Useable	Total	Useable	Total	
	Harvest	1	1	2	2	1+2	1+2	
		lbs	lbs	lbs	lbs	lbs	lbs	
Type	Variety							
Hot	CAPPERINO	18324	18709	13230	14379	31554	33088	
Sweet	CHERRY PICK	4968	9761	4727	9073	9696	18834	
Hot	FIRE BALL	15480	16734	7924	10074	23404	26808	
Hot	TIME BOMB	19772	20608	11983	13847	31755	34455	
	p	0.001	0.003	0.031	0.086	0.001	0.001	
	LSD	4310	4758	5771	NS	5552	6136	

Yields of Useable (total – Cull) and total peppers by harvest and over all harvests

p probability values less than 0.05 are statistically significant

LSD Least significant difference. Means for varieties are significantly different if the difference is = or > the the LSD value