

Fall Pepper Variety Evaluation



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Table 1. Summary of cultural practices used for variety trial of pepper grown with seepage irrigation in Palm Beach, FL. during fall 2011.

Field history	
Location	Palm Beach, FL.
Experimental design	RCBD (4 reps)
Irrigation	Seepage
Plot size	10.8 ft (13 plants/row)
Harvest size	10.8 ft (13 plants/row)
Planting date	10 Oct. 2011
Fumigation	Telone C-35/Chloropicrin/K Pam (35 gal/acre, 150 lb/acre and 60 gal/acre, respectively)
Linear ft per acre	7,260
Bed spacing (center to center)	6 ft
Bed height	8 in
Bed width	36 in
Plant population	17,477
Distance between plants	10 in
No of rows	2
Distance between rows	14 in
Row run	North - South
Harvest date	
1st	6 Jan. 2012
2nd	24 Jan. 2012
Planting to 2nd harvest	15 weeks

Table 2. Sources of pepper seeds

Variety	Company	Bacterial spot (Xcv) resistance
ACR 2993	Abbott and Cobb	1-5
ACR 2994	Abbott and Cobb	1-5
Aristotle	Seminis	1-3
E41-20854	Enza Zaden	1-5, Pc
E41-20896	Enza Zaden	1-5
E41-20900	Enza Zaden	1-5, TSW
E41-50169	Enza Zaden	1-5
E410-21069	Enza Zaden	1-5
FPP 7039	Sakata	1-5 and 7-9
FPP 8048	Sakata	1-5 and 7-9, TSW
HMX-7632	Harris Morran	1-5
Hunter	Syngenta/Rogers	1-5 and 7-9
PR 2011-1	Pepper Research	1-10
PR 2011-2	Pepper Research	1-10
PR 2011-3	Pepper Research	1-10
Cutlass	Syngenta/Rogers	1-5 and 7-9, TSW
Bayonet	Syngenta/Rogers	1-5 and 7-9, TSW
SYN-1	Syngenta/Rogers	1-5 and 7-9
SYN-9	Syngenta/Rogers	1-5 and 7-9
Tom Cat	Syngenta/Rogers	1-5 and 7-9
Vanguard	Harris Morran	1-5, Pc
XPP 6001	Sakata	1-5 and 7-9
7141	Seminis	1-5
8302	Seminis	1-5
9325™	Seminis	1-10

Xcv 1,2,3,4,5,6,7,8,9,10 - Bacterial spot (*Xanthomonas campestris* pv. *Vesicatoria*)
Pc - Phytophthora root rot (*Phytophthora capsici*); TSW - Tomato spotted wilt.

Table 3. Summary of temperature and total rainfall in Palm Beach, FL. during fall 2011.

Period	Temperature (°F)			Total rainfall (in)
	Average	Min	Max	
Oct. 2011	72.5	64.5	82.8	4.7
Nov. 2011	69.5	59.8	81.4	0.3
Dec. 2011	66.2	55.8	79.0	1.7
Jan. 2011	59.7	45.5	75.3	0.0
Average/Total	67.0	56.4	79.6	6.6

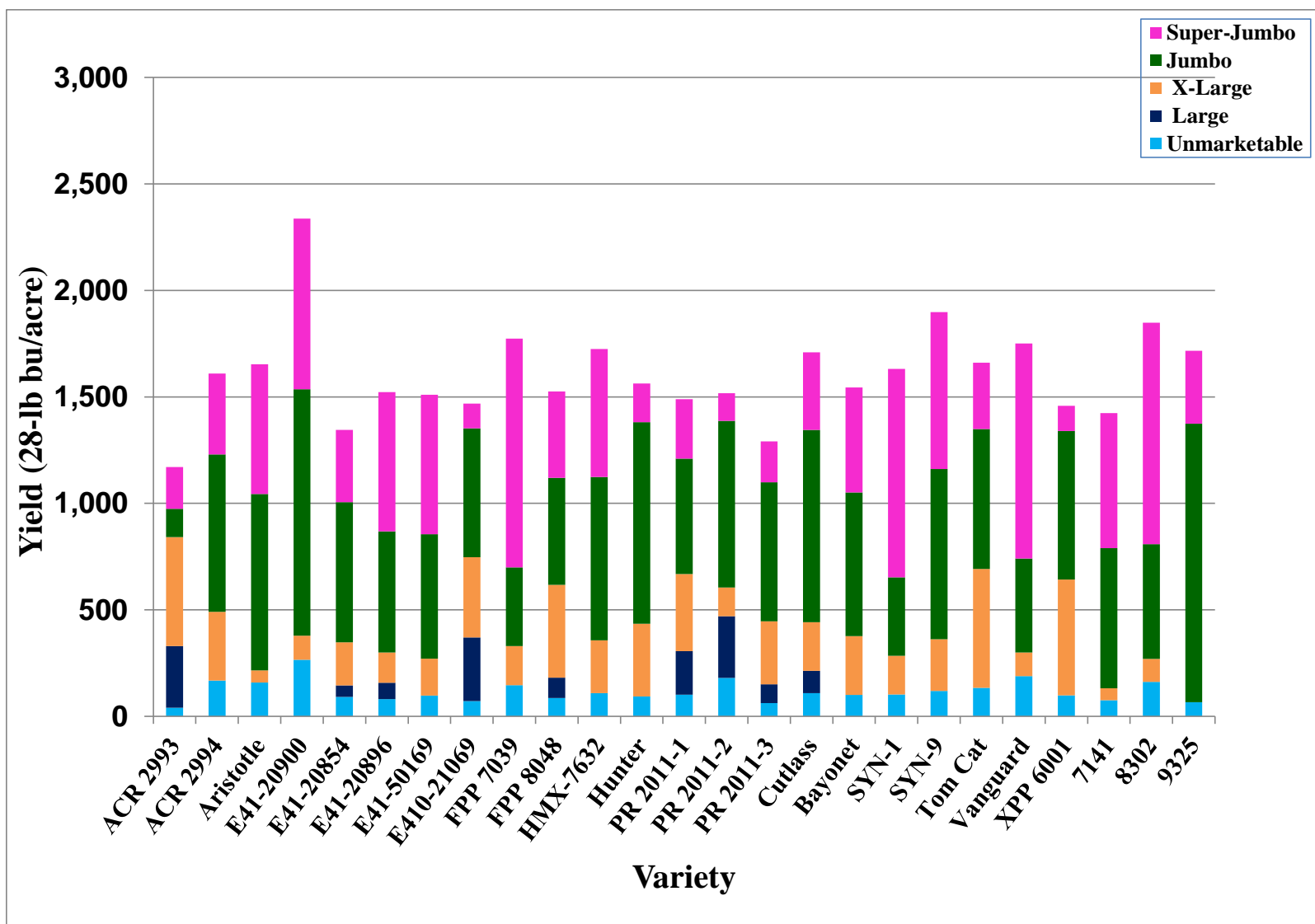


Fig. 1. First harvest marketable and unmarketable yield categories for selected pepper varieties grown in Palm Beach, FL. during fall 2011.

Table 4. First harvest marketable and unmarketable yield categories for selected pepper varieties grown in Palm Beach, FL. during fall 2011.

Variety	Super-Jumbo	Jumbo	X-Large	Large	Unmarketable	Total marketable
-----Yield (28-lb bu/acre)-----						
ACR 2993	196ghi ^z	132d	512	289	40	1,130
ACR 2994	379defghi	739abc	323	0	168	1,441
Aristotle	609cdefgh	828abc	58	0	158	1,495
E41-20900	801abcd	1,158ab	113	0	265	2,072
E41-20854	339efghi	658bcd	202	54	91	1,254
E41-20896	654abcdef	568bcd	142	77	81	1,442
E41-50169	655abcdef	585bcd	173	0	97	1,412
E410-21069	117i	605bcd	377	299	71	1,398
FPP 7039	1,074a	370cd	184	0	146	1,628
FPP 8048	406defghi	502cd	436	95	86	1,440
HMX-7632	600cdefgh	768abc	248	0	108	1,616
Hunter	182hi	947abc	341	0	93	1,470
PR 2011-1	279fghi	542cd	362	205	101	1,388
PR 2011-2	130i	783abc	134	290	180	1,337
PR 2011-3	192hi	653bcd	296	88	62	1,230
Cutlass	364efghi	902abc	229	105	109	1,600
Bayonet	493defghi	675bcd	276	0	101	1,443
SYN-1	979abc	368cd	182	0	102	1,529
SYN-9	737abcde	799abc	243	0	119	1,779
Tom Cat	311efghi	657bcd	558	0	134	1,527
Vanguard	1,011abc	441cd	111	0	188	1,563
XPP 6001	118i	697bcd	544	0	99	1,359
7141	635bcdefg	658bcd	56	0	75	1,349
8302	1,040ab	538cd	109	0	161	1,687
9325™	343efghi	1,308a	0	0	66	1,650
P. value	0.0001	0.02	0.23	0.002	0.14	0.03
Sig.	**	ns	ns	**	ns	ns

^zWithin columns, means followed by different letters are significantly different according to Duncan's Multiple Range Test at 5%. **Significance at $P \leq 0.01$. *Significance at $P \leq 0.05$. ns = Non-significance.

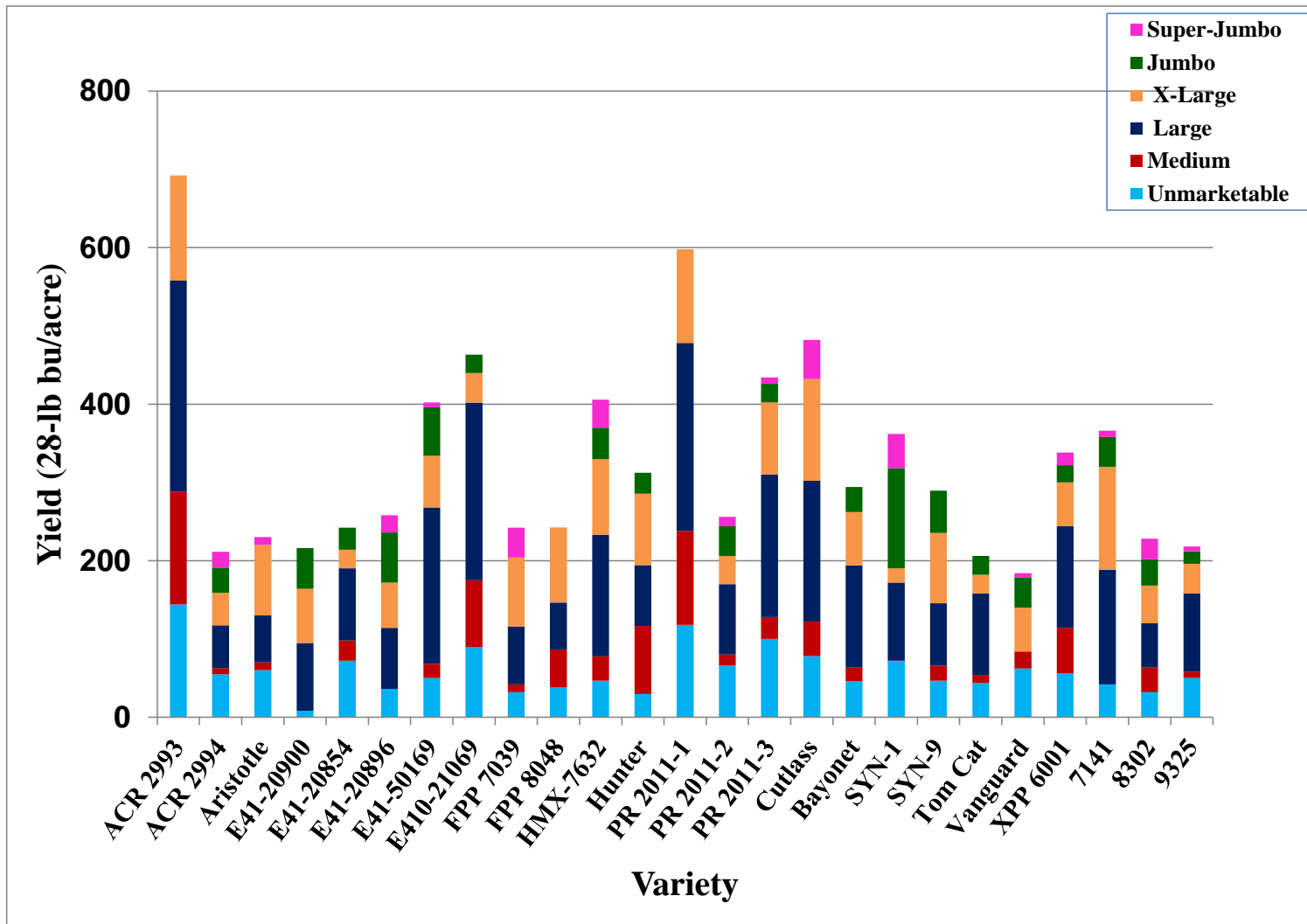


Fig. 2. Second harvest marketable and unmarketable yield categories for selected pepper varieties grown in Palm Beach, FL. during fall 2011.

Table 5. Second harvest marketable and unmarketable yield categories for selected pepper varieties grown in Palm Beach, FL. during fall 2011.

Variety	Super-Jumbo	Jumbo	X-Large	Large	Medium	Unmarketable	Total marketable
-----Yield (28-lb bu/acre)-----							
ACR 2993	0	0	134	270a ^z	144a	144a	548a
ACR 2994	20	32	42	55ef	8d	55cdef	157gh
Aristotle	10	0	90	60def	10d	60cdef	170fgh
E41-20900	0	52	69	87cdef	0d	8f	208defgh
E41-20854	0	28	24	92cdef	26cd	72bcde	170fgh
E41-20896	22	64	58	78def	0d	36def	222defgh
E41-50169	6	62	66	200abcd	18d	50cdef	352bcdef
E410-21069	0	24	38	227abc	85bc	90bcd	374bcd
FPP 7039	38	0	88	74def	10d	32ef	210defgh
FPP 8048	0	0	96	60def	48cd	38def	204defgh
HMX-7632	36	40	97	155abcde	31cd	46cdef	359bcde
Hunter	0	27	91	78def	87bc	30ef	283cdefgh
PR 2011-1	0	0	120	240ab	120ab	118ab	480ab
PR 2011-2	12	38	36	90cdef	14d	66bcde	190efgh
PR 2011-3	8	24	92	182abcde	28cd	100abc	334bcdefg
Cutlass	50	0	130	180abcde	44cd	78bcde	404abc
Bayonet	0	32	68	130bcdef	18d	46cdef	248cdefgh
SYN-1	44	128	18	100bcdef	0d	72bcde	290cdefgh
SYN-9	0	54	90	80def	19d	47cdef	243cdefgh
Tom Cat	0	24	24	104bcdef	10d	44def	162gh
Vanguard	6	38	56	0f	22d	62cdef	122h
XPP 6001	16	22	56	130bcdef	58cd	56cdef	282cdefgh
7141	8	38	132	146abcde	0d	42def	324bcdefg
8302	26	34	48	56def	32cd	32ef	196defgh
9325 TM	6	16	38	100bcdef	8d	50cdef	168gh
P. value	0.07	0.32	0.36	0.003	0.0001	0.0002	0.0001
Sig.	ns	ns	ns	**	**	**	**

^zWithin columns, means followed by different letters are significantly different according to Duncan's Multiple Range Test at 5%.

**Significance at $P \leq 0.01$. *Significance at $P \leq 0.05$. ns = Non-significance.

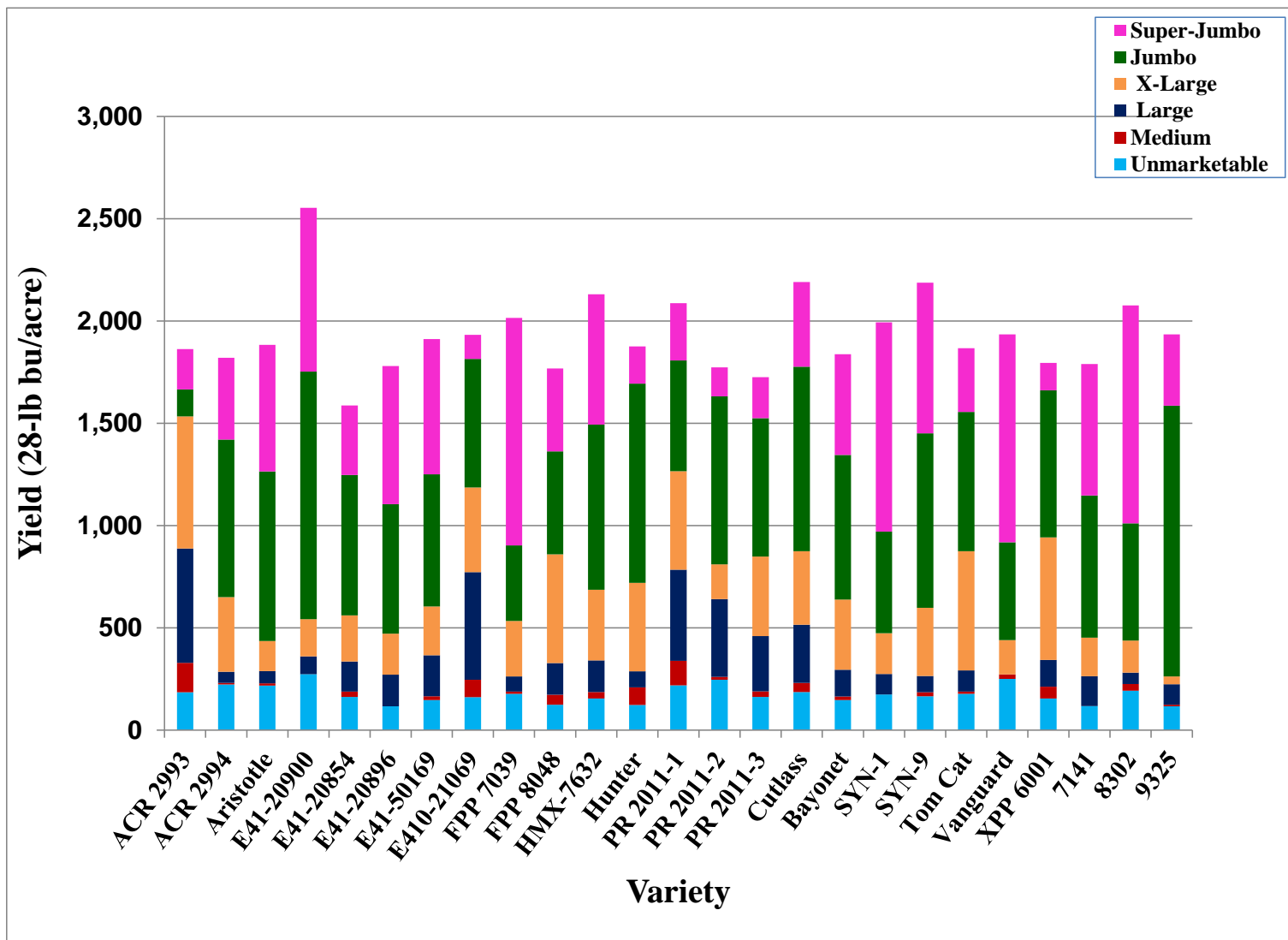


Fig. 3. Total harvest marketable and unmarketable yield categories for selected pepper varieties grown in Palm Beach, FL. during fall 2011.

Table 6. Total harvest marketable and unmarketable yield categories for selected pepper varieties grown in Palm Beach, FL. during fall 2011.

Variety	Super-Jumbo	Jumbo	X-Large	Large	Medium	Unmarketable	Total marketable
-----Yield (28-lb bu/acre)-----							
ACR 2993	196ghi ^z	132	646	560a	144a	184	1,678
ACR 2994	400defghi	771	365	55de	8d	223	1,598
Aristotle	619cdefgh	828	148	60de	10d	218	1,665
E41-20900	801abcd	1,210	182	87de	0d	273	2,280
E41-20854	339efghi	686	226	146cde	26cd	163	1,424
E41-20896	676bcdef	632	200	155cde	0d	117	1,664
E41-50169	661bcdef	647	239	200cde	18d	147	1,764
E410-21069	117i	629	414	526a	85bc	161	1,771
FPP 7039	1,112a	370	272	74de	10d	178	1,838
FPP 8048	406defghi	502	532	155cde	48cd	125	1,644
HMX-7632	636bcdefg	808	345	155cde	31cd	155	1,976
Hunter	182hi	974	432	78de	87bc	123	1,753
PR 2011-1	279fghi	542	482	445ab	120ab	219	1,868
PR 2011-2	142i	821	170	380abc	14d	246	1,527
PR 2011-3	200ghi	677	388	270bcd	28cd	162	1,564
Cutlass	414defghi	902	359	285bcd	44cd	187	2,004
Bayonet	493defghi	707	344	130cde	18d	147	1,692
SYN-1	1,023abc	496	200	100de	0d	174	1,819
SYN-9	737abcde	853	333	80de	19d	165	2,022
Tom Cat	311efghi	681	582	104de	10d	178	1,689
Vanguard	1,017abc	479	167	0e	22d	250	1,685
XPP 6001	134i	719	600	130cde	58cd	155	1,641
7141	643bcdefg	696	188	146cde	0d	117	1,673
8302	1,066ab	572	157	56de	32cd	193	1,883
9325™	349efghi	1,324	38	100de	8d	116	1,818
P. value	0.0001	0.33	0.18	0.0001	0.0001	0.51	0.17
Sig.	**	ns	ns	**	**	ns	ns

^zWithin columns, means followed by different letters are significantly different according to Duncan's Multiple Range Test at 5%.

**Significance at $P \leq 0.01$. *Significance at $P \leq 0.05$. ns = Non-significance.

Table 7. Quality categories for selected peppers varieties grown in Palm Beach, FL. during fall 2011.

Variety	Lobules (number)	Length ----- (in) -----	Width (in)	Thickness	Ratio
ACR 2993	3.5ab ^z	3.8cdef	3.6fghi	0.32a	1.05abcdef
ACR 2994	3.7ab	4.0abc	3.6ghi	0.30ab	1.13abc
Aristotle	3.3b	4.0abc	3.8bcdef	0.31ab	1.09abcde
E41-20854	3.3b	4.0abc	3.8bcdef	0.31ab	1.09abcde
E41-20896	3.3b	4.0abc	3.8bcdef	0.31ab	1.09abcde
E41-20900	3.3b	4.0abc	3.8bcdef	0.31ab	1.09abcde
E41-50169	3.8ab	3.8cde	3.5ghi	0.30abcd	1.08abcde
E410-21069	3.6ab	3.5gh	3.6cdefg	0.27cdef	0.96fgh
FPP 7039	3.6ab	3.9bcde	3.7cdefg	0.28bcdef	1.06abcdef
FPP 8048	3.5ab	3.7cdefg	3.7cdefg	0.30abc	1.00efgh
HMX-7632	4.0a	3.6defgh	3.8bc	0.32a	0.94gh
Hunter	3.8ab	3.4h	3.6efgh	0.31ab	0.94gh
PR2011-1	3.8ab	3.8cdef	3.5ghi	0.29bcde	1.07abcde
PR2011-2	3.5ab	4.1ab	3.4i	0.30abc	1.15ab
PR2011-3	3.8ab	3.9abcd	3.4hi	0.27def	1.15a
Cutlass	3.8ab	4.0abc	3.6efg	0.26ef	1.12abc
Bayonet	3.9a	3.9bcde	3.8bcde	0.30abc	1.03cdefgh
SYN-1	3.7ab	4.0abc	4.0a	0.31ab	0.99efgh
SYN-9	3.8ab	4.1ab	4.0a	0.31ab	1.03cdefgh
Tom Cat	3.6ab	3.9bcde	3.7bcdef	0.32a	1.04bcdefg
Vanguard	3.8ab	3.9abc	3.9ab	0.31ab	1.00defgh
XPP 6001	3.7ab	3.8cdef	3.6defg	0.27def	1.04bcdefg
7141	3.8ab	4.2a	3.8bcd	0.31ab	1.11abcd
8302	3.8ab	3.6efgh	3.8bc	0.30abcd	0.94gh
9325TM	4.0a	3.5fgh	3.8bcdef	0.26f	0.92h
P. value	0.03	0.0001	0.0001	0.0001	0.0001
Sig.	*	**	**	**	**

^zWithin columns, means followed by different letters are significantly different according to Duncan's Multiple Range Test at 5%.
 **Significance at $P \leq 0.01$. *Significance at $P \leq 0.05$. ns = Non-significance.