

NEW YORK STATE 2010 PROCESSING PEA CULTIVAR TRIAL SUMMARY

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Location: NYS Agricultural Research Farm, Geneva - soil type – silt loam. **Tillage** – Conventional. **Fertilizer:** broadcast 400 lb/A of 8-14-21 and worked in. **Planter** – Modified Hege 80 (cone type). **Planting Date** - 4/30/2010. Picking started on 6/23 and we finished on 7/9. **Herbicide** - Treflan prepl & Dual post plant. **Plot Size:** 7 rows by 30 ft. **Row Width:** 6 inches, Row length: 30 ft. **In-row Spacing:** 1600 seeds were placed in the cone for the 30 ft plot – theoretically this is 7.6 seeds per foot or 663,771 seeds per acre). **Insecticide** – none. **Experimental Design** – Randomized split block design, 4 replications (3 replications were harvested and another was left for demonstration). **Model TG4EI Integrating Texturegage** – measure for maturity. The objective of this trial was to compare a number of normal leaf and afila type pea varieties for yield and other quality characteristics. Yield of seven rows by 5 feet per replication (17.5 square feet) was obtained by pulling the plants and hand picking the pods. A target tenderometer value of 100 was used for the final harvest. A stationary sheller was used to remove berries from the harvested pods. Tenderometer readings were taken on each replication and averaged for the report. Pea berries were hand sieved with Seedburo hand testing screens. See following table for details. Please direct any questions to the following mailing address, phone number or email address. Jim Ballerstein, NYSAES, 630 West N. Street, Hedrick Hall, Geneva, NY 14456-0462, 315-787-2223 (phone) jwb2@cornell.edu (email). *We wish to thank the NYS Vegetable Research Council and Association and cooperating seed companies for their financial support of the project. Complete reports are due upon request.*

Table 1. Cultivars and Seed Source Description

Cultivar	Seed Source	Maturity	Leaf type	Days to Harv.	Heat Units to Harv.	Sieve Size index
Jumpstart	Brotherton	Early	n	57	1110	
June	Brotherton	Early	n	59	1160	
Cabree	Seminis	Early	n		1175	3.4
PLS 534	PLS	Early	af	58	1180	
ES 414 std)	Seminis	Early	n		1195	3.55
Topps	PLS	early	n	60	1260	3.5
Romance	Seminis	Middle	af		1265	3.5
Cosima	Brotherton	Middle	n	62	1280	
BSC3048	Brotherton	Early	af	62	1290	
Marias	Crites	Early	n	59	1290	3.6
Tonic	Brotherton	Middle	n	63	1300	
Portage	Crites	Middle	af	60	1325	3.78
Sienna	Brotherton	Middle	af	63	1350	
Savannah	Crites	Middle	af	61	1370	4.01
BSC359	Brotherton	Middle	af	65	1400	
Bistro	Brotherton	Middle	af	66	1410	
EX 0899	Seminis	Late	af		1425	
Legacy	PLS	Late	n	67	1440	
Pendleton	Seminis	Late	af		1455	3.15
Bolero (std)	PLS	Late	n	68	1460	4.0
Samish	Crites	Late	n	65	1465	3.84
Boogie	Brotherton	Late	af		1470	3.8
S S DA 1470	Seminis	Late	af		1470	
Ashton	Seminis	Late	n		1480	3.3
PLS 1051	PLS	Late	n		1480	3.6-3.7
Durango	Seminis	Late	n		1480	3.55
Ricco	Pure Line*	Late	af		1530	
Hudson	Crites	Late	n	67	1540	3.82
BSC 5697	Brotherton	Late	af	68	1560	
Grundy	Pure Line*	Late	n		1595	
Mundial	Seminis	Late	n		1600	3.25
EX 0865	Seminis	Late	af		1600	4.0

**Table 2 - Adjusted Yield in order of Highest to Lowest
Early Season**

Cultivar	Days to Harv.	Heat Units to Harv.	<i>Adjusted Heat Units to Harv.</i>	Actual Ten. Units	<i>Adjusted Yield lbs/A</i>	Plant Pop./A (1000)
Marias	56	1305	1299	103	6232	529
Jumpstart	54	1234	1244	95	6035	626
Topps	56	1305	1293	106	5495	497
ES 414	55	1267	1259	104	5442	542
June	55	1267	1237	115	5403	596
Cabree	54	1234	1232	99	5255	591
PLS 534	56	1305	1299	103	4824	554

Mid Season

Cosima	59	1390	1372	109	7836	537
Sienna	60	1425	1421	102	7204	471
BSC359	61	1457	1463	97	7163	441
BSC359	62	1478	1472	103	7263	400
Portage	59	1390	1360	115	6956	573
Bistro	61	1457	1453	102	6950	571
Savannah	59	1390	1390	100	6708	492
BSC3048	60	1425	1395	115	5933	415
Romance	59	1390	1376	107	5351	526
Tonic	56	1305	1333	86	4617	536

Main Season

Grundy	67	1610	1560	125	8593	485
Mundial	68	1649	1647	101	8575	560
EX 0865	69	1690	1698	96	8461	518
Boogie	63	1498	1494	102	8366	589
Ricco	67	1610	1482	164	7719	509
PLS 1051	66	1575	1583	96	7699	476
Durango	64	1519	1519	100	7478	563
BSC 5697	66	1575	1515	130	7473	377
Ashton	64	1519	1527	104	7366	562
Hudson	67	1610	1594	108	6600	429
Samish	63	1498	1494	102	5970	526
Legacy	64	1519	1523	98	5900	548
Sw.Sa. 1470	62	1478	1480	99	5517	631
Bolero	63	1498	1516	91	4717	484
Pendleton	64	1519	1525	103	4562	443
EX 0899	63	1498	1500	99	4420	548

Table 3. Plant and Pod Characteristics (In order of maturity)

Cultivar	Node to first flower	nodes with pods/plt	Wt. Of plts & pods (lb)	Wt. of plants (lb)	Wt. of pods (lb)	Wt of berries (lb)	Pods per plant	% Single pods/node	% Double pods/node	% Triple pods/node	Pod length (in)	Berries per plt.	Berries per pod
Early Season													
Cabree	8 to 9	2.8	2.14	0.96	1.18	0.5	4.5	50	50	0	2.5	25	5.5
June	9 to 11	4.3	2.7	1.3	1.4	0.6	6.4	56	44	0	3	41	6.4
Jumpstart	9	4.5	2.48	0.9	1.58	0.75	5.9	68	29	3	3	31	5.2
ES 414	9 to 10	3.3	1.94	0.74	1.2	0.55	4.9	53	47	0	2.25	20	4.1
Topps	8 to 9	2.4	2.05	1.1	0.95	0.45	3.7	46	54	0	2.5 -3	23	6.2
Marias	9	4.1	3.6	2.35	1.25	0.45	5.2	74	26	0	3.5	29	5.6
PLS 534	11	2.9	2.4	1.55	0.85	0.35	3.9	65	35	0	3	17	4.4
Mid Season													
Tonic	10 to 11	3.2	2.7	1.35	1.35	0.65	5.2	55	38	7	2.5	15	3.0
Portage	10 to 12	2.4	2	1.05	0.95	0.5	4.0	52	30	18	2.5 -3	22	5.3
Cosima	9 to 10	3.4	2.35	1.1	1.25	0.6	4.9	56	44	0	2.5	28	5.6
Romance	11 to 13	2.5	2.8	1.55	1.25	0.55	4.2	47	38	14	2.75	26	6.1
Savannah	11 to 12	3.6	2.6	1.2	1.4	0.8	5.4	49	51	0	2.75	29	5.4
BSC3048	9 to 11	5.3	3.1	1.55	1.55	0.8	7.2	65	35	0	2.75	41	5.8
Sienna	10 to 11	3.2	3	1.45	1.55	0.85	5.4	39	53	8	2.75	31	5.8
Bistro	11 to 13	3.5	3.68	2.28	1.4	0.66	4.3	53	43	3	2.75-3.0	31	7.1
BSC359	12 to 13	3.8	5.16	3.16	2	0.94	6.6	35	64	2	3.25-3.5	43	6.6
Mainseason													
SS. 1470	12 to 13	4	2.98	1.43	1.55	0.55	5.6	64	35	2	2.5	30	5.4
Ricco	13 to 15	3.2	2.65	1.2	1.45	0.7	4.7	54	46	0	3.25	27	5.9
Samish	12 to 13	2.7	2.55	1.3	1.25	0.75	4.0	51	49	0	2.5-3.0	27	6.6
Boogie	14 to 15	2.6	2.85	1.5	1.35	0.8	4.6	47	41	12	3.5	26	5.7
EX 0899	13 to 15	3.1	2.62	1.58	1.04	0.38	4.5	54	46	0	2.75	18	4.1
BSC 5697	12 to 14	5.5	2.85	1.4	1.45	1	8.4	60	33	8	2.75	46	5.5
Bolero	14 to 15	3.7	3.45	2.1	1.35	0.8	5.5	53	41	6	3	29	5.2
Durango	13 to 15	4	2.72	1.12	1.6	1	5.8	52	40	8	3-3.25	33	5.8
Legacy	13 to 14	3.8	3.9	2.52	1.38	0.5	5.7	53	42	5	3	26	4.6
Pendleton	14 to 16	3.8	3.25	1.65	1.6	0.85	5.9	55	35	11	2.75	36	6.2
Ashton	12 to 13	4.5	2.88	1.27	1.61	1	7.0	47	47	6	2.75	36	5.1
Grundy	13 to 15	3.6	3.72	1.42	2.3	1.35	6.5	35	61	3	3.25	47	7.2
PLS 1051	13 to 14	3.5	3.56	1.71	1.85	1	6.3	33	55	12	3.25	39	6.2
Hudson	13 to 14	3.7	2.95	1.45	1.5	0.65	5.1	73	27	0	3.25-3.5	32	6.3
Mundial	14 to 16	3.8	3.06	1.51	1.55	0.75	6.5	35	54	11	2.75-3.5	35	5.4
EX 0865	15 to 17	3.3	3.08	1.66	1.42	0.6	5.2	52	41	7	3	29	5.5