

# **1999 Green Pea Variety Trials**

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# REPORT ON THE 1999 GREEN PEA VARIETY TRIALS

Tom Darnell  
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Umatilla County, Milton-Freewater, Oregon

Fifty varieties for harvest and eight observational varieties were seeded at the Gradwahl Nibler-Houchin field (elevation 1340 feet) southeast of Walla Walla, Washington on March 25. This is an early seeding date for this location. Soil type is very productive Athena silt loam, 0 to 7 percent slope. Organic matter is over two percent.

One hundred pounds of ammonium sulfate fertilizer (21-0-0-24) was applied to the winter wheat stubble in late summer of 1998. The field was fall plowed and the seedbed was prepared in the spring with a spring tooth. Three-fourths pint Treflan and 1.5 ounces of Pursuit were pre-plant incorporated with a spring tooth for weed control. Soil temperature at planting (three inches) was 54 degrees F.

The randomized plots (four replications), thirty feet long, were seeded with a modified eight-row International Cyclo Air unit. The unit is mounted on a conventional grain drill frame and equipped with double disc openers with seven-inch rows. The drill drops 6.3 seeds per foot of row. Plants did not start to emerge, due to wet, cold field conditions, until April 17. The plots were harrowed on April 7, prior to plant emergence, but were not packed.

The growing season was extremely cool and dry. During the harvest period (June 14-24) there were only two days above 90 degrees and only four days above 80 degrees F. Rainfall occurrence and amounts were adequate prior to emergence and bloom but were light and infrequent from bloom through harvest. Twenty-five percent of the total precipitation (4.45 inches) occurred as showers of 0.20 inches or less. From the start of bloom through harvest the plots only received 0.43 inches of precipitation. Precipitation levels were taken on site. Total precipitation from seeding to the end of harvest was 4.45 inches. There were 0.82 inches of precipitation in March, 1.20 inches in April, 2.0 inches in May and 0.43 inches in June. Heat units were calculated from daily temperatures recorded near the Walla Walla City-County Airport, using a 40-degree F. base.

At harvest, a seven-foot long section from two replications was pulled by hand, bulked and vined in a small sample viner at AGRIFROZEN FOODS, Inc. in Walla Walla, Washington. The threshed peas were run over a sample grader/cleaner and weighed. Prior to taking the tenderometer readings, the samples were placed in a 68-degree F. water bath. All samples were completed by 11:30 a.m. A blanched, frozen harvest sample was prepared for viewing at the annual green pea industry seminar on February 9, 2000.

Heat unit values include the day of planting but not the day of harvest. Yield figures are actual pounds per acre. No adjustments were made for differences in tenderometer or plant stand.

## **1999 PARTICIPATING SEED COMPANIES**

**ASGROW**  
PO Box 1235  
Twin Falls, Idaho 83301

**W. BROTHERTON SEED CO.**  
INC  
PO Box 1136  
Moses Lake, Washington 98837

CRITES-MOSCOW GROWERS, INC.  
PO Box 8912  
Moscow, Idaho 83843

**UPPER VALLEY SEED**  
1415 North 950 East  
Shelly, Idaho 83274

PURE LINE SEEDS, INC.  
PO Box 8866  
Moscow, Idaho 83843

**ROGERS SEED COMPANY**  
PO Box 4727  
Boise, Idaho 83711

**SHARPES INTERNATIONAL**  
PO Box 68  
Orbend, California 95943

**DANISCO SEED**  
Hojbygardvej 14  
DK-4960 Holeby  
Denmark

## **PARTICIPATING PROCESSORS**

SMITH FROZEN FOODS, INC.  
Depot Street  
Weston, Oregon 97886

**HERMISON FROZEN FOODS**  
2250 S. Highway 395  
Hermiston, Oregon 97838

AGRIFROZEN FOODS, INC.  
1164 Dell Avenue  
Walla Walla, Washington 99362

## **PARTICIPATING GROWERS**

**Growers of freezer peas in the Blue Mountain production area.**

	<b>Variety</b>	<b>Plant Stand/Ft</b>	<b>First Bloom</b>	<b>Harvest Date</b>	<b>Heat Units</b>
1	PLS 876	5.5	5/23	6/14	1125
2	PLS 8925	5.6	5/24	6/14	1125
3	Jaguar	5.0	5/28	6/16	1202
4	PLS 871	4.9	5/25	6/14	1125
5	PLS 27	5.3	5/26	6/14	1125
6	13046	3.8	5/25	6/15	1162
7	PLS 168	4.8	5/29	6/17	1237
8	Celebration	5.8	5/29	6/17	1237
9	CMG 324 F	5.8	5/26	6/15	1162
10	4124	6.6	5/26	6/15	1162
11	CMG 330 F	5.3	5/28	6/16	1202
12	FR 664	5.1	5/27	6/15	1162
13	XP 383	4.4	5/29	6/18	1268
14	PLS 5P 45	5.0	6/1	6/19	1302
15	Bolero	6.1	6/1	6/19	1302
16	FR 637	5.1	5/28	6/16	1202
17	FR 647	5.3	5/31	6/17	1237
18	Venus	5.3	5/27	6/15	1162
19	85 0417 8	6.2	5/30	6/17	1237
20	V 21	5.6	5/29	6/18	1268
21	Gemini	5.6	5/31	6/20	1327
22	Sancho	5.8	5/31	6/18	1268
23	PLS 462 2	6.1	6/2	6/20	1327
24	PLS 152 R	5.2	6/5	6/20	1327
25	PLS 192	6.2	6/2	6/20	1327
26	PLS 105 1	5.3	6/4	6/21	1351
27	PLS 166	5.7	6/1	6/19	1302
28	PLS 130	5.3	6/4	6/21	1351
29	Samish	5.5	5/29	6/18	1268
30	PLS 524	5.4	6/5	6/21	1351
31	PLS 182	5.4	6/5	6/22	1378
32	12094	5.8	5/30	6/20	1327
33	PLS 155	5.3	6/3	6/23	1407
34	Genie	5.3	5/31	6/19	1302
35	PLS 224 W	4.6	6/2	6/22	1378
36	Oasis	6.6	6/2	6/20	1327
37	DS 89034	5.9	5/31	6/19	1302
38	Bingo retest	5.7	6/2	6/19	1302
39	PLS 04	5.3	6/4	6/22	1378
40	ER 85 0423 8	6.0	6/4	6/23	1407
41	85 0420 8	6.4	6/4	6/22	1378
42	85 0001 7	4.0	6/5	6/23	1407

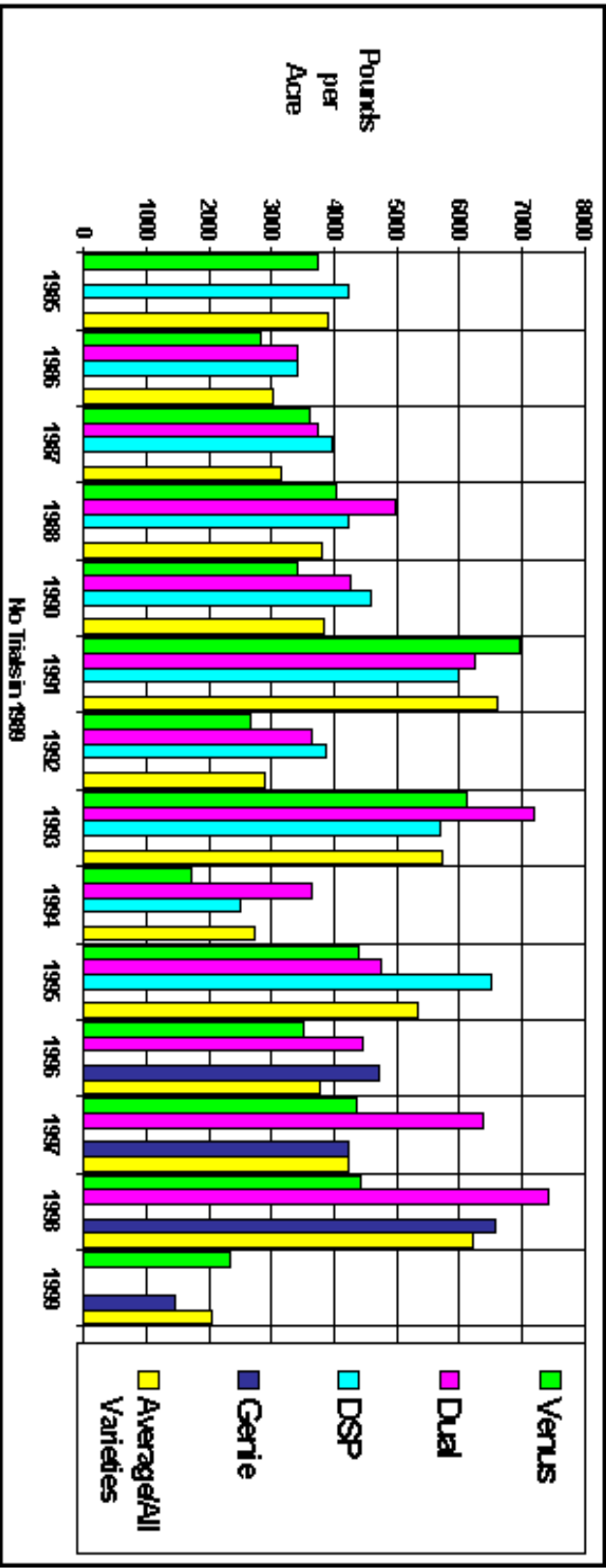
	Variety	Plant Stand/Ft	First Bloom	Harvest Date	Heat Units
43	DS 89083	5.7	5/30	6/19	1302
44	Gallant	6.6	6/1	6/20	1327
45	FR 384	6.1	6/4	6/22	1378
46	Kermit	5.8	5/31	6/19	1302
47	CMG 340 F	5.1	6/5	6/22	1378
48	PLS 56 1	6.8	6/6	6/24	1436
49	FP 2154 retest	5.1	6/1	6/20	1327
50	FP 2090 retest	5.2	6/3	6/21	1351
51	FP 2135	5.3	6/1	6/18	1268
52	CMG 354	5.7	6/5	6/22	1378
53	CMG 353 F	4.7	6/4	6/22	1378
54	CMG 352 AF	4.8	6/1	6/21	1351
55	FP 2180	5.2	6/1	6/20	1327
56	FP 2096	5.5	6/1	6/20	1327
57	CMG 355 AF	4.2	6/5	6/22	1378
58	FP 2177	6.5	6/4	6/21	1351

	<b>Variety</b>	<b>Average Tendrometer</b>	<b>Pounds Per Acre</b>	<b>Bloom Node</b>	<b>Plant Height</b>	<b>Lodging*</b>
1	PLS 876	98	2587	9	12	3
2	PLS 8925	102	1644	9	14	2
3	Jaguar	98	2130	9	13	3
4	PLS 871	96	2092	9	12	3
5	PLS 27	94	1653	9	13	3
6	13046	102	2260		15	4
7	PLS 168	90	2148	10	13	1
8	Celebration	119	2410	11	11	1
9	CMG 324 F	91	1522	10	16	2
10	4124	90	1616		17	3
11	CMG 330 F	96	1877	11	13	4
12	FR 664	94	2130	12	16	3
13	XP 383	97	2746	12	14	2
14	PLS 5P 45	95	1719	13	13	1
15	Bolero	92	1672	14	12	3
16	FR 637	94	2073	13	9	1
17	FR 647	93	1840	13	12	2
18	Venus	96	2326	14	15	4
19	85 0417 8	96	1980	13	13	2
20	V 21	105	1821	14	16	1
21	Gemini	98	2456	14	16	2
22	Sancho	94	1896	14	14	1
23	PLS 462 2	96	2055	15	14	4
24	PLS 152 R	95	1793	14	13	3
25	PLS 192	100	1877	15	13	3
26	PLS 105 1	101	1606	14	13	2
27	PLS 166	99	1578	14	14	2
28	PLS 130	96	2298	14	15	2
29	Samish	98	2484	12	12	2
30	PLS 524	92	2102	15	16	2
31	PLS 182	95	2232	15	15	3
32	12094	104	2344		15	3
33	PLS 155	88	1971	15	12	3
34	Genie	93	1457		12	3
35	PLS 224 W	95	2391	14	15	3
36	Oasis	94	2251	13	14	2
37	DS 89034	102	1308	12	10	1
38	Bingo retest	103	1999	15	13	4
39	PLS 04	92	1905	16	14	2
40	ER 85 0423 8	92	1756	16	14	2

	<b>Variety</b>	<b>Average Tendrometer</b>	<b>Pounds Per Acre</b>	<b>Bloom Node</b>	<b>Plant Height</b>	<b>Lodging*</b>
41	85 0420 8	85	2643	16	12	2
42	85 0001 7	92	2017	14	14	3
43	DS 89083	115	2634	13	15	1
44	Gallant	110	2307	16	14	3
45	FR 384	96	1849	17	14	2
46	Kermit	107	2438	14	16	1
47	CMG 340 F	88	1905	15	15	3
48	PLS 56 1	83	2260	16	16	2
49	FP 2154 retest	114	1625	16	14	4
50	FP 2090 retest	104	2158	17	12	2
51	FP 2135			13	14	4
52	CMG 354			14	15	2
53	CMG 353 F			15	16	3
54	CMG 352 AF			15	14	4
55	FP 2180			16	13	2
56	FP 2096			16	15	2
57	CMG 355 AF			16	15	2
58	FP 2177			17	12	2

Yearly Comparative in Pounds per Acre Yield from 1985-1999

YEAR	SITE	SEEDED	PRECIPITATION	FRST BLOOM	START OF HARVEST	Yield			Yield Average	
						VENUS	DUAL	DSP	GENIE	All Varieties
1985	Mansfield - Garland 1350'	April 4	3.75	May 20	June 10	3751		4211		3921
1986	Rea - Lyons 1300'	April 7	5.48	May 27	June 11	2843	3402	3425		3018
1987	Mansfield - Garland 1350'	April 10	4.04	May 17	June 11	3615	3736	3963		3145
1988	Rea - Lyons 1300'	March 15	7.4	May 14	June 12	4089	4954	4216		3801
1990	Rea - Lyons 1300'	April 3	7.32	May 14	June 18	3408	4249	4800		3847
1991	Mansfield - Wilson 1300'	April 16	9.88	June 5	July 1	8967	6252	5986		8623
1992	Rea - Lyons 1300'	March 24	2.88	May 8	May 29	2666	3636	3889		2883
1993	Mansfield - Levine 1175'	April 17	7.99	May 26	June 18	6126	7183	5706		5741
1994	Rea - Lyons 1300'	March 31	3.78	May 11	June 8	1714	3668	2516		2727
1995	Mansfield - Levine 1175'	April 15	6.62	May 28	June 20	4401	4734	6801		5308
1996	Rea - Lyons 1300'	April 30	4.21	June 7	June 28	3804	4466		4707	3773
1997	NHler-Reaser Bros 1340'	March 26	6.01	May 15	June 6	4373	6384		4227	4238
1998	Rea - Lyons 1300'	April 4	5.4	May 14	June 15	4418	7413		6669	6203
1999	NHler-Reaser Bros 1240'	March 25	4.45	May 23	June 14	2326			1467	2087



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