

2022 GREEN PEA VARIETY TRIAL REPORT



Cody Copp, Extension Horticulturist and Assistant Professor of Practice, Oregon State University Extension Service – Umatilla County; **Don Wysocki**, Extension Soil Scientist and Associate Professor of Practice, Oregon State University Extension Service – Umatilla County and Columbia Basin Agricultural Research Center; **Alan Wernsing**, Columbia Basin Agricultural Research Center; **Paul Carter**, Extension Agronomist and Associate Professor Emeritus, Washington State University Extension Service – Columbia County

March 2023



Trial notes

The 2022 Green Pea Variety Trial was conducted at the Nibler Farm near Milton-Freewater, OR (45.9867, -118.2889). The Green Pea Variety Trial has been held in the area in and around this field since the mid-1980s. We would like to thank Gary Nibler for providing the field, land preparation, and weed control for the trial. We would also like to thank H.T. Rea Farming for providing vining, cleaning, and sample processing equipment.

The trial was sown on April 25, 2022, with a five foot-wide, five-row plot drill (Hege Maschinen GmbH, Germany) with 12-inch row spacing. The 36 check and experimental lines were sown at a rate of 800 pure live seed (i.e., corrected for germination rate) with three replications. The first replication was arranged by ascending heat units to maturity (provided by the seed companies) for demonstration and the second and third replications were randomly assigned (Table 1). Plot dimensions were 5 feet by 20 feet with five-foot alleyways between plots.

Stand counts were taken on May 23, 2022, by randomly placing a 1 by 5-foot quadrat within but perpendicular to the length of the plot and counting the number of emerged plants (Table 2).

Bloom began June 6, 2022, and was determined by the appearance of first blooms in each variety (Table 3). Node count (including subterranean nodes) for first bloom was determined on three plants from each plot and averaged. The latest variety bloomed on June 24, 2022.

Yield was determined from two combined subsamples of 5 by 10-foot area from two plots for each variety (Table 3). Samples were vined and cleaned before being weighed. Plot yield was extrapolated to pounds per acre. After weighing, a subsample of approximately 150 mL of cleaned peas was run through a tenderometer to determine tenderometer score.

Seed providers

Brotherton Seed Co., Inc.
115 N. 1st Street
Warden, WA 98857
(509) 765-1816

<http://brothertonseed.com>

Crites Seed, Inc.
212 College Street
Moscow, ID 83843
(208) 882-5519

<http://www.critesseed.com>

Pure Line Seeds, Inc.
1700 W 1st Street
Warden, WA 98857
(509) 349-2374

<https://purelineseed.com>

For more information

Crop Profile for Peas (Green) in Idaho

<https://ipmdata.ipmcenters.org/documents/cropprofiles/IDpeas-green.pdf>

Green Pea Nutrient Management Inland Northwest – east of the Cascades (EM 9140)

<https://catalog.extension.oregonstate.edu/em9140>

Peas, Processing – Eastern Oregon

<https://horticulture.oregonstate.edu/oregon-vegetables/peas-processing-eastern-oregon-0>

2022 Green Pea Variety Trial Report

Table 1. 2022 Green Pea Variety Trial plot layout, sown on April 25, 2022, near Milton-Freewater, OR. Check varieties are indicated with an asterisk (*).

Replication 1			Replication 2			Replication 3		
Plot no.	Variety no.	Variety name	Plot no.	Variety no.	Variety name	Plot no.	Variety no.	Variety name
101	24	DGL 0027	201	1	Tomahawk	301	4	CS-503AF
102	25	Saltingo	202	2	CS-504AF	302	16	Naches
103	26	228-132	203	3	Ambler	303	22	BSC-799
104	27	PLS-228	204	4	CS-503AF	304	27	PLS-288
105	28	PLS-566	205	5	Portage	305	23	BSC-599
106	29	PLS-586	206	6	CS-456AF	306	2	CS-504AF
107	30	Bolero*	207	7	Samish*	307	29	Bolero*
108	31	PLS-576	208	8	CS-492AF	308	20	BSC-737
109	32	Marquis	209	9	CS-508AF	309	34	PLS-602
110	33	Serge*	210	10	CS-464AF	310	13	CS-441AF
111	34	PLS-602	211	11	CS-513F	311	11	CS-513F
112	35	Dancer	212	12	CS-514F	312	26	228-132
113	1	Tomahawk	213	13	CS-441AF	313	12	CS-514F
114	2	CS-504AF	214	14	CS-515AF	229	33	Serge*
115	36	98-441	215	15	Trinity	232	35	Dancer
116	3	Ambler	216	16	Naches	234	24	DGL 0027
117	4	CS-503AF	217	17	CS-517AF	317	6	CS-456AF
118	5	Portage	218	18	BSC-712	235	31	PLS-576
119	6	CS-456AF	219	19	BSC-494	319	25	Saltingo
120	7	Samish*	220	20	BSC-737	320	18	BSC-712
121	18	BSC-712	221	21	EXP-612	321	32	Marquis
122	8	CS-492AF	222	22	BSC-799	322	10	CS-464AF
123	9	CS-508AF	223	23	BSC-599	323	19	BSC-494
124	19	BSC-494	224	24	DGL 0027	324	5	Portage
125	10	CS-464AF	225	25	Saltingo	325	1	Tomahawk
126	11	CS-513F	226	26	228-132	326	36	98-441
127	12	CS-514F	227	27	PLS-228	327	15	Trinity
128	20	BSC-737	228	28	PLS-566	328	21	EXP-612
129	13	CS-441AF	229	29	PLS-586	329	28	PLS-566
130	21	EXP-612	230	30	Bolero*	330	14	CS-515AF
131	22	BSC-799	231	31	PLS-576	331	17	CS-517AF
132	14	CS-515AF	232	32	Marquis	332	29	PLS-586
133	23	BSC-599	233	33	Serge*	333	8	CS-492AF
134	15	Trinity	234	34	PLS-602	334	3	Ambler
135	17	CS-517AF	235	35	Dancer	335	7	Samish*
136	16	Naches	236	36	98-441	336	9	CS-508AF

2022 Green Pea Variety Trial Report

Table 2. 2022 Green Pea Variety Trial entries with heat units to harvest, seeds per pound, and germination rate provided by participating seed companies.

Company	Variety	Heat units to harvest (40 °F)	Seeds per lb.	Germination rate (%)	Seed per plot (g)	Stand count (plants/ft ²)
Pure Line	228-132	980	4022	75	120.4	4.3
Pure Line	98-441	1280	1876	93	208.2	6.9
Crites	Ambler	1285	3313	97	113.0	5.7
Pure Line	Bolero	1100	2914	91	137.0	5.8
Brotherton	BSC-494	1441	2592	99	141.5	3.1
Brotherton	BSC-599	1600	2110	99	173.9	5.7
Brotherton	BSC-712	1422	4930	98	75.2	4.3
Brotherton	BSC-737	1560	4536	99	80.9	5.9
Brotherton	BSC-799	1590	2506	85	170.5	6.4
Brotherton	EXP-612	1590	2587	99	141.8	4.9
Crites	CS-441AF	1565	2236	98	165.7	6.5
Crites	CS-456AF	1325	2304	97	162.5	5.5
Crites	CS-464AF	1525	2967	99	123.6	5.0
Crites	CS-492AF	1430	2183	—	168.1	5.6
Crites	CS-503AF	1310	2768	98	133.9	6.1
Crites	CS-504AF	1245	2082	95	183.6	6.7
Crites	CS-508AF	1430	3006	93	129.9	5.5
Crites	CS-513F	1545	2686	98	138.0	5.5
Crites	CS-514F	1550	2121	99	173.0	5.0
Crites	CS-515AF	1600	2768	99	132.5	7.1
Crites	CS-517AF	1610	3152	99	116.4	4.5
Crites	Dancer	1160	3080	92	128.2	5.3
Pure Line	DGL 0027	966	2838	62	206.4	8.3
Pure Line	Marquis	1140	4657	83	94.0	5.5
Pure Line	Naches	1630	2536	98	146.1	6.7
Pure Line	PLS-228	1000	2462	99	149.0	7.1
Pure Line	PLS-566	1080	2630	97	142.4	6.1
Pure Line	PLS-576	1130	2812	93	138.9	5.1
Pure Line	PLS-586	1100	2441	97	153.4	4.7
Pure Line	PLS-602	1160	3101	99	118.3	5.4
Crites	Portage	1325	2000	96	189.2	6.1
Pure Line	Saltingo	966	3018	98	122.8	7.3
Crites	Samish	1420	2316	97	161.7	5.0
Pure Line	Serge	1150	2100	99	174.7	6.5
Crites	Tomahawk	1230	2131	96	177.5	6.1
Crites	Trinity	1610	2873	98	129.0	5.2

2022 Green Pea Variety Trial Report

Table 3. 2022 Green Pea Variety Trial entries with field data collected at bloom and harvest.

Company	Variety	Bloom date	Nodes at bloom	Harvest date	Days to harvest	Yield (lb/acre)	Tenderometer score
Pure Line	228-132	6/7	11	7/5	71	3395	130
Pure Line	98-441	6/19	12	7/12	78	8193	120
Crites	Ambler	6/9	10	7/4	70	4150	105
Pure Line	Bolero	6/19	12	7/7	73	4714	90
Brotherton	BSC-494	6/20	12	7/12	78	4600	145
Brotherton	BSC-599	6/17	13	7/7	73	4770	115
Brotherton	BSC-712	6/18	11	7/7	73	4402	95
Brotherton	BSC-737	6/21	14	7/11	77	7973	125
Brotherton	BSC-799	6/21	13	7/11	77	7367	115
Brotherton	EXP-612	6/21	15	7/7	73	3436	90
Crites	CS-441AF	6/18	12	7/11	77	6678	115
Crites	CS-456AF	6/9	10	7/5	71	5552	90
Crites	CS-464AF	6/17	11	7/12	78	7975	115
Crites	CS-492AF	6/10	12	7/5	71	4793	95
Crites	CS-503AF	6/8	10	7/4	70	2978	125
Crites	CS-504AF	6/6	10	7/4	70	2070	110
Crites	CS-508AF	6/17	11	7/5	71	3035	95
Crites	CS-513F	6/20	12	7/11	77	3645	100
Crites	CS-514F	6/17	12	7/7	73	6730	100
Crites	CS-515AF	6/22	15	7/11	77	8229	105
Crites	CS-517AF	6/24	14	7/11	77	4237	100
Crites	Dancer	6/21	15	7/12	78	7844	115
Pure Line	DGL 0027	6/10	12	7/5	71	5920	125
Pure Line	Marquis	6/20	12	7/7	73	4432	105
Pure Line	Naches	6/22	14	7/11	77	7997	105
Pure Line	PLS-228	6/10	11	7/5	71	5297	120
Pure Line	PLS-566	6/12	12	7/11	77	7857	130
Pure Line	PLS-576	6/13	13	7/12	78	6123	130
Pure Line	PLS-586	6/15	11	7/11	77	6104	115
Pure Line	PLS-602	6/17	12	7/12	78	5485	150
Crites	Portage	6/9	10	7/5	71	4666	105
Pure Line	Saltingo	6/10	12	7/7	73	9088	120
Crites	Samish	6/16	10	7/5	71	2810	90
Pure Line	Serge	6/17	12	7/11	77	8142	125
Crites	Tomahawk	6/6	9	7/4	70	3833	125
Crites	Trinity	6/22	13	7/11	77	5204	105