

Project Title: Western Regional Winter Pea Trial 2006-07

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Objective: To evaluate new varieties of winter pea for winter survival and grain yield in northwestern Montana.

Results:

Nine cultivars of dry pea were seeded at 12 seeds/ft² in 80 ft² plots. The plots were arranged in a split block design with cultivars randomized within 4 replicates.

Emerged plants were counted on 11/17/06 and live, growing plants counted again on 5/21/07 to determine winter survival. Date on which 50% of the plants in each plot first flowered was recorded. Number of nodes leading to the first reproductive node was recorded. Maturity date was determined when more than half the plot had turned yellow and pods beginning to dry. The pea seed was harvested with a Hege plot combine, cleaned and weighed to determine plot yield. Samples of 100 intact seeds were weighed to determine seed size.

Winter survival ranged from 33% to 71% of the fall stand. All cultivars had bloomed by June 10 and reached maturity by Aug.4. Yields ranged from 864 lbs/a ('PS03101160') to 1985 lbs/a ('PS03101150').

Summary:

Three experimental cultivars exceeded the yields of the check varieties 'Windham' and 'Spector'. Fall-seeded peas appear to be suitable for this area provided sufficient spring moisture is available.

Future Plans:

We shall continue to evaluate winter peas for this area if ARS desires.

Western Regional Winter Peas

2006-07

<u>Cultivar</u>	<u>Fall</u> <u>Std</u> <i>pl/sqft</i>	<u>Spring</u> <u>Std</u> <i>pl/sqft</i>	<u>Winter</u> <u>Survival</u> %	<u>First</u> <u>Blm</u> <i>date</i>	<u>Nodes</u> to 1st blm	<u>Height</u> <i>in</i>	<u>Maturity</u> <i>date</i>	<u>Yield</u> <i>lbs/a</i>	<u>SeedWT</u> <i>#/lb</i>
PS03101146	5.3	2.8	54	6/10	10	27.3	8/1	1707	3318
PS0230F061	7.3	2.4	33	6/10	9	23.8	8/2	1272	3225
PS9830F011	5.8	4.1	71	6/9	9	25.5	7/30	1927	3473
PS03101150	6.8	3.8	57	6/10	11	26.0	8/3	1985	3123
Windham	6.5	4.0	63	6/9	10	27.5	7/28	1452	3430
PS003100635	6.8	2.7	39	6/6	10	28.3	7/30	1526	3769
PS0230F092	5.8	3.3	55	6/8	9	26.8	8/1	1844	3249
Spector	6.8	2.9	42	6/9	10	36.5	7/27	1603	3813
PS03101160	4.5	2.8	65	6/10	9	28.5	8/1	864	3314
PS0230P063	6.2	2.5	35	6/10	9	24.5	8/4	1125	3244
mean	6.2	3.1	51		9	27.5		1530	3396
Pr>F	0.5639	0.8310	0.0526		0.3765	0.0022		0.0009	0.0005
LSD(0.05)	NS	NS	31		NS	6.2		613	291
CV(%mean)	25.0	51.3	37.1		16.2	14.1		24.0	5.9