

PROJECT TITLE: Western Regional Dry Pea Yield Trial

PROJECT LEADER: Fred Muehlbauer, WSU

Cooperator: Duane Johnson, NWARC

Louise Strang, NWARC

OBJECTIVE: Compare yield potential of experimental spring pea breeding lines in a northwest Montana environment.

METHODS: Ten dry pea accessions from Washington State University and 2 named varieties were seeded into 100 ft² plots at 8.3 seeds/ft² on 4/18/05. All entries were short vine, semi-leafless type. The soil was fertilized with 22 lbs. N/a and 104 lbs. P₂O₅/a. Entries were arranged in a randomized complete block design with 3 replicates. Stand counts were taken on 5/11. Dates were recorded when 50% of each plot had bloomed and when 50% had reached maturity (yellow leaves, hard seed). The plants were uprooted when they reached maturity, and the seeds thrashed out when the plants were dry. The peas from each plot were weighed to determine yield and 100-seed samples weighed to determine seed weight (no. of seed/lb).

RESULTS: First blooms appeared between 6/19 and 6/24. The plants had matured by 7/25. The plants were uprooted and left to dry in the plots. When dry the peas were fed into a plot combine to be thrashed. Peas from each plot were weighed to determine yield and 100-pea sub samples were weighed to determine seed size (number/pound). Pea yields ranged from 719 lbs/acre ('PS01102958') to 1318 lbs/acre ('Delta'). 'PS0110745' had the smallest seeds and 'PS0010836' had the largest.

Western Regional Dry Pea Yield Trial

Kalispell, 2005

<u>Cultivar</u>	<u>Cotyledon</u>	<u>Stand</u> <u>#/sqft</u>	<u>Bloom</u> <u>date</u>	<u>Nodes</u> <u>to 1st flw</u>	<u>Maturity</u> <u>date</u>	<u>Height</u> <u>in</u>	<u>Yield</u> <u>lbs/a</u>	<u>Seeds</u> <u>#/lb</u>
PS810162	Green	18.6	6/21	11	7/20	16.7	1091	2137
PS0010804	Green	23.2	6/21	13	7/24	18.9	1048	2084
PS0110460	Green	18.9	6/20	11	7/24	16.9	1250	1940
PS0110745	Green	22.0	6/22	11	7/23	20.0	1053	2314
PS0110767	Green	18.3	6/19	13	7/21	20.8	980	2198
PS0110805	Green	21.3	6/23	14	7/25	28.8	721	2270
PS0110827	Green	19.3	6/21	14	7/25	24.7	752	2147
Stirling	Green	21.8	6/20	10	7/22	20.1	1156	2234
PS0010806	Yellow	13.7	6/22	11	7/21	20.6	781	1979
PS0010836	Yellow	18.9	6/24	12	7/23	17.6	1222	1886
PS01102958	Yellow	23.4	6/21	12	7/23	21.7	719	2011
Delta	Yellow	26.9	6/22	13	7/22	22.7	1318	2014
mean		20.5		12		20.8	1008	2101
LSD(0.05)		5.1		2		4.7	435	70
Pr>F		0.004		0.000		0.001	NS	< 0.0001
CV(%mean)		14.9		9.6		13.6		2.0

Seeded 4/18/05 in R8.