

Project Title: Western Regional Dry Pea Trial 2007

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Objective: To evaluate new varieties of spring-seeded dry pea (*Pisum sativum*) for grain yield in northwestern Montana.

Results:

Twelve cultivars of dry were seeded at 9 seeds/ft² in 100 ft² plots. The plots were arranged in a split block design with cultivars randomized within 4 replicates.

Emerged plants were counted on 5/21/07. 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 were 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.

Stand establishment was excellent with ~100% occupancy in all plots. All cultivars had bloomed by June 29 and reached maturity by July 25. Yields ranged from 1863 lbs/a ('Medora') to 3274 lbs/a ('PS03101822').

Summary:

DS Admiral' and 3 experimental cultivars exceeded the yields of the check varieties 'Meddora' and 'Stirling'. Abundant spring moisture followed by hot dry conditions during maturation provided an ideal environment for dry peas in 2007.

Future Plans:

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

Peas 2007

| <u>Cultivar</u> | <u>Stand</u> <i>pl/sqft</i> | <u>Fst</u> <u>Blm</u> <i>date</i> | <u>Nodes</u> | <u>Ht</u> <i>in</i> | <u>Maturity</u> <i>date</i> | <u>Yield</u> <i>lbs/a</i> | <u>Seed</u> <u>Size</u> <i>#/lb</i> |
|-----------------|--------------------------------|-----------------------------------------|--------------|------------------------|--------------------------------|------------------------------|-------------------------------------------|
| PS03101340 | 9.2 | 6/19 | 12 | 31.8 | 7/24 | 2821 | 2088 |
| PS02100107 | 9.0 | 6/25 | 11 | 29.3 | 7/25 | 2576 | 2414 |
| PS03101459 | 9.7 | 6/23 | 12 | 31.5 | 7/25 | 2548 | 2299 |
| PS03101445 | 9.6 | 6/26 | 12 | 28.3 | 7/25 | 2607 | 2418 |
| Medora | 8.9 | 6/29 | 14 | 35.5 | 7/25 | 1863 | 2509 |
| Stirling | 11.3 | 6/21 | 11 | 26.8 | 7/25 | 2793 | 2574 |
| PS03101822 | 8.6 | 6/21 | 12 | 27.8 | 7/24 | 3274 | 2183 |
| PS0010836 | 9.8 | 6/25 | 11 | 28.0 | 7/24 | 2873 | 2143 |
| PS03100278 | 11.8 | 6/20 | 13 | 32.5 | 7/24 | 2561 | 2290 |
| PS03100280 | 8.4 | 6/22 | 11 | 33.3 | 7/24 | 2726 | 2290 |
| PS01102958 | 8.1 | 6/27 | 14 | 31.0 | 7/25 | 2525 | 2156 |
| DS Admiral | 12.1 | 6/26 | 11 | 36.8 | 7/24 | 2958 | 2291 |
| mean | 9.7 | | 11.9 | 31.0 | | 2677 | 2304 |
| Pr>F | 0.0 | | 0.0205 | < 0.0001 | | 0.0007 | 0.0007 |
| LSD(0.05) | 1.6 | | 2 | 2.9 | | 458 | 198 |
| CV(% mean) | 11.4 | | 11.4 | 6.6 | | 11.9 | 6.0 |