

Field Pea Planting Date Effects on Yield and Various Agronomic Traits, Langdon 1998-2000.

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A field pea planting date trial was conducted at the Langdon Research Extension Center from 1998-2000 to evaluate the effect of planting date on field pea yield and other agronomic traits. Cultivar ‘Integra’ (yellow-cotyledon) was sown at the rate of 300,000 live seeds/acre in a randomized complete block design with four replications each of the three years of the study. Individual plots were 7 – 6 inch spaced rows x 16 feet long. Other production practices were followed according to NDSU recommendations.

Results from the trial are presented in Table 1. The average yield of the 2nd, 3rd and 4th planting date was decreased by 15, 36, and 69 percent, respectively, when compared to the first planting date. Much of the decreased yields in 1998 and 1999 were associated with increased levels of powdery mildew. The decrease in yield with later planting dates was also reflected in significantly more seeds/lb (smaller seed size). Test weight was not affected by planting date. Days to flower and mature both decreased as planting date was delayed. Lodging was generally lower at the later planting dates.

This study reconfirms previous research which recommends planting in late April and early May to obtain maximum seed yield. Planting early promotes as much plant development possible before the major heat and water stresses occur.

Table 1. Planting date effect on yield and various agronomic traits of field pea, Langdon 1998-2000.

Planting Date			Yield (bu/a)				Test Weight (lbs/bu)			
98	99	00	98	99	00	Avg.	98	99	00	Avg.
M6	A30	A26	75.2	62.0	63.1	66.8	63.9	62.0	61.6	62.5
M19	M18	M8	60.5	48.0	62.2	56.9	63.3	62.8	61.6	62.6
J1	M27	M23	38.1	36.8	54.8	43.2	63.6	61.4	62.1	62.4
J9	J8	J5	19.5	12.7	31.7	21.3	63.4	61.8	62.1	62.4
LSD 5%			5.7	7.3	14.9		NS	NS	NS	

Planting Date			Days to Flower				Days to Mature			
98	99	00	98	99	00	Avg.	98	99	00	Avg.
M6	A30	A26	54	59	60	58	93	97	98	96
M19	M18	M8	51	51	55	52	90	91	91	90
J1	M27	M23	45	47	48	47	82	87	82	83
J9	J8	J5	43	46	46	45	78	86	78	81
LSD 5%			1	NS	1		1	1	2	

Planting Date			Vine Length (in.)				Lodging (0-9)			
98	99	00	98	99	00	Avg.	98	99	00	Avg.
M6	A30	A26	49	44	39	44	6.0	7.8	6.5	6.8
M19	M18	M8	45	42	39	42	5.8	6.8	6.5	6.4
J1	M27	M23	45	37	42	41	2.5	5.0	6.5	4.7
J9	J8	J5	46	33	33	37	4.5	4.0	4.0	4.2
LSD 5%			2	4	2	2	NS	2.0	1.2	

Planting Date			Seeds/lb			
98	99	00	98	99	00	Avg.
M6	A30	A26	1780	1976	1627	1794
M19	M18	M8	2237	1990	1681	1969
J1	M27	M23	2650	2312	1792	2251
J9	J8	J5	3054	2683	2250	2662
LSD 5%			246	274	183	