

## Dry Pea Response to Seeding Date and Variety, 2024

### NDSU Langdon Research Extension Center

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A field trial was conducted at the NDSU Langdon Research Extension Center to examine the response of dry pea to seeding dates on two varieties. Earlier research from 1998-2000 indicated that the optimum timing for maximum yields was May 10 before dropping to 80 percent of the maximum by May 19. After that date yields dropped off rapidly. Much of the yield loss was due to varieties not having resistance to the disease downy mildew. With new genetics for downy mildew offered in most of the new pea varieties, yield trends the past several years have been increased at the later seeding dates. This study was initiated to examine seeding date trends with the newer varieties available.

Experimental design was a randomized complete block split plot (whole plots = seeding date, sub-plot = variety) with four replications. Yellow pea varieties 'AAC Chrome' and 'Spider' were planted on May 13, May 23, and June 7 on a conventionally tilled Svea-Barnes loam soil in 6, 7-inch rows at a seeding rate of 325,000 pure live seeds/acre, 7.5 seeds/ft<sup>2</sup>. An early May planting was planned but weather conditions prevented this.

There were no significant or small differences between the traits observed when averaged over seeding dates or averaged over varieties. 'Spider' did have a lower plant stand but was able to compensate with more pods/plant to have a similar yield (Table 2). Days to flower and protein was greatest at the May 13 seeding date (Table 1). The greatest yield occurred at the May 23 seeding date but the differences were not significantly different from other seeding dates.

This one-year study would seem to indicate that the planting window for field peas may be extended for northeastern North Dakota. Additional studies are needed to verify this information.

**Table 1. Field Pea response to seeding date averaged over varieties.**

Seeding Date	Plant Stand	Days to Flower	1000 KWT	Test Weight	Protein	Yield
	plt/ft <sup>2</sup>		g	lbs/bu	%	bu/a
May 13	6.1	53	239	62.4	26.1	71.7
May 23	5.1	50	244	64.3	25.2	80.8
June 7	6.1	46	215	65.0	25.5	74.3
LSD (0.10)	0.6	1.8	11.0	0.8	0.3	NS
CV (%)	9.3	2.0	3.0	1.0	1.3	8.4

**Table 2. Field Pea response to variety averaged over seeding date.**

Variety	Plant Stand	Days to Flower	1000 KWT	Test Weight	Protein	Yield
	plt/ft <sup>2</sup>		g	lbs/bu	%	bu/a
AAC Chrome	6.2	49	234	63.9	24.8	76.1
Spider	4.7	50	231	63.9	26.4	75.2
LSD (0.05)	0.4	0.7	NS	NS	0.4	NS