

Effect of Early Planting on Canola, Field Pea, and Hard Red Spring Wheat

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On response to the unseasonably warm spring, an experiment was conducted at the Carrington Research Extension Center to evaluate earlier than normal planting dates for canola, field pea, and hard red spring wheat (HRSW). ‘Hyola 357 Magnum’ canola, ‘Admiral’ field pea, and ‘Steele ND’ HRSW were planted at 9 live seeds/ft², 300,000 live seeds /ac, and 1.2 million live seeds /ac, respectively.

The planting dates were spread over a 28-day period (Table 1) and emergence dates for all crops were spread over a 28- to 30-day period (data not shown). Emergence generally occurred 10 to 13 days after planting, with the exception of the April 22nd and 29th planting dates. Due to cold weather during this period, crop emergence for these dates occurred 15 to 20 days after planting. From April 22 through May 4, the average minimum air temperature was 23°F. The cold temperatures also reduced the canola stand for the April 8th and 15th planting dates (Table 1) and caused slight injury on wheat leaves planted April 8, but did not affect field pea.

Table 1. Effect of early planting on selected parameters of canola, wheat, and field pea.

Planting Date	Canola			Hard Red Spring Wheat					Field Pea		
	Stand Count	Test PM	Seed Weight	Seed Yield ^a	Leaf Heading	Scab Disease Severity	1000 DON	Seed KWT	Seed Yield	PM	
	#/ft ²	date	lb/bu	lb/ac	date	%	%	ppm	gram	bu/ac	date
April 8	3.3	July 23	52.2	1424	June 19	57.5	24.5	2.2	29.1	55	July 21
April 15	4.4	July 24	52.2	1946	June 22	55	27.8	2.4	28.5	51	July 21
April 22	8.8	July 26	52.5	1826	June 25	40	39.3	4.8	26.9	43	July 22
April 29	7.3	July 28	48.5	1521	June 27	32.5	42.3	4.7	25.6	41	July 23
May 6	6.3	July 28	48.3	1473	June 29	23.8	40.8	5.2	25.4	39	July 24
LSD (P=0.05)	2.0	2	2.7	238	1	8.38	8.0	1.7	1.2	4	1

^aYellow Finch feeding on the first planting date reduced yields by an estimated 10 to 15%.

Planting date did not affect the oil content (42.9%) or 1000 kernel weight (3.2 grams) for canola; the plant stand (872,000 plants/acre), test weight (59.1 lbs./bushel), or seed protein (15.7%) for wheat; or the plant stand (269,000 plants/acre), 1000 kernel weight (252 grams), test weight (65.7 lbs./bushel), seed protein (22.0%), or yield (46.0 bushels/acre) for field pea (data not shown).

Very early planting resulted in higher HRSW yields, reduced scab severity, and lower DON levels. Field pea yield was not improved with very early planting. Canola yield tended to increase with earlier planting. However, the exposure of the canola plant growing point to frost increases the risk of crop injury.