Canola Response to Avail, 2006 and 2010

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Experiments were conducted at the Carrington Research Extension Center to evaluate canola response to 11-52-0 starter fertilizer treated with Avail. To evaluate the effectiveness of Avail, 11-52-0 and 11-52-0 treated with Avail were applied with the seed at a rate of 22.5 lbs phosphate /acre.

Materials and Methods

Studies were established using conventional tillage practices at two sites in 2006 and 2010.

2006: Soil tests indicated 11 ppm (Olsen) phosphorus at Q and 4 ppm phosphorus at E. 'Invigor 4870' canola was sown April 25 in 14-inch rows at 7 live seeds per square foot. The canola was swathed July 24 and harvested August 3.

2010: Soil tests indicated 7 ppm phosphorus at Q1 and 5. 'DKL 72-55' canola was sown May 4 in 7-inch rows at 14 live seeds per square foot. The canola was harvested August 11 at Q1 and August 17 at Field 5.

Results

There was a site by treatment interaction for days to bloom and bloom duration. At three of the four sites, days to bloom occurred two to four days earlier and bloom duration was three to four days longer when a starter fertilizer was applied (Table 1).

Table 1. Days to bloom and bloom duration.

	2006		2010			2006		2010		
Treatment	Q	E	Q	5	Avg.	Q	E	Q	5	Avg.
	Days to Bloom					Bloom Duration (days)				
Untreated Check	54.0	53.0	48.8	48.3	51.0	16.0	18.5	21.3	17.3	18.3
11-52-0	50.8	51.0	46.8	47.0	48.9	20.3	20.0	20.5	20.0	20.4
11-52-0 + Avail	50.0	49.8	46.5	46.5	48.2	20.8	21.0	21.3	21.0	20.9
LSD (P=0.05)	1.0	1.4	NS	1.6	0.9	1.0	1.0	NS	2.0	2.0

There was no site by treatment interaction and no treatment response for days to PM, plant height, test weight, and seed oil content (data not shown). For seed yield there was no site by treatment interaction. An individual site analysis indicated no treatment response at each site but when all sites were combined, 11-52-0 increased yield compared to the untreated check (Table 2). Yields were similar for 11-52-0 and 11-52-0 treated with Avail.

Table 2. Seed yield.

	2006		2010		
Treatment	Q	E	Q	5.0	Avg.
	Seed Yield (lb/acre)				
Untreated Check	979	1693	2632	2688	1998
11-52-0	1046	1775	3251	2959	2258
11-52-0 + Avail	1277	1995	3204	2811	2309
LSD (P=0.05)	NS	NS	NS	NS	229