

VIII SEED PRIMING TRIAL

- Objective:** To evaluate a novel seed priming system to enhance emergence, maturity and yield of canola.
- Background:** A method of priming seed has been developed and commercialized by a company named Kamterter II L.L.C. for a number of vegetable crops including some crucifer vegetables. This priming system has shown to improve germination and reduce time to germination of these small seeded vegetable crops. Potential benefits for canola may include faster germination rates, which should reduce the incidence of seedling diseases such as *rhizoctonia*, *fusarium* and *pythium*, better crop weed competition, shorter days to maturity and higher yields.
- Methodology:** The four treatments in this trial included primed vs. unprimed Q2 and InVigor 2663. This trial was designed and analyzed as a split-plot with the varieties as the main plot. Seed lots of each variety were identical for both primed and unprimed treatments. Each treatment was replicated four times. Crop development ratings were taken weekly throughout the growing season. Spring stand counts from multiple dates were taken at the exact same locations in the plots for each date.
- Observation:** This trial was seeded on May 15 into good moisture. The only sign of emergence at four days after planting (DAP) was in the primed Q2 (0.2 plants per square foot). At 9 DAP, the primed InVigor 2663 tended to have a few more emerged plants than the unprimed. There were no stand differences between the primed and unprimed Q2 at 9 or 22 DAP, or in the InVigor 2663 treatments at 22 DAP. For both varieties, the primed treatment reached canopy closure about one day before the unprimed. The primed Q2 bloomed about a day ahead of the unprimed Q2. No bloom differences were visible between the InVigor 2663 treatments.

Results:

SEED PRIMING TRIAL Thief River Falls, MN							
System	Yield (%)	Yield (lb/ac)	Yield (bu/ac)	Contribution Margin (\$/ac)	Oil (%)	Growing Degree Days	Days To Maturity
InVigor 2663 - Unprimed	100	1914	38.3	19.23	40.6	1169	85
InVigor 2663 - Primed	105	2006	40.1	N/A	41.0	1169	85
Q2 - Unprimed	100	1886	37.7	23.81	40.6	1169	85
Q2 - Primed	99	1863	37.3	N/A	40.8	1149	84
LSD (0.10) for priming within variety		60.6	1.21		0.56		
CV%		2.3	2.3		1.0		

Discussion:

The primed InVigor 2663 showed a significant yield advantage over the unprimed. No yield difference was noted with Q2. The cost of priming was not available, therefore contribution margins were not calculated for primed treatments. There were no differences in oil content or maturity between the primed and unprimed treatments for either variety.