

Improper harvesting timing, techniques, and handling or the combination of these practices can result in reduced grain yield and seed quality. Consequently, proper harvest management is a key agronomic factor in retaining canola yields. The two dominant harvesting techniques, swathing and straight-cut combining, have many positive and negative attributes associated with each practice. Swathing provides an even seed maturity, allows for earlier harvest (eight to 10 days) and ultimately reduce the risk of fall frost. However, it is difficult to swath the entire canola crop at the optimal timing, it also requires more labour, time, and fuel. Straight-cut combining facilitates quicker dry down of crop and weeds and providing perennial weed control. Straight-cut combining also reduces labour and equipment costs. As there are several harvest aid options for canola, it is important to determine if product selection will influence seed quality and overall stem dry down.

The demonstration was conducted at the Scott Research Farm in 2016. The demonstration was arranged as a randomized complete block design (RCBD) with four replicates and a total of six treatments.

**Table 1.** Canola desiccation products and application rate

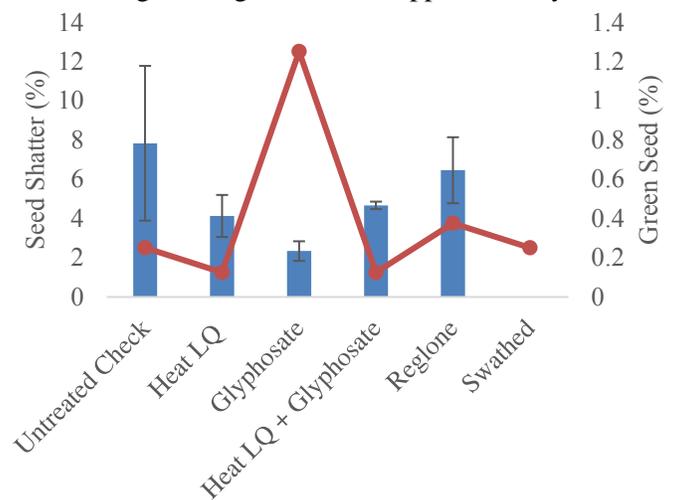
Trade Name	Common Name	Group	Application Rate
Untreated	-	-	-
Heat LQ + Merge	Saflufenacil	14	50 g ai/ ha 1L/ ha
Glyphosate	Glyphosate	9	900 g ae/ ha
Heat LQ + Glyphosate + Merge	Saflufenacil Glyphosate	14 9	36 g ai/ ha 900 g ai/ ha 0.5 L/ ha
Reglone	Diquat	22	1.7 L/ha
Swathed	-	-	-

Stem dry down assessments and seed moisture content were made 5,7,9,11, and 13 DAA to assess the efficacy of individual desiccant products. Stem dry down and seed moisture following glyphosate resulted in a slow but constant decline after 9DAA. Heat LQ and Heat LQ + Glyphosate both resulted in a steady decline in seed moisture and stem dry down at 9DAA, however, Heat LQ + Glyphosate had greater stem dry down 11 DAA. Heat LQ + Glyphosate also resulted in 8% more seed moisture content reduction 5DAA compared to Heat LQ alone.

Reglone had the fastest stem dry down compared to the remaining treatments. Reglone decreased overall seed moisture by 2% in two days, however, as the seeds were 85-90% SCC, moisture content was initially lower compared to the other

desiccant applications. However, in terms of “combinability” the Heat LQ, Heat LQ + Glyphosate and Reglone treatments were nearly identical. In contrast, the canola stems in the glyphosate treatments had a slightly higher stem moisture which made combining more difficult and slowed harvest.

The results also showed that straight-cut and swathed treatments did not significantly influence overall yield or oil content. Harvest methods did affect seed size, percent seed shatter and percent green seed. Swathed and glyphosate treatments had the highest test weight, however, TKW dropped by 4% and 5% compared to the Heat LQ, Heat LQ + Glyphosate, and Reglone treatments, respectively. Reglone had the greatest seed shatter amongst desiccant products of 6%, however, seed loss was greater than anticipated due to environmental conditions that delayed optimal harvest timing. Green seed was relatively similar among all treatments, expect for glyphosate, which resulted in the greatest green seed of approximately 1.25%.



Overall harvestability was greatest for treatments of Heat LQ, Heat LQ + Glyphosate and Reglone. Glyphosate as a harvest aid was not effective due to poor stem dry down and overall reduced harvestability. As there are true desiccant options available, glyphosate may be better utilized for weed control rather than as a harvest aid. To manage risk, producers may need to consider implementing varieties for both straight-cut and swathed harvesting. This may help producers effectively target the proper desiccation and swathing timing by expanding the target window.

For the full report, see

<https://www.westernappliedresearch.com/research/fact-sheets/>.

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