HEAT® LQ SUPPORTED AS PRE-HARVEST AID ON FLAX

Manitoba flax farmers have one more tool in their arsenal, thanks to work by MCA and partners

Flax is a hearty crop that can adapt to a variety of soil types and climates. However, it also presents challenges, primarily harvestability and straw management. Flax stalks tend to mature unevenly and can remain green throughout the fall, making them difficult to manage at harvest and in the following spring. There are two types of chemistries available to assist with flax harvest management in Canada: pre-harvest herbicides (pre-harvest aids) and desiccants.

Pre-harvest aids are non-selective, systemic herbicides that provide late-season perennial weed control and may improve flax harvestability by reducing the amount of green material in the field. Desiccants are non-selective herbicides that rapidly dry down the crop and weeds to allow for an earlier harvest.

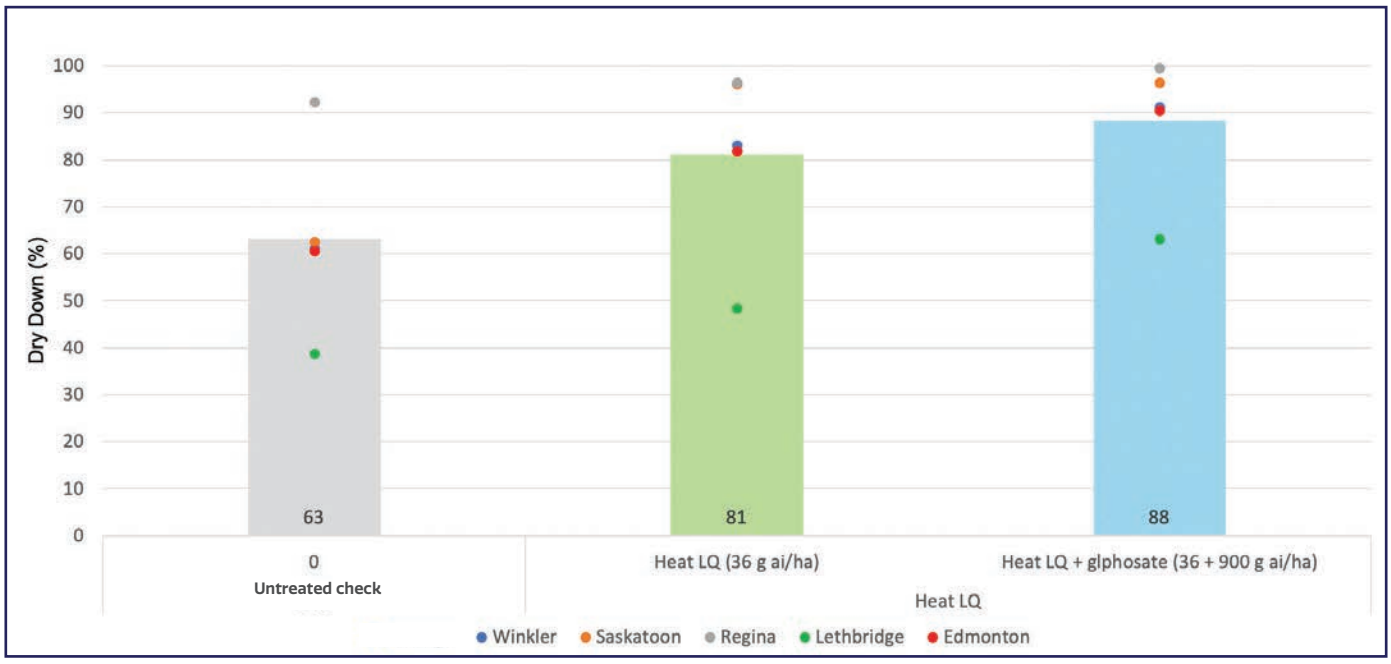
A desiccant or pre-harvest aid application benefits harvest by evening out stalk moisture or stay-green and "desiccating" or drying out that plant material. The goal is to have a plant that breaks down easily, does not wrap around moving parts of a combine and degrades in the field readily over fall and winter months.

There are three pre-harvest aids registered for flax in Canada: saflufenacil (Heat® LQ), diquat and glyphosate. Heat® LQ has been registered as a pre-harvest aid for flax for several years, but the application wasn't recommended due to knowledge gaps regarding the efficacy when applied alone (not tank-mixed with glyphosate) and acceptability of the flax seed in export markets.

"Canadian flax has a reputation for high quality, and we want to ensure farmers have the agronomy management tools to maintain the reputation we have for our flax," says Wayne Thompson, executive director of the Saskatchewan Flax

Lead Researcher: **BASF**

BASF Canada Agricultural Solutions, headquartered in Calgary, AB, has over 625 employees who work at one of three production facilities across Canada or one of several research farms across the Canadian Prairies. Agricultural Solutions is the largest division of BASF Canada Inc., working closely with the regional Agricultural Solutions team and collaborating on research and product development that benefits North American farmers. To find out more about BASF Canada Agricultural Solutions, visit agsolutions.ca or follow them on Twitter at twitter.com/BASFAgSolutions.



▲ *Per cent drydown/desiccation of the flax crop 18-25 days following an application of Heat® LQ and Heat® LQ + glyphosate compared to untreated flax. Heat® LQ applied alone provided similar flax drydown/ desiccation compared to the Heat® LQ + glyphosate treatment.*

PHOTO: BASF CANADA AGRICULTURAL SOLUTIONS

▲ *Flax pictured seven days after pre-harvest aid application. Heat® LQ providing very similar flax drydown/desiccation compared to the Heat® LQ + glyphosate treatment.*

Development Commission (SaskFlax).

The prior understanding was that Heat® LQ as a pre-harvest aid on flax would exceed maximum residue limits (MRLs) for the European market, an important market for Canada. In terms of herbicide residue limits, flax is classified in the same group as canola, which also complicated things, Thompson says.

"Historically the residue work was completed for canola, a much larger crop than flax, and flax residue information was based off that. More background work on flax MRLs was needed."

However, because the industry recognized that Heat® LQ could be a useful agronomic tool to improve flax harvestability, it came together to work on behalf of farmers. BASF Canada Agricultural Solutions (BASF), in partnership with Manitoba Crop Alliance (MCA) and SaskFlax, ran a field trial program with financial support from the two provincial organizations.

"Desiccants are important for flax harvest," says Mark Oostlander, senior research manager for herbicides at BASF. "When we were approached by the flax councils asking if we would support this application, more background work was needed to understand the implications on market access."

Two evaluation criteria were developed, he says. First, testing the efficacy of the product, (i.e., if Heat® LQ dries down flax when applied by itself at registered rates). Second, determining if there would be any concerns around market access with selling the seeds.

To address these questions, trials were conducted at nine BASF research sites across Western Canada.

Heat® LQ was applied pre-harvest to flax at the recommended timing of 30 per cent seed moisture (75-80 per cent of the bolls are brown). Desiccation efficacy was determined every 3-5 days until the flax was ready to harvest.

Trials were harvested and samples of each treatment were analyzed for residue to determine the suitability of the flax seed to enter export markets.

Results from extensive testing on five locations over two years concluded improved flax dry down when Heat® LQ was applied as a standalone treatment (not tank mixed with glyphosate) at labelled rates. In addition, the acceptability for the use of Heat® LQ pre-harvest at the labelled rate as a standalone treatment for flax across all key export markets was determined.

"This research gives flax farmers a viable tool to facilitate harvest while ensuring no limitations on market access for their product," Oostlander says. "It is also a great example of all partners working together to solve farmers' needs and to support the agriculture industry."

For the 2022 growing season, 40 acres/case was recommended for application when 75-80 per cent of bolls were brown and had less than 30 per cent seed moisture. This recommendation was in place for the 2022 growing season and remains the same for 2023.

For 2023, the existing recommendation remains in place to avoid tank mixing with glyphosate. However, work to assess this use pattern is still ongoing.

Furthering our knowledge around products for Canadian crops is extremely important, and the industry will continue to support work in this area, Thompson says. "Being a small crop, we are continuously looking for more options, so farmers have the tools they need to grow and manage a good flax crop."

A general reminder for flax farmers: Always refer to the product label for application rates and pre-harvest intervals when using any crop product. In addition, always contact your buyer to ensure they will accept treated flax before making your pre-harvest application decisions. ●

ON YOUR FARM

Research confirms efficacy of Heat® LQ pre-harvest for flax across all export markets

For more information on Heat® LQ visit agriculture.basf.ca/west/products/solutions/heat-lq.html.

MCA ANNUAL INVESTMENT: $5,000

CO-FUNDERS:

SaskFlax

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