

Timing of hail more important than damage

By Barb Glen

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Farming Smarter plans to retire its hail simulator unless funding is offered for further research. | File photo

An applied agricultural research association in Alberta wrapped up its study on hail and how it affects crops

They won't be beating up healthy crops anymore.

The team at Farming Smarter, the applied agricultural research association, has concluded a study on hail and how it affects crops, a process that required researchers to develop their own hail simulators and deliberately damage crops so effects could be studied.

Ken Coles, general manager of Farming Smarter, presented research results Dec. 12 at the organization's annual conference.

Researchers concluded that the amount of damage done by hail was less important than the timing of the hail event. Hail in the early crop stages allowed time for plants to recover, but late in the growing season there is little to be done.

As well, various tests of crop rescue products that suggest beneficial effects following a hailstorm made no statistically relevant improvements to a crop after the "big white combine" has come through.

"Generally speaking right now, hail insurance is your best bet, your best return on investment in trying to help yourself recover from a hail damaged crop," said Coles.

Research teams in several Alberta locations simulated hail at different growth stages on peas and wheat. Lethbridge also did tests on dry beans.

Coles said peas were the most sensitive to hail damage, and wheat fared the best, but again, maturity of the crop was the biggest factor.

Wheat was able to recover well from hail if damaged early, but once heads start to emerge, or if heads are knocked off by hail, recovery is minimal. Though wheat may then tiller, that often creates more problems because of green seed and storage issues.

None of the crops showed response to rescue products, whether they were fungicides or nutrient products, Coles said.

A few trials conducted only in Lethbridge showed a response to certain products, "but how often does it have to work or how reliable does it need to be for you to make that investment in a recovery product?" he said.

“Overall, (there was) minimal response to the products that were applied. The growth stage is the largest factor affecting yield loss. Once we get past that sort of mid-June and into the reproductive stages of the plant, the ability to recover from a hail event, it drops off rather dramatically.”

In a later interview, Coles said the hail simulator will be retired unless funding is offered for further research on hail.

“We were trying to get some funding to develop algorithms that you could use remote sensing, whether it be a drone or satellite imagery, to help predict what the damage is right immediately after a hail event because there’s so much spatial variability.

“I think that could be a valuable tool for farmers. It could be used as a tool to even negotiate with AFSC (Agriculture Financial Services Corp.) adjusters because they typically come in and do four spots when they rate a field, and that’s not a lot.”

The hail studies were conducted in Lethbridge, Vegreville and Falher.