

Home-made hail simulator crushed some hail damage doubt

TIANNA ELL

Farming Smarter

Farming Smarter's three-year hail recovery research project suggests that insurance is the most reliable way to protect your farm from crop loss due to hail damage.

The project began in 2015 with the intent of discovering the validity of nutrients and fungicides advertised as recovery methods for hail-damaged crops.

"There are products out there being touted as hail rescue products," said Ken Coles, the project leader and General Manager of Farming Smarter.

Farming Smarter, InnoTech Alberta and SARDA set out to create a reliable way to simulate hail-damage as well as the outcome of crops treated after the damage has occurred.

A hail simulator consisting of dog chains attached to a rotating drum was designed and created specifically for the trial at the Farming Smarter location. InnoTech Alberta and SARDA created their own variations by attaching golf balls and using different machinery for their simulators, which all received a similar result.

Crops were damaged at three growth stages, tillering, flag leaf and flowering with an intensity of zero per cent, 33 per cent, and 67 per cent damage. Technicians conducted trials with the simulator before beginning the study to determine the accuracy of the damage inflicted on the crops.

Agriculture Financial Services Corporation (AFSC) adjusters assisted in the calibration of the hail simulator before the official trial began, as well as assessing the damage of the research trials during the project.

The crops included in the study were canola, wheat and pulses over the three-year period. Early on, it was obvious that the timing of the hail damage was a large factor in the recovery and total yield of the crops.

Plots damaged early in the season had more time to recover and produced a higher yield than those that experienced hail mid to late season.

Fungicides showed minimal improvement in overall yield, but the nutrient-enriched trials caused a drop in yield when compared to the untreated crops.

"While this project has helped add to a limited knowledge base, there is still a rather large gap in knowledge regarding appropriate management practices required for a hail damaged crop," said Coles.

Farming Smarter continues to study hail damage by comparing the yield of an early hail damaged crop to one that is reseeded after hail damage.

Photo courtesy of Farming Smarter
Early season damage on a wheat plot. This is the 67 per cent damage condition. Farming Smarter is simulating effects of hail damage on test plots complete a three-year research project.

