

Ag Matters – Cover Crops project

by December Burgess

Farming Smarter plans to answer the numerous questions local producers have regarding the impact, viability and benefits of establishing cover crops in Prairie Canada.

Mike Gretzinger, Research Coordinator at Farming Smarter, says his team is excited to research the short- and long-term effects of cover crops on our land.

The project started in 2018 led by Dr. Yvonne Lawley from the University of Manitoba and collaborators from the University of Saskatchewan.

“Cover crops are something used for soil erosion, fertility, quality, water retention, water management, weed management, pest management and diseases,” said Gretzinger.

People interested in this method see potential to increase yield and reduce input costs, especially when combined with no-till and grazing livestock. Early adopters and existing studies indicate that cover crops cycle nutrients that typically leach from the soil, increasing crop productivity and soil health over all.

“When we harvest a crop, we typically remove the seed head and cut down most of the plant material, with cover crops were trying to grow something more substantial over the winter when we would normally just have straw peeking out or covering the ground,” Gretzinger said.

Researchers are conducting two different experiments across five locations within the prairies – Crop Rotation and On-Farm.

Crop rotation focusses on four-year annual rotations – one rotation using cover crops and the other without. The experiment will compare the two results over four locations: Carmen, MB, Saskatoon, SK, Redverse, SK and Lethbridge, AB. Each location offers different soil types and precipitation averages.

The 4-year Lethbridge rotation is spring wheat-canola- durum wheat- peas with clover, lentils, radish and a blend of fall rye and winter peas as cover crops. This will be compared to the same rotation without cover crops, a 2-year rotation of Canola- Wheat and 4 years of reference crop of Alfalfa.

The on-farm experiment is in Brandon, MB and evaluates field scale cover crops using commercial equipment. Once again, the experiment will follow crop rotations both with and without cover crops.

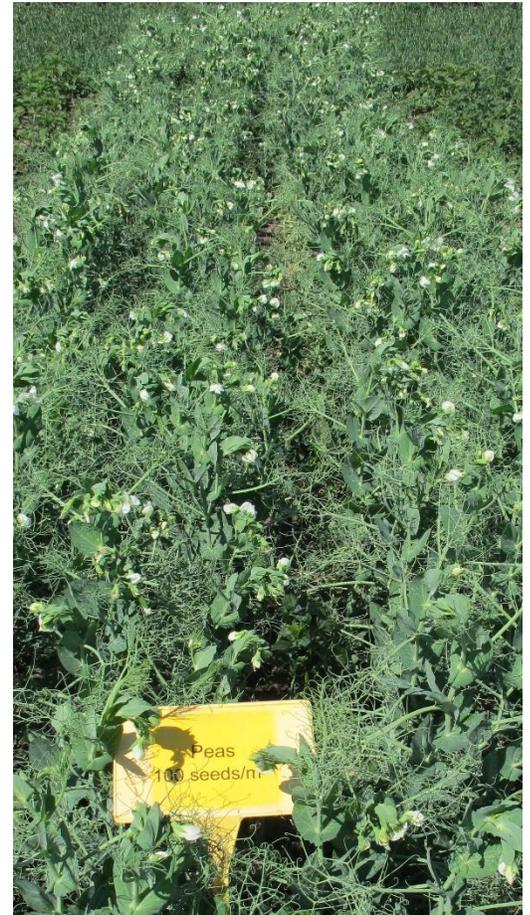
According to Gretzinger, the biggest problem Farming Smarter has had this far is getting the crop to establish in their fields.

“We’ve only had half our long-term average in rainfall this year,” he explained.

The inconsistent weather is one of the hurdles hypothesized before this project began. The Canadian prairie offers producers a short growing season and unpredictable levels of moisture, creating a landscape that may be unreliable for growing cover crops.

The impact cover crops have on crop yield vary depending on multiple factors, including climate, cover crop type, growth, management and C/N ratio.

Gretzinger points out, “Potentially, cover crops may actually end up being detrimental to our systems so we’re going to have to stay tuned the next couple years and see what happens.”



Peas growing in Lethbridge trials. Credit: Farming Smarter