2018 Canola Agronomic Research Program (CARP)

**Disease**
- Understanding the role of adult/whole plant blackleg resistance.
- Investigation of novel management strategies for sclerotinia.

**Fertility**
- Evaluation of soil test results and recommendations by lab for canola production.
- Quantification of optimal fertilizer rate, placement and application timing to mitigate greenhouse gas emissions from canola production systems.
- Investigation of micronutrient requirements in high-yielding, short rotation systems.
- Investigation of tissue test for boron. Quantifying deficiency and sufficiency with in field response to application.
- Improving phosphate management for long term sustainability on the prairies.

**Integrated Pest Management & Sustainability**
- Value of beneficial organisms (including aquatic invertebrates), wetland/headland/refuge for habitat, specifically for canola production and also farm productivity.
- Genetic screening for canola insect pest resistance.
- Dynamic thresholds for diamondback moth larvae, taking into account lower plant stand densities and the role of beneficial insects.
- Quantifying the shelterbelt effect on canola yield in zero till systems.
- Crop modelling to determine the impact of changing climate, landscape and production practices.
- Impact of plant density and uniformity on pest pressure and management strategies.

**Stand establishment**
- Evaluation of the interactions between canola seeding depth, seed size, soil temperature, residue and soil moisture.

**Harvest and Storage Management**
- Evaluation of aeration and drying systems in silo bags.
- Quantification of seed respiration in storage by cut time and pre-harvest practices (ie. swathed, naturally ripened, straight cut with a pre-harvest aid).
- Evaluation of canola seed moisture, chlorophyll content and phenotypical traits with hybrid seed and typical plant densities.