Summary of Strategic Research Initiative (SRI) Project of 2024

- One project was funded by SRI for a total of $4,267,116.
- Five Industry partners co-funded a total of $1,767,116**.**

University of Saskatchewan

Accelerate Discovery of Root Rot Solutions for Pea and Lentil in Saskatchewan (20230401)

Principle Investigator: Sabine Banniza, University of Saskatchewan

Objectives:

- The effect of secondary metabolites/polyphenols in roots in pea and lentil on root rot.
- Using molecular and conventional breeding for improved root rot resistance and rapid variety release in pea and lentil.
- Host-pathogen interaction with *Fusarium avenaceum* toxin knock-out isolates
- Gene editing in lentil.
- Characterizing the diversity and abundance of *Aphanomyces* and *Fusarium* populations in SK.
- Expanding Western Canadian *Aphanomyces euteiches* genomic resources.
- Optimizing crop rotations to mitigate root rot disease of lentil and pea RNAi control of *A. euteiches.*
- RNAi control of *A. euteiches*
- Endophytic Control of root rot in lentil and Medicago Root Infection Model.
- Biocontrol of Aphanomyces root rot using bacteria isolated from soil.
- IPM pyramiding using biocontrol, natural products and tolerant lines.

Co-funded by: Saskatchewan Pulse Growers, Western Grains Research Foundation, Alberta Pulse Growers Commission, Results Driven Agriculture Research, Manitoba Pulse and Soybean Growers

SRI Funding: $4,267,116