Strategic Field Program (SFP)

Funding for these SFP projects was approved by the Minister on January 31, 2025.

Predatory Nematodes as Biocontrol Agents for Root Maggots in Vegetable Crops *(20240978)*

Contractor: Doug Waterer
Ministry Specialist: Connie Achtymichuk
Objectives:

- To determine the level of root maggot control that can be achieved by applying affordable and practical amounts of commercially available predatory nematodes To test the efficiency of the three maggot control products.
- To assess the relative efficacy and practicality of different methods of applying the nematodes – including treating transplants prior to planting out vs spraying the nematodes onto plants once they are in the field.
- To assess the duration of root maggot control provided by a single application of nematodes versus multiple applications staged over the course of the growing season.
- To compare the efficacy of the nematode treatments in a fast-maturing crop like radish versus in a slower maturing crop like cabbage and/or rutabaga – where the period of exposure to the root maggots is extended.
- To examine the efficacy, cost efficiency and ease of use of predatory nematodes compared to standard insecticide treatments.

SFP Funding: $42,000

Assessing the Capabilities and Practical Applications of Different Modified Growing Environments for Year-Round Food Production *(20240979)*

Contractor: Shawn Clark, National Research Council of Canada
Ministry Specialist: Glen Sweetman
Objectives:

- To evaluate the feasibility of retrofitting buildings into plant growth facilities and to compare their effectiveness with other types of controlled environment agriculture (CEA) systems, including modular farms and modified shipping container-based growth facilities.
- To evaluate the economic differences among these modified growing environments for sustainable, year-round local food production.
- To analyze and compare the facilities on metrics such as energy use, crop yield, labor, and setup costs.
- To generate data to guide municipalities, growers, and investors in assessing the economic and environmental benefits of each facility type.
- To facilitate knowledge transfer through Field Days and share project outcomes with interested parties.

SFP Funding: $122,000

Investigation of *Melissococcus plutonius* Persistence in Beekeeping Equipment in Saskatchewan *(20240980)*

Contractor: Simon Lalonde, Saskatchewan Beekeepers Development Commission
Ministry Specialist: Geoff Wilson
Objectives:

- To understand the risk of contaminated beekeeping equipment as a reservoir for European foulbrood disease and to demonstrate effective disinfection protocols for hive equipment.

SFP Funding: $150,000

Varroa Mite Resistant Stocks (USDA-ARS Pol-Line, Saskatraz) - Viability for Varroa Mite Resistance and Economic Traits in Northern Climates- Saskatchewan *(20240981)*

Contractor: Simon Lalonde, Saskatchewan Beekeepers Development Commission

Ministry Specialist: Geoff Wilson
Objectives:

- To demonstrate the differences in Varroa population dynamics in bees bred for varroa resistance and local Saskatchewan stocks.
- To demonstrate the differences in honey bee population dynamics in bees bred for varroa resistance and local Saskatchewan stocks.
- To demonstrate economic characteristics of bees bred for varroa resistance and local Saskatchewan stocks.

SFP Funding: $148,000

Evaluating Grasshopper Resistance in Annual Forages and On-Farm Prussic Acid Testing *(20240984)*
Contractor: Amber Wall, Wheatland Conservation Area
Ministry Specialist: Austin Baron
Objectives:

- To evaluate grasshopper resistance of five common annual forages in Southern Saskatchewan.
- To evaluate the effects of neighboring plant species on grasshopper damage.
- To relate grasshopper feeding to prussic acid concentration in sorghum.
- To evaluate the efficacy of on-farm prussic acid testing using cyantesmo paper

SFP Funding: $44,990

Evaluating the Fertility Package of Newly Available Oat Milling Varieties in Saskatchewan *(20240985)*
Contractor: Brianne McInnes, Northeast Agriculture Research Foundation
Ministry Specialist: Matthew Struthers
Objectives:

- To demonstrate suitable nitrogen rates for new oat varieties with higher yield potential in different soil and climatic zones within the province.
- To demonstrate to local oat growers, new varieties that are available to increase adoption of new oat genetics.

SFP Funding: $102,500