Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

Lethbridge Research and Development Centre

profils-profiles.science.gc.ca/en/lethbridge

Canada

The Lethbridge Research and Development Centre was established in 1906 in Lethbridge, Alberta. As one of Agriculture and Agri-Food Canada's most historic and largest research facilities, it has a wide range of expertise and diverse areas of research. The Centre has one satellite location – the Vauxhall Research Farm.

Located in the semi-arid climate of southern Alberta, the Centre is uniquely positioned to research agricultural systems under both dryland and irrigated conditions, including cereal grains and important regional crops such as potatoes and pulses. Alberta is home to many beef cattle producers, which reflects the Centre's significant contributions to livestock productivity, reducing greenhouse gas emissions, animal welfare, forage production and food-safety.

As a major hub for agricultural research in Western Canada, the Centre has grown over the years and now includes specialized facilities such as insect and microbial containment facilities, a 1,000-head research feedlot, controlled barns and observation facilities, greenhouses, controlled-climate growth chambers and expansive field test plots.

How we benefit farmers, industry, the environment and Canadians

Our research:

- **Improves** the health of people, animals and the environment
- **Improves** the economic and environmental sustainability of crop, forage and livestock production
- **Promotes** animal welfare and safe handling of livestock
- **Works directly** with industry and producers to help solve challenges and meet sector needs
- **Helps** producers learn best management practices for their operations
- **Supports** improved water management and sustainable irrigation practices
- **Enables** producers to improve their long-term competitiveness while reducing their environmental footprint
- **Improves** food safety and combats antimicrobial resistance
- **Creates** new plant varieties with better resistance to disease and adapted to the semi-arid climate
- **Helps** farmers protect their crops and better manage weeds, insects, diseases and pests
- **Supports** Canada's agriculture economy

Key research areas:

- Field crop production
- Plant health
- One Health
- Air and climate
- Farm animal production
- Soil and water management
- Biodiversity
- Breeding innovations and crop germplasm development

Our continued support:

- Discovering new livestock feeding strategies to improve production, health and environmental outcomes
- Reducing the environmental footprint of beef cattle production
- Increasing the sustainability of growing potatoes by preventing disease, reducing input costs and introducing new varieties
- Helping prevent harmful bacteria such as *E. coli* from entering the food chain
- Discovering new solutions and management practices for herbicide-resistant weeds
- Maintaining more than 100 years of long-term rotation crop studies providing important historical data

Examples of our success:

- Created field guides for producers to manage pests and support beneficial plants and insects in their fields
- Built a one-of-a-kind rumen (stomach) microbe collection that provides essential information on microbial diversity
- Created the HOLOS open software program that enables producers to test ways to reduce their greenhouse gas emissions
- Developed more than a dozen grass and legume varieties
- Developed approximately 170 cereal, pulse and horticulture varieties adapted for the Canadian Prairies
- Developed new biobed technique to help producers improve water quality

AAFC no. : 13228E | ISBN : 978-0-660-72438-6 | Catalogue no. : A59-95/2024E-PDF