



USASK SIGNATURE AREAS

AGRICULTURE

Food and bioproducts for a sustainable future

Lead: Dr. Trever Crowe (PhD, P.Eng., PAg), College of Agriculture and Bioresources

The University of Saskatchewan (USask) is a global leader in agricultural research and advancement, with roots dating back to 1909. USask plays a leading role across the sector on local, national and international fronts, with a reputation of excellence and a commitment to the responsible and sustainable advancement of the agriculture industry. Our deep history drives the *Agriculture Signature Area of Research* as it addresses some of the world's most pressing challenges.

Supporting the coordinated and interdisciplinary efforts needed to feed the world, USask's *Agriculture Signature Area of Research* is addressing issues of food security, production efficiencies and policy in the face of a changing climate and a growing global population. The intersection of these challenges calls for coordinated, innovative and swift responses that address the priorities and needs of farmers, industry partners, governments and consumers. To #BeWhatTheWorldNeeds, USask researchers are discovering, growing and evolving the agricultural products and practices of tomorrow.

Growing food to feed the world takes place at the intersection of traditional, modern and ecological practices that protect the environment, with optimized production and reduced inputs. At this nexus, USask researchers are embracing precision agriculture, exploring novel proteins, and promoting resilient, lower-input breeds of both plants and animals. The interdisciplinarity of water security, soil health, crop resilience, microbiological and food sciences, and veterinary medicine all contribute to these objectives.

To bring food from farmers and producers to tables around the world, USask researchers are advancing transportation and storage sciences, evaluating economic and public policy, and addressing questions of equity and access. Here, food safety and availability, public education and trust, population health and consumer preferences are at play.

The *Agriculture Signature Area of Research* is leveraging unparalleled strengths and commitments to promote USask's continued success and prominence in the field. The impacts of USask research are also bolstered and enabled by strong external partnerships with producer groups and provincial and federal government agencies. USask is home to a vast network of centres and facilities that drive innovation and success in this Signature Area, including the: Livestock and Forage Centre of Excellence, Crop Development Centre, Global Institute for Food Security, Controlled Environment Facility, and others.

Notable Areas of Focus:

- Innovating advancements that create enhanced crop varieties, breed-diverse and disease-resistant animals, and novel protein alternatives to more efficiently and sustainably produce food through the use of digital (precision) agriculture.
- Supporting crop resiliency by maximizing soil, root and plant health and insect resistance in a changing climate.
- Keeping food and agricultural products safe, available and trustworthy through the development of meaningful economic and public policy.