



GLOBAL INSTITUTE *for* FOOD SECURITY



POTASHCORP – A FOUNDING PARTNER

INVESTING IN GLOBAL FOOD SOLUTIONS

Saskatchewan will make contributions to global food security by supplying healthy agricultural commodities and food ingredients, as well as crop production inputs such as potash. It will be a world leader in innovations in agriculture and will be a model for international cooperation in science and technology transfer.

With a shared vision to develop Saskatchewan-led solutions to feed a growing world population, the Global Institute for Food Security (GIFS) was created through a unique public and private partnership by PotashCorp, the Government of Saskatchewan, and the University of Saskatchewan in December 2012.

The new Institute, based at the University of Saskatchewan, is positioned to become a world-renowned centre of excellence in agriculture and food-system research, building on Saskatchewan's strengths in crop production and focusing on technological, economic, nutritional and environmental improvements to the global food supply system.

LEADING DISCOVERY AND INNOVATION

As a cross-disciplinary institute, GIFS will engage scientists, faculty members, and students from other research institutes and universities in Canada and around the world, providing unprecedented opportunities for collaboration.

GIFS research on food systems will produce solutions that are relevant and transferable to parts of the world where food production and distribution remains a challenge. Breeding for higher yields, examining how soil quality affects the nutritional value of crops, adapting traditional prairie crops to local soils and water – these are a few of the ways GIFS will advance food solutions for growing populations and economies around the world.

GIFS will draw on the unique expertise and technology of a bio-science research cluster that includes the University of Saskatchewan, Canadian Light Source synchrotron, Saskatchewan Research Council, National Research Council and Agriculture and Agri-Food Canada. In addition, GIFS enjoys the support of private-sector business and industry in Saskatchewan whose enterprises foster and depend on agriculture and food.



“The knowledge, research and innovation done through these many resources are of global importance and the bio-science cluster in Saskatchewan which collaborates with GIFS is one of the strongest of its type in North America.”

Dr. Roger Beachy,
GIFS Founding Executive Director and CEO

A CATALYST FOR RESEARCH AND INNOVATION

GIFS aims to create a research culture that is interdisciplinary, systems-based, global, and focused on moving solutions from discovery to innovation to commercialization. Its investments will shine a light on food research excellence currently underway, identify opportunities for private-sector involvement and focus research efforts to maximize returns on public-sector investment.



In its initial year, GIFS identified three research and innovation themes, all linked to the mission to increase crop production, build a prosperous economy in Saskatchewan, and contribute to global food and nutrition security:

1 Capturing value in the global food supply system.

Research and innovation may include processes and systems to add value to agricultural crops and crop products, both to capture value for agricultural producers and agribusiness and to meet the nutritional and health needs of consumers. The value of both food and non-food products and processes contribute to the profitability and environmental sustainability of food production. Issues such as agricultural trade policies, market assurance, food safety, consumer behavior, and technology adoption may be addressed.

2 Increasing resiliency of crops and cropping systems.

Research will seek genetic and agronomic solutions to substantially increase crop yield and to confront existing and new biotic and abiotic threats to crops. Overall agricultural productivity will be enhanced by developing crops and cropping systems with resilience to predicted/anticipated changes in weather patterns and climate changes, including tolerance to changes in climate.

3 Healthy soils for optimum crop productivity and agricultural sustainability.

Research may include topics such as maximizing nutrient and water use efficiency and minimizing soil-borne plant disease. A priority is given to building on local strengths of innovation, including the presence of the Canadian Light Source synchrotron and a new cyclotron to enhance the use of high-resolution imaging and analysis of physical, chemical, and biological complexity in agriculture soils.

A STRONG FOUNDATION

GIFS is advancing a number of initiatives to position itself as a leading-edge food research institute. These include:

- Working with partners to identify key infrastructure needs to ensure that the Saskatchewan bio-sciences cluster has the platform technologies necessary to support a new centre of excellence in plant sciences and food production;
- Identifying opportunities to enhance human capital within the cluster by recruiting world-class scientists and their productive research programs to Saskatoon, enabling dramatic progress towards increasing crop production;
- Utilizing research funds to provide incentives to scientists within the cluster to bundle their expertise together with other disciplines and professionals to work on system-based challenges that cannot be resolved any other way; and
- Forming partnerships between scientists in Saskatchewan and those in partner countries of particular interest or relevance to Saskatchewan to ensure we make the best use of talent and infrastructure.

A FOCUS ON COLLABORATION

GIFS is a catalyst for collaboration between Saskatchewan researchers and those working in other countries who are also focused on global food security. Research partnerships with countries that are important export markets for Saskatchewan are key – as are partnerships with world-leading institutes that have complementary mandates to GIFS.

Collaboration is a key to partnership development. GIFS will focus on optimizing talent and infrastructure for particular research initiatives, as well as the global transfer and adoption of appropriate technologies.

The Global Institute for Food Security welcomes the opportunity to explore new partnerships and pursue research and innovation opportunities that address the challenges we collectively face in providing solutions for the increasing global demand for safe, reliable food.





MISSION

New knowledge for sustainable food solutions by increasing sustainable crop production, building a prosperous bio-economy in Western Canada, and enhancing global food and nutrition security through innovation and international collaboration.

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Founding Partners of the Global Institute for Food Security

With initial commitments of up to \$35 million from PotashCorp and \$15 million from the Government of Saskatchewan over seven years, and support of world-class facilities and centres at the University of Saskatchewan, GIFS will apply Saskatchewan's unique resources, innovation and expertise to address the increasing global demand for safe, reliable food.