UNIVERSITY OF SASKATCHEWAN

College of Agriculture and Bioresources

"Building for the Future: Next Generation Agriculture and Bioresources"

The Global Challenge: During the next two decades, the world will face a number of challenges that will significantly impact agriculture and other resource sectors. By 2050, the world's population will increase from the current six billion to nine billion people (source: OECD). Global warming could lead to desertification of crop lands and loss of low-lying habitat, necessitating increased food and bioproduct production from northern temperate zones. With or without climate change, the world's population will rise, and novel renewable resources, products and management systems will be highly sought after worldwide.

Saskatchewan's rich resources, geography and proven track record in world-leading agricultural research and innovation offer enormous potential to develop the next generation of agriculture and bioresources. The University of Saskatchewan is poised to lead the evolving bio-economy as a pre-eminent provider of new knowledge and technologies to add value to crops, trees and land through environmentally-responsible approaches, thereby helping our province, country and world thrive through this century and beyond.

The Saskatchewan Advantage: With an integrated approach to novel food, fibre and fuel development, the U of S is uniquely positioned to seize the concept of 'green growth' and support a sustainable and globally competitive bioeconomy. The College can lead the world, through renewed investment in research and training, in providing:

- new products—ranging from hardier, higher-producing varieties of plants and animals to crop inputs and feeds that will help farmers gain a greater return on their investment;
- a secure supply of healthy and highly nutritious food and feed;
- bioproducts including nutraceuticals, fibre products, and energy;
- sustainable production systems in agriculture and forestry that produce safe, high-quality foodstuffs and bio-based industrial and wellness products, and
- improved rural and northern economic development opportunities and quality of life through policies and systems advancing stewardship of soil, water and biotic resources.

Building a Sustainable and Competitive Bioeconomy: To ensure the advantage of being a lead innovator in developing, growing, processing, and selling—both locally and globally—needed food, fibre and fuel products, we must:

- Ensure that scientists have a reliable, state-of-the-art tool for testing plant growth under varying environments, by upgrading the aging phytotron, Canada's largest controlled environment facility which is critical for advanced crop development and productivity improvement;
- Train tomorrow's Aboriginal agronomy and agro-business leaders through enhanced programs in indigenous land and resource management studies;
- Enhance the beef industry's competitive edge and meet rapidly increasing global demands for efficiently produced high-quality animal protein by updating the out-moded Beef Cattle Research and Teaching Facility; and
- Capitalize on opportunities for new exportable technologies and products by building a new dairy research and training facility to replace the aging dairy barn on campus.

These new and upgraded facilities will support the top-calibre training, knowledge generation and commercial development expected by our students, producers, industries and public, creating an environmentally-sensitive knowledge-based bioeconomy much more rapidly than can other more economically challenged locations. Saskatchewan has huge potential to help sustainably feed, clothe and fuel the world if we are only bold enough to seize the opportunities.