

# Media Release

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## **Assiniboine cracks Top 50 Research College ranking**

BRANDON, Man. (December 4, 2025)—Canada’s Top 50 Research Colleges, announced today, includes Assiniboine College for the first time. The annual ranking places Assiniboine College in the 47<sup>th</sup> spot of publicly funded colleges in Canada.

The college’s strategic plan, released in June 2024, outlined a number of aspirations for the college by 2030—among them, becoming a top 50 research college. Stepping onto the list this year puts the college ahead of schedule, with sights set on continued growth in this area.

In recent years, the applied research being conducted at Assiniboine has made significant contributions to advancements in agricultural practices, sustainable horticulture, and environmental stewardship. The research focuses on crop sustainability, pest management, soil health, and clean technologies, addressing industry and regional food production challenges.

Integrating applied research with the student experience and engaging an increasing number of industry and funding partners, the college has seen spectacular growth in this area.

### **Quotes**

#### **Mark Frison**

“Applied research helps industry partners solve problems and improve practices. We’re proud of the talented faculty who have grown our research portfolio. Paying attention to industry needs has paved the way for exceptional hand-on learning experiences for students.” – Mark Frison, President, Assiniboine College.

#### **Hon. Renée Cable**

“It’s great to see Assiniboine join RRC Polytech in being named in the Top 50 Research Colleges in Canada. We are proud of the leadership our colleges in Manitoba are showing on the national stage when it comes to applied research. They contribute to both strong student learning outcomes and industry competitiveness.” - Honourable Renée Cable, Minister of Advanced Education.

Last year, the Province of Manitoba provided \$1 million through Research Manitoba to match a \$1 million Canada Foundation for Innovation award received by Assiniboine College, toward a new \$5 million teaching and research greenhouse.

# Background

The [Applied Research section of the college website](#) provides more information about [researchers](#), their focus areas and projects.

We'd be happy to connect you with one of our researchers. Reach out to [communications@assiniboine.net](mailto:communications@assiniboine.net) to coordinate.

## Current Project Examples

### **Waste-Derived Alternatives for Peat-Reduced Growing Media**

Addressing increasingly unsustainable peat use in horticulture by developing peat-reduced growing media using agricultural and timber waste products such as wood fibers, cattail and hemp fibers, waste sheep wool pellets, and biochar. Project focuses on standardizing methods to evaluate the bio-physicochemical properties of these materials to determine their suitability for potted plants and hydroponic vegetable production with the goal of identifying environmentally sustainable, reusable, and efficient media alternatives that reduce the ecological footprint of horticultural systems.

Faculty lead: Dr. Poonam Singh

Funding partner: IRAP (National Research Council), AAFC Salary Award (\$14K), Sustainable Canadian Ag Partnership (SCAP) Strategic Initiative (portion of \$1.395M), Manitoba Agriculture, Ramo, QC; Typha Co., MB; Hemp Sense, MB; Canadian Co-operative Wool Growers Ltd., Sioux Valley Dakota Nation, MB, Vanderveen Greenhouses, MB.

### **Optimizing Biochar and Composts for Sustainable Growing Media**

Examining biochar and composts produced from diverse feedstocks and methods to determine their suitability as components of sustainable growing media. By evaluating their physicochemical properties and phytotoxicity, the project aims to identify compost blends that enhance plant growth, yield, quality, and overall media performance, and investigates the disease-suppressive potential of composts to support healthier and more resilient horticultural production systems.

Faculty lead: Dr. Poonam Singh

Funding partner: IRAP (National Research Council), AAFC Salary Award (\$14K), Sustainable Canadian Ag Partnership (SCAP) Strategic Initiative (portion of \$1.395M), Manitoba Agriculture, Infinite Technologies, ON; Typha Co., MB; Hemp Sense, MB; Smiley Worms, MB; Carbon Lock Tech, MB; Vanderveen Greenhouses, MB, Sioux Valley Dakota Nation, MB

### **Resource-Smart Strategies for Greenhouse Crop Production**

Improving resource-efficient soilless cultivation by optimizing how water and nutrients are delivered to greenhouse crops. Evaluating nutrient and water use efficiencies of alternative media

blends in controlled greenhouse environments and high tunnels to determine how these materials influence nutrient availability, uptake, and overall crop performance. This work also identifies optimal nutrient formulations and irrigation strategies that reduce water use while supporting sustainable and economically viable greenhouse production.

Faculty lead: Dr. Poonam Singh

Funding partner: IRAP (National Research Council), AAFC Salary Award (\$14K), Sustainable Canadian Ag Partnership (SCAP) Strategic Initiative (portion of \$1.395M), Manitoba Agriculture, Canadian Co-operative Wool Growers Ltd., Vanderveen Greenhouses, MB.

### **Boosting Hydroponic Crops with Oxygen-Enriched Nutrition**

Plant roots and microbes can rapidly deplete oxygen in hydroponic systems, reducing water and nutrient uptake. This research tested oxygen-enriched nutrient solutions in both high-technology and solar greenhouses and found that oxygen supplementation improved postharvest fruit quality in both environments. While solar greenhouses produced lower yields and shorter shelf life overall, oxygen enrichment helped enhance plant performance across greenhouse types.

Faculty lead: Dr. Poonam Singh

Funding partner: NSERC Mobilize, Sustainable Canadian Ag Partnership (SCAP) Strategic Initiative (portion of \$1.395M), Manitoba Agriculture, Vermillion Growers, MB

### **Greenhouse expansion including new laboratory and expanded header space**

Project to build four new commercial greenhouses, root zone laboratory, expanded header house, growth chamber and cold storage at the North Hill campus. Project cost is more than \$5 million and will expand the horticulture applied research and teaching programs. More [here](#).

Faculty lead: Dr. Sajjad Rao and Dr. Poonam Singh

Funding partner: Canada Foundation for Innovation (\$1M), Research Manitoba (\$1M), McCains (\$200,000), RBC (\$500K), Fisher Scientific, Assiniboine College

### **Greenhouse in a Box**

After 8 years of collecting data on greenhouse technology and operation, this project will develop and test a small, off-grid, solar-powered greenhouse for use in all climates and in any part of Canada to provide a way to grow fruits and vegetables year-round. More [here](#).

Faculty lead: Dr. Sajjad Rao

Funding partner: Sustainable Canadian Ag Partnership (SCAP) Strategic Initiative (portion of \$1.395M), Manitoba Agriculture, RBC Foundation(\$200K)

### **Agronomic assessment of strawberry varieties for commercial production in Manitoba**

Testing new varieties of strawberries for optimal commercial production in Manitoba

Faculty lead: Dr. Sajad Rao

Funding partner: Sustainable Canadian Ag Partnership (SCAP) Strategic Initiative (portion of \$1.395M), Manitoba Agriculture, Prairie Fruit Growers Association

**Agronomic testing of purple carrots and sweet potatoes as a source of nutritional additives to conventional foods**

Growing and testing varieties of purple carrots and purple sweet potatoes as a source of anthocyanin to be used as a nutritional additive in foods.

Faculty lead: Dr. Sajjad Rao

Funding partner: IRAP (National Research Council), Myera Group, University of Manitoba

**Identify and evaluate real time climatic parameters for early strawberry production in a passive solar greenhouse to use & benefit from predictive analytical tools**

Using proprietary climate data collection units, collect environmental data to develop a decision-making tool for strawberry producers to be proactive in dealing with adverse weather events.

Faculty lead: Dr. Sajjad Rao

Funding partner: IRAP (National Research Council), Farmer's Hive

**Application of radio-wave imaging for assessment of soil and potato tuber quality in Manitoba soils**

Testing the use of ground penetrating radar to determine soil parameters such as soil moisture and plant growth stages.

Faculty lead: Dr. Baljeet Singh

Funding partner: IRAP (National Research Council), Terra Wave

**Bugs in a Jug**

Study of the effect of biostimulants in sustainable crop production examining the impact of various nitrogen fertilizer rates and multiple crops

Faculty lead: Dr. David Rourke (Adjunct), Russ Edwards School of Agriculture & Environment Dean

Funding partner: Sustainable Canadian Ag Partnership (SCAP) Research and Innovation, Manitoba Agriculture, Manitoba Crop Alliance, Manitoba Canola

**Delayed Seed Germination**

Study of various seed coverings that can delay seed germination of fall crops that are seeded at the same time as the spring crop

Faculty lead: Dr. David Rourke (Adjunct), Edwards School Dean

Funding partner: Sustainable Canadian Ag Partnership (SCAP) Research and Innovation, Manitoba Agriculture, Rourke Farms

**Collection and study of environmental DNA (eDNA) in water for wild pig tracking**

Water testing for environmental DNA (eDNA) of wild pigs for tracking and surveillance of wild pigs in Manitoba. More [here](#).

Faculty lead: James Hood

Funding partner: Sustainable Canadian Ag Partnership (SCAP) Research and Innovation, Manitoba Agriculture, Squeal on Pigs, Manitoba Pork

### **Agronomist in Residence (AiR)**

Examining agronomic issues in pulses and soybeans in Manitoba, with partner support for salary and research costs.

Faculty lead: Anand Aneja, Edwards School Dean

Funding partner: Manitoba Pulse and Soybean Growers (MPSG), Assiniboine College

### **Assessment of commercial biostimulants in soybeans**

Assessing commercial biostimulants applied to foliar portion of soybeans to determine optimal cropping results

Faculty lead: Dr. Baljeet Singh

Funding partner: Manitoba Pulse and Soybean Growers (MPSG)

### **Multi cropping and cover crops as regenerative agriculture production**

Comparison study of soil health management practises on different crops (includes varying nitrogen fertilizer levels and cover cropping). More [here](#).

Faculty lead: Dr. David Rourke (Adjunct), Edwards School Dean

Funding partner: Manitoba Association of Watersheds (Manitoba Living Lab) \$180K; Scotiabank (\$125K)

### **Biochar as a soil amendment for erosion control on cropping field slopes**

Application of biochar in pellet or powder form to slopes to slow or prevent soil erosion

Faculty lead: Dr. Baljeet Singh

Funding partner: Manitoba Association of Watersheds (Manitoba Living Lab) \$150K

### **Upgrades to the Manitoba Weed and Native plant gardens at the North Hill campus**

Upgrading the gardens to increase public and student accessibility and learning tools

Faculty lead: Edwards School Dean

Funding partner: Manitoba Habitat Conservancy-Conservation Trust (\$33K)

### **Development of Net-Positive Network for soil health in Western Canada**

Building a network of grain producers in western Canada to share best soil health practises for their regions. More [here](#).

Faculty lead: Edwards School Dean

Funding partner: Weston Family Soil Health Initiative (\$1.6M), MPSG, Manitoba Forage and Grasslands Association (MFGA), Rourke Farms, Farm Management Canada

### **Development of digital diagnostic tools for pathogens in soybeans**

Collecting plant disease samples in soybeans to develop an algorithm for providing treatment planning for crop producers.

Faculty lead: Brandon University; Dr. Baljeet Singh-co-investigator

Funding partner: Research Manitoba

### **Mitacs Student Intern Salary Award (x2)**

Salary award for two student interns to study the evaluation of commercial fungicides for treating Ascochyta/Mycosphaerella blight complex in field peas

Faculty lead: Dr. Baljeet Singh

Funding partner and amount (where applicable): Mitacs (\$15K), Manitoba Pulse and Soybean Growers (MPSG) (\$15K)

### **Proposals pending for projects looking at:**

- Fungicide resistance in peas
- Biochar as an alternative to peat in soilless media
- Growth hormones and nitrogen fertilizer on a newly developed wheat variety
- Real-time greenhouse gas measurement and AI optimization

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For more information or to connect with a researcher, please contact [communications@assiniboine.net](mailto:communications@assiniboine.net).

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