

8/1/2024

# U of Guelph Teams Advance in Homegrown Innovation Challenge

*Dr. Sean Campbell*

The University of Guelph has proudly announced that two U of G research teams will be among the 11 advancing to the second phase of the Homegrown Innovation Challenge. The competition, funded by the Weston Family Foundation and featuring a prize of \$33 million, challenges research teams to grow berries at scale and out of season in Canada.

Dr. Mike Dixon and his research team are seeking to use the \$691,730 they received to develop a hybrid methodology of state-of-the-art greenhouse practices combined with vertical farming methods, incorporating learnings from space-based food production research.

“To stabilize these factors and reduce the variability in supply and quality, we propose to grow strawberries with solutions we’ve developed to grow food in space,” Mike said.

Alternatively, Dr. Youbin Zheng and his research team are investigating the use of artificial intelligence (AI) and smart automation to provide optimal production conditions using their \$999,918 in funding.

“Growing berries in controlled environments requires balancing many interconnecting parameters, such as lighting, air humidity and temperature, rootzone dissolved oxygen, water and nutrients,” Youbin said. “If one factor changes, the others change, too. It’s beyond the capacity of conventional greenhouse practices to manage precisely and effectively.”

Using a system of biosensors, the team hopes to minimize inputs and have better control fine tuning their growing conditions.

More information on the teams and their respective projects can be found at

<https://news.uoguelph.ca/2024/05/u-of-gs-researchers-take-agri-food-challenge-to-the-next-level/>