

# Innovation Consulting Community team proposes sustainable farming container at ISU

Evan Linden | April 15, 2020

*NOTE: The photos in this story were taken before travel restrictions from coronavirus (COVID-19) were in place.*



The ICC team visits a shipping container farm in Champaign. Pictured from left to right: Ryan Strange, Joe Quigley, Madison Steines, James Smith, Phoebe Naylon, Brennan Douglas, Alicia Chiakas, Aviv Zelniker, Max Snyderman, Bill Bagby with Central Illinois Produce, Dr. Eric Godoy, and Joe Kennedy

profit and nonprofit projects,” said Kaufman. “This experience helps students enhance their skills all around and helps our clients find solutions.”

This year, the ICC assigned 14 projects to 90 students representing 24 majors. One group of four students tackled an increasingly pressing issue: sustainable farming.

The students assembled in late October, mentored by Elisabeth Reed, director of the [Office of Sustainability](#), and Dr. David Kopsell, assistant chair of and professor in the Department of Agriculture. Ryan Strange, a senior from Bloomington double majoring in business administration and small business management, led the team and collaborated with fellow students Joe Kennedy, Madison Steines, and Joe Quigley.

The project was inspired by the Boston company [Freight Farms](#), urban agriculture innovators who create farms in shipping containers. Kopsell, who is familiar with growing systems, was brought in by Kaufman to be a horticulture mentor.

“I shared some of the ideas that I’d always wanted to investigate, and one that he really liked was the idea of writing a grant for a containerized growing system,” said Kopsell.

From there, the team focused on analyzing the benefits of a containerized growing system on campus.

In just a few months, a team of motivated students put together a proposal to implement a shipping container farm on Illinois State’s campus.

“Self-motivation is impressive to employers,” said Marketing Professor Dr. Peter Kaufman, one of the founders of the [Innovation Consulting Community \(ICC\)](#). “Most students are taught one discipline in school, but world problems are interdisciplinary.”

Kaufman and others founded the ICC in 2016 to provide students with hands-on experiences outside their classes. Each year, teams of students are matched with clients at companies and nonprofit organizations to help solve a current issue they are facing. “It’s a unique experience to tackle both

“Our project was a feasibility study of the purchase of one of these units,” said Strange. “The unit itself is the technology necessary for hydroponic farming, and all of that goes inside an old freight container.”

To see one of these units in action, the group visited a current model located at the University of Illinois at Urbana-Champaign. “The director there was a tremendous help,” said Strange. “He gave us many details about operations and risk management.”

The team spent weeks finding the right contacts and establishing relationships in order to gather information for the project. “We built this huge network of different partnerships that helped us find out how we would finance this unit,” said Strange.

According to Strange, the purchase of one of these units would cost \$120,000, with recurring costs adding up to around \$40,000 a year.



The inside of a shipping container farm located in Champaign.

“I think the cost is within the reach of a grant program,” said Kopsell. “These containers can operate year-round and provide great teaching and learning tools.”

Most importantly, the containers are both efficient and sustainable. Each container system can produce as much as one acre of field production —up to 13,000 plants depending on the crop. The efficient drip irrigation system uses five gallons of water per day, which is marginally less than a field.

“This is really the forefront of innovation in terms of agricultural production,” said Strange. “It’s going to cut back on a lot of the carbon emissions from transporting the food. It’s really going to cut back on costs also, because most of the costs for food come from transportation.”

If installed on campus, the container system could be located next to the South University Street Garage.

Strange’s team presented its project at ICC’s annual symposium. In adherence with social distancing requirements, the symposium took place via Zoom on April 10.

Strange and his team noted that the ICC experience greatly benefited them as professionals. “It opens up a lot of doors and you have to teach yourself a lot,” said Strange. “Our mentors were definitely there for help, but it was mostly our group that set up all of the meetings and held ourselves to the deadlines. All of those things are fundamental skills that you’ll need when you move on to the professional workforce.”

Reed and Kopsell were impressed by the group’s work ethic and commitment.

“This student group was very well organized and stayed on task throughout the entire semester,” said Reed. “They communicated well with each other.”

“For me, this project represents the best of Illinois State University,” said Kopsell. “It allows students to find their passion and provides them an avenue to learn how to overcome challenges, solve problems, and make a difference.”

*Students interested in participating in the Innovation Consulting Community for the next academic year can email [innovationconsulting@IllinoisState.edu](mailto:innovationconsulting@IllinoisState.edu) for more information.*