



Innovation Ecosystem 2024 Year-End Update

Digital and Precision Agriculture

With the critical support of the Iowa Legislature – and in partnership with [BioConnect Iowa](#) – Iowa State University of Science & Technology continues to forge new frontiers in innovation supporting the growth of Iowa’s biobased economy.

KEY AREAS OF EMPHASIS

The primary area emphasis this year was to increase the number of university researchers and scientists exploring the commercial viability of AgTech innovations. This involved three aspects.

1. Helping researchers identify their areas of discovery that had the greatest commercial potential.
2. Encouraging them to see themselves as part of the process of translating innovation into business products and services.
3. Helping them successfully apply to the DPA seed grants.

Previously, the DPA platform had an average three successful seed grant applications a year; this year 20 applications were submitted and 11 were selected for funding. The others will be refined for future funding opportunities.

Support of the new [Digital Ag Innovation Lab](#) was another key area of emphasis. The platform provided specialized equipment that will accelerate the translation of research into commercial products and partnerships with Iowa-based ag companies.

KEY ACCOMPLISHMENTS AND ECONOMIC IMPACTS

- The 11 proposals receiving DPA seed grants this year cover a broad spectrum of technologies, and they engage company partners in six counties across the state of Iowa.
- [EnGeniousAg](#), a startup in which three of the four founders are Iowa State faculty, was successfully sold to CropX, a leader in digital agronomic solutions. The sale of the company, which commercialized ISU-developed technology, increases the awareness of the value of ISU research and the business support ecosystem that is in place to support the creation of new business opportunities for Iowa-based companies.
- Another startup success is [Hermes BioMaterials Inc.](#), led by ISU faculty member Shian Jiang and graduate student Connor Thorpe. Hermes’ Flow Guiding Barrel technology has reached international markets, generating over \$80,000 in initial sales. The company has established a fully equipped 1,800-square-foot lab, grown to four employees, and expanded its services to

include consumable sales and consulting, creating new jobs and driving economic growth in Iowa. The company was a top 10 finalist in the [Iowa InnoVenture Challenge](#).

KEY OPPORTUNITIES AND PRIORITIES FOR 2025

- Fund collaborations between Iowa-based companies and ISU scientists to explore or strengthen research and commercialization capabilities across an array of digital and precision agriculture applications.
- Increase the number of research scientists focusing on areas with high commercialization potential by relaunching Idea Web, an online tool for researchers to search for the most critical needs of farmers, entrepreneurs, and ag industry partners.
- Increase engagement of graduate students in the creation of innovation-driven enterprises and startups by hosting a seminar that provides students a platform to learn firsthand from the experiences of other students and faculty who have become ag entrepreneurs.

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Iowa State

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