



Digital Ag Overview

Iowa State University



Iowa State University

Land Grant University | Established 1858

- 7 Colleges
 - College of Agriculture and Life Sciences
 - Ivy College of Business
 - College of Engineering
 - College of Liberal Arts and Sciences
 - College of Design
 - College of Health and Human Sciences
 - College of Veterinary Medicine
- 31,105 Total Enrollment
- \$301.3 Million in Research Funding

Iowa: 100 Years of Ag Innovation

- **Pioneer Hi-Bred (1926):** World's first company dedicated to the development and marketing of hybrid seed corn.
- **Sukup Manufacturing (1962):** World's first automatic grain stirring system to reduce grain spoilage.
- **Kinze Manufacturing (1975):** World's first rear-fold planter to support road transport of 12-row and larger planters.
- **Ethanol Production (1986):** World's first state to achieve 100MGY of corn ethanol production.
- **Ag Leader Technology (1992):** World's first widely successful on-the-go combine yield monitor.
- **John Deere (2002):** World's first factory-offered GPS-based autosteering system for row crop tractors.



Why Leading in Innovation Matters

- **Jobs:** 1 in 5 jobs in Iowa is connected to agriculture.
- **Rural Vitality:** Agriculture is the engine; rural communities are the ecosystem.
- **Ag Sustainability:** Every year we should have the capacity to produce more per unit of land with a profitable and sustainable outcome.



No state has more riding on the success of agriculture than Iowa.

And no region has more influence on that success than Central Iowa.

Our North Star



To be the *premiere thought leader*
and partner in ag innovation.

Powered by our core values of **Passion, Innovation,**
Collaboration, and Excellence.

Our Mission: Innovate, Educate, Outreach



- We **innovate** with partners to create new solutions that drive value into agriculture and our communities.
- We **educate** to inspire students, advance the skills of industry professionals, and ensure a thriving workforce that drives success for our industry.
- We **outreach** to share our knowledge with farmers and ag businesses and promote practices that enhance their success.



Alliant Energy Ag Innovation Lab

Digital Ag
INNOVATION LAB

- **Motivation:**

- Long term home for ISU's Digital Ag Innovation Lab.
- High bay space for confidential and public events.
- Improved access to ISU students.
- Investment by Alliant Energy funded classroom and communal space

- **Key Metrics:**

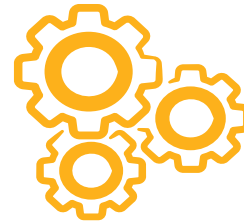
- 85,000 sq-ft facility.
- 68,000 sq-ft high bay and labs.
- ~450 connected acres for product dev.
- Office space for 83 staff and students.
- Training rooms for ~200 people.
- \$20M total investment.
- Year one traffic count: 9000+ visitors



Economic Impact: Our “why” starts with service



~60%
of industry-sponsored innovation research at Iowa State University



Technologies used by more than 10,000 farmers across over 100 million acres annually



75+
Products currently sold in the ag industry



\$500M
In net economic impact



400+
Industry contracts completed



100+
Patents and tech transfer licenses



Economic Impact: Large Company Research and Product Development

Digital Ag
INNOVATION LAB

- Commitment and service to Iowa **job retention and creation** with major employers.
- Stimulate **major Iowa investments**:
 - John Deere Technology and Innovation Center
 - DuPont and Verbio Renewable Natural Gas Plant
 - BioMade Fermentation Innovation Center
 - Bayer Innovation Center
- Influence technology development and innovation that puts **Iowa farmers first**. Deploy broadly to farmers within our communities.



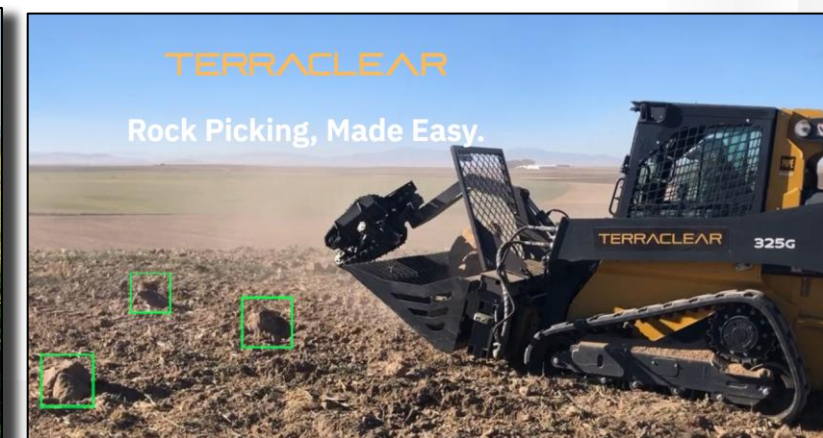
Economic Impact: Small & Midsize Business Product Development



- We support startups and small companies because they create **net new jobs in Iowa**.
- We **identify, support, and promote startups** that will change the world through technology and innovation.
- We **prioritize** companies that with direct farmer impact and the potential to impact rural communities.



TERRACLEAR



Economic Impact through Innovation: Precision Spray Technologies

- The Digital Ag Team provides critical innovation and technical assistance to help ensure **Iowa is the epicenter** of smart spraying solutions.
- Precision spraying offers the ability to **reduce herbicide use by 90%+** during post emergence application.
- **Iowa State technology is used by farmers on 50M+ acres per year and has significantly reduced spray drift globally.**



Economic Impact through Iowa State Extension Outreach: Planter University



- We are laser focused on **farmer and ag retail impact**
- Our courses help with **technology adoption and delivery**
- Our experts are meeting farmers where they are, **with whatever technology they have today**
- **80% of participants reported adding more than \$10 per acre in value**

- Planter U: Continual public demand for programming year over year.
 - 2022 was inaugural year, reaches 250+ growers annually.
 - 2026 – Ames and Carroll sold out within 48 hours, 7 new events
 - 2026: All locations are sold out with waiting list, **more than 700 total attendees**

- Revenue from private events used to develop new courses.

PLANTER UNIVERSITY
IOWA STATE UNIVERSITY
Extension and Outreach

2026 Locations
Feb 2, 2026 **Ames**
Feb 3, 2026 **Carroll**
Feb 4, 2026 **Kanawha**
Feb 5, 2026 **Independence**
Feb 6, 2026 **Otley**

go.iastate.edu/planter Registration is \$100 and space is limited.

The poster features a background image of a red tractor pulling a large red planter through a field. The text is overlaid on the image in white and red boxes.

\$100M+ self reported farmer impact through Premier Event Programs

Economic Impact through Iowa State Extension Outreach: Planter University

- *Planter University was great, I'm planting for the first time ever this year. I've never driven a tractor that was pulling a planter before. While I'm still nervous, I'm a little less nervous now, thanks!*
- *The team did an **exceptional job** in not only discussing how row units function, how to troubleshoot malfunctions, and preventative maintenance, but they also relayed the **agronomic significance** of having properly functioning row units on **crop uniformity and yield**. Telling their personal experiences working on & operating the planters on the ISU farms added **great practical value**.*



Extension Outreach: Programming for Drones

- Drone courses are an attractive entry point into agriculture, especially for **young rural Iowans**.
- Technology is relatively inexpensive, demand increasing.
- Portfolio of training opportunities:
 - Part 107 Test Preparation Course
 - Imagery Drone Workshops
 - Spray Drone Workshop





Investing in Today's Workforce

Digital Ag
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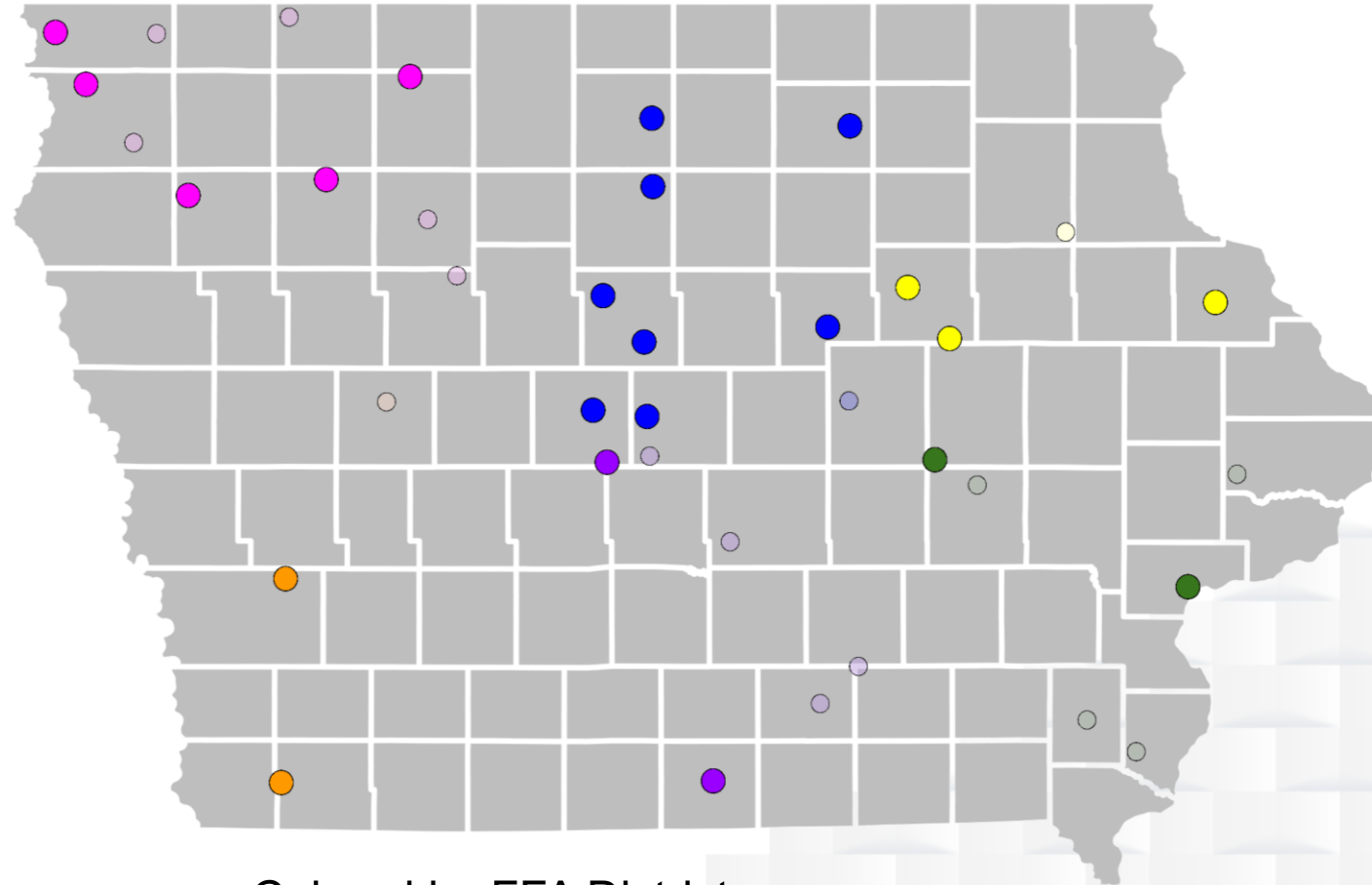


Investing in Today's Workforce



K-12 STEM Engagement and Workforce Pipelining

- **39 agricultural educators** across the state of Iowa applied to be a part of the inaugural program.
- **22 educators/schools were selected** based on available resources.
- Resources have been acquired to support **2nd cohort** of high school educators.



- Colored by FFA District
- Sized by accepted or declined at this time

K-12 STEM Engagement and Workforce Pipelining



- Impact on Iowa high school students
 - 22 teachers x ~15 students per class = **More than 300 students** in the first year.
 - Assumes each teacher uses this content in **only one class**.
- Partnering with high schools to deploy this curriculum across other states in parallel with ISU for 2026.
 - ISU branding is intended to continue to position Iowa as “The Place” for Ag Innovation.



Educate: 4H and FFA Student Engagement



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