

Driving Innovation in Agriculture

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November 27th, 2018

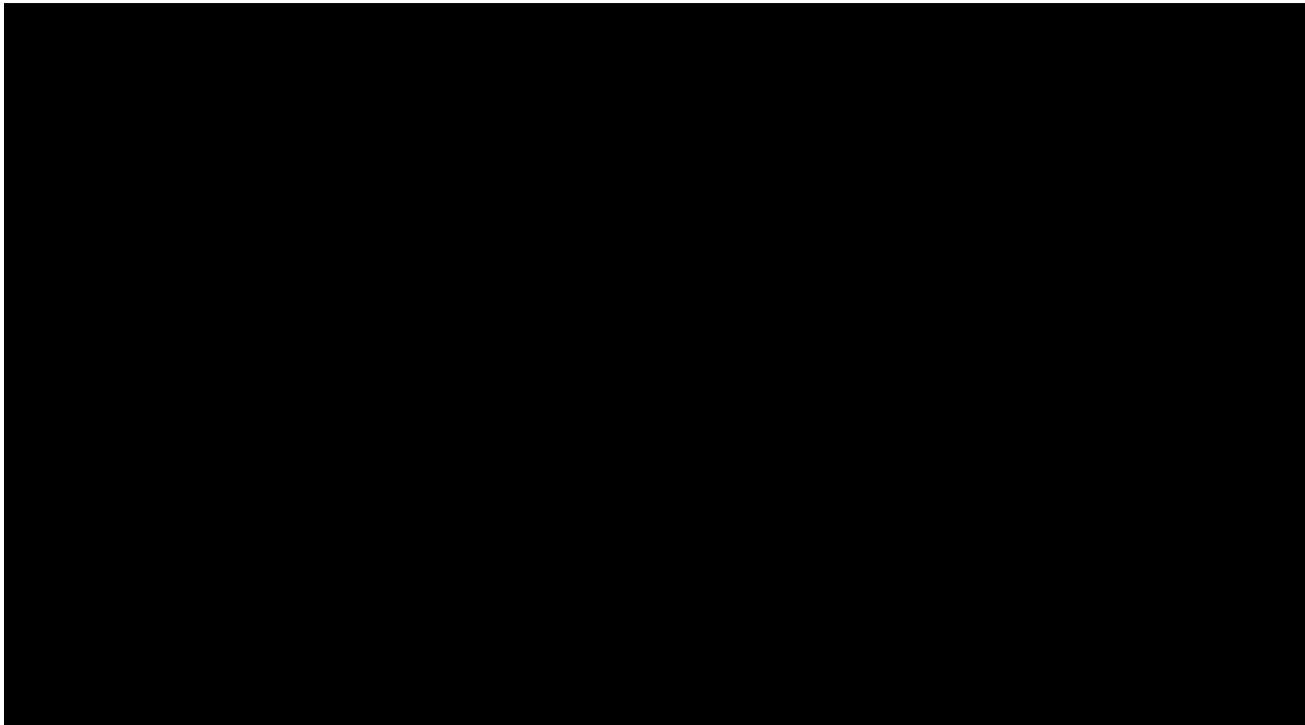


- Lead Global Online Education
- Make Cutting Edge Discoveries
- Grow Entrepreneurship
- Enhance Partnerships
- Deliver a Global Impact

Scouting Fields for Pests, Disease, Nutrient Deficiencies – 2010

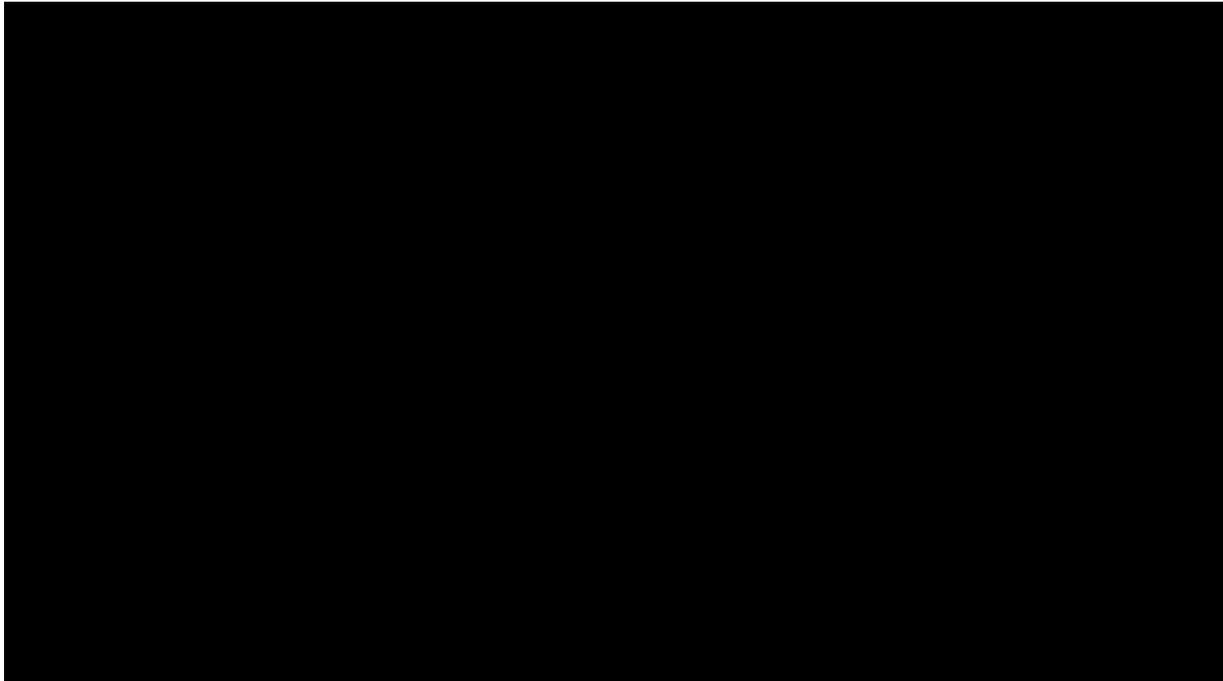


Scouting Fields for Pests, Disease, Nutrient Deficiencies – 2018



https://www.youtube.com/watch?v=QIW5_oqxrZk&t=0s

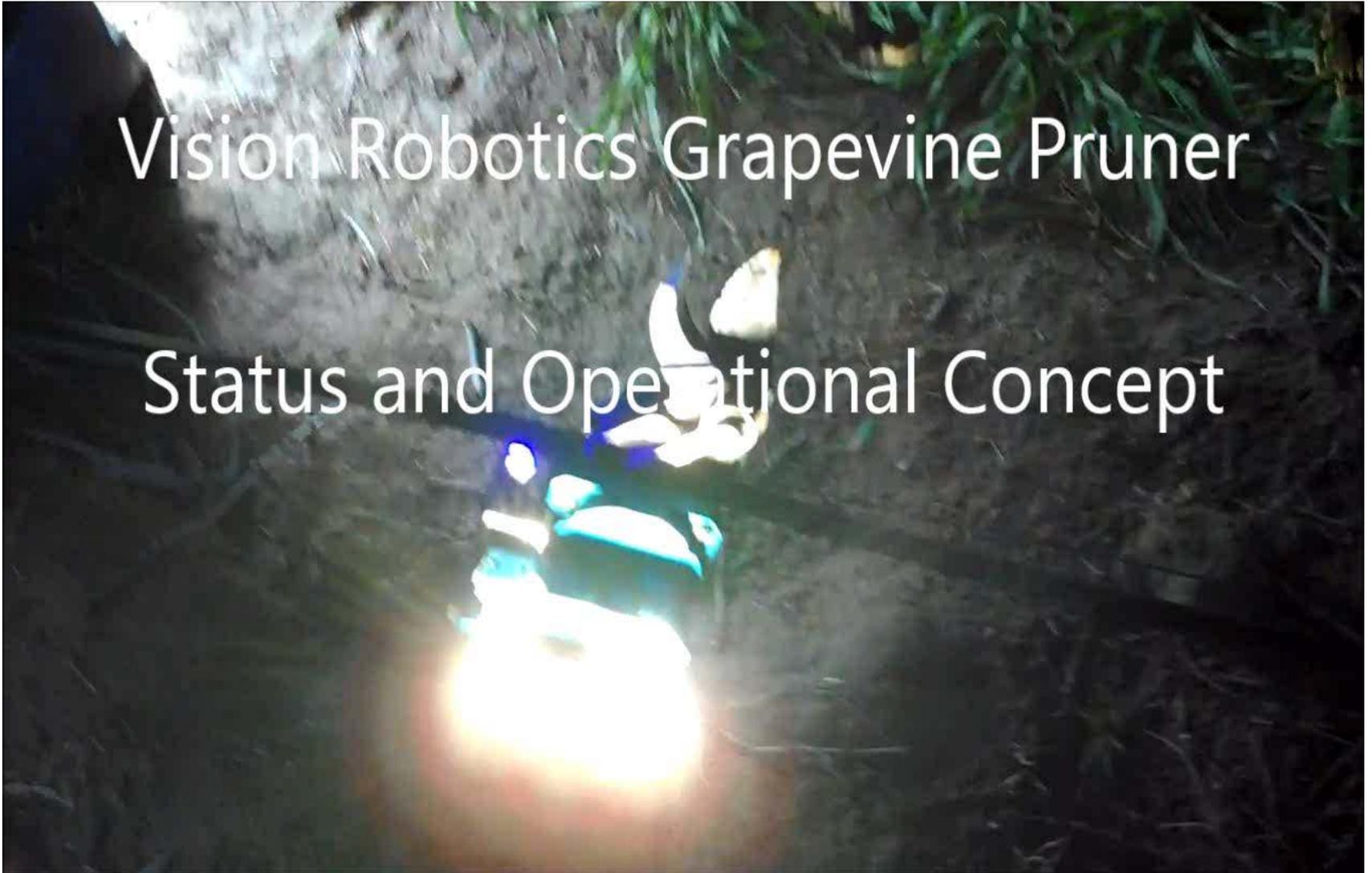
Picking Strawberries – 2018



<https://www.youtube.com/watch?v=M3SGScaShhw>

Vision Robotics Grapevine Pruner

Status and Operational Concept



The Power of Spectral Imaging



What does this mean for our farmers and consultants?



- Rural Broadband

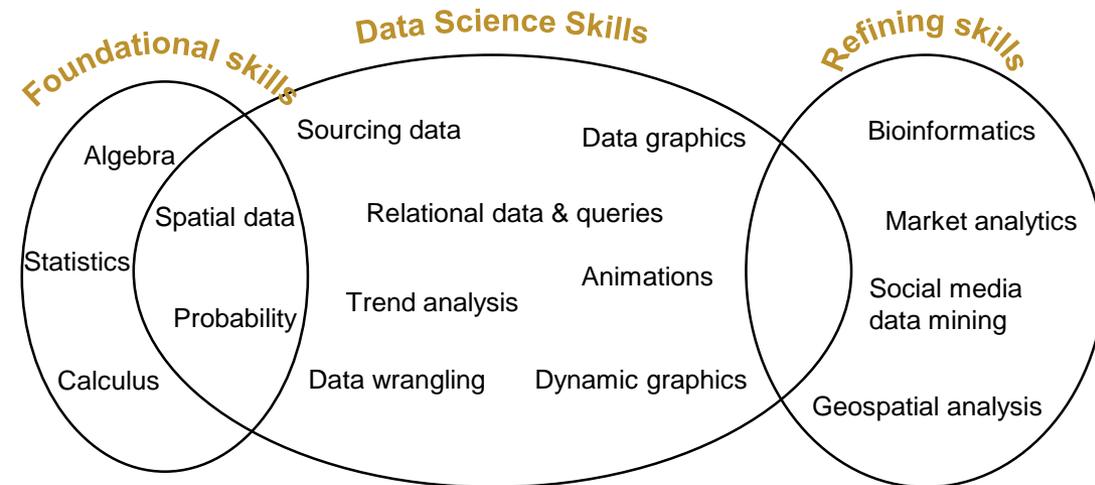
- Every dollar invested in broadband returns \$4 to the economy
- \$12B for Indiana in present value of net economic benefits over a 20 year period
- key gains from rural broadband would be in healthcare and education, economic and workforce development, farm income, and consumer savings.
- The study was conducted by the [Purdue Center for Regional Development](#) and commissioned by [Indiana Electric Cooperatives](#) and [Tipmont REMC](#) with financial support from [CoBank](#).
- Authors: Allison Goedde, Wally Tyner and Larry DeBoer, Purdue University

What does this mean for our students?

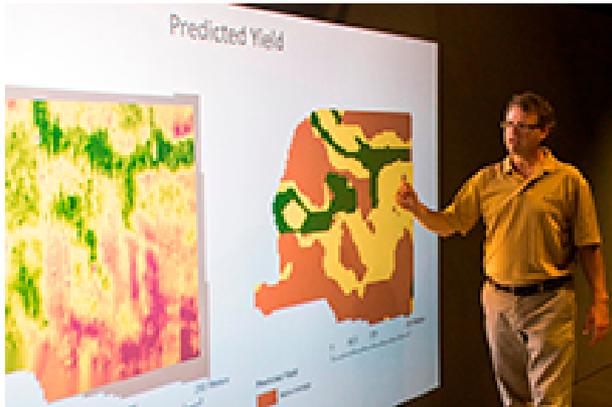
Digital Agriculture & Data Science

- Undergraduate competency
- Address the Digital Divide
- Enhance partnerships

- **Bring in more diverse students**
 - Technical competency and interests
 - Broader Demographics
 - Data Mine
- **Utilize Online Tools**
 - Professional MS
 - Certificates
 - Workforce Development
- **Enhance Entrepreneurship**
 - Student Competitions
 - Ag-celerator™



What does it mean for our society?



Phillip R. Owens demonstrates how a farmer's field can be mapped to show predicted crop yield (Ag Soil Analytics)

- 2 Entrepreneurs in Residence
- \$2 M Ag-Celerator - Venture Capital Fund accessible
- Foundry Launch Box process for start ups
- Certificate of Entrepreneurship and Innovation

How does digital agriculture impact our global presence?



<http://ictforag.org/>

1. Where are Digital Financial Services improving farmer finances?

2. How can Digital Extension Services succeed where analog versions have failed?

3. What do Private Sector Partnerships – Version 2.0 look like?



Think about a world where:

- Broadband access was available to everyone
- Real time automated decision making was the norm due to analytics
- Autonomous vehicles were on every farm
- Sensors and robots connected every distribution plant and product around the globe
- All transactions were electronic



Digital Agriculture has the potential to disrupt:

- Labor supply and needs
- Global Productivity
- Cybersecurity
- Subject matter experts - Extension
- Entrepreneurship Opportunities
- Trade

