Accelerate the agricultural economy by empowering expanded uses and markets of agriculturally derived products.

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AURI Focus Areas

Biobased Products

Coproducts

Food

Renewable Energy

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AURI Services

Commercialization Services	• **Private** / One-to-One Client Projects • Business, feasibility, hands-on technical assistance • Lab / Equipment Availability
Public Initiatives	• **Free to the world** • Applied R&D and Information for entrepreneurs and industry • Ag Innovation Partnership: catalyze activity (Ex: Reports, Guides)
auri Connects	• Industry Convenings • Public dissemination: Research projects / reports • Webinar Wednesday, Fields of Innovation, New Uses Forum

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AURI Partners

MUDAC 2024 Data Challenge

- Agriculture is the foundation of the Minnesota's economy
- Minnesota ranks 6th in the nation for agricultural production
- Impact of agricultural-related industries in MN: Over $100 billion annually and supports over 385,000 jobs
- **Goal**: Investigate crop production levels across MN; Consider the sustainability of the use of synthetic fertilizers, etc.

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MUDAC 2024 Data Challenge

- Modern agriculture depends on a combination of natural and synthetic/commercial fertilizers, mostly for nitrogen
- Synthetic fertilizers are energy and carbon-intensive
- Ammonia and ammonia derivatives are the major source of nitrogen for agriculture

Note: Modern farming practices utilize precision technologies to optimize fertilizer application; however, aggregated data has been provided for this year's challenge.

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MUDAC 2024 Data Challenge

- Long supply chains for synthetic/commercial fertilizers have proven to be fragile - exposing end users to high prices and limited availability
- Advances in the use of alternative fertilizers such as biologicals and organic fertilizers (i.e. manure) may reduce future demand for synthetic fertilizers
- Consideration of production facilities for the manufacture of “green” fertilizers with a lower carbon footprint may become a reality as hydrogen-based fuel sources come online

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MUDAC 2024 Data Challenge

- Provide an understanding of the crop production levels for major crops grown in Minnesota
- Understand the various factors that influence crop production each year
- Investigate the impact of synthetic and organic fertilizers on crop production
- Identify the optimal location for two new “green” fertilizer production facilities in Minnesota

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Thank you for participating in this year's challenge!

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