



Iowa Smart Agriculture Forum: Circles of Life June 6-7, 2023

Executive Summary

The Iowa Smart Agriculture Work Group, which released its vision for the future of Iowa agriculture in its [Circles of Life report](#) in November 2022, followed up by hosting a field day and forum June 6-7, 2023, in Des Moines, Iowa.

The objectives of the event were to:

- Share and celebrate the Iowa Smart Agriculture (IASA) vision.
- Forge consensus on the priority building blocks needed to achieve the IASA vision.
- Further advance IASA efforts to challenge, promote, educate and equip our agricultural community in the 21st Century.
- Recruit new partners and champions.

There were eighty-five people in attendance, plus others who joined virtually, representing a range of generations and perspectives, including farmers, livestock producers and representatives from Iowa State University, state commodity groups, Iowa FFA, local and state governmental agencies, state conservation alliances, agriculture retail and support services, and other community leaders.

Day 1

After meeting at the Des Moines Marriot Downtown, participants boarded a bus for an afternoon of touring innovative food systems and agricultural operations in Central Iowa. Stops included:

- **Des Moines Area Religious Council Food Warehouse**, which works to supply its food network of food pantries and sees opportunities for Iowa farmers to diversify into a unique market partnership. According to Matt Unger, Des Moines Area Religious Council CEO, says the food bank would like to source its produce locally but there is not enough supply.
- **Clayton Farms** in Ames, which grows salad greens and microgreens using a vertical hydroponic system then delivers directly to consumers through a subscription/delivery service. Demand is growing for fresh, delivered produce.
- **VERBIO Biorefinery** in Nevada, which is North America's first industrial scale renewable natural gas facility using agriculture residues as its feedstock. Upon completion of its second phase in mid-summer 2023, the facility will operate as a biorefinery, producing 60 million gallons of corn-based ethanol and an additional 60 million ethanol gallons equivalent of renewable natural gas from stillage. The process also produces humus, a soil amendment, and organic fertilizers.
- **Couser Cattle Co.** in Nevada, which is owned by Bill and Nancy Couser. The second- and third-generation operation feeds and finishes 5,000 to 6,000 head of cattle and farms 5,000 acres, producing both corn and soybean seed. They were recognized in 2010 as the National Cattlemen's Foundation Environmental Stewardship Award winners for their business philosophy centering on ensuring both profit opportunities and environmental performance are present in their operations.

Participants enjoyed a social and dinner at the Cousers' then heard from Lane Arthur, vice president of embedded software and solutions at John Deere, and viewed research plots.

Day 2

The second day of the conference brought participants together in the World Food Prize Foundation's Hall of Laureates to learn and discuss pathways to safely and sustainably produce an abundance of food, feed, fiber and energy, while concurrently protecting and building health in our soil; filtering and storing water; sequestering carbon and reducing greenhouse gas emissions; and ensuring economically compelling opportunities for our livestock producers, farmers, their families and communities.

After opening remarks from Ray Gaesser, IASA co-chair and moderator and a welcome given by Natalie Bidner from the World Food Prize Foundation, participants heard from:

- Dan Robison, dean of Iowa State University's College of Agriculture and Life Sciences, who outlined the day's objectives and introduced ISU faculty.
- Shashi Menon, CEO of EcoEngineers, who shared shifts in culture and business feeding into a [vision for circular system innovations](#), including carbon markets.
- Bruno Basso, Ph.D., who attended virtually and spoke on [circular systems in agriculture](#) and how research and digital tools are helping farmers increase efficiency, profitability and overall sustainability.

Lois Wright Morton, IASA member, moderated a panel introducing Iowa Smart Agriculture. Panelists included:

- Lydia English, Practical Farmers of Iowa.
- Jason Russell, a livestock and grain farmer.
- Dean Sponheim, Sponheim Sales and Services.

Dean Dan Robison moderated a panel of leaders who reacted to IASA's vision, including:

- Matt Herman, Iowa Soybean Association Senior Director of Renewable Products Marketing.
- Matt Unger, Des Moines Area Religious Council CEO.
- Jeff Plagge, Iowa Superintendent of Banking.
- Mike Naig, Iowa Secretary of Agriculture.
- Matt Russell, State Executive Director of the USDA Farm Services Agency in Iowa.

Sean McMahon, Iowa Agriculture Water Alliance executive director, shared ["The Iowa Nutrient Reduction Strategy's Defining Decade."](#)

Kevin Reynolds, conservationist, encouraged farmers in their important role of preserving natural resources.

During the afternoon, participants broke out into four groups to discuss and identify priorities for the future of Iowa agriculture:

- Topic 1: Risk Management
- Topic 2: Innovation
- Topic 3: Diversification
- Topic 4: Payment for Ecosystem Services

Takeaways from the conversations included:

- Lenders need concrete numbers to encourage them to invest in the innovative approaches farmers want to use on the land.
- Crop insurance needs adjustments to incentivize, reward and better equip farmers to manage risk in climate-smart farming systems.

- Government needs to standardize how carbon and other ecosystem services are measured to level the playing field.
- Education is crucial for all in and outside of agriculture.
- Landlords play important roles in how farmers can innovate on the land, so it is important to communicate with, educate and encourage them to work with farmers on conservation and climate-smart efforts.
- Diversity on the farm can increase cash flows and community interaction.
- Iowa has a lot of opportunity to increase diversity of crops and livestock, but first markets must be developed.
- Carbon markets are the most-developed ecosystem services markets currently, but we cannot be carbon-centric. Farmers need to be compensated for all the ecosystem services they provide to society.
- The way ecosystem services are monitored, verified and reported needs work.
- Farmers need incentives to keep producing ecosystem services. They need fair prices, greater transparency and confidence in the system.
- Ecosystem services markets should be simple yet flexible while giving the buyer confidence. Farmers need flexibility in how they can participate in ecosystem services markets because things change on the farm year-to-year. As one young participant, an FFA member, said about ecosystem services markets: “Let’s be patient. We need to do this right, not right now.”

Key Themes Identified

Iowa is a leader in agriculture and has made great progress over the decades. However, we cannot stop now. We need to work together and continue to improve our efficiencies, expand our circles of life, and partner with other farmers and business in our community to enhance our environment, our communities, and our profitability as we take care of our farms and families now and in the future.

We need to shift from a “take, make and dispose” economy to a “circular” economy, which “makes, uses, reuses and recycles,” adding value on and off the farm. We can think beyond traditional cropping systems and integrate livestock, encourage production of renewable fuels and other products and co-products from our crops, and grow more diverse crops.

There are a lot of opportunities for farmers to participate in a circular economy. We must continue sharing this message with everyone along the agriculture and food value chain and learn from one another’s perspectives and experiences.

During the day’s final session, Lisa Schulte Moore, from Iowa State University, invited all forum attendees to share their synopses of the past two days.

Concepts shared include:

- Circular ag is relevant and, though there are many challenges, there are many opportunities for innovation and improvement, starting from a grassroots level.
- Progress is being made and needs to be accelerated.
- When we work together, we all benefit. Transdisciplinary partnerships achieve results.
- The farmer has to be at the center. Farmer ingenuity leads the way.
- Technology is here and is coming. In the new age of data, the challenge is making data accessible and usable to the farmer.
- We can’t legitimize inappropriate uses of land through technology.
- We need to ask ourselves, “What locks us into the status quo?”

- We need to be open to new ideas.
- The general public needs education on what is going on. We in agriculture need continued education.
- We are ready for the next renaissance of Iowa agriculture.
- This conversation needs to continue to get things done, not just be something we talk about.
- Opportunities include ideas of turning vicious cycles into virtuous cycles, diversity, and ecosystem service payments.
- Smart government is the key to our preferred future.
- There is lots of work for students.
- Farmers are innovators, and we need to give them opportunities.
- Change is hard, and it takes a village. But the ag village is growing.
- Don't sell yourself short. You are doing great.
- With a willing spirit, a lot can be achieved.
- Our agriculture future is bright.

Next Steps

IASA will continue to share its message and gain the support of more partners across the agriculture and food value chain in Iowa, including farmers representing all types and sizes of agricultural production.

Thanks to its partnership with Iowa State University, IASA will host listening sessions across the state in late summer and fall to continue the conversation with more farmers at the local level. From what is learned in the listening sessions—including the challenges, ideas and needs of farmers—IASA will develop roadmaps that guide Iowa agriculture in achieving its vision for the future.

Important Links

- [Circles of Life report](#)
- [Day 2 agenda](#), includes links to [event recording](#) and presentation slides
- [Rapporteur synopsis](#)
- [“Iowa farmers talk cattle, other innovative approaches for farm country’s future,” blog post](#)

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