



**SfL Side Event for IICA
Sustainable Agriculture of the Americas Pavilion
COP 27
Wednesday, November 16, 2022
12:30-13:30**

Organizer: Solutions from the Land

Title: Circular System Pathways for Scaling Climate Smart Agriculture

Event/Exhibit Description:

Food systems stakeholders are calling for bigger thinking and the transformation of current linear systems of agriculture and food into circular systems that better reflect the complex interactions among human and natural systems and their behaviors under stress conditions such as a changing climate and volatile, uncertain markets. Diversified livestock-cropping systems innovate system approaches and offer a variety of circular models within the farm and across agricultural and food systems sectors that: a) utilize forages, crop residues, and by-product wastes and convert them into high quality commodities; b) provide food and nutritional security due to their high-quality protein, essential fatty acids and bioavailable micronutrients; c) retain and sequester carbon and enhance other ecosystem services, and d) provide and improve livelihoods for billions farmers world-wide. This session will showcase climate smart agriculture systems farmers across the Americas are deploying to address climate change challenges and concurrently deliver ecosystem services and food & nutrition security.

Event/Exhibit Significance:

The 2022 State of Food Security and Nutrition in the World (FAO, IFAD, WFP, WHO, UNICEF) cites rising world undernourishment affecting between 702-828 million people or 9.8% of the world population. Equally concerning is that almost 3.1 billion people were not able to afford a healthy diet in 2020. Food and nutrition security begins with farmers who have resources, knowledge, technologies, supporting public policies and are able to make a living for their households using climate neutral and nature positive strategies while producing abundance of food and quality nutrition. Farmers, foresters, and fishers have the capacity to improve food and nutrition production efficiency while ensuring the integrity of soil, water, biodiversity and other ecosystem services. This capacity requires 1) context specific priorities and solutions that are aligned with national policies and priorities, 2) uncommon collaboration among many sectors including civil society, 3) farmers as targets of national and global policies and regulations have systemic opportunities to provide significant input to problem identification and solutions, 4) profitable farm enterprises enabled by viable and functioning carbon and ecosystem service markets, 5) Climate Smart approaches are scale appropriate for all size and types of farms, and 6) science-based practices and technologies integrated with farmers

experiential knowledge and indigenous innovation are the foundation for adaptive management and co-delivery of ecosystem services and food and nutrition security. Climate smart diversified livestock-cropping systems directly support multiple UN SDGs including Goal 1, No poverty (profitable livelihoods); Goal 2, Zero hunger (food production); 3, Good health and well-being (nutrition); 6, Clean water and sanitation (efficient management of water); 7, Affordable clean energy; 8, Decent work and economic growth (promoting sustained, inclusive sustainable economic growth and full and productive employment); 12, Responsible consumption and production (managing waste); 13, Climate action (adapting to and mitigating climate change); 14, Life below water and 15, Life on land (biodiversity dependent on sustainably managing farms and landscapes)

This event will include the release of a new white paper authored by the farmer-led Iowa Smart Agriculture Work Group that promotes circular, diversified cropping systems to achieve the following goal: **Manage Iowa's working landscapes to safely and sustainably provide an abundance of nutritious food, feed, fiber, and fuel, while 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.**

Panel

Moderator- Ray Gaesser, Corning, Iowa; North America Climate Smart Agriculture and Solutions from the Land Board Member

Land Grant University scientist, with expertise in circular economy- Dr. Bruno Basso, Michigan State (remote)

Four farmers talk about their diversified livestock/cropping/forestry systems and climate smart approaches that give them options to manage risk under uncertainty

- Brad Doyle, Weiner, AR- Berger Farms/Eagle Seed. Grows rice, soybean, 100% irrigated, Tailwater recovery system (#1 rice growing farm in the US)
- Jocelyn Anderson, Willows, CA- GSA Farms, California Almonds, walnuts, row crops. Walnut huller technologies and water mgt
- Nathan Belusso- a 2nd generation farmer who raises soybean, corn and beans on his farm in Mato Grosso State, Brazil

Potential panel questions:

1. What are some circular systems you're using in your farm/ranch enterprise? How do they improve your climate resilience?
2. How do circular systems and retaining on-farm value help you co-produce ecosystem services and agriculture/forestry products that ensure your livelihood?
3. How can producers be rewarded not just for producing commodities, but for the water they filter and store, the carbon they sequester, the biodiversity and wildlife habitat

they enhance, the economic growth and local wealth they generate and the improved of life they produce?

4. How can research processes be prioritized and streamlined to integrate agriculture and forestry with conservation goals and ecosystem services?
5. How can we expand and accelerate farmer-to farmer experimentation and knowledge sharing on ecosystem services delivery?

Focal Points

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