Previously Awarded

- An affordable, long-range wireless network that grants farmers data to allow them to use inputs more precisely, saving time, money, and resources.
- A commercially feasible reactor to separate beneficial bioactive oligosaccharides (OG) from agricultural waste streams. This process provides extra value in agricultural processing and more affordable OG’s to healthcare markets, which play a large role in reducing the incidence of intestinal infection in infants and adults with nutritional and/or immunologic deficiencies.
- Locally handcrafted, humanely-certified, sustainably produced, healthy goat cheese and related products targeted at a growing demand in regional markets.
- A method for measuring evapotranspiration (ET) from crops and other ecosystems, which can provide growers with direct measurements of daily actual ET over an entire field. This provides farmers the information to adapt their practices to decrease crop management costs, increase crop yields and quality, and expand production.
- Sensor and communication technologies for irrigation management (SCTIM) in surface irrigated crops, which can help growers save water, decrease labor cost, and reduce environmental impact due to tail discharge.
- A mobile, in-the-field conversion unit that takes sugar beets and efficiently processes them into a versatile sugar feedstock for bio-industry purposes, such as bio-fuel. This technology addresses seasonal and geographical pressures to handle large amounts of in-field or agricultural wastes and feed stocks.

Other Sample Projects

- Development of environmental sensors for field application in agricultural production (e.g., to monitor water use, nitrogen in soil, pesticide use, etc.).
- Food systems that produce societal health benefits, improve nutrition, and/or reduce societal health risks and costs associated with diseases such as diabetes, cancer and ADHD.
- On-farm, postharvest technologies to increase food security for smallholder farmers in the developing world.
- Water- and energy-efficient agronomic practices/technologies (i.e., those that require minimum water and energy input).
- Bio-based materials to decrease dependence on fossil fuels in agricultural production, to decrease soil toxicity, or to improve soil health.
- Improved cropping systems with the potential to sequester atmospheric carbon effectively at scale.
• Advances in communication technologies for agricultural applications (i.e. 24/7 field monitoring of crop water use, weather information, market information, etc.).

• Development of energy- and water-efficient food processing technologies, and/or food processing technologies that decrease food waste.

• Aggregation and distribution infrastructure to enable regional sale and distribution of, and/or create markets for, locally produced agricultural products.

• Innovation and scalability of affordable precision agriculture technologies at the field scale.

• Rotational cropping systems to decrease requirements for petroleum-based inputs and increase biodiversity and soil fertility.

• Remediation technologies for contaminated water (ground and surface water) and soils.

• Innovations that lead to commercialization and scaling of agro-ecological practices.

• New crop/soil sensors and remote sensing techniques, integrated with GIS and GPS.

• Affordable biosensors of agricultural products and processes (e.g., on-line monitoring of milk quality, pesticide residues and produce quality for large and small operations).

• Effective methods or tools for increasing welfare and productivity of agricultural labor.