

Ways to Contribute to the Circular Economy

Regenerative Agricultural Systems

1. How can we sustainably regenerate healthy soils and rangelands?
2. What practices can preserve or improve biodiversity of agroecosystems?
3. What technologies or practices can integrate co-products and by-products back into the ecosystem?

Closing Nutrient Loops (Nutrients for crops, livestock, and people)

1. How can we capture co-products and by-products from the entire supply chain and generate additional value?
2. What production practices maximize nutrient utilization? (e.g. air capture of nitrogen for fertilizer production or on-farm biodigesters to turn waste into biogas)?
3. How can we increase sustainable production (e.g. grasslands to ruminants to manure to fertilizers to crops to animal feed)?

Enhancing Nutrition gains and Reducing losses

1. How can we increase the density of nutrition in our food while:
 - a. preserving quality of taste
 - b. decreasing perishability
 - c. increasing ease of preparation
 - d. increase options for consumers
2. How can we increase the quality and safety of food?
3. How can we produce nutrient dense food while maintaining soil health?

Resilient Food Systems

1. How can food production and supply systems better respond to environmental/climatic variation?
2. How can we develop food preservation technologies and systems that can respond to the environment?
3. How can food systems respond to consumer demand to reduce food loss and waste?

These are just some examples of paths that will help enable the circular economy. If your idea doesn't fit into any of them, that's great! We want original thinkers. Just be sure to draw a line from your idea to how it will ultimately contribute to a circular economy in agriculture.

Still unsure if your proposal fits in the ARSX2022 theme? Contact arsx@usda.gov .