

Central Colorado Conservancy: 3/24/23 Blogpost and Website Updated

Sustainable Agriculture Research Grant Awarded to Local Producer

Agricultural producers in the Upper Arkansas River Valley are looking for ways to improve soil health in order to build resilience in the face of climate uncertainty, drought and other mounting challenges. Many farmers and ranchers are currently stuck in a cycle of relying heavily on off-farm inputs such as synthetic fertilizers to maintain soil fertility and yields and support their livelihoods. This reliance can be environmentally and financially costly and is a significant barrier to building economic and ecological resilience.

This big problem may have a tiny solution- so tiny, it's invisible to the naked human eye. High fungal compost, which contains billions of beneficial soil microorganisms, is gaining popularity as a soil amendment that can break the cycle of fertilizer dependence. Though we may not be able to see most beneficial soil microorganisms, they play a huge role in nutrient cycling, plant health, carbon sequestration, and water holding capacity in the soil ecosystem. High fungal compost applications on range and cropland can increase microbe diversity and abundance, thereby stimulating natural soil function and minimizing the need for synthetic in-puts.

Though high fungal compost is emerging as a promising alternative to synthetic fertilizers and chemicals, it is not a truly sustainable solution unless farmers and ranchers can produce it themselves in a cost and labor effective way. Central Colorado Conservancy is working with local producer Rick Bieterman, who owns and operates Watershed Ranch in Buena Vista, to address this problem. Mr. Bieterman, in collaboration with the Conservancy and with technical assistance from CSU Extension's Rangeland Specialist Annie Overlin, was recently awarded a research grant to trial on-farm methods for producing high fungal compost using readily-available local materials.

The grant is sponsored by the Western Sustainable Agriculture Research and Education (SARE) Farmer and Rancher program, which encourages producers to lead on-farm research projects that further agricultural sustainability and innovation. Mr. Bieterman will work closely with technical advisors to implement his SARE grant over the next three years. The goal is to create a blueprint that other local farmers and ranchers can easily follow to produce their own high fungal compost and reduce dependence on expensive off-farm inputs.

The purpose of SARE grants is to take agricultural innovation from the theoretical realm to the practical, empowering farmers and ranchers to find what works on their own land and to share their discoveries, challenges, and successes with their communities. This type of learning and knowledge sharing is what has always helped farmers and ranchers adapt and grow, and it is more important now than ever as agricultural communities face fragmentation from development, rising costs, climate uncertainty, and other challenges. Central Colorado Conservancy is proud to support a SARE project that has the potential to help local agricultural producers become more resilient in the face of these challenges- not by investing in new

technology, but by nurturing the complex webs of soil microorganisms that lie right beneath our feet.