

GE TRANSITION: SOIL HEALTH TRIALS OVERVIEW

OVERVIEW

There are many pathways to create more regenerative agricultural systems in Boulder County, including the perennialization of annual cropland, enabling grazing opportunities on cropland by diversifying and extending rotations, cover cropping and compost strategies, and changes to tillage, chemical usage, and management. The goals of the Soil Health Trials were to not only to improve soil health, but to increase the economic profitability of field production. In Year 1, we focused on the use of cover crops and increasing the diversity of monoculture cash crops. One of the biggest barriers to cover cropping is the lack of late-season water needed for successful establishment. Thus, we focused on integrating covers by over or inter seeding during the growing season.

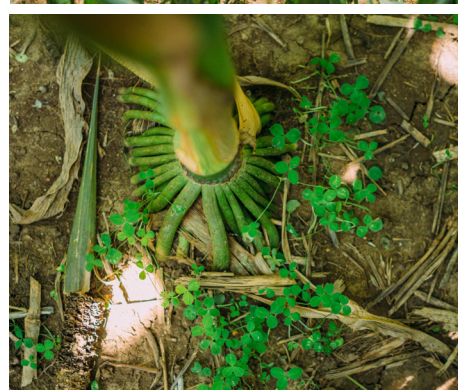
	Farms	Practices	Total Acres
2020 Crop Year	6	3	161.5

OUTCOMES

- Overseeded cover crops into corn had moderate success in germination of clover and radish, but not rye. Incorporating compatible herbicide and/or mechanical weed control approaches will determine potential success for this practice. This practice works best under pivot irrigation.
- Rye was interseeded into a weakly established alfalfa field, which showed moderate success in establishment and improved forage quality and yield. A cheat-grass invasion overtook a portion of trial and non-trial areas. This practice is best under pivot irrigation but can occur in any irrigated field.
- Pea-oat cover crop trials grew well in the early season but were terminated midway through trial (accidental spray and intentional spray for weed control). This practice can occur in dryland or any type of irrigated setting.
- The overseeding and interseeding trials were moderately successful and indicate that cover crop establishment is possible. These cover crops could be excellent forages for grazing in the fall and spring, however more experimentation is needed to understand both economics and management strategies for livestock integration.

TAKEAWAYS FOR THE FUTURE

- These practices are not yet mature enough to bring immediate economic benefit to the farmers participating in this project.
- Thus, future trials for soil health and regenerative agriculture will occur outside the GE Transition project.



Parks &
Open Space