



PROFILES IN soil health

David Harold
Olathe, Colorado

1,000 acres

Crops: Cattle, field corn and vegetables including pinto and white kidney beans, squash, sunflowers

Covers: Multi-species

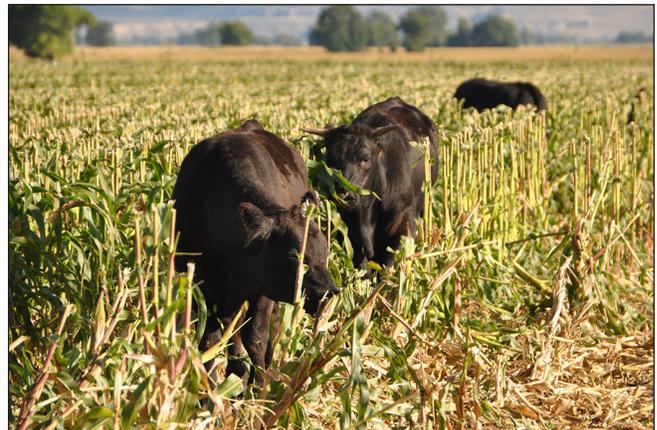


Business Sustainability Increased with Soil Health Building Principles

Healthy soil may produce quality food that consumers find desirable, but that's not what drives David Harold's passion for improving soil health.

"I do it because I like to do it, and I don't really care if everybody knows why," said the 35-year-old farmer from Olathe, Colorado.

Dig a little deeper, and you'll find the reasons why Harold's straightforward answers are rooted in a strong commitment to growing good food on his farm sustainably. "My perspective on sustainability is kind of more cut-and-dried



Cattle are not only providing additional ecosystem diversity, for David Harold, but economic diversity, as well.

mathematical type of a thing," he said. "If we are spending more energy trying to produce a crop than we are actually harvesting out of it, then that is not sustainable."

Harold even looks at energy in a way that few farmers do – starting with the sun. He considers how plants take in solar energy through the process of photosynthesis to create

carbohydrates in plants, and how those plants and the symbiotic soil microbes, are all an integral part of the carbon cycle.

"I hate to say that because then people think I'm some sort of weirdo talking about carbon and global warming," he said. "But carbon relates to energy. Storing energy in carbon chains in the soil is really what a farmer's job is all about."

Harold's overall soil health-farming approach has also been influenced by his experience with organic food production. "I got interested in soil health after coming back and farming with my father," he said. "At that point we had some organic certified ground and we also farmed conventionally. The conventional side is pretty much a formula."

The challenge, according to Harold, was on the organic side of the operation. That challenge pushed him to look more comprehensively at how his farm, as a system, was actually functioning. "It led me to really get interested in soil and water use, and nutrient management, and just look at the whole farming system from a different perspective," he said.

His holistic approach, based on building soil health through the use of diverse cropping rotations, diverse cover crop species and integrated grazing, is now the cornerstone of his business.

"Since I came back to farm we have more cattle and we have started to integrate them and manage them as part of our farming operation," Harold said. "I see the cattle as a tractor sometimes to do some tillage and sometimes to manage crop residue, besides just being another part of the cash flow. So we have started to do more and more mob grazing."

The cattle are not only providing additional ecosystem diversity, but economic diversity, too. "The cattle have given me a lot more opportunity to plant some things without having the worry of, 'Am I going to go broke by doing this?' It's not perfect, but it's something I believe in and am willing to maybe take a hit and maybe not make as much money in the short-term because I'm building soil health," he said.

As an irrigator, Harold's soil health-farming methods also help him use that water as judiciously as possible. "Through soil health practices we can increase our water-holding capacity in the soil,"



NRCS Soil Conservationist Katie Alexander, right, and David Harold review the farm's conservation plan during a field visit.

he said. "And if we can reduce our applications of irrigation water – if we can reduce water loss below the root zone – all those things have a positive effect on water, both in terms of quantity and quality."

Harold said USDA's Natural Resources Conservation Service's programs have also helped mitigate the short-term financial cost of some of his soil and water conservation activities – activities like sub-surface irrigation and cover cropping. "It has been helpful to have the NRCS funding to do things that probably wouldn't be feasible otherwise," he said.

Keeping his business sustainable by applying soil health-building principles remains the long-term goal of his operation. But other than growing good food in a truly sustainable manner, Harold's long-term vision for himself and the farm is purposefully mercurial.

"I don't have a vision of where I want to be," he said. "I used to and it never worked out very well, so now it's really more just going with the flow. I'm enjoying what I'm learning and I'm just trying to grow good, healthy crops."

Want to unlock the secrets in YOUR soil?

Go to: www.nrcs.usda.gov

