



a tractor works a minimum till potato field in Ririe

TNC'S HEALTHY SOIL, CLEAN WATER INITIATIVE SEEKS TO PROMOTE NO-TILL DIRECT-SEED FARMING

By Steve Stuebner

Brad Johnson is a lifelong Idaho farmer. He grew up on a dryland farm in Tensed where his family raised bluegrass with no-till practices.

He's got an ag resume that's taller than a corn stalk at harvest time. He's got a plant and soil science degree from the University of Idaho. He's worked on farms in the Magic Valley, raised cattle in Salmon, and worked for barley growers in the beer industry in Eastern Idaho.

"Conservation agriculture has always been in my blood," he says.

A year ago, The Nature Conservancy in Idaho hired Johnson as their farm outreach professional in Idaho on a new national initiative called Healthy Soils, Clean Water Initiative. The initiative encourages no-till, direct-seed farming to promote soil health, also emphasizing water quality, water conservation, and reduced use of chemicals for fertilizer and weed control.

"I'm relying on my experience as a lifelong farmer," Johnson says. "My main pitch is talking about soil health while working with farmers to reduce input costs, labor, fuel, and other things, and reduce production costs."

Johnson is traveling across Southern Idaho talking to farmers about those issues, and talking with conservation districts and Natural Resources Conservation Service officials as well. NRCS launched a Soil Health initiative a number of years ago in Idaho and across the nation that laid the ground work about the benefits of transitioning to no-till, direct-seed farming.

A number of conservation districts have purchased their own direct seed drills to assist farmers who might want to try no-till farming, and NRCS agronomist Marlon Winger spread the word about the benefits of the Soil Health initiative with numerous presentations about building



no-till corn sprouts in a field

We Got it Wrong

Last month's feature article *Partners Reduce Mud, Improve Water Quality on Camas Prairie Waterways* should have stated Mr. Shumaker:

"...discussed funding opportunities with the local NRCS representative however, NRCS planning policy and practice standards required that water quality resource concerns on the Animal Feeding Operation (AFO) to be fully addressed. This did not align with his objectives and he elected to explore other funding opportunities."

organic matter into the soil, improved water-retention, crop benefits and water quality benefits.

"NRCS has been huge for me," Johnson says. "Marlon is a great asset. I see him as a mentor."

Mark Davidson, TNC Director of Conservation, has been working with ranchers in Southern Idaho on wildlife and stream conservation projects for decades. When TNC decided to launch the Healthy Soils, Clean Water Initiative, "it seemed like a pretty easy evolution for us," Davidson said. "We needed to develop a conservation strategy around farming, water quality, water quantity, soil health, climate issues, community im-

pacts and ultimately, looking at strengthening the economic viability of our ag communities."

"We're looking to see if we can support farmers who are striving to be more re-



cattle grazing at the Unruh farm

silient,” Davidson says. “This is a program that The Nature Conservancy is engaging in with farmers around the world.”

Davidson met with a number of NRCS district conservationists, conservation district boards, water managers, and farmers to get a sense of how TNC’s Healthy Soils, Clean Water Initiative program could be crafted to help farmers make the transition from conventional farming practices to no-till, direct-seed farming. One of those strategies is to address the financial risk for farmers who want to experiment with regenerative farming practices.

That concept appealed to Kryst Krein, an American Falls farmer, who was trying things to improve the soil health on his farm. “Growing up, my dad was growing spuds and wheat in a two-year rotation, and that was not the best thing for the crop or the ground,” Krein said.

About five years ago, he changed up the rotation to wheat, corn and spuds. After harvesting the wheat, he started growing cover crops to hold the soil in place. Two years ago, he started doing test strips with a no-till corn field. He’d like to do more acreage, but the financial downside is scary to him.

“I’d like to do more, but to lose, say 300 acres of a crop would be a catastrophe,” Krein says. “So many farmers want to make improvements on soil health and conservation, but the margins are so tight every year, and they’re going to be really tight this year.”

So TNC’s financial safeguards give him more confidence to take a little more risk.

“I’m nervous, but excited,” Krein says. “I’m going to ease into it and try some things out.”

Krein points out that he farms in an area with soil that’s mostly sand and silt. He’s working on increasing the organic matter in the soil, and he’s tracking the results. The cover crops are helping increase the organic matter in the soil, and that helps with water retention.

In general, the cover crop mix can be devised in such a manner that the roots of the plants build organic matter in the soil, adding biomass and creating habitat for micro-organisms like fungi and other microbes to thrive beneath the land surface.



Chris Unruh checks the organic matter in the soil in a field that hasn't been tilled in several years

Krein has worked with NRCS on cover crop mixes that will work the best for his soil.

As many farmers do, Krein has been grazing his cover crops with livestock to add income and derive organic benefits from the manure that cows produce on the fields. He’s grazing 200 heifers for eight weeks. “All of that manure is free and it helps the soil,” he says.

Moving west across the Snake Plain, Chris Unruh is another farmer who has been working with TNC and NRCS on soil health in the Grand View area. Unruh came to Idaho from a farm in Kansas. He pays close attention to the soil health on his farm, remembering what his ancestors taught him about the Dust Bowl era.

“You can never not have a living root in the soil,” he says. “You never leave the ground bare or see topsoil blowing in the wind.”

Unruh is also a Mennonite. Part of the religious theology is, “The Lord requires us to be good stewards of the land, and my father always preached that we should leave the land in better condition than you found it,” he said.

Unruh has been doing no-till direct-seed farming for about six years. He raises corn with no-till methods, sunflower seed, alfalfa and timothy, and he raises lots of cover crops for winter grazing. He also recently added a 200-kilowatt solar system that provides power for pivot irrigation.

When you visit Unruh’s farm just above the hill from the little town of Grand View, get ready for a fast ride. He’s been busy getting his fields planted for the spring, and he’s just one of those guys who’s always in a hurry – a big hurry.

Says Connie Tharp, NRCS District Conservationist in Elmore County, laughing at the experience. “He’s a lot of fun to work with, but he wears me out.”

Unruh qualified to participate in NRCS’s Conservation Stewardship Program in

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2019. That's a five-year program that provides annual payments to producers to maintain and improve their existing conservation programs and adopt additional practices to address resource concerns.

"It's a high bar to qualify for the Conservation Stewardship Program, and really only the best of the best qualify for the program," Tharp says. "He's achieved that bar, and he's always pursuing new ideas to go beyond that."

For instance, Unruh is working on reducing the amount of synthetic fertilizers and herbicides that he applies to his crops through building more organic material in the soil and using specific plants in his cover crop mix such as timothy to help with that, Tharp said. Timothy helps build nitrogen into the soil, specifically, she said.

The TNC financial safety net program also helps Unruh experiment with soil health practices to take the pressure off focusing solely on crop yield and profit to pay for operations, he said. And the NRCS EQIP has been helpful for other conservation practices as well.

Tharp helps devise the cover crop mix for Unruh's fields, but he takes great interest in the mix and may do something custom beyond what the soil health books recommend. "We spent hours and hours trying to figure out the best mix," she said.

During the winter, Unruh works with an Idaho cattle rancher to graze more than 1,000 head of cattle on corn stubble and cover crops. The mild winter climate in Grand View is a great place for the cows to graze. He's a bit nervous about potential soil compaction from the cattle footprint, but he loves the idea of feeding lots of carbon into the soil from the cow manure and grazing the plants.

"Everything we do is designed to put more carbon into the soil," he says. "If



a 200 KW solar system powers the irrigation on Chris Unruh's farm

you have cover crops, cattle need to be in the program."

Unruh emphasizes that his farming practices are what's best for his farm, and he is not being judgmental about anyone else's farm or their farming practices.

"I'm not being critical of anyone, I want to make that clear," he says. "This is just what we do."

Going back to Johnson's outreach efforts across Southern Idaho, he is finding a number of farmers who are interested in talking with him about reducing input costs and preserving topsoil. The financial incentive part of the overall package is what Johnson calls, a "risk mitigation strategy." TNC also can contribute funds for seed and equipment. There are five overall principles of the TNC Healthy Soil, Clean Water initiative, "and if they are worried about losing income, we can help," Johnson says.

TNC has raised private funds to launch the initiative in anticipation of catalyzing more interest from supporters and agencies. This is happening as conservation districts help with no-till drills that can be rented,

and NRCS EQIP programs help with other conservation improvements on the farm.

Johnson is doing the outreach on a farmer-to-farmer basis. He's also working on putting together a demonstration farm in the Magic Valley outside Burley where people could come learn more about no-till, direct-seed farming and conservation benefits.

"This is a pretty big priority for TNC right now," Johnson says. "Farming is big in Idaho. This is a place where we can make some progress on these issues."

"I think it's important for folks to know that we're not trying to tell farmers what to do," adds Davidson. "We don't want farmers to lose money. We heard that across the Snake River Plain. We're asking farmers, would you like to make a shift in your operations to benefit soil health and the environment? Is there a way that we can help you do that?"

Steve Stuebner writes for Conservation the Idaho Way on a regular basis.

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