Baby Steps.

Moving Beyond Sustainability into a Regenerative System

Ezra Lakey started Lakey Farms in 1945 with a focus on small grain production. Half the acres were in small grains and the other half were summer fallow, with the occasional plow down nitrogen pea crop. The farm progressed and grew through the years as did the family. Ezra’s five children all helped on the farm, but Dwight and his younger brother Jerry were the two who were most involved. Dwight’s eldest son, David, returned after college to the farm to help the operation grow to nearly 9,000 acres at one point. With the passing of Ezra in 2009 and the retirement of Jerry, additional help was needed. At that time, Dwight’s youngest son, Dan, was 2 years out of college where he had obtained a bachelor’s degree in Business Management and was living in Twin Falls working in outside sales. With the pending birth of his first child, the desire to raise his children on the farm was growing. When presented with the opportunity to return to the farm, Dan and his wife, Marie, made the decision to return to the small East Idaho town.

A Legacy of Conservation

Soil conservation is nothing new to the Lakey’s. In the early 1980s, they transitioned away from moldboard plowing into chisel plowing to reduce erosion. They also incorporated water and
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sediment basins and contour farming for the same reason. Then in the late 1990s, they moved away from fallowing so many dryland acres and moved to annual cropping. Dwight served on the Caribou Soil Conservation District from 1989 to 1998. Through the years, they have tried to implement the best conservation techniques of the time.

When Dan came back to the farm in 2009, changes were in the works. The Lakey’s were seeing the negative effects of using Anhydrous Ammonia (NH3) fertilizer and starting to transition away from it. Dwight was looking at incorporating mustard into their limited crop rotation. Then a JD-1895 no-till drill was purchased. Dan was tasked with figuring out how to operate it and run it. By 2013, mustard was in the rotation and giving the ground a much needed break from cereal grains, but they still were seeing some concerns on other cropland. "At that time, I thought that what we needed was a different tillage tool or something to dump out of a jug that we could use to cure the problem," Dan recalls.

Changing views

The farm was looking at additional tillage implements such as disk rippers and high speed vertical tillage tools to deal with compaction and residue. At one point, he thought possibly more fallowing and returning to the plow might be the answer. Then, Dan began attending soil classes in 2014.

"I started to realize that what I was seeing and treating on the cropland were merely symptoms, and they weren’t addressing the real problem," he said.

Dan began to experiment with the no-till potential of the drill and tried some no-till fall wheat plantings. As he was out no-tilling he was caught in photograph by the local NRCS soil conservationist. No-till is not a typical practice in Caribou County. At that time it was suggested to Dan that he try some cover cropping. It was possible that the NRCS-EQIP program could provide some technical and financial assistance. As he thought about how to go about this new endeavor of cover cropping, he realized that as a farmer, he really didn’t know how plants grew. Sure, he knew the basics and what they taught in school, but he began doing research. He read books like "Mineral Nutrition of Higher Plants" and "Decomposition in Terrestrial Ecosystems." This was the beginning of hours of internet articles, YouTube video research, and soil health information by people such as Gabe Brown, Ray Archuleta, Jill Clapperton, Gary Lewis, Jay Fuhrer, and others. In spring of 2016, he applied what he learned by planting 230 acres of cover crop. It didn’t turn out to be a beautiful, lush, diverse stand, which was a bit of a disappointment to the NRCS field office, but the soil health concepts were taking hold. It sparked his curiosity and led to digging holes, measuring soil temperature, looking at soil structure, counting worms, pore space, moisture content, plant roots, and trying how to determine how a plant grows and interacts with its environment. Dan has learned that the biological aspect is the largest segment of the soil, not the physical or chemical as he’d previously thought.

He sees a lack of carbon, frequent frost, lack of available moisture to the crop, and the human mindset as limiting factors in agriculture for Caribou County. To Dan, carbon is the #1 limiting factor in soils, but it can be replenished if managed correctly. A plant that is healthy and vigorous is more frost tolerant. Moisture can be significantly affected by No-Till Drilling on a field in 2015
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how the soil is treated and protected and as he’s learned, it's not how much rain you get, but how much water your soils can hold, that determines the potential of the crop. As for mindsets, he realizes that new things are often hard for people to wrap their heads around. This is especially true when something has been successfully practiced for a long time. But Dan echoes Canadian rancher Don Campbell’s philosophy: "If you want to make small changes, change the way you DO things, but if you desire to make large changes, change the way you SEE things."

Going forward

In 2017, Dan has new goals and a new vision:
1. Replace fallow acres with cover crops, no bare dirt. Strive to keep a living root in the ground.
2. On tilled fields, minimize tillage passes.
3. Stop straw removal, look at residue as a resource not trash. Keep the carbon in the field.
4. Look for additional rotational crops for diversity.
5. Reduce fertilizer and herbicide inputs through functional soil-nutrient cycling.
7. Change from a sustainable operation to a regenerative operation while maintaining production.
8. Bring cattle or small ruminants back onto the land to graze covers and keep nutrients in the field.
9. Provide the same opportunity to his children to come back to the farm, just as his father did for him.

Dwight and David have provided a check, context, and support for Dan’s ideas. They have many years of experience. They have given Dan the freedom to try different things, and often offer advice on what he can do better to help him succeed. They run a successful operation without these new ideas, but they can see the value in the soil health principles and where they can be incorporated.

An invaluable asset to Dan is a group of individuals in his area to bounce ideas off of and discuss soil health principles; these are mentors, friends, and fellow producers with whom he consults. This often leads to discussion and disagreement but it provides perspective and additional information. It also creates the potential for large scale testing of ideas and provides a support group for them as they move through the soil health learning process together.

Dan is now giving his friends and family Christmas and birthday presents that include: Root shovels, soil health books, rain gauges, PH meters, soil thermometers, and graduated cylinders for conducting soil slake tests. Dan jokes that he may not have many friends left if he keeps giving those types of gifts!

He remembers as a teenager, farming was all about hard work. Work hard to get the job done, and then go ride his dirt bike. Now, hard work is still critical, but his paradigm has changed. Now understanding soil health and allowing the soil system to work is just as critical for this "toddler" curiously navigating (and as toddlers do, sometimes stumbling) through the early years of his journey. As they approach the decade milestone of their return home, Dan and his wife look back at the ups and downs in agriculture and the trials they have faced, and both agree they wouldn’t trade the experience for anything. They now have 3 children, Emerey (7), Trey (3), and Grayson (1) that all help their dad on the farm and give the Lakey’s hope for the next generation in their family centered operation.

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