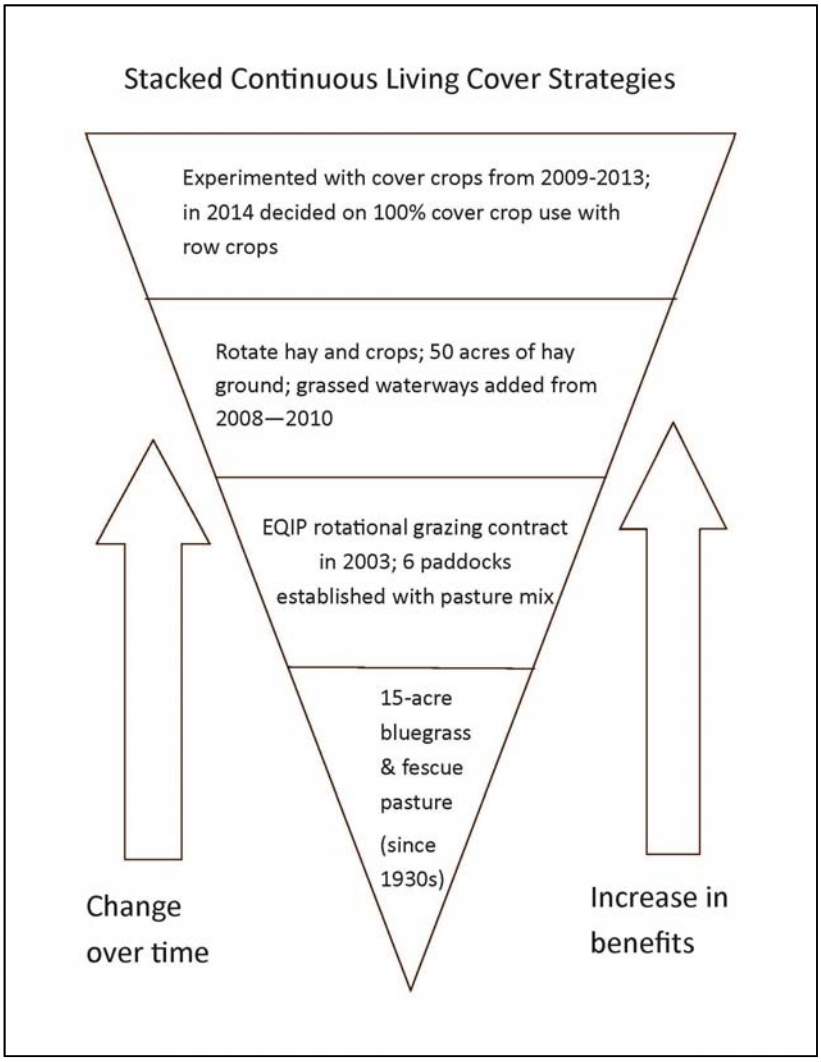
Fred Abels

Holland, IA; July 2014



Up until 2003, Fred Abels was driving a semi-truck and farming. When that truck-driving job ended, he wanted to be fully employed on the farm, so added cows to his operation. He discussed rotational grazing with an NRCS staff person, then signed up for EQIP (Environmental Quality Incentives Program) and got grazing paddocks and hay ground established. Fred's acreage is divided into 1/3 corn, 1/3 soybean, and 1/3 forage for cows. His rotational grazing system includes 6 paddocks, each 9 acres. He also uses a 15-acre bluegrass and fescue pasture, which has not been tilled since the 1930s. His hay ground is hayed for the first cutting and usually grazed for the second and third harvest.

Stacking of multiple soil conservation and continuous living cover practices: Fred Abels added livestock to his operation and started a rotational grazing system in 2003, also using a pasture that had existed on his farm since the 1930s. His winter cattle feed originally came from baling a friend's grassed waterways, but he added hayfields gradually from 2008 to 2010. After experimenting with cover crops for several years, he became convinced of their value and planned to use them on 100% of cropped acres in 2014.

The hayfields were added gradually from 2008 to 2010. Back in 2003 when starting out, he got his winter feed by harvesting about 20 to 25 acres of grassed waterways on land custom-farmed by a friend. The friend didn't want to do the mowing and was willing to let Fred take the hay if he would mow it, so Fred got the forage for just the cost of harvesting.

He chose the land for the hay and pasture ground based on their location close to his buildings; the livestock handling facilities were on the home place, and it would have been more difficult to use neighboring land to run cattle. Fencing requirements were also a consideration that resulted in cows being on his home place. The cows have to walk up to the buildings for water. EQIP funding was used to install a "jug" waterer at the buildings. Although there are two access points to the creek where cows could get water, they walk home to drink from the jug. Fred can tell in the farthest-away edges of the paddocks that they aren't grazed as hard because of their distance from the water source.

His first seeding in 2004 was red clover, birdsfoot trefoil (BFT), and endophyte-free fescue. The BFT stuck around in the drought of 2012 when other forage species didn't make it. He's now trying to manage the BFT to let it go to seed, so that it will reseed and maintain the stand. When cows harvest his 2nd and 3rd hay cutting, he can accomplish the natural reseeding. He has had really good luck with frost-seeding, too. He has frost-seeded a bluegrass pasture with red clover and BFT. He'll let it get it grazed pretty far down in the fall and then seed before first graze in the spring.

Cows spend 5 days on a 9-acre paddock. He hasn't changed from that rotation in 10 years. The paddocks are seeded in a mixture of reed canarygrass and Kura clover. It took four years to establish the Kura clover, which was done through an Iowa State University on-farm trial. He loves the Kura clover; it spread through runners, always regrows, and he hasn't grazed it out in 10 years. An application of 64 oz. of Roundup knocked it back for two weeks, but then it recovered He has 55 acres of Kura clover and reed canary that he would not return to row crops, because he wants to keep the Kura. It just keeps going and supplies N to the reed canarygrass.

Fred's average herd size is 85 cows. He buys in cows from southern Iowa as replacements, and his culls go to the local sale barn. Calving is from August 15 through early October. He weans in March, holds until May, and sells weaned and backgrounded calves at the sale barn. Net returns have been good on the cattle. The price of replacement cows has been going up, though. In 2013 it was $1200/head, in 2014 it was $1775/head, and he anticipated a price of $2200/head in fall of 2014. His cows have a calf nursing them all winter and need good feed. Usually he grazes cattle through the cornfields after harvest, but the last couple of years have been hard with cold and snow. Feeding his own hay and corn silage means he doesn't have to buy feed; and with the grazing he has been able to hold his feeding costs to less than $1/head/day.

After the drought of 2012 and then in 2013 a wet spring followed by drought, Fred put about half of his hay ground back into crops. On June 26, 2013 he had 8" to 10" of rain in the afternoon. That was the last rain he had in the 2013 season. He switched to feeding corn silage instead of hay in 2013,

because corn silage growers in the area were seeing increased yields in 2012. He was very disappointed in the hay yields in the spring of 2014; especially the poor performance of the endophyte-free fescue. He had it on some of his best ground and even so, wasn't seeing good production. In the drought of 2012 he harvested a grassed waterway three times that was in reed canarygrass. That kept going when other things didn't, and got him thinking about using reed canarygrass instead of fescue for hay when he rotates crop ground back into hay. His plan as of summer of 2014 was to sign up for an EQIP contract to put the crop acres that used to be in hay back into bromegrass, reed canarygrass and alfalfa.

Evolution of Fred's experience with cover crops:

- 2009 –Sarah Carlson talked him into trying cover crops. He seeded turnips on a Friday into standing corn. That Sunday a hailstorm knocked the corn down to waist-high. Then it was too shady for the turnips and they didn't establish.
- 2010 – Skipped cover crops.
- 2011 – Aerial-seeded 50 acres of annual ryegrass and oats. Then there was no rain except for a little shower the week of seeding, and no growth.
- 2012 – Skipped cover crops.
- 2013 – In the fall, seeded winter cereal rye on corn silage acres after the crop was removed. There was no rain afterwards, and this was on prior hay ground with very hard-packed soil. The seeder didn't get the rye into the ground very well and there was a weak stand.
- 2014 – Hosted a field day; sent soil sampled in from cover-cropped and non-cover-cropped ground; had the Haney soil test applied by Ward Labs. It clearly showed the benefit of cover crops. This fall, cover crops are going on every corn and soybean acre due to the benefit on cycling of nutrients. The savings on avoided P & K inputs alone will pay for the cover crop.

The winter cereal rye cover crop planted in fall of 2013 had an additional, unexpected benefit. Fred puts down 100 lbs. of N before planting corn, and then side-dresses another 50 lbs. N into 4" corn. In the spring of 2014 when he headed out to side-dress N by knifing it in, he found very hard soil and kept breaking shear bolts on the applicator. He took a whole bag of bolts with him to get the job done. When he got to the field that had the rye cover crop, the soil was softer and he didn't break a single shear bolt. His cousin's husband had a similar experience. He strip-tills and applies P and K in the fall, and aerial seeded 100 acres with winter cereal rye. In the following fall, the soil was so mellow on those acres that he could move one mile per hour faster through that field during harvest. After those experiences, both Fred and his cousin are planning to plant cover crops on 100% of their acres.

Fred is intending to use winter cereal rye. He likes the longer fall window for planting it: he's looked through the Midwest Cover Crop Council's selector tool and found a Sept. 1 cutoff date for planting just about everything except winter cereal rye, which can go into October for seeding. A neighbor two miles away has five crop-duster planes, so he has access to aerial

seeding. It will cost him $15 to $18 /ac for the seeding and about $18/ac for purchasing the seed. He is thinking about growing his own rye for cover crop seed. He needs about 500 lbs. of seed to treat his acreage. If he could get a good stand of cover crop rye seeded around Labor Day and get a good stand, he would consider letting it go and combining it for his cover crop seed. He is also considering winter cereal rye as a potential forage crop that he could bale in early spring and then plant soybeans. Some of his neighbors are getting 1.5 to 3 round bales per acre from baling a winter cereal rye cover crop.

The fibrous roots of winter rye help to increase soil organic matter and decrease the fertilizer requirement for his corn crop. The Haney test that he had done through Ward Labs recommended no P and K, and 150 lbs. of N for 200 bu/acre corn. Fred knows he can reduce P and K application, but isn't sure yet about N. This is a big change from the old days when the recommendation was 1.1 to 1.2 lbs. of N applied for every bu/acre of corn yield goal. The loss of N from those applications was previously thought to be no big deal, but now we know it is causing problems downstream, so he's interested in the reduced N application.

The Haney soil test was very eye-opening. A new field they acquired that hasn't been under no-till management does not have as healthy of a soil as their no-till acres. He was also surprised that their pasture paddocks have a soil health index of 13 (20=best); he thought it would be higher. A neighbor has been applying swine manure to the paddocks and Fred thinks maybe they need even more manure on the paddocks.

He noted the contrast between his operation and that of a neighbor with fields uphill of Fred's. The neighbor uses maximum tillage, and makes 4 trips across the field to Fred's one. He piles up dirt along the fencerow to build a sort of dam at the edge of his field, and in 2014 the result of that was a 4' high waterfall pouring into Fred's field. When the soil dam washes away, the neighbor just re-builds the dam. Fred shakes his head at this method of land management. Fred's farm had 17.7" of rain from the last ½ of June through first ½ of July of 2014. With grassed waterways and no-tilling of everything, he thinks his farm is not too bad off in terms of soil loss.

There are more birds around his farm now because of all the grass. Actually, they keep him up at night with all the chirping. When he was out spraying for thistles after the cows had just left a paddock, he found a nest in the reed canarygrass that wasn't disturbed after 5 days ofgrazing. He is satisfied with knowing that he can protect his soil, balance crops and livestock, make a living from his land, and see the benefits to wildlife on his property.