

75 Years of Cover Crops

By Bob Schultz

When I was a kid, Dad planted either rye or oats after the vegetable or sweet corn crop. He always seeded the wheat to red clover. He would broadcast red clover into some of the field corn prior to the second cultivation. This worked out very well and in the spring there would be a beautiful stand of clover to plow down. When I started farming, I also used oats or rye after vegetables or sweet corn and used red clover or domestic rye grass in part of the field corn. This worked fine until I switched to 30-inch rows. In narrow rows, there was too much shade and the plants had difficulty establishing themselves and also they would be eaten by thick slugs. I kept on with rye or oats after vegetables and seeding wheat to red clover. After I started raising soybeans, I started planting some of the fields to rye after soybean harvest. This is the program I am still following to this day. Is it economically viable? Probably not. One field has been in sweet corn for 42 years. Every year the field was planted to rye, usually by 15 August. By November, there would be a massive top growth and when plowed in the spring, it was like plowing sod – there was tremendous root growth. In spite of the infusion of all this organic matter, in 42 years the organic matter increased by one-tenth of one percent. This experience makes me a little skeptical of people reporting they increased their organic matter 4% in five years.

There are two million pounds of soil in the plow layer. One percent of two million is 20,000. A good corn crop will produce about 7,000 pounds of organic material. A cover crop will add a possible 3-4,000 pounds. Soil organic matter is not static; it is continually being mineralized.

In the case of cover crops that are killed before they turn to cellulose, they oxidize quite rapidly.

I am just skeptical of some claims.

One situation where cover crops can backfire is especially on clay ground. When rye is knee high, it can draw a lot of moisture out of the ground in a short time. If it transpires, all the soil moisture, the planted crop will not germinate.

In spite of the downers, I still plant about 500 acres of cover crops a year. Are they profitable? Probably not. No. Well, look dummy why do it? Because I think it is the right thing to do. Not all right decisions make sense economically.