by Sarah Beth Aubrey

Alternative Cash Flow

Carbon credits may provide new revenue opportunities for farmers and ranchers.

Yes, this column is dedicated to improving your communication around the farm or ranch; yes, I mostly share stories and tips of leadership, succession and developing the next generation. However, leaders need to stay on top of the current issues, so this month I'm taking a break from our usual subject to address something you've likely been hearing a lot about — carbon credits. I'd like to attempt to answer some not-so-basic questions with the help of a few experts cited below.

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> — Todd Janzen
> Janzen Ag Law

What is a carbon credit?
Carbon credits originate with the concept of reducing an amount of carbon dioxide (CO^2) or its equivalent from the atmosphere. When there is a market for this carbon reduction, it can generate carbon credit. The most common measurement for carbon credits is in metric tons. One metric ton equals about 2,205 pounds. The phrase CO^2 "or its equivalent" denotes that by also or additionally reducing other greenhouse gas (GHG) emissions, you may generate a carbon credit.

"At a basic level, if a farmer or rancher can demonstrate a reduction in one metric ton of CO^2 or its equivalent on his or her operation, they should be able to create and sell a carbon credit," says agricultural attorney Todd Janzen, of Janzen Ag Law, a firm specializing in environmental law for farmers.

So, to reduce the emission, the carbon must be "captured." One common way to accomplish that is through increasing soil carbon — or keeping carbon in the soil. Many experts also believe that increasing soil carbon — whether with row crops or pastureland — directly benefits the health of the soil, thus yielding advantages to agricultural practices. Most likely, increasing soil carbon, whether out of a desire to improve the soil quality or to potentially earn a carbon credit (that can be sold through a carbon contract) involves adding, changing or implementing certain farming or grazing practices.

Jenny Pluhar, writing for *Progressive Cattle*, cites the following ways to increase soil carbon:

- Planting vegetative ground cover
- Minimizing disturbance such as avoiding plowing or continuous grazing
- Increasing plant diversity
- Keeping plants with roots in the soil longer (such as between growing seasons if a row crop operation)
- Adding back regenerative grazing

According to Jason Weller, President of TruTerra, Land O'Lakes' sustainability business, farmers are uniquely positioned to potentially earn compensation from certain management practices.

"Farmers use regenerative farming practices that improve soil health to boost crop biomass production and minimize soil disturbance. In turn, this helps soils absorb more organic matter and over time transform it into soil carbon. Farmers are compensated for the additional quantity of soil carbon they have sequestered in their fields' or pastures' soils," he explains.

How is carbon measured (to earn a carbon credit)?
Once the landowner begins a new practice to increase soil carbon, measurement is the next step to potentially earning a carbon credit payment. It's important to note here that measurement varies widely as does verification of that measurement. Today no standard exists, and most carbon credit buyers have their own system.

In the most basic terms, the company offering a carbon credit program will work with the farmer to take soil samples and use lab analysis to measure and quantify the amount of carbon in the soil. Most of these labs are third party. Then, companies use a soil modeling technique (often proprietary) to estimate how much soil carbon is present. A variety of factors are considered — though this could vary — including soil type, the crop rotation used (or not used), tillage methods or no-till, grazing rotation and even available weather data for the location of the soil.

How is a carbon credit created?
To earn the carbon credit, it all starts on the land with production processes implemented by the farmer or rancher, such as using no-till methods or moving marginal land into native grasses or forest regrowth.

"It's important to remember that carbon credits can be created by either a reduction in carbon or long-term storage (sequestration) of carbon," Janzen says.

A key fact to remember is that adding the practice doesn't generate the credit. The company that wishes to buy a credit will require a measurement and verification process. Carbon credit companies act as intermediaries, connecting the farmer or rancher with the buyer, but usually paying the farmer directly in the form of a contract and selling the subsequent credit to the ultimate buyer. It's important to note that you don't exactly hold a credit in the palm of your hand.

"A carbon credit is not a tangible thing, but it is a commodity that can be created, sold, traded or bought," Janzen explains.

Who buys carbon credits?
Up until now, we've been talking about agricultural practices. However, here is where climate-related topics come into play. Carbon credit buyers are typically those in industries that are large emitters of CO^2, and they opt to purchase a carbon credit to offset or reduce their carbon footprint. Emitters, such as technology and energy companies, are common large buyers today, though any company may choose to buy carbon credits.

Some companies do this for philosophical reasons, others to improve the appearance of being considered "green" by shareholders, employees or the public, and some companies enter the carbon market because they are mandated by law to reduce their carbon footprint and the purchase of carbon credits is an acceptable means of meeting these requirements.

There is a lot more to consider if you're a landowner considering participating in the carbon market, but experts agree that whether you have forest, pastureland or row crops, there are potential income opportunities to consider. Take a look and do your homework. HW

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