Trading Carbon Credits

How does that work?

by ***Troy Smith***

Surely, by now, you've heard about carbon credits. You've heard about the concept of capturing and storing (sequestering) carbon in the soil. It's something all forms of plant life do — remove carbon dioxide from the atmosphere and sequester carbon in soil organic matter. And there has been a lot of talk about how the sequestered carbon represents a potential cash crop for farmers and ranchers.

But among many owners of agricultural lands, the response has been, "Sure. Show me the money."

Now, some producers are seeing the money and putting it in the bank. Darrel Buschkoetter has received two checks, over the last couple of years, representing the sale of carbon credits produced by his farming and cow-calf operation near Lawrence, Neb.

"I've received about $2,300 altogether, or little over $1 per acre, through the Farmers Union carbon credits program," Buschkoetter explains. "That's not a lot of money, but it's an additional incentive to manage the land like it should be managed. I think there's potential for carbon credits to be worth more in the future. I started out by enrolling my no-till cropland and some CRP (Conservation Reserve Program) acres. Now, I'm working toward enrollment of my rangeland too."

According to the National Farmers Union (NFU), about $8 million has been earned by producers participating in the carbon credit program launched in 2006. Managed through the North Dakota Farmers Union office, the NFU program markets carbon credits through the Chicago Climate Exchange (CCX). North America's only greenhouse gas registry, reduction and trading system, the CCX is where carbon credits are bought and sold much like commodities are traded on other exchanges.

Buyers include environmentally conscious individuals, organizations and companies. Among the biggest players are utilities and manufacturers feeling pressure to reduce fossil fuel emissions, including carbon dioxide. For example, an electric utility company might buy carbon credits (also called carbon offsets) to offset or neutralize some portion of emissions from coal-fired generators. Speculators buy too, anticipating an increase in the value of carbon credits.

The CCX authorizes a number of offset projects through which agricultural producers can receive marketable carbon credits. Livestock operations that collect and combust methane (with an anaerobic manure digester) may be eligible, as are forestry projects planted since 1990 in accordance with certain requirements. But perhaps of greatest interest to most agricultural producers are projects involving:

- cropland under continuous conservation tillage practices (includes cropland under continuous hay production);
- previously cropped land that is converted to permanent stands of grass (can include acreage enrolled in CRP since January 1999); and
- native rangeland managed under prescribed grazing.

Generally, acreage in much of the eastern and central portions of the U.S. is eligible for projects involving conservation tillage cropland or cropland converted to grass. The issue of carbon credits is based on the average expected carbon accumulation rates in various regions, based on soil type and precipitation. Producers are credited with 0.2 to 0.6 metric tons of carbon for each acre of eligible conservation tillage cropland and 0.4 to 1 metric ton per acre for qualifying grass stands during each year of a carbon credit contract. Currently, the CCX offers contracts for periods of five years.

Native rangeland in much of the Great Plains region and parts of the Rocky Mountains, California and Northwestern states may be eligible to earn 0.12 to 0.52 metric tons per acre. To qualify, rangeland must be managed under a plan designed to improve vegetative growth, and thus, increase amounts of carbon stored. Grazing plans must incorporate moderate stocking rates and strategies for pasture rotation and seasonal use. Under this type of project, contracts also are for a period of five years.

The CCX requires that projects involving less than 10,000 metric tons of carbon per year register through an offset aggregator. So farmers and ranchers typically participate through one of nearly 100 CCX-approved aggregators such as NFU. According to North Dakota Farmers Union program specialist Liz Mathern, an aggregator registers producers and enrolls their eligible acreage into pools representing marketable carbon credit contracts.

Mathern says the size of a pool isn't based on total acreage per se. They must represent a capacity for sequestering that required minimum of 10,000 metric tons annually, but NFU pools typically represent several hundred thousand tons. During each production year covered in a contract, a database of all included land tracts is submitted to CCX. A portion of the land tracts will be randomly selected for verification by a CCX-approved third-party verification entity. Verifiers use information provided by the aggregator combined with potential site visits to confirm that promised management practices are being implemented.

"All land tracts are subject to initial verification and annually during the term of a contract," Mathern says. "At this time, however, only 10% of contracted acres are selected each year. Exceptions would include producers enrolling very large tracts of land (more than 10,000 acres), which would receive a site visit the first year, before any payments are made."

Carbon credits earned by producers contributing to a pool are sold by the aggregator. Individual producers then receive annual payments for their respective shares of the proceeds, less an administrative fee retained by the aggregator. In NFU's case, the "commission" is 10%. However, 20% of tons earned are placed in a carbon bank by the CCX with payment made in a lump sum at the end of a contract. This serves as an incentive for producers to complete all terms of the contract.

The value of carbon credits is determined annually during the term of a contract, so payments will fluctuate, up or down, with market prices. A producer signing

a five-year contract would have prices set at least five times during the contract period.

"Producers should understand that the market changes, as with any commodity. The market price for carbon credits has ranged from less than $1 per metric ton to over $7," Mathern explains.

She says recent payments have been based on prices near $4 per metric ton. That translates to a per acre rate of $1 to $4, depending on the type of land. To date, NFU has sold carbon credits primarily for projects involving conservation tillage acreage and cropland converted to grass. No carbon credits earned on rangeland have been marketed, but enrollment for rangeland is underway.

Not all carbon contracts are written with the landowner. Contracts involving conservation tillage cropland are typically written with the "operator." This may be a renter if that is the person on record with the Farm Service Agency (FSA) as having control of the land and making crop decisions. Transfers are allowed, should there be a change of tenant during the contract period. The new tenant would have to agree to contract terms, or the original holder of the contract would face penalties. Similarly, if a landowner sells acreage that he or she has put under contract, the next owner must accept its terms or the seller will bear responsibility for breaking the contract.

"Producer participation in carbon credit programs is voluntary, but all contracts are legally binding. Penalties apply whenever terms are broken," Mathern says. "Monies paid would have to be returned, and the value of carbon credits in the CCX bank would be forfeited."

In the case of share-rent agreements, carbon credit contracts are written with only one of the parties — either the landowner or the tenant — who would receive payments for 100% of carbon credits sold. However, all parties having a share in the acreage must sign the contract. They should make a separate agreement determining if and how payments are shared.

The future of carbon trading is uncertain. It's linked to the worldwide greenhouse gas debate. "Cap-and-trade" legislation is favored by some U.S. lawmakers and the new presidential administration. If enacted, such legislation could mandate limits for carbon dioxide emissions and prompt increased demand for carbon credits.

PHOTO BY CHERYL MERRIHEW

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Several years ago, acid rain concerns spawned a similar cap-and-trade market to address sulfur dioxide emissions. Over time the cost of buying credits, to offset emissions, became high enough to force companies to place scrubbers on smokestacks and replace the highest emission plants with new lower-emission facilities.

Eventually, application of new carbon dioxide emissions-reduction technologies, coupled with development of alternative energy sources, might reduce or eliminate the need to buy carbon credits. For the time being, proponents of carbon trading encourage farmers and ranchers to consider the current opportunity to adopt land management practices that are economically and environmentally sound and get paid for it. **HW**

Editor's Note: *For more information about trading carbon credits visit the Chicago Climate Exchange Web site* (www.chicagoclimatex.com) *or its approved aggregators, including National Farmers Union* (carboncredit.ndfu.org).

Carbon trading: It doesn't fit everybody

This carbon trading thing is kind of a hot topic among cattle folk and particularly among those running cattle on the High Plains and western ranges. It was a frequent subject of interest at cattlemen's meetings attended by this writer during the last year or so. That was true even at events where no discussions on that specific topic were planned. Carbon sequestration and the idea of selling carbon credits just kept coming up. If not during a meeting proper, it was talked about in the halls during breaks, over lunch or in the parking lot afterward.

Several things may be fueling the fire. Producers who have enrolled acreage in conservation tillage carbon sequestration projects have actually been paid for it, as have some producers who converted cropland to permanent stands of grass. They've been talking about it. And now, with the development of rangeland projects, western ranchers are wondering if they can tap the carbon market.

Its likely more producers will sign up for the various types of carbon sequestration projects and benefit. In this writer's opinion, there are others who probably shouldn't even try. It's best left up to the individual producer to decide in which group he or she belongs. Those considering enrollment are well advised to make an informed decision by seeking out more information than is available at the coffee shop.

No doubt, there are enthusiasts that have over-sold the carbon trading concept, usually by making participation in carbon sequestration projects sound too easy. Some proponents may have been overly optimistic about the potential value of carbon credits. On the other hand, critics have called carbon trading a scam, or a phony market based on imaginary money. Some claim signing a carbon credit contract amounts to signing away personal property rights. At the very least, they say, someone is going to tell the landowner how to manage his or her operation.

What follows is not an endorsement or condemnation. Rather, it is observations based on this writer's limited research. The only advice of value is an admonition to seek out the facts and use common sense.

First of all, remember that the whole notion of trading sequestered carbon grew out of the global warming debate. It is a market-driven mechanism aimed at reducing the effects of so-called greenhouse gases — carbon dioxide in particular. That was made clear at every public presentation, on every Web site and in all literature used as background for this story. Producers who don't buy into the global warming theory may choose to shun carbon credit programs purely for philosophical reasons. Whether they subscribe to global warming theories or not, some producers may decide to ride the carbon trading horse for whatever it is worth and for as long as it will run.

Something that should become clear to anyone studying the information available through the Chicago Climate Exchange (CCX), the National Farmers Union or other CCX-approved aggregators is that farmers and ranchers can earn marketable carbon credits only if they meet certain land management requirements. Producers don't get paid for carbon credits by doing nothing.

On cropland no-till practices are required because they enhance sequestration of carbon. Acreage under traditional tillage doesn't qualify. On rangeland carbon sequestration is enhanced through reduced stocking rates, pasture rotation and seasonal use. A formal grazing plan that meets or exceeds Natural Resource Conservation Service (NRCS) guidelines is required. Ranchers preferring to stick with season-long grazing or any practices outside of requirements won't be eligible to enroll their rangeland.

For producers already implementing required practices, compliance may be no big deal. The CCX recognizes established carbon sequestration rates by geographical region. Generally, no soil tests or other measurements are required prior to enrollment. However, many producers would have to make significant changes in management, and they will be subject to verification that required practices are being followed. If there is doubt whether a producer can maintain required practices for the term of a contract (usually five years), participation is ill advised. In every case participation is voluntary, but contracts are legally binding. If a producer whose name appears on a contract doesn't meet its terms, that producer faces consequences. It's wise to know, before you sign, what penalties might apply.

Producers should be particularly wary about enrolling leased land. Consider what could happen if a lease were given up or lost while a carbon contract was in force. Renters and landowners have to be in agreement over who receives payment for sales of carbon credits and how they will or will not be shared.

Nobody knows for sure what the potential income from selling carbon credits might be. A few years ago, figures like $10, $15 and $20 an acre were tossed about liberally. Actually sales, thus far, translate to more modest numbers. Buyers participate in the market voluntarily and prices have varied considerably.

Politics is a factor likely to affect the future. Proposed legislation may, in effect, force U.S. manufacturers or other entities whose operations emit carbon dioxide to purchase carbon credits to offset at least some portion of total emissions. That is expected to be supportive of carbon credit prices. Maybe they will reach or exceed those aforementioned levels.

Some critics argue that carbon trading provides a way for the worst offenders to stave off action to effectively reduce carbon dioxide emissions at their source. That might be true as long as buying of carbon credits is cheaper than implementing emissions reduction mechanisms. If and when those companies eventually find economical ways to reduce carbon dioxide emissions, the market for carbon credits could decline. Perhaps it will go away altogether.

For now, carbon trading may provide an additional income stream to agricultural producers willing and able to participate. But it probably doesn't fit everybody.

— Troy Smith