
Soil Carbon Management Offsets Introduction and Overview

Introduction

Mickelson & Company, with selected agents, is providing agricultural producers in South Dakota with a new and growing source of production agriculture income – “carbon credits”. Carbon credits are derived from the environmentally friendly aspects associated with the production agriculture practices of conservation tillage (no or limited till crop production) and conversion of previously farmed land to grass.

Benefits

- New source of income currently
- Possibility of higher annual income amounts in the future
- Early farmer participation will provide input for future federal regulations
- Acres enrolled by August 15th, 2008 will be eligible for carbon credit issuances for the 2007 crop year as well as the 2008 crop year;

Requirements and Specifications

- Five year commitment to conservation tillage or grassland maintenance (through 2012)
- Tillage practice must leave two-thirds of the top-soil undisturbed
- Tillage practice must leave two-thirds of the residual remaining on the field surface (grazing is allowed, baling is not)
- Eligible grassland must have been established after January 1, 1999
- CCX conservation tillage contracts are issued at .4 metric tons of CO₂ per acre in central and western South Dakota and .6 metric tons of CO₂ per acre in eastern South Dakota
- Eligible acres must be enrolled through a CCX-registered Offset Aggregator (e.g. Mickelson & Company)
- Enrolled acres join “pools”, from which ten percent of the acres are annually selected for verification of the required practices by a CCX approved independent verifier

Contact information:

For questions you may contact your participating independent crop insurance agent or:

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No-till Rates and Eligible Regions:

<u>Geographic Region</u>	<u>Carbon Credit Issuance Rate</u>
<u>Zone A – Continuous Conservation Tillage</u> South Dakota Counties Bon Homme, Brookings, Clark, Clay, Codington, Day, Duel, Grant, Hamlin, Hanson, Hutchinson, Kingsbury, Lake, Lincoln, Marshall, McCook, Minnehaha, Moody, Roberts, Turner, Union Yankton	XSO's (Carbon Credits) issued at a rate equal to .60 per acre.
<u>Zone B – Continuous Conservation Tillage</u> All other South Dakota Counties	XSO's issued at a rate equal to .40 per acre*.
<u>Zone A – Permanent Grassland Planting</u> All South Dakota Counties	XSO's issued at a rate equal to 1.00 per acre.

* For South Dakota counties west of the Missouri River, irrigated acres shall be eligible for enrollment only if the irrigation began prior to April 17, 2007. Any such eligible acres shall accrue carbon credits at a rate equal to .6 per acre.

Frequently Asked Questions about CCX Conservation and Grassland Soil Carbon Offsets

- What is the Chicago Climate Exchange, or CCX?*
CCX is an exchange where carbon credits are traded by members of the exchange. It was started in 2003. Many members have made legally binding but voluntary commitments to reduce air pollution. More information is available at www.chicagoclimateexchange.com.
- What is a carbon credit?*
A carbon credit is a common term used to refer to a metric ton of carbon dioxide. It is the most common reference for a number of greenhouse gases (including carbon dioxide) believed to contribute to the gradual warming of the earth's climate.
- Carbon credits and global warming – is this for real?*
To put it in the words of a respected U.S. business leader, Jeffrey Imelt, CEO, General Electric: "We saw seven states in the U.S. that had cap-and-trade systems already, and this impossible labyrinth of regulations coming our way....There is no percentage for any CEO in the world to run his or her business thinking that there are not going to be carbon caps someday. Because the day it becomes law, you're five years too late. And you either get out ahead of these things or you get stomped by them." Wall Street Journal, March 24, 2008

In addition, Senators McCain, Clinton and Obama all support U.S. federal greenhouse gas regulation.
- So what is an Exchange Soil Offset, or XSO?*
An XSO is the term used by CCX to refer to a carbon credit (a metric ton of carbon dioxide) that is generated by sequestering (storing) a metric ton of carbon in the earth due to certain recognized environmentally friendly farming practices.
- Aren't there significant costs associated with ascertaining specific identifiable carbon sequestration taking place in individual fields?*
Yes. CCX has avoided most of these costs (which may outweigh the value of the sequestered carbon) by defining a minimally accepted set of practice guidelines and then applying

conservative sequestration rates to geographic regions to come up with their standard issuance rates.

- *What is the value of a carbon credit on CCX?*
It changes daily – www.chicagoclimateexchange.com carries current pricing. Historically the price range has been between \$1.00 and \$5.50. Take this price times the carbon credit issuance rate of your land (.4 to 1.0 carbon credits per acre) to determine the gross value per acre. Of course, there is no guarantee as to the future value of a carbon credit.
- *What are the expenses associated with signing up?*
Mickelson & Company charges ten percent (10%) to act as an aggregator and CCX charges \$.20 per carbon credit for registration and trading. There will also be some costs associated with the annual verification work. These expenses are either deducted from sales proceeds or may be advanced by Mickelson & Company, so there are no anticipated out-of-pocket expenses associated with signing up.
- *When will the carbon credits be sold?*
Carbon credits are eligible for trading after verification of the carbon pool in which you are enrolled. This is expected to be completed shortly after the conclusion of the fall harvest. Annual distributions are anticipated, but ultimately CCX requires all trading decisions be made by Mickelson & Company. Pricing of your potential carbon credits would be done as they are verified and traded (i.e. annually as they are issued).
- *What is going to determine the price of carbon credits that may be issued in the future?*
The rules associated with future climate regulation passed by the United States Government will be the primary factor in determining future carbon credit pricing in the United States. Many commentators expect the United States to pass a “cap-and-trade” carbon bill, that will seek to reduce our national output of greenhouse gases a certain percentage every year from an agreed upon baseline amount. Cap-and-trade regulation has been successfully used in the United States with the pollutant that caused acid rain. Both the Kyoto Protocol and the European Union have currently adopted this form of regulation with respect to greenhouse gases. Whether soil based carbon credits are part of this future climate regulation (and under what rules) will further impact the value of carbon credits to the farm community.

The second factor will of course be the laws of supply and demand which will be heavily influenced by both the nature of the future regulation and the costs of various polluters to engage in certain “pollution avoidance” activities.
- *How do the CCX rules address the risks associated with carbon storage reversal?*
First, CCX requires all aggregators to bank twenty percent of the enrolled acres until expiration of the five year practice period commitment. Second, CCX requires ten percent of each pool to be verified annually. Third, CCX requires a five year practice period commitment (versus annual). Future federal rules may provide for longer commitment periods (at potentially higher carbon credit prices).
- *What is the purpose of an aggregator?*
First, an aggregator markets the carbon credit opportunity to the farm community. As part of this process, it promotes involvement by the farm community in protecting their stake in future carbon regulation guidelines. Second, it ensures compliance with the carbon credit practice guidelines by arranging annual verifications by CCX approved verifiers. Third, it acts as one

administrative contact for CCX for a large and diverse group of individual farmers that may each individually represent a relatively small amount of carbon credits. CCX requires all soil based carbon credits go to market through an aggregator and that the aggregator retains sole trading rights for each carbon pool it enrolls. An aggregator will also provide periodic accounting and distribution of proceeds. Lastly, an aggregator should keep its farming clients <http://www.software995.com/> informed as to current events with respect to carbon markets and carbon regulation.

- *What is required to be eligible for the conservation tillage requirements under CCX rules?*
Under CCX's rules, general eligibility criteria and practices include:
 1. Continuous cotton, soybeans and pulse crops (i.e. beans, peas, lintels, etc.) are eligible only if there is a cover crop;
 2. In general, two-thirds of the soil surface must be undisturbed and two-thirds of the residue should be remaining on the field;
 3. Eligible Implements include but are not limited to: no-till drill, no-till and strip-till planters, rolling harrows, low disturbance liquid manure injectors, anhydrous ammonia applicator, manure knife applicator, sub-soil ripper with at least 24 inch shank spacing;
 4. Ineligible implements include but are not limited to: field cultivators, tandem disk, offset disk, chisel plow, moldboard plow;
 5. In general, if the implement would require that a leveling or smoothing activity follows, it would likely result in too much soil disturbance;
 6. Alfalfa is generally eligible as a no-till crop provided the appropriate practices are followed and may be hayed or grazed.
 7. Fallowed acres are not eligible;
 8. No XSO's will be issued in years in which residue removal and/or burning occurs, except that grazing of livestock is allowed;
 9. No XSO's will be issued for years in which flax is a crop;
 10. Ridge till is not an eligible practice;

CCX has a technical advisory committee that occasionally considers modifications to these guidelines.

- *May I earn carbon credits annually through 2012?*
CCX guidelines provide for the issuance of carbon credits through the 2010 crop year. CCX will periodically revise these guidelines; likely taking into consideration passed or proposed federal carbon regulation rules. Mickelson & Company anticipates there will be a market at CCX and possibly other places for soil based carbon credits past the 2010 crop year, but there is no guarantee what the nature of that market will be or if it will exist.

Potential Carbon Credit (XSO) Income Worksheet

	Total	Less: Ineligible	Net	Offset Issuance Rate	Metric Tons Year
Non-Irrigated Cropland Acres					
Irrigated Cropland Acres					
Permanent Grassland Acres					
Total Offset Tons Annually (XSO's)					
Price per ton					
Total Annual Payment					
Less:					
Aggregator compensation (10%)					
CCX Offset Registration and Trading fees (\$.20/ton)					
Verification costs					
Annual Net Contract					
Times: 80% (to account for 20% reserve account)					
Times: Five years (total potential contract revenue)					

**FOR PURPOSES OF DEMONSTRATION ONLY - NOT BINDING
DEPENDENT UPON A MARKET EXISTING FOR CARBON CREDITS AND
FUTURE PRICES FOR CARBON CREDITS**