



## **CARBON CREDIT OFFSET MARKETS**

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Mainstream and credible science points out that human activity is having a negative impact on climate. Restated, the increase in greenhouse gas concentrations (GHG) will cause serious problems in the future. There are a few contrarians in the political and science community but as the science becomes more robust the arguments against taking action, weaken.

As farmers engaging in the science debate is a waste of our limited energy and resources. The Kyoto protocol is an international agreement to address GHG levels and contains market mechanisms that create opportunity (not without risk) for the ag sector.

The two Kyoto mechanisms to reduce GHG are Emission Reductions and GHG Removals. Simply put Emission Reduction slows the rate of adding GHGs. Biological removal takes CO<sub>2</sub> from the atmosphere and stores it as organic carbon in our soils.

Agriculture can do both. We can reduce the sector emission of GHGs like CO<sub>2</sub>, nitrous oxides and methane by the way we manage our soils, fertilizers, livestock and manure handling systems. These create Emission Reduction offsets.

As a sector we also have the potential to remove CO<sub>2</sub> and store it as organic carbon in our soils or trees. These Emission Removals create carbon sink offsets. The science is simple: plants absorb CO<sub>2</sub> and turn it into organic carbon that can be stored as organic carbon in soils or biomass like trees creating carbon sinks. These are dynamic systems that can be reversed e.g. a growing forest can remove CO<sub>2</sub> creating a sink; a forest fire can release the stored CO<sub>2</sub>. Soil sinks are also dynamic systems that can gain or absorb or release CO<sub>2</sub>. This creates a Permanence Risk or liability.

The market mechanisms contained in Kyoto allow those with surplus credit to sell them to those with surplus emissions. There are provisions to create an international market and price discovery system. Since Canada is unlikely to reach its own target farmers will probably only have access to a domestic market with two major buyers. Large final emitters (LFEs) like utility companies and the Canadian government.

The rules of domestic offset system are a bit uncertain and the links to offshore markets are unclear. LFEs will be able to purchase offshore credits (even ag offsets) but farmers will be held captive in a domestic market that will limit the price they are paid.

There seems little doubt that the supply of offsets will not meet the demand, which should strengthen offset's values. The federal government confuses price discovery with the Price Assurance Mechanism (PAM), which guarantees that the LFTs will not have to pay more than \$15 per offset tonne.

A new federal department that will have a fee structure will administer the offset system. Buyers (LFEs) and suppliers (Farmers) may be separated by project proponents, aggregators who will try to assemble multiple suppliers for a fee.

Some LFEs have created spin off companies to aggregate for them. Other aggregators may offer to market your offsets as part of the services they already offer for a fee. There will also be a host of brokers and traders who want a piece of the pie as well.

Before farmers get involved in the trading system there is a need to be cautious.

First remember the two offset types: Emission Reductions and Emission Removals (sinks). Emission Reduction offsets can be traded like any other commodity. There are several markets to follow. The European ones seem to function with prices moving between \$25.00 and \$50.00. Chicago Climate Exchange (CCX) has been flat at about \$2-\$3. It's been there for so long CCX should be ignored as a price discovery system. Domestically \$15.00 should be the floor. PAM limits upside and a serious supply shortage should limit downside.

Emission Removals (sink) offsets have the Permanence liability issues so approach this with caution. The offset system design allows Farmers to sell sink offsets that have a liability attached. It is unlikely LFEs will accept this liability. Methods of addressing liability include A pooling notion which sets a percentage of the offsets aside as a reserve and or other insurance schemes will be deducted from the offset value to the Farmer.

Sink offsets can also be traded as temporary credits. This is an offset lease or emission storage contract for a specified time. This acts like a loan of the offset or rental of Emission storage space. This limits liability and if traded ex post (after creation) eliminates liability. Temporary credits are not favoured by LFEs but should be the preferred option to Ag. Suppliers. Temporary credits are more of a service than a commodity and would presumably track emission reduction offsets at a lower rate.

Approach this market with great caution and do your research before you sign any contract. The offset rules and protocols are under development but hopefully by Agritech things will be a little clearer and I can add more detail. If you are uninformed you are vulnerable. Governments LFE's and lots of middlemen want to extract value so you will need to pay attention if you want to return the value to the farm gate. For homework check out [www.ssca.ca](http://www.ssca.ca).