

Agricultural Carbon Offsets

Intro

INFORMATION FOR ALBERTA'S OFFSET MARKET

Frequently Asked Questions

1) What is an offset credit?

An offset credit is a reduction in greenhouse gases in one area that counterbalances the emissions created in another. Since 2007 in Alberta large industrial operations that emit over 100,000 tonnes of greenhouse gases, (making up about half of Alberta's total), have been regulated and required to reduce their emissions. They were given three choices: 1) Increase efficiency, for example by cogeneration 2) Pay a set provincial carbon price into a fund now called Emission Reduction Alberta 3) Pay for emissions reductions in the other half of Alberta's emission total, the non-regulated part of the Alberta's economy, which includes agriculture. This last method created a market for offset credits in agriculture as well as other sectors. The keys here are that the offset system is a *market*, not a *program* like Growing Forward or the Canadian Agricultural Partnership, and it is one part of a much larger system.

2) How many ways can agriculture collect offset credits?

Offset credits are created by following procedures call 'protocols'. As of Dec 2018 there are 25, of which agriculture is using four: Conservation Cropping, Fed Cattle (Reducing Greenhouse Gas Emissions from Fed Cattle), Microgeneration (Distributed Renewable Energy Generation), and Biogas (Anaerobic Decomposition of Agricultural Materials). Conservation Cropping (and its predecessor the Tillage protocol), are by far the most widely used by agriculture. Fed Cattle has seen some adoption by feedlots, Biogas by some large biogas plants, and Microgeneration has just recently become operational. Some protocols don't apply to agriculture, and some have been too difficult to use or uneconomic so far.

Full list of all protocols: https://www.alberta.ca/alberta-emission-offset-system.aspx?utm_source=redirector

3) What is an offset credit worth? How much will I get per acre? Why the difference between the 'Carbon price' and what I get?

Varies depending on the set provincial carbon price, how close the offset selling price gets, the farmer/aggregator split, and the amount of carbon tonnage. An example using the Conservation Cropping protocol, based on a \$23.00/tonne offset sale price and a 2/3 to 1/3 farmer/aggregator price split:

Parkland area

1000 acres X 0.113 tonnes/acre = 113 tonnes carbon
113 tonnes carbon X \$15.33/tonne = \$1732 or \$1.73/acre

Dry Prairie area

1000 acres X 0.057 tonnes/acre = 57 tonnes carbon

57 tonnes X \$15.33/tonne = \$874 or \$0.87/acre

Note the key to what a producer will receive in income is the amount of carbon tonnage. While the amount the offset sells for is usually somewhat under the Emissions Reduction Alberta ‘Carbon Price’, and aggregation companies take a portion to get offsets in a sellable state and sold, the main factor driving the offset return to the farmer is the carbon yield. The ‘Carbon Price’ is listed *per tonne*, and with Conservation Cropping the carbon ‘yield’ ranges from about *a tenth to a twentieth of a tonne an acre* in 2018, while with the Microgeneration protocol the yield is set at just under a kg (0.64) per kWh, less than 1/1000 of a tonne.

4) I have a quarter section, is it worthwhile to apply for offsets?

A feedlot may want to inquire on the Fed Cattle protocol, and a solar installation may want to look at Microgeneration. Under Conservation offset income for a quarter is low, and it is likely not worthwhile to go through the process.

4) I following the Conservation Cropping protocol and I am a renter, do I need the landowners signature? If so, why?

In the Conservation Cropping protocol ownership of offset credits default to the landowner, so his signature is needed to claim the offset. However also needed is a number of records that the renter usually has, so who claims the offset is a matter of negotiation between renter and landowner, keeping in mind the income per acre is small.

5) What kind of records do I need to keep?

Depends on the offset. The Conservation Cropping protocol requires a farmer to prove the ownership of the field and the field practice (field location, crop, machinery used, etc), while the other protocols are quite different. For example the Microgeneration protocol requires accurate power production records.

6) Do I need to use an aggregator? Where can I get information on aggregators in my area?

Technically no, however in practice the large industrial facilities that purchase offsets prefer to buy offset credits in large quantities and sign a single contract rather than negotiate a number of contracts for small volumes. Aggregators act as project developers/compilers, plus manage the numerous requirements that go into creating and selling a viable offset: managing data collection, third party verification, serialization, and ultimately marketing and selling. Current Aggregation companies working with the Conservation Cropping Protocol as of November 7th, 2018:

AgriTrend Aggregation: 1-877-276-7526

Carbon Credit Solutions: 1-877-912-9132

Farmers Edge (for their agronomic customers): 1-866-724-3343

7) How much are they charging for this service?

Usually around a 1/3 to 2/3 Aggregator/Farmer split for Conservation Cropping offsets, can vary somewhat. Other protocols may be different.

8) Why are there no offsets for forage or trees?

While the Alberta offset system does provide a market for carbon, it does come with a number of limitations. As well as building up carbon or reducing greenhouse gas production, an activity to be approved as an offset protocol has to be beyond business as usual, proven by scientific research, quantifiable and verifiable. A problem in any one of these areas can prevent an offset from going ahead, and this is what has happened with forages and trees up to this point.

The main Alberta Agriculture Carbon page with information sheets on all the agricultural protocols is here:

<http://www.agriculture.alberta.ca/agcarbonoffsets>

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For more information contact the Ag-Info Centre at 310-FARM (3276) or Paul Jungnitsch at 780-427-3801

The information contained here is the interpretation of Alberta Agriculture and Forestry. Alberta's carbon offset system is managed by Alberta Environment and Parks. Offset projects must comply with the most recent quantification protocols and program requirements published by Environment and Parks at: https://www.alberta.ca/alberta-emission-offset-system.aspx?utm_source=redirector

