



TEAMALBERTA

ADVANCING ALBERTA'S CROP SECTOR TO 2025 AND BEYOND

January 9, 2020

Honourable Jason Nixon
Minister of Environment and Parks
323 Legislature Building
10800 – 97 Avenue
Edmonton, AB T5K 2B6

Honourable Devin Dreeshen
Minister of Agriculture and Forestry
229 Legislature Building
10800 – 97 Avenue
Edmonton, AB T5K 2B6

Re: Alberta Environment and Parks Memorandum (November 18, 2019) – Additionality Assessment of the Quantification Protocol for Conservation Cropping (Version 1.0) (Conservation Cropping Protocol)

Dear Ministers Nixon and Dreeshen:

On behalf of the over 20,000 barley, canola, pulse and wheat farmers in Alberta, we appreciate the opportunity to provide comments on the "Additionality Assessment of the Conservation Cropping Protocol (CCP)". Since receiving your memo, Team Alberta has had numerous conversations with other market stakeholders about additionality with respect to census data, no-till definitions, project developers' internal data, and barriers that inhibit the adoption of conservation cropping practices by farmers in Alberta.

We all agree the 40% adoption threshold that Alberta has established for market penetration of a technology or practice is very close for no-till; especially given the uncertainty around the interpretation of additionality from both the proportionality perspective and the adoption rates of the more restrictive definition of no-till in the CCP. If the Government of Alberta acknowledges the unique proportional additionality mechanism that is applied in the CCP, then the market penetration rate should not matter. This approach is applied in the CCP because there is a desire to maintain the carbon stored in the soil, and to provide ongoing incentive to farmers who have adopted sequestering practices and to farmers who have yet to switch to no-till.

In the era of 'Net Zero' – we cannot completely decarbonize our economy unless we mobilize the biological bridge via sinks. It's unfortunate and untimely that Alberta is considering terminating the CCP when soil

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carbon is still being sequestered by growers¹ and others are recognizing the unique additionality application to projects that build sinks. Alberta may be offside since both Saskatchewan and Manitoba are considering these protocols in their systems.

Team Alberta asks the Government of Alberta to consider taking a prudent course of action that will not jeopardize the carbon market for Alberta farmers. Agricultural carbon offsets, especially the CCP, are important tools that recognize farmers for their environmental stewardship efforts that remove carbon from the atmosphere. Millions of dollars have been injected into rural communities across Alberta in the last several years because Alberta has had a functioning market. This is why we are aligning with the other market stakeholders on four key recommendations:

- 1) Announce a moratorium on new farms and fields after the May 1, 2020 deadline.**
- 2) Maintain the soil coefficients in the CCP.**
- 3) Conduct a thorough additionality assessment of no-till adoption rates/conservation cropping practices.**
- 4) Make a commitment to prioritize the development of a new sustainable cropping system protocol for 2022.**

Recommendations:

1) Announce a moratorium on new farms and fields after the May 1st, 2020 deadline

Given project developers' analysis showing declines in credit production the last few years;

Given new farmers or existing farmers have been engaged by project developers since the submission of the 2019 planning sheets;

- ❖ We recommend the Government of Alberta (GoA) allow new farms and fields to be added to the project planning sheets for the 2020 crop year.

Note – we expect the impact of this action to be negligible because the number of credits generated on an annual basis have seen little variation over the life of the old No-Till protocol and the current CCP. See data from Carbon Credit Solutions Inc. (CCSI):

1. Credit production from the No-Till protocol for years 2002 to 2011:
 - a. Average credit production by vintage year was 1,103,858.
 - b. Lowest credit volume at 959,442 credits (2002)
 - c. Highest credit volume at 1,227,394 (2008)
 - d. Credit production declined annually from 2008 to 2011 to 1,035,005 tonnes.
2. Credit production from the Conservation Cropping Protocol for years 2012 to 2017:
 - a. Average credit production by vintage year was 675,605.

¹ See Viresco Solutions' proposed "Sustainable Cropping Systems Protocol"

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- b. Lowest credit volume at 586,441 credits (2012)
- c. Highest credit volume at 740,664 credits (2015)
- d. Credit production declined annually from 2015 to 2017 to 694,969 tonnes.

2) Maintain the soil coefficients in the CCP

Given the protocol is scheduled to end in 2021;

Given an additionality assessment will likely show adoption rates of conservation cropping practices near 40% – should Alberta choose to ignore proportional additionality;

- ❖ We recommend the GoA leave the soil coefficients alone until the CPP ends in 2021.

3) Conduct a thorough additionality assessment of no-till adoption rates/conservation cropping practices

Given the actual adoption rates of the restricted definition of no-till and soil disturbance are not known;

Given the questions asked in the census do not reflect the definition of conservation cropping used in the CCP;

Given this review can be used to develop a new “Sustainable Cropping Systems Protocol”;

- ❖ We recommend that the GoA reconsider how additionality is determined for no-till activities by conducting a thorough additionality assessment of no-till rates/conservation cropping practices, which are required by the CCP.
 - This study should look at the adoption of these practices over a multi-year period to determine the rate at which the adoption of these practices is changing.

4) Make a commitment to prioritize the development of a new sustainable cropping system protocol for 2022

Given jurisdictions, programs/registries, and businesses around the world are looking to implement programs to incentivize carbon sequestration activities in farm production systems to support Net Zero targets;

Given the drive for soil carbon credits has resulted in numerous efforts to develop protocols for groups like Nori, Ecosystem Services Market Place, Indigo Ag, Bayer Crop Sciences, the Climate Action Reserve the American Carbon Registry and the Gold Standard;

Given Alberta took a global leadership role when it approved the No-Till protocol in 2007 and the subsequent Conservation Cropping Protocol in 2011;

Given Alberta has the expertise to develop a comprehensive sustainable cropping system protocol to quantify emission reductions from our agricultural sector and re-establish itself as a global leader in agricultural offsets;

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Given Viresco Solutions, Carbon Credit Solutions Inc. and others are willing to share in the co-development of a North American “Sustainable Cropping Systems Protocol”;

- ❖ We recommend that the GoA make a commitment to prioritize the development of a new sustainable cropping system protocol for 2022.

In closing, we ask you to please consider taking a prudent course of action on these four key recommendations so that Alberta farmers are not negatively impacted by AEP’s additionality assessment for the Conservation Cropping Protocol. Alberta farmers and rural communities do benefit from these important revenue sources that recognizes the farmer’s role as environmental stewards in mitigating carbon emissions and sequestering greenhouse gases in agricultural soils. Team Alberta is supportive of the efforts from multiple stakeholders towards the development of new protocols, such as the “Sustainable Cropping System Protocol”, which can recognize these climate benefits.

Please see the attached technical brief on additionality for more detailed information that supports our recommendations. If you require further assistance please contact Karla Bergstrom, Manager of Government and Industry Affairs in the Alberta Canola office at 780-454-0844 or karla@albertacanola.com. Team Alberta looks forward to continuing to work with your government as you endeavour to make life better for all Albertans.

Sincerely,



Gary Stanford
Alberta Wheat Chair



John Guelly
Alberta Canola Chair



Dave Bishop,
Alberta Barley Chair



Don Shepert
Alberta Pulse Growers Chair

Cc: Ms. Bev Yee, Deputy Minister of Environment and Parks
Mr. Justin Wheler, Executive Director, Regulatory and Compliance Branch (AEP)
Mr. Andre Corbould, Deputy Minister of Alberta Agriculture and Forestry

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Conservation Cropping Protocol in Alberta – Addressing Additionality

(December 20, 2019) Prepared by Viresco Solutions for Team Alberta (Alberta Canola, Alberta Pulse Growers and the Alberta Wheat and Barley Commissions)

Issue:

Discussions about the additionality of the Conservation Cropping Protocol (CCP) have been ongoing. This brief is designed to clarify why traditional assumptions of additionality may not necessarily apply to this type of activity, from both a wider North American perspective and a Canadian–Albertan perspective. Further, the science shows that carbon sequestration has not leveled off and that significantly more sequestration can and is occurring due to better agronomics, improved cultivars, increased productivity and more widespread acreage of deeper rooted canola.¹

Background:

Internationally, additionality is one of the foremost issues surrounding offsets. Additionality involves trying to justify intent, which is often counter-factual. In other words, to qualify as an activity in a protocol one needs to demonstrate the activity will result in GHG reductions/removals that are **additional** or **incremental** to what would have happened in the absence of the project (i.e. baseline condition). Therefore, additionality is often estimated, which is subjective. As a result, different tools have been developed globally to improve assessments of additionality.

1. Additionality Definitions for CO₂ Removals in the North American/Global Context:

The Tillage System Management component of the CCP uses a performance standard baseline that is proportionately adjusted to the level of practice uptake of various tillage systems in Alberta’s soil regions. This proportional method of additionality, coupled with the recognized importance of keeping sequestered soil carbon out of the atmosphere and continuing to remove produced CO₂e through biological sinks, is an important climate change mitigation tool. This requires unique approaches to this protocol that differ from most others in addressing additionality. This is recognized in Alberta and in: a) the Government of Canada’s past policy statements on offsets; b) the U.S.’s past proposed policy statements; c) the Western Climate Initiative’s offsets criteria; and d) the Australian Carbon Farming Initiative.

a) Environment Canada Policy Statements – Turning the Corner (June 2009):

Section 2.3.4 – The project must achieve incremental greenhouse gas reductions.

The project must have started to achieve reductions in greenhouse gases on or after January 1,

¹ This was the subject of a webinar presentation presented by Dr. Brian McConkey of Agriculture and Agri-Food Canada (AAFC) to staff at Alberta Environment & Parks and Alberta Agriculture & Forestry on October 1, 2018.

2006, except for projects that are susceptible to easy reversal (e.g. reduced tillage and no-till projects in agriculture). The Minister may specify a normalized baseline² in the Offset System Quantification Protocol that these projects can utilize regardless of start date.

b) American Clean Energy and Security Act of 2009 (H.R. 2454)

Activities that are readily reversible (i.e. those that store carbon in soils) may have a start date no earlier than January 1, 2001, where an alternative date may produce an environmental benefit by removing an incentive to cease and then re-initiate activities that began prior to January 1, 2009.

Also, in Section 734a (2) and Section 504a (2) b for activity baselines, it reads:

- A standardized methodology for establishing activity baselines for offset projects – The Administrator shall establish activity baselines to reflect a conservative estimate of business-as-usual performance or practices for the relevant type of activity.³ The baseline provides an adequate margin of safety to ensure the environmental integrity of the offsets calculated in reference to such baseline.

c) Western Climate Initiative Offset Criteria (2013):

Western Climate Initiative (WCI) aims for the most conservative baselines possible to guarantee that projects go beyond business-as-usual. To accomplish this, WCI identifies the most stringent regulatory and legal requirements found in any of its jurisdictions and measures baselines against those requirements.

- Performance Standard baselines are the preferred option; however, WCI partners can suggest alternative protocols where jurisdictions have varying levels of regulatory, incentive, or adoption levels.
- In this regard, WCI retains the option to use what it terms as "proportional additionality" to determine performance standards for agriculture and forestry sequestration. WCI proposes to assess sector activity across a region (a jurisdiction or WCI as a whole) and measure change in a project's carbon stocks against this sectoral baseline.⁴

d) Australian Carbon Farming Initiative:

The Australian Carbon Farming Initiative uses a 'positive list' of activities or project types that they deem additional. Meaning, the Australians have made policy decisions that deem conservation tillage as additional activities.

² A normalized baseline is essentially an adjusted baseline, based on proportional additionality.

³ The US legislation recognizes that 'activity baselines' have some level of adoption, and adjusting by adoption rates can be used to meet additionality.

⁴ See <http://www.westernclimateinitiative.org/component/remository/Offsets-Committee-Documents/Offsets-System-Essential-Elements-Final-Recommendations>

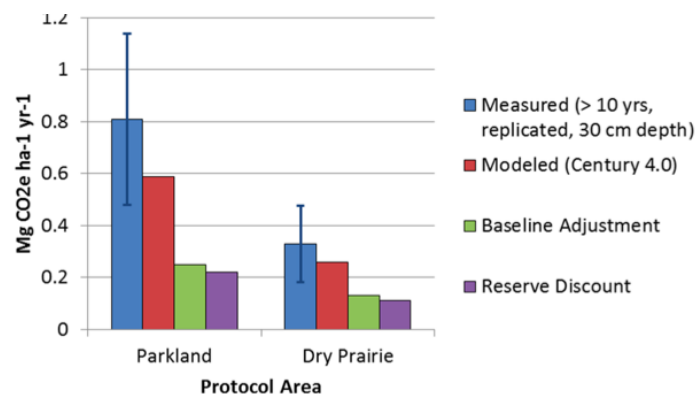
2. Alberta Context:

The Tillage System Management component of Alberta’s CCP allows early adopters and projects implemented after January 1, 2002 (Alberta’s start/crediting date) to be eligible to create credits at a discounted rate (essentially adjusting the carbon gain to zero). Thus, no one receives credit for the carbon stored to date and everyone applies the discounted coefficient. This is the policy solution to forming a more equitable arrangement between late and early adopters – while maintaining the practice and the sink stored to date by those who adopted earlier.

The maintenance of stored carbon up until the start date of the system is an important policy objective for Alberta, as well as for the proposed Canadian rules, the U.S. draft legislation, the WCI objectives and the Australian policy. Incenting this continued activity by early adopters ensures that the carbon stored to date is maintained, which refers to the 6 Mt of carbon (not CO₂e) from 1990-2001 before Alberta’s Carbon Pricing System began in Canada.⁵ The introduction of an Offset System policy with all of its new regulatory criteria (real, permanent, measurable) should recognize the need to keep soil sequestration to date ‘permanent’ – thus avoiding perverse policy outcomes.

The original designers of the Tillage System Management protocol, AAFC and Environment Canada, thought the proportional additionality approach to the baseline achieved a more equitable outcome for all stakeholders in Canada, and protected the carbon previously stored. Obviously, other systems and registries have considered this as well.

Figure 1 – For every 3 tonnes sequestered by Alberta growers, only 1 tonne is credited in the system.⁶



Conservative Science/Policy in the Protocol – 1 tonne credited for every 3 sequestered in soil: 1 Mt CO₂e/yr from 2002 to 2012

Science based on validation of Century model (Vanden Bygaart et al 2008) and use of modeled results (McConkey et al. 2007) for Canada’s National Inventory Report (Environment Canada, 2013)



⁵ This 6 Mt was claimed by the federal government in its international commitments up until 2001.

⁶ Slide is courtesy of Tom Goddard, Manager Environmental Policy, Alberta Agriculture and Forestry.

3. Census Uncertainty – Suppression and Scaling

Agriculture census data is gathered from all farms in Canada every five years. There is no sampling of the population, so it is able to provide a wealth of high-quality data that is internationally recognized. However, uncertainties can arise from the processing and interpretation of this data.

Statistics Canada guards individual privacy and will suppress expression of a variable if there are less than 17 observations/records present in a grouping. This becomes an issue where polygons are small and/or farms are few. More suppression issues arise when processing raw farm data to small polygons (e.g. Soil Landscape of Canada polygons) versus larger Eco district polygons. Results of both levels of polygons can be rolled up to Eco region levels, but the final cumulative statistic could be different.

There are various methods of handling suppressed data depending upon the intent of the analysis. For example, if we are interested in the number of hectares of barley and only 16 farms report barley in a polygon, then Statistics Canada will not report the barley variable for that polygon. Decisions will have to be made as to whether barley should be rolled into a larger class of “cereal grains” or moved to a dummy polygon to capture the “remainder” from all suppressed polygons. The latter would at least provide an accurate total number of barley hectares for a larger polygon (e.g. province).

4. Census of Agriculture Uncertainty – Definitional Issues:

Statistics Canada uses a national level definition for terms and practices defined within the Census of Agriculture. As shown here, the way the no-till or zero-till seeding question is posed is very broad and it does not mention number of passes or disturbance level thresholds.

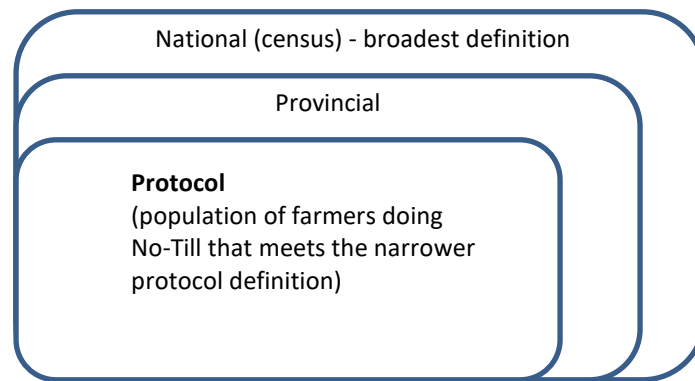
2016 Census of Agriculture Definition⁷:

- 98. ◦ **No-till seeding or zero-till seeding** (*Include direct seeding into undisturbed stubble or sod.*)
 - Tillage that **retains most of the crop residue on the surface** (*Include minimum tillage.*)
 - Tillage that **incorporates most of the crop residue into the soil**

Individual province definitions may differ from the national term. For instance, the Alberta provincial definition is more restrictive than the national census definition. The result is Alberta’s protocol definition of no-till or zero-till has an even more restricted and exact definition than either the provincial or national criteria. (See Figure 2)

⁷ See http://www23.statcan.gc.ca/imdb-bmdi/instrument/3438_Q1_V4-eng.htm

Figure 2 – No-Till Definition



Implications and Considerations:

Project developers in Alberta disqualify many applicants to their Conservation Cropping programs because the equipment does not meet the Protocol eligibility requirements. Many growers think they are 'no-tilling' and fill in the census form as such, but they are disturbing the soil more than the Protocol allows. Fall tillage ejects many acres from aggregators' programs and eligible acres are shrinking.

The reasons for excluding potential applicants to a project developer's program are multi-fold:

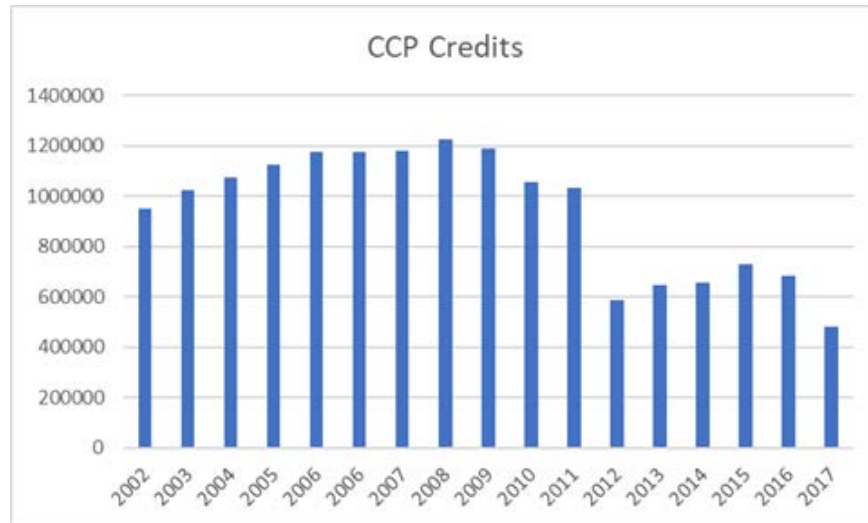
- i. Openers are too wide (e.g. seeders with 12-inch shanks and 5.5-inch openers)
- ii. Small shovels for weed control (e.g. 5-inch sweeps on 10-inch centers)
 - o Mostly in regions with lighter soils
- iii. Light cultivation to warm soil temperature prior to seeding
 - o Mostly in regions with darker soils
- iv. Compaction issues requiring tillage that exceed the 10% discretionary threshold
- v. Manure incorporation
- vi. Vertical tillage
 - o A growing practice in recent years, especially in the fall

Since there are definitional issues with the census data and uncertainty exists in the way a farmer answers the census question, perhaps a better way to assess additionality is to consider the number of growers enrolled in carbon projects vis-a-vis the larger farm population? This will likely be less than 20 to 30% of farms.

Although Alberta's project developers have aggressively tried to recruit new farms into their programs, they think the threshold has been reached in the province. For example, one prominent project developer has over 8,000 farm names in their data management system that they have engaged, but only 2,785 would be eligible to generate credits in their program. Another project developer estimates that between 35 to 45% of the growers they interact with, who initially signal as no-till operators, do not

qualify. According to the Offset Registry data, the annual credit volumes have shrunk substantially. (See Figure 3)

Figure 3 – Offset volumes from Tillage System Management and CCP in Alberta.



Recommendation:

1) Alberta Environment and Parks and the Auditor General preserve the additionality of practices under the Tillage System Management and Conservation Cropping Protocols – Not doing so would be a major risk for Alberta.

- Given the situational context around the globe, where there is growing consolidation by global players that biological sinks and Nature-based Solutions are seen as a missing and important part of the carbon balance sheet⁸;
- Given that the Tillage System Management component of the protocol uses proportional additionality (carbon sequestered has been adjusted for the carbon gained to date), which other systems around the world have also recognized in their policy statements;
- Given that definitional issues in the Census of Agriculture may throw into question the adoption levels in Alberta vis-a-vis the tighter definitions of No-Till under this Protocol; and
- Given the latest available science will help make sound evidence-based decisions.

The Government of Alberta can make a policy decision to proceed with this protocol, like Australia, for the reasons brought forward in this technical brief as a legitimate approach to real reductions of GHGs. Please let us know if additional information would be useful for this decision.

⁸ See <https://nature4climate.org>