April 29, 2025

Environment and Climate Change Canada

Via email: creditscompensatoires-offsets@ec.gc.ca

RE: Consultation on the Federal Offset Protocol: Reducing Manure Methane Emissions

On behalf of the National Cattle Feeders' Association (NCFA) and the Canadian Cattle Association (CCA), we appreciate the opportunity to provide input on Environment and Climate Change Canada's draft *Federal Offset Protocol: Reducing Manure Methane Emissions.* Our organizations represent 60,000 beef producers across Canada, and we support continuous progress towards sustainable outcomes for all parts of the value chain.

Industry Background

Beef production starts with the cow-calf phase, which includes calves from birth until they are weaned from the cow, usually around 6-months of age. During this period, cattle are typically housed outdoors on pasture with manure naturally being distributed across the landscape. Following this is the feeding phase, which would be from the time of weaning to when the cattle reach market weight at approximately 14-18 months of age and 1400-1500 lbs. This stage occurs in a feedlot where cattle are housed in pens and fed high energy diets, producing more pounds of beef while occupying less land, consuming less water and producing less atmospheric emissions.

Feedlot production systems vary across Canada. In Eastern Canada, cattle are typically fed in a covered building. Some feedlots use solid-flooring systems which are routinely cleaned out, producing a manure-straw mix which can then be stored or composted before being applied to land. Other feedlots have slatted floors, allowing manure to drop through the slats for collection. These slatted floor manure collection systems reduce the need for straw bedding and produce a liquid slurry which is either stored underneath the barn or transferred to holding tanks.

In Western Canada, feedlots are open-air systems where solid manure is collected and removed from the pens periodically during the year. This manure is often stockpiled or composted until conditions are suitable for spreading the manure on land, but recent improvements in feedlot design and biogas technology present a growing opportunity for manure to be used as feedstock for anaerobic digesters.

The draft *Federal Offset Protocol* outlines a number of ways to reduce methane emissions and capture carbon credits by doing so, but we have some suggestions for clarification within the protocol.

Chemical treatment (Chemical MTS)

Some beef producers who are storing liquid manure are collecting it directly below the barn, which may present physical and chemical challenges related to mixing. If there is to be extension and training related to these protocols, we would appreciate guidance around parameters for incorporating chemicals, as well as discussion of any safety concerns associated with mixing sulfuric acid with manure.

Mechanical separation (Mechanical MTS)

The process of mechanical separation has traditionally been a rather energy intensive process, making it difficult to reduce methane emissions enough to significantly offset the inputs. Given the capital investment also required, adoption would be enhanced by funding programs which support incorporation of these systems.

Anaerobic digestion (AD MTS)

In some instances, there may be an anaerobic digester set up with a hub-and-spoke system designed to bring manure from neighbouring sources into one centralized facility for processing. This brings up several opportunities for clarification within the protocol:

- In the case of a hub-and-spoke model, would it be the owner of the biogas facility or the provider of the manure who will be eligible to capture the credits for manure used in the anaerobic digester?
- If other organic materials are added to an anaerobic digester along with manure, can the manure portion of the mix still count towards credit calculation?
- How does the protocol work in conjunction with the Clean Fuel Regulations, and how can participants ensure they capture eligible credits but avoid double-counting?

General Comments

While the protocol has good intentions and we respect the value of detailed quantification related to measurable reductions in methane emissions, the result is a program which is so cumbersome that it will be difficult for many farms to implement. Other offset protocols have seen limited uptake because administrative burden has either deterred participation or has required the engagement of professional services to quantify the credits, which incurs expenses and significantly reduces the benefit to the participant.

There is also a lack of inclusion of solid manure systems which are common in the beef cattle sector and have incredible potential to drive the adoption of anaerobic digestion systems across the country. The manure from beef feedlots in Alberta alone has the potential to produce 9,240,000 GJ of renewable natural gas (RNG) annually, and protocols which incentivise development could help drive sector growth. This opportunity is increasingly being looked at as a solution to reducing methane emissions while also growing the green energy sector in Canada, but is unfortunately not supported through this draft protocol and is not represented in other agriculture-based offset protocols.

We have several suggestions for the improvement of this offset protocol:

1. **Definition of manure**

   We suggest the definition of manure for the purpose of this offset protocol includes all manure, regardless of source (e.g. dairy, hog, beef) or form (e.g. liquid or solid). This approach has been adopted in other jurisdictions and would provide an incentive for all of animal agriculture to improve manure management practices. This change may include specifications related to dry matter content but would avoid the exclusion of industries or specific producers based on their production system, thereby levelling the playing field.

2. **Carbon intensity calculation**

   In the interest of simplifying the program, we would suggest that all manure be assigned an average carbon intensity value which can be the basis for assumed emission avoidance. This modification would reduce the intensity of verification requirements and administrative burden while still achieving the intended outcomes of reduced methane production. Calculating average carbon intensity across all types of manure should allow for overall methane reduction numbers to still be representative.

3. **Baseline calculation**

   There is room for enhanced clarification as to how the baseline would be calculated for a new operation, as well as whether there can be a transition period if the baseline calculation changes. Additionally, should there be a change in regulations which shift the calculation of eligible credits, there should be an adjustment period which allows participants to continue capturing credits at a declining rate over time. Some of the methods outlined in the draft protocol require significant capital investment and this would help offset costs which are incurred based on projected income at present day values.

Summary

This protocol has the potential to impact agriculture in a positive way if it is achievable and practical to implement. The protocol should also be designed in a way that permits new technologies to be reviewed and efficiently incorporated into the protocol as they evolve. Support in terms of program guidance documents and extension, as well as financial supports for implementation of some of these processes would encourage awareness and adoption of the protocol. Some of these outlined technologies, for example, anaerobic digestion, require significant infrastructure and may take many years to see a return on investment, especially with risk factors such as fluctuating carbon markets and evolving regulations.

The Canadian beef industry presents an opportunity for our country to be a leader in methane reduction strategies while supporting a renewable energy sector through the adoption of anaerobic digesters, but there need to be mechanisms in place to support this development. The *Federal Offset Protocol: Reducing Manure Methane Emissions* has the potential to be a catalyst for the growth of this sector if it can be modified to include manure from the majority of beef feedlots.

We thank you for the opportunity to provide input to this consultation and would gladly accept the opportunity for further discussion related to this file.

Sincerely,

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