

BullSense

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Do your homework before selling Greenhouse Gas offsets

The Alberta Greenhouse Gas (GHG) offset system currently offers three approved and one pending approval protocols for quantifying the GHG emission reductions from bovine management practices. To date the only agricultural GHG offset protocol in use is based on tillage management. The bovine GHG offset protocols are distinctly different in how they are applied, and calculated, compared to tillage-based offsets. However, there are similarities in the risk of contracting and selling these types of GHG offsets.

Approved bovine protocols

The approved bovine protocols based on practice changes that reduce GHG emissions include:

1. Including Edible Oils in Cattle Feeding Regimes: GHG offsets are created as a result of the inclusion of between 4% and 6% edible oils

(on a dry matter basis) in the finishing diet. Edible oils at these levels suppress methanogenesis and result in a 20% reduction in enteric methane emissions. (Methane has 21 times the global warming potential of CO₂, so saving one tonne of CH₄ emissions is equal to 21 tonnes of CO₂, or 21 tonnes of GHG offsets or carbon credits.)

2. Reducing Days on Feed of Cattle: GHG offsets are created as a result of adopting new technologies that reduce the number of days on feed for cattle being finished in a feedlot. This reduces the enteric methane emissions and methane and nitrous oxide emissions from manure. (Nitrous oxide (N₂O) has 310 times the global warming potential of CO₂, so saving one tonne of N₂O emissions is equal to 310 tonnes of CO₂, or 310 tonnes of GHG offsets or carbon credits.)



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3. **Beef Lifecycle Projects:** GHG offsets are created as a result of reducing the culling age of cattle, therefore accurate records of birth dates is critical. By reducing the age of cattle for a given weight, enteric methane emissions and emissions from manure are reduced.

The GHG offset protocols are continuously being developed. A protocol pending final review is the “selection for residual feed intake in beef cattle.” The GHG offsets are created as a result of selecting beef cattle with a genetic trait for increased feed efficiency also known as “low residual feed intake.”

Unlike tillage-based GHG offsets, bovine-based offsets are based on feedlot data. This means GHG offsets will depend directly on the management and available data at each feedlot operation and cow calf operation for the Lifecycle Protocol. Project-based GHG offsets are calculated on the conditions before and after a given practice change. This requires three years of data before the practice change is implemented. The actual difference between the baseline values and the data from the practice change forms the GHG offset calculation.

GHG offsets not without risk

The risk to the project owner from a failed Alberta Environment (AENV) audit will depend on what basis the GHG offsets were sold. GHG offsets are sold on a contractual basis and the project developer and/or aggregator is usually required to provide some assurances if the project does not complete a successful AENV audit. Risk (financial and legal liabilities) to the project owner, in this case the livestock operator, will vary depending on the contract with the project developer and/or aggregator. Some issues to consider include:

- **Project risk:** what happens if your livestock operation offset credits are identified in an AENV audit to have deficiencies?
- **Counterparty risk:** what is the experience, track record, affiliations and, references of the project developer and/or aggregator seeking to create the GHG offsets from the livestock operation?
- **Execution risk:** does the project developer and/or aggregator have the systems and qualifications to complete the project and extract the best values for the GHG offsets?
- **Legal risk:** what are the obligations and legal risks as defined in the contract to create and market the potential GHG offsets?
- **Price risk:** on what basis are the potential GHG offsets being marketed and what pricing options are available? GHG offset prices are not fixed and can vary over time.

There may be risks to creating GHG offsets, particularly when they are used by LFEs for compliance purposes, but the risks can be managed with some education. Not all livestock operations will qualify for GHG offsets, but there may be value for those that do. The carbon market is just starting to develop in Alberta and appears poised to grow throughout North America. Starting your education today is probably a wise idea before signing on.

Reference: Bruce Love, Preferred Carbon

www.preferredcarbongroup.com

Disclaimer: The views expressed in this article are those of the author only and are not intended to represent financial advice.

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Beefbooster is bringing cattlemen across western Canada together for an exciting, full-day event. We're lining up informative workshops and seminars from industry experts and thought leaders in herd management. You won't want to miss it, so stay tuned for more details.