



Agricultural Offset in Québec

[COOP.carbone](http://COOP.carbone)

**FOND**ACTION  
CSN POUR LA COOPÉRATION  
ET L'EMPLOI

 **Desjardins**

**La Coop**  
fédérée

# COOP CARBONE

  
ASSOCIATION QUÉBÉCOISE  
POUR LA MAÎTRISE DE L'ÉNERGIE

**C3E**

## Our mission

- To induce GHG emissions reductions in Quebec
- To generate Green Economic Development in Quebec through the Carbon Market mechanisms

# What do we do?

- We put in place programs of activities in different sectors with the actors involved
  - We identify projects,
  - We identify barriers, solutions ...and we help implement projects
- We market credits to finance part of our activities
- We are putting in place a Carbon Fund to finance projects in North America (early stage)

# A pilot project: Agro Carbone

- A structure of support to the dairy farmers
  - Identification of potential
  - Identification of projects
  - Standardisation
  - Implementation
  - Aggregation
- ... replication in other agricultural sectors
- Objective: to lower project costs (direct and indirect) as much as possible and make projects being implemented
- Beginning in September

# Offsets in agriculture

- Total emissions: 6.4 MtCO<sub>2</sub>e
- Several possibilities:
  - CH<sub>4</sub> capture and destruction from manure storage facilities
  - CH<sub>4</sub> reduction from enteric fermentation
  - N<sub>2</sub>O reduction (fertilizers)
  - Agroforestry
  - No-till / conservation agriculture
- Only one existing protocol → CH<sub>4</sub> from manure storage facilities
  - # projects registered = none
  - Barriers:
    - Small project
    - E.g. average size : = 60 cows
    - Biogas utilisation does not lead to carbon offset
    - Biogas utilisation is barely profitable given the absence of feed-in tariff + low energy costs

# N<sub>2</sub>O emissions: the most interesting potential

- 6,2% of Qc total GHG emissions (3<sup>rd</sup> after CH<sub>4</sub> and CO<sub>2</sub>)
- Due to nitrogen fertilizer, but also cattle, fossil fuel and biomass combustion
- QC inventory → 3,0 MtCO<sub>2</sub>éq.
- Increase of 13,9% since 1990 (2,6 to 3,0 MtCO<sub>2</sub>e)
- Why N<sub>2</sub>O should be targeted :
  - emissions 3 times more than CH<sub>4</sub> manure
  - Enteric fermentation is difficult (no antecedent, lack of data)

# Other reasons to target N2O

- International
  - Alberta already adopted
  - California is considering
  - CDM has a methodology
- Canadian protocol developed by :
  - Canadian Fertilizer Institute
- Need to be adapted to QC:
  - Document common practices (BAU)
  - Quantify emission reduction potential
  - \*\*\*Agregator is needed



## Other possibilities

- Agroforestry: no sequestration protocol yet, but one is foreseen towards the end of 2015
- The protocol may be applicable to projects in agricultural lands
- No till : potential seems to be low
- Enteric fermentation : potential would be interesting to explore as the total emissions are quite important (2.3 MtCO<sub>2</sub>e)

# We are looking for partners

- We have local partners
  - Dairy farmers
  - Processing players
  - Financial partners
- We don't want to reinvent the wheel
  - We want to share knowledge
  - ...+ some more financing