Sustainable Canadian Agricultural Partnership
Environmental Sustainability and Climate Change Program
Climate Change and Environment Beneficial Management Practices (BMPs) in Newfoundland and Labrador
(Excludes Resilient Agricultural Landscape Program BMPs)

Beneficial Management Practice	Baseline Condition Component (Current Practice)	BMP Quantitative Variable	BMP Description Components
[1] Anaerobic digestion of food waste, conversion of biogas into electricity, heat or renewable natural gas. (Agri-processors)	• Baseline waste disposal method (landfill, compost, etc.)	• Estimated quantity of food waste (tonnes)	• Volume (L) of acid used (optional)
[2] Energy efficiency improvements / implementation of renewable energy (improvements to building envelope, lighting and ventilation upgrades (includes heating, refrigeration, cooling and water heating upgrades, installing energy monitoring controls and equipment)) (Agri-processors)	• Baseline energy type • Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)	• Estimated annual reduction in fossil fuel energy consumption (kWh) (if available)	• New energy type (where applicable/if different from baseline) • Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)
[4] Investment in purchase, modification and improvement of water use equipment to increase energy efficiency (Agri-processors)	• Baseline energy type • Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)	• Estimated annual reduction in fossil fuel energy consumption (kWh) (if available)	• New energy type (where applicable/if different from baseline) • Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)
[13] Fertigation (including perennial and annual crops)	• Estimated historical rate of fertilizer application (kg N/ha) (optional)	• Area (acres) converted from conventional application to fertigation	• Estimated total rate of fertilizer application after adoption of fertigation (kg N/ha) (optional)
[14] Fertilizers containing nitrification and urease inhibitors	• Baseline nutrient management (include rates and application method, and crop type) (optional) • Baseline rotation sequence (If using as part of a rotation sequence (certain crops only within the sequence)) (optional)	• Area (acres) of application	• Fertilizer type • Timing of application (optional) • Method of application (optional) • Fertilizer rate (optional) • Inhibitor rate (if separate) (optional) • Crop type (optional)
[20] Polymer coating slow release fertilizers	• Estimated historical rate of fertilizer application (kg N/ha) (optional)	• Area (acres) converted from conventional application to coated	• Estimated fertilizer application rate from using PCU (kg N/ha) (optional)

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Beneficial Management Practice	**Baseline Condition Component (Current Practice)**	**BMP Quantitative Variable**	**BMP Description Components**
[21] Precision farming applications which result in reductions in synthetic fertilizer use: GPS information collection, GPS guidance, manual controllers for variable rate fertilizer application, variable rate mapping, sectional controls on seeder, etc.	• Historical fertilizer application rate (kg N/ha) and yield	• Area (acres) converted to precision ag from conventional practice	• New fertilizer application rate (kg N/ha) and yield
[22] Replace or offset synthetic fertilizer with organic soil amendments (e.g., composted agricultural or fish waste, digestate, bio-solids) (eligible expenses could include composting equipment)		• Area (acres) where synthetic fertilizer is replaced with organic amendments	
[25] Split applying fertilizer with optimization of rate based on sensors	• Baseline nutrient management (include rates and application method, and crop type). (optional)	• Area (acres) of application	• Timing of each application (optional) • Method of each application (optional) • Fertilizer type for each application (optional) • Fertilizer rate for each application (optional) • Crop type (optional)
[26] Spring tillage of forages (incentivize over normal practice of late fall tillage)		• Area (acres) where spring tillage used over fall tillage	
[33] Transitioning to spring application from fall application of manure with incorporation		• Estimated amount of manure applied (tonnes)	• Duration (months) manure was stored since tank was previously emptied. • Livestock manure type (beef/dairy/swine/poultry/other) • Generalized manure type (liquid, solid, composted) • N content of applied manure (g N/kg manure) (optional)

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[34] Transitioning to spring banding from spring or fall broadcasting, and fall banding (costs can include equipment modification)	• Estimated historical rate of fertilizer application (kg N/ha) (optional)	• Area (acres) converted from conventional fertilizer application to banded	• Estimated total rate of fertilizer application after adoption of banding (kg N/ha) (optional)
[39] Demonstration trials that result in measured emissions reductions or carbon sequestration		• Net emissions reductions (CO2e) of the demonstration trial	• BMP being demonstrated
[67] Acidification of liquid dairy or liquid swine manure	• Baseline manure treatment practice (managed as liquid or as a solid)	• Head (number) of cattle or swine (average number of head over the year)	• Volume (L) of acid used (optional)
[68] Anaerobic digestion of liquid manure with off-farm organics, conversion of biogas into electricity, heat or renewable natural gas	• Baseline manure treatment practice (managed as liquid or as a solid)	• Estimated quantity of manure (tonnes)	• Volume (L) of acid used (optional)
[73] Impermeable Negative Air Manure Storage Covers with methane or biogas capture	• Baseline liquid manure storage practice (previous cover type)	• Head (number) of cattle or swine (average number of head over the year)	• Type of cover adopted (based on regionally eligible options)
[75] Installation of methane collectors, flaring equipment, catalytic oxidation and bio-filters, etc. to convert methane into CO2	• Baseline manure treatment practice (managed as liquid or as a solid)	• Head (number) of cattle or swine (average number of head over the year)	• Description of equipment to be installed (optional if captured in project title)
[77] Methane-reducing feed amendments (3-NOP, Asparagopsis)		• Head (number) of cattle being fed amendment (all ages) (average number of head over the year)	• Feed amendment • Duration of feed amendment • Cattle sub-sector (beef, backgrounding, dairy, feedlot, etc.) • Breakdown of head by heifers and steers (optional)
[81] Solid-liquid separation systems for manure or digestate	• Baseline manure treatment	• Head (number) of cattle or swine	• Volume of solids collected

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[84] Straw liquid manure covers	• Baseline liquid manure storage practice (previous cover type)	• Head (number) of cattle or swine (average number of head over the year)	
[94] Building envelope, lighting, and ventilation energy efficiency upgrades (includes heating, refrigeration, cooling, and water heating upgrades, Installing energy monitoring controls and equipment)	• Baseline energy type • Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)	• Estimated annual reduction in fossil fuel energy consumption (kWh) (if available)	• New energy type (where applicable/if different from baseline) • Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)
[95] Farm machinery and vehicle modifications to improve energy efficiency or switch to biodiesel use, or other renewable energy source (renewable natural gas, renewable electricity)	• Baseline fuel type • Baseline fuel consumption (litres) (quantity for one year without proposed technology)	• Reduction in annual estimated quantity of diesel fuel used (L)	• New fuel type • Intervention fuel consumption (litres) (quantity for one year following project implementation)
[96] On-farm energy source switching and storage (wind generation, geothermal, solar)	• Baseline energy type • Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)	• Estimated annual reduction in fossil fuel energy consumption (kWh) (if available)	• New energy type (where applicable/if different from baseline) • Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)
[122] Recycling of Agricultural Plastics	• Baseline practice of disposal (on farm burning, off-site incineration or landfill)	• Volume (tonnes) of plastic recycled	• Plastic product being recycled (optional) (grain bags, twine, etc.)
[129] Investment in purchase, modification and improvement of irrigation equipment to increase energy efficiency	• Baseline energy type • Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)	• Estimated annual reduction of fossil fuel energy consumption (if available) (kWh)	• New energy type (where applicable/if different from baseline) • Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)