

**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)	<ul style="list-style-type: none"> <li>Baseline waste disposal method (landfill, compost, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated quantity of food waste (tonnes)</li> </ul>	<ul style="list-style-type: none"> <li>Volume (L) of acid used (optional)</li> </ul>
[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)	<ul style="list-style-type: none"> <li>Baseline energy type</li> <li>Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated annual reduction in fossil fuel energy consumption (kWh) (if available)</li> </ul>	<ul style="list-style-type: none"> <li>New energy type (where applicable/if different from baseline)</li> <li>Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)</li> </ul>
[4] Investment in purchase, modification and improvement of water use equipment to increase energy efficiency (Agri-processors)	<ul style="list-style-type: none"> <li>Baseline energy type</li> <li>Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated annual reduction in fossil fuel energy consumption (kWh) (if available)</li> </ul>	<ul style="list-style-type: none"> <li>New energy type (where applicable/if different from baseline)</li> <li>Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)</li> </ul>
[13] Fertigation (including perennial and annual crops)	<ul style="list-style-type: none"> <li>Estimated historical rate of fertilizer application (kg N/ha) (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) converted from conventional application to fertigation</li> </ul>	<ul style="list-style-type: none"> <li>Estimated total rate of fertilizer application after adoption of fertigation (kg N/ha) (optional)</li> </ul>
[14] Fertilizers containing nitrification and urease inhibitors	<ul style="list-style-type: none"> <li>Baseline nutrient management (include rates and application method, and crop type) (optional)</li> <li>Baseline rotation sequence (If using as part of a rotation sequence (certain crops only within the sequence)) (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) of application</li> </ul>	<ul style="list-style-type: none"> <li>Fertilizer type</li> <li>Timing of application (optional)</li> <li>Method of application (optional)</li> <li>Fertilizer rate (optional)</li> <li>Inhibitor rate (if separate) (optional)</li> <li>Crop type (optional)</li> </ul>
[20] Polymer coating slow release fertilizers	<ul style="list-style-type: none"> <li>Estimated historical rate of fertilizer application (kg N/ha) (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) converted from conventional application to coated</li> </ul>	<ul style="list-style-type: none"> <li>Estimated fertilizer application rate from using PCU (kg N/ha) (optional)</li> </ul>

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[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.	<ul style="list-style-type: none"> <li>Historical fertilizer application rate (kg N/ha) and yield</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) converted to precision ag from conventional practice</li> </ul>	<ul style="list-style-type: none"> <li>New fertilizer application rate (kg N/ha) and yield</li> </ul>
[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)		<ul style="list-style-type: none"> <li>Area (acres) where synthetic fertilizer is replaced with organic amendments</li> </ul>	
[25] Split applying fertilizer with optimization of rate based on sensors	<ul style="list-style-type: none"> <li>Baseline nutrient management (include rates and application method, and crop type). (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) of application</li> </ul>	<ul style="list-style-type: none"> <li>Timing of each application (optional)</li> <li>Method of each application (optional)</li> <li>Fertilizer type for each application (optional)</li> <li>Fertilizer rate for each application (optional)</li> <li>Crop type (optional)</li> </ul>
[26] Spring tillage of forages (incentivize over normal practice of late fall tillage)		<ul style="list-style-type: none"> <li>Area (acres) where spring tillage used over fall tillage</li> </ul>	
[33] Transitioning to spring application from fall application of manure with incorporation		<ul style="list-style-type: none"> <li>Estimated amount of manure applied (tonnes)</li> </ul>	<ul style="list-style-type: none"> <li>Duration (months) manure was stored since tank was previously emptied.</li> <li>Livestock manure type (beef/dairy/swine/poultry/other)</li> <li>Generalized manure type (liquid, solid, composted)</li> <li>N content of applied manure (g N/kg manure) (optional)</li> </ul>

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[34] Transitioning to spring banding from spring or fall broadcasting, and fall banding (costs can include equipment modification)	<ul style="list-style-type: none"> <li>Estimated historical rate of fertilizer application (kg N/ha) (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) converted from conventional fertilizer application to banded</li> </ul>	<ul style="list-style-type: none"> <li>Estimated total rate of fertilizer application after adoption of banding (kg N/ha) (optional)</li> </ul>
[39] Demonstration trials that result in measured emissions reductions or carbon sequestration		<ul style="list-style-type: none"> <li>Net emissions reductions (CO<sub>2</sub>e) of the demonstration trial</li> </ul>	<ul style="list-style-type: none"> <li>BMP being demonstrated</li> </ul>
[67] Acidification of liquid dairy or liquid swine manure	<ul style="list-style-type: none"> <li>Baseline manure treatment practice (managed as liquid or as a solid)</li> </ul>	<ul style="list-style-type: none"> <li>Head (number) of cattle or swine (average number of head over the year)</li> </ul>	<ul style="list-style-type: none"> <li>Volume (L) of acid used (optional)</li> </ul>
[68] Anaerobic digestion of liquid manure with off-farm organics, conversion of biogas into electricity, heat or renewable natural gas	<ul style="list-style-type: none"> <li>Baseline manure treatment practice (managed as liquid or as a solid)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated quantity of manure (tonnes)</li> </ul>	<ul style="list-style-type: none"> <li>Volume (L) of acid used (optional)</li> </ul>
[73] Impermeable Negative Air Manure Storage Covers with methane or biogas capture	<ul style="list-style-type: none"> <li>Baseline liquid manure storage practice (previous cover type)</li> </ul>	<ul style="list-style-type: none"> <li>Head (number) of cattle or swine (average number of head over the year)</li> </ul>	<ul style="list-style-type: none"> <li>Type of cover adopted (based on regionally eligible options)</li> </ul>
[75] Installation of methane collectors, flaring equipment, catalytic oxidation and bio-filters, etc. to convert methane into CO <sub>2</sub>	<ul style="list-style-type: none"> <li>Baseline manure treatment practice (managed as liquid or as a solid)</li> </ul>	<ul style="list-style-type: none"> <li>Head (number) of cattle or swine (average number of head over the year)</li> </ul>	<ul style="list-style-type: none"> <li>Description of equipment to be installed (optional if captured in project title)</li> </ul>
[77] Methane-reducing feed amendments (3-NOP, Asparagopsis)		<ul style="list-style-type: none"> <li>Head (number) of cattle being fed amendment (all ages) (average number of head over the year)</li> </ul>	<ul style="list-style-type: none"> <li>Feed amendment</li> <li>Duration of feed amendment</li> <li>Cattle sub-sector (beef, backgrounding, dairy, feedlot, etc.)</li> <li>Breakdown of head by heifers and steers (optional)</li> </ul>
[81] Solid-liquid separation systems for manure or digestate	<ul style="list-style-type: none"> <li>Baseline manure treatment</li> </ul>	<ul style="list-style-type: none"> <li>Head (number) of cattle or swine</li> </ul>	<ul style="list-style-type: none"> <li>Volume of solids collected</li> </ul>

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[84] Straw liquid manure covers	<ul style="list-style-type: none"> <li>Baseline liquid manure storage practice (previous cover type)</li> </ul>	<ul style="list-style-type: none"> <li>Head (number) of cattle or swine (average number of head over the year)</li> </ul>	
[94] Building envelope, lighting, and ventilation energy efficiency upgrades (includes heating, refrigeration, cooling, and water heating upgrades, Installing energy monitoring controls and equipment)	<ul style="list-style-type: none"> <li>Baseline energy type</li> <li>Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated annual reduction in fossil fuel energy consumption (kWh) (if available)</li> </ul>	<ul style="list-style-type: none"> <li>New energy type (where applicable/if different from baseline)</li> <li>Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)</li> </ul>
[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)	<ul style="list-style-type: none"> <li>Baseline fuel type</li> <li>Baseline fuel consumption (litres) (quantity for one year without proposed technology)</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in annual estimated quantity of diesel fuel used (L)</li> </ul>	<ul style="list-style-type: none"> <li>New fuel type</li> <li>Intervention fuel consumption (litres) (quantity for one year following project implementation)</li> </ul>
[96] On-farm energy source switching and storage (wind generation, geothermal, solar)	<ul style="list-style-type: none"> <li>Baseline energy type</li> <li>Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated annual reduction in fossil fuel energy consumption (kWh) (if available)</li> </ul>	<ul style="list-style-type: none"> <li>New energy type (where applicable/if different from baseline)</li> <li>Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)</li> </ul>
[122] Recycling of Agricultural Plastics	<ul style="list-style-type: none"> <li>Baseline practice of disposal (on farm burning, off-site incineration or landfill)</li> </ul>	<ul style="list-style-type: none"> <li>Volume (tonnes) of plastic recycled</li> </ul>	<ul style="list-style-type: none"> <li>Plastic product being recycled (optional) (grain bags, twine, etc.)</li> </ul>
[129] Investment in purchase, modification and improvement of irrigation equipment to increase energy efficiency	<ul style="list-style-type: none"> <li>Baseline energy type</li> <li>Baseline Energy consumption (estimated quantity for one year without proposed technology) (kWh)</li> </ul>	<ul style="list-style-type: none"> <li>Estimated annual reduction of fossil fuel energy consumption (if available) (kWh)</li> </ul>	<ul style="list-style-type: none"> <li>New energy type (where applicable/if different from baseline)</li> <li>Intervention energy consumption (estimated quantity for one year following project implementation) (kWh)</li> </ul>