

Living Lab – Prince Edward Island

Beneficial Management Practices (BMPs)

BMP 1: Livestock Feeding Strategies

This activity evaluates the inclusion of PEI seaweed in the diets of beef and dairy cattle to reduce enteric methane emissions while assessing animal production, health, and reproductive performance. This research is underway at the AAFC Nappan Research Farm in collaboration with Dalhousie University and the PEI Department of Agriculture. Living Lab – PEI is supporting knowledge transfer activities.

BMP 2: Rotational Grazing

This activity comprises two key components: improving the management of long-term forages, and introducing intensive grazing practices in Island potato rotations. This research involves the establishment of a community of practice, providing support to producers in developing grazing management plans, and implementing practices to improve pasture yield, soil health, and water holding capacity.

BMP 3: Natural Carbon Sinks

This activity involves two sub-activities: designing multifunctional hedgerows in collaboration with producers to support agronomic and ecological goals, and investigating the carbon sequestration potential of edge-of-field constructed wetlands.

BMP 4: Alternative Soil Amendments

This activity involves two sub-activities: evaluating combinations of biological soil amendments (biochar, compost) to increase soil organic carbon and crop yield, and investigating the use of residual soil amendments (gypsum, wood ash, compost) as alternatives to inorganic fertilizers and lime.

BMP 5: Cover Crop Management Strategies

This activity involves two sub-activities: assessing the combined effects of a minimum-tillage and maximum green cover crop rotation, and interseeding cover crops within late-season crops like corn and soybeans, with the aim of enhancing soil organic matter, carbon sequestration, and reducing nitrate leaching and soil erosion.

BMP 6: Refining Nitrogen Management

This activity involves three sub-activities: determining how legumes and cover crops impact soil nitrogen supply for subsequent potato and corn crops, investigating new and emerging technologies for nitrogen management in potato production systems, and comparing liquid manure application methods (broadcast versus injected, with and without nitrification inhibitors) on crop yield, nitrogen and phosphorus-use efficiency, and greenhouse gas emissions.



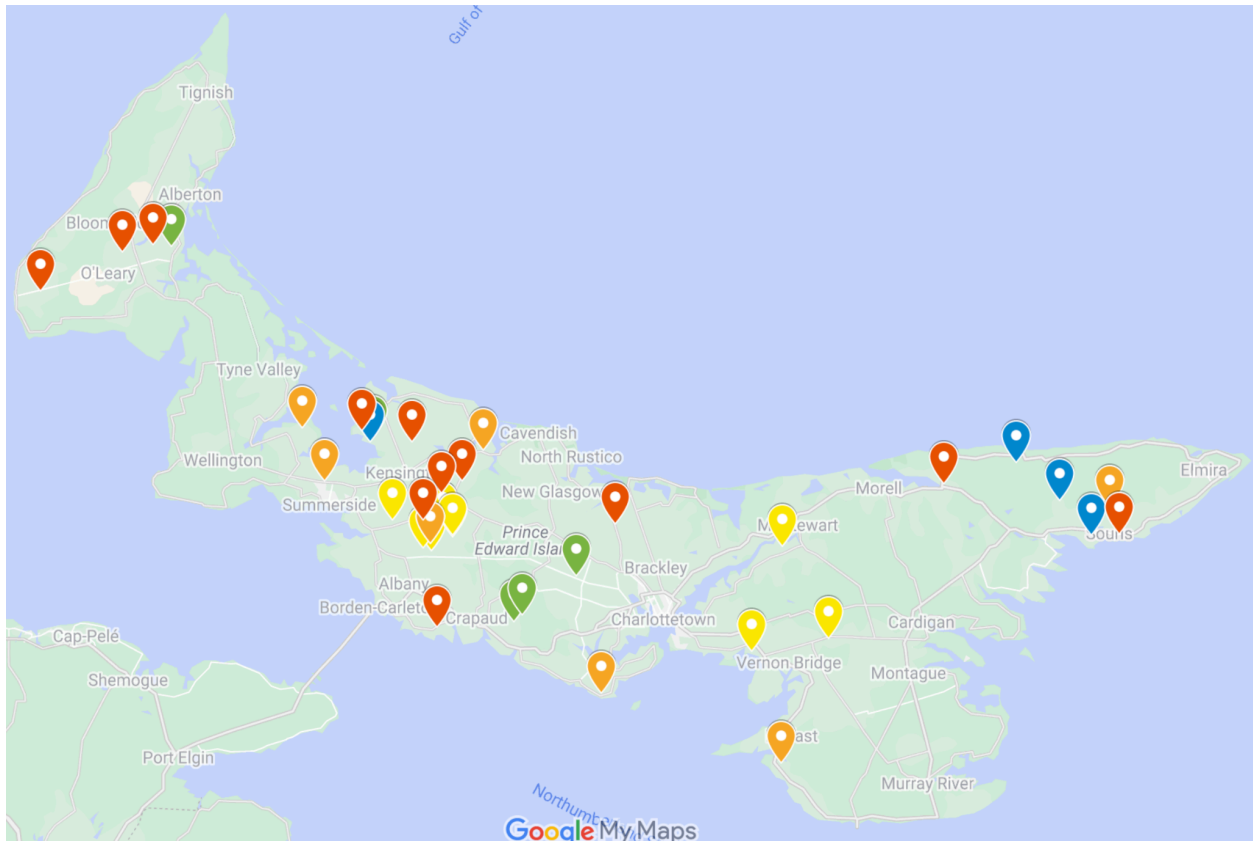
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Supporting Activities

In close collaboration with project partners, each BMP activity has three key supports: **awareness, engagement, and knowledge transfer activities** (social media campaigns, factsheets, field tours, producer workshops), **digital agriculture tools** (precision agriculture technologies, digital soil mapping, modelling), and **socio-economic analysis** to understand the impacts of adopting these practices on farm profitability, off-farm social benefits, and barriers and incentives to adoption.

Map of Living Lab – Prince Edward Island Sites



Map Legend

Livestock Feeding Strategies (Nappan, NS)

Rotational Grazing

Natural Carbon Sinks

Alternative Soil Amendments

Cover Crop Management Strategies

Refining Nitrogen Management



Agriculture and
Agri-Food Canada

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