

# Sustainable Canadian Agricultural Partnership

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## Resilient Agricultural Landscape Program Program Guide

Newfoundland and Labrador



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# Table of Contents

Resilient Agricultural Landscape Program .....	1
Eligible RALP BMPs .....	2
<b>1. Marginal and Critical Landscape Features</b> .....	<b>3</b>
BMP number 49*:	3
BMP number 60*:	4
BMP number 65*:	5
BMP number 50*:	6
BMP number 47*:	7
BMP number 138:	8
BMP number 52*:	9
<b>2. Enhancing Cropland Management</b> .....	<b>10</b>
BMP number 32*:	10
BMP number 27*:	11
BMP number 9*:	12
BMP number 10*:	13
BMP number 15*:	14
BMP number 28*:	15
BMP number 53*:	16
BMP number 36*:	17
<b>3. Enhanced Pasture and Grassland Health</b> .....	<b>18</b>
BMP number 58*:	18
<b>4. Enhanced Grazing Management</b> .....	<b>19</b>
BMP number 63*:	19
BMP number 51*:	20
BMP number 64*:	21
Appendix: Resilient Agricultural Landscape Program (RALP) Beneficial Management Practices (BMPs) in Newfoundland and Labrador .....	22

# Resilient Agricultural Landscape Program

The objective of the Resilient Agricultural Landscape Program (RALP) is to support producers to conserve and enhance the resiliency of agricultural landscapes by accelerating the adoption of land use and management practices. Specifically, the goal is to maximize multiple ecological goods and services (EG&S) for farms and regional pastures. EG&S are the benefits society derives from healthy functioning ecosystems and includes the maintenance and provision of healthy soil and water resources, wildlife habitat and biodiversity, as well as, adapting to the impacts of climate change.

In Newfoundland and Labrador, RALP will provide \$4,612,050 in funding over five years to support federal and provincial goals of greenhouse gas reduction and carbon sequestration through sustainable agricultural and land management activities. RALP funding is available for the implementation or expansion of new Beneficial Management Practices (BMPs) on agricultural lands; however, will not support current ongoing practices on existing acreages.

Agri-environmental BMPs can increase and enhance EG&S and are important to improving the overall sustainability of farms. However, some practices can have limited private benefit and return on investment for producers, and/or can have substantial on-going maintenance costs.

RALP will help to address these specific situations and perceived barriers to adoption experienced by other traditional program approaches. RALP will support the implementation of higher public value projects on agricultural lands including the restoration and maintenance of wetlands, support for water retention projects, establishment of permanent pastures, and maintenance of existing high value natural assets occurring on-farm such as wetlands, riparian areas and other provincially relevant practices.

This will be accomplished by establishing and using an EG&S acreage payment approach for BMPs that provide multiple EG&S where traditional funding cost-share ratios and models have been insufficient to encourage adoption at the level desired. The actual value of RALP BMPs in Newfoundland and Labrador is based on opportunity costs, depreciation, labour, and establishment and maintenance costs required to encourage uptake of these EG&S. Capital costs for various items including, but not limited to, fencing, equipment, water dug out construction, may be covered by Sustainable Canadian Agricultural Partnership (Sustainable CAP) or other provincial and/or federal funding.

RALP will focus on providing support for:

- Activities that decrease the amount of marginal and fragile lands used for cropping;
- Activities that maintain healthy, strong soils while naturally mitigating the impacts of climate change on farm;
- Agri-environmental best management practices that seek to increase and enhance multiple ecological goods and services; and
- Awareness and knowledge transfer, extension services, program development, and product development related to eligible RALP activities and outreach.

Due to the variability of landscapes on farms across the province, individual RALP projects will be tailored to the applicant, which may require assistance with planning and implementation through the RALP Coordinator. Acreage payments under RALP will vary depending on the activity and will be structured as a lump sum payment that covers a three-year period at the beginning of the term specified in the Contribution Agreement (CA). Successful applicants will enter into a CA with a three-year commitment to maintain the approved BMP(s) on the acreage indicated in the application and stipulated in the CA. As part of the CA, BMP(s) will require maintenance over the specified three-year period. If those requirements are not met, applicants will be required to repay funds. Compliance inspections will be conducted following implementation and will occur during the subsequent three-year period. Individual RALP payments will vary by initiative, cropping history, and intended implementation by the applicant.

Eligible activities support implementation and ongoing maintenance of program activities that support carbon sequestration, greenhouse gas reduction, or provide other environmental benefits such as protection of waterways and provision of pollinator habitat.

RALP funding is based on set acreage payments for a three-year term. Applicants are eligible for a maximum RALP payment of \$40,000 per year; however, funding offers may be pro-rated based on program demand and BMP funding priority. Applicants should be aware that if specific BMP activities have been funded by a different program, the applicant will not be eligible to receive RALP funding for that BMP on the same land, although other BMPs may still be eligible.

In order to be eligible, BMP activities must be:

- Incurred and completed by the applicant within the eligibility timeframe specified in the CA; and
- Recommended by the RALP Coordinator and/or other departmental staff, as needed.

For general Sustainable CAP eligibility and application process, please refer to the Sustainable CAP Program Guide.

## **Eligible RALP BMPs**

Eligible RALP BMPs are identified below and in the Appendix. RALP BMPs that enhance carbon sequestration activities will receive funding preference when applications are reviewed by the RALP Coordinator and Implementation Committee and are denoted by an asterisk (\*) and referenced in the Appendix. Producers can apply for a RALP acreage payment if they initiate any of the following RALP BMPs.

The RALP BMPs are categorized into four EG&S categories:

1. Marginal and Critical Landscape Features
2. Enhancing Cropland Management
3. Enhanced Pasture and Grassland Health
4. Enhancing Grazing Management

## 1. Marginal and Critical Landscape Features

The objective of the Marginal and Critical Landscape Features is to protect marginal and high-risk lands through a variety of land use and management practices.

### BMP number 49\*:

Convert marginal and high-risk annual cropland to permanent grassland or perennial biomass crops, which includes establishment of tame forages.

**Table 1: Acreage Payments Associated with BMP 49**

Current Land Use for Conversion	Annual Forage (corn silage, oat pea, grain)		Vegetable	
	Acreage Parameters	1 acre or less	Additional acres after first	1 acre or less
Total three-year funding eligibility per acre:	\$1,830	\$655	\$2,880	\$1,750

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers growing annual crops on marginal/high risk lands including, but not limited to, extensive slopes, high water tables, near waterways, excessively stony and/or erosion risk soils, this funding area will promote the establishment and maintenance of perennial biomass crops, such as forage species like clovers, ryegrass, timothy, or fescue.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of cropland under annual management practices, such as vegetable, grain or annual forage production. Payment level will vary depending on existing normal annual management practices, such as vegetable, grain or annual forage production and total acreage on which this BMP is to be implemented. Higher payment for the first acre will assist with depreciation cost of necessary equipment. Input costs also include seed, lime, and fertilizer. The higher payment for vegetable land is reflective of the higher opportunity cost associated with taking land out of vegetable production. Acreage to be converted to this BMP must be identified in the application with accompanying maps and proposed seeding species identified.

Baseline condition required on an application:

- General soil texture: coarse, medium or fine

## BMP number 60\*:

Planting of trees and shrubs on marginal or high-risk cropland

**Table 2: Acreage Payments Associated with BMP 60**

Current Land Use for Conversion	Forage		Fruit and Vegetable	
	Native tree seedlings	Native tree seedlings with ¼ fruit trees	Native tree seedlings	Native tree seedlings with ¼ fruit trees
Total three-year funding eligibility per acre:	\$4,737	\$5,847	\$7,887	\$8,997

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers growing crops on high-risk lands such as extensive slopes, high water tables, near waterways, excessively stony, and/or erosion risk soils, the intent of this BMP is to plant native trees such as spruce, fir, pine, or birch. Producers may choose to include up to ¼ of the acreage as other commercially grown species including, but not limited to, apple and plum trees.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of cropland under annual management practices such as fruit, vegetable, grain, or forage production. Payment level will vary depending on existing normal annual management practices, such as fruit, vegetable, grain, or forage production and total acreage on which this BMP is to be implemented. Payment for the first acre is intended to help with depreciation costs of planting and maintenance equipment as well as cost associated with acquiring tree seedlings. The higher payment for fruit and vegetable land is reflective of the higher opportunity cost associated with taking land out of fruit and vegetable production. Acreage to be converted to this BMP must be identified in the application with accompanying maps and proposed species of trees to be planted.

Baseline condition required on application:

- Previous land use: annual, perennial, or grazing; and
- General soil texture: coarse, medium or fine

## BMP number 65\*:

Wetland restoration, construction of new wetlands

**Table 3: Acreage Payments Associated with BMP 65**

Current Land Use for Conversion	Forage	Fruit and Vegetable
Total three-year funding eligibility per acre:	\$900	\$4,050

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers growing crops on previously converted wetlands including peat bogs, the intent of this BMP is to promote the reverted use of an area to a wetland, such as removal of dykes, or filling of drainage ditches.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of cropland that was a previous wetland. Payment level will vary depending on existing normal annual management practices, such as fruit, vegetable, grain, or forage production and total acreage on which this BMP is to be implemented. The acreage payments reflect the opportunity cost of taking land out of production, removal of dykes, and filling of drainage ditches. The higher payment for fruit and vegetable land is reflective of the higher opportunity cost associated with taking land out of fruit and vegetable production. Acreage to be converted through this BMP must be identified in the application with accompanying maps.

Baseline condition required on application: None



## BMP number 50\*:

Creation or widening of buffers using grasses, trees or shrubs in agricultural fields adjacent to surface water sources, as well as other actions to protect existing riparian areas such as reshaping of edges and fields.

**Table 4: Acreage Payments Associated with BMP 50**

Current Land Use for Conversion	Forage			Fruit and Vegetable		
Project Parameters	Native tree seedlings	Native tree seedlings with ¼ fruit trees	Non-Treed Buffer Areas	Native tree seedlings	Native tree seedlings with ¼ fruit trees	Non-Treed Buffer Areas
<b>Total three-year funding eligibility per acre:</b>	\$4,737	\$5,847	\$900	\$7,887	\$8,997	\$4,050

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers growing annual or perennial crops on lands near surface water and in riparian zones, the intent of this BMP is to promote the establishment and maintenance of trees, shrubs, and perennial biomass crops in these areas. Buffer areas must contain trees, shrubs or grasses to be eligible for this payment, and meet a minimum distance of 15 metres from the high-water mark. This may also include the planting of a perennial forage species to prevent erosion and runoff.

## Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of cropland near surface water/riparian areas. Payment level will vary depending on chosen planting species, existing normal annual management practices, such as fruit, vegetable, grain, or forage production and total acreage on which this BMP is to be implemented. Acreage payments include depreciation on tree planting equipment, tree seedlings, temporary fencing of area if required, ongoing maintenance over the three-year period, and opportunity cost of land being taken out of production. The higher payment for fruit and vegetable land is reflective of the higher opportunity cost associated with taking land out of fruit and vegetable production. Acreage to be converted through this BMP must be identified in the application with accompanying maps and proposed species of trees, shrubs, or forage to be planted must be identified.

Baseline condition required on application:

- Previous land use: annual, perennial, or grazing; and
- General soil texture: coarse, medium or fine

## **BMP number 47\*:**

Avoided conversion and maintenance of natural features on critical and/or at-risk agricultural landscapes such as grasslands, wetlands, and woodlots.

**Table 5: Acreage Payments Associated with BMP 47**

<b>Current Land Use for Avoided Conversion</b>	Agricultural Lands with Natural Features such as Grasslands, Wetlands, Woodlots
<b>Total three-year funding eligibility per acre:</b>	\$480

**Note:** This acreage payment reflects 100 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease land containing natural features such as grasslands, wetlands and woodlots, the intent of this BMP is to encourage producers to leave such natural features in place. Payment will be provided to maintain the edges of these features to prevent encroachment on non-critical cropping areas. Eligible activities may include the maintenance of existing windbreaks, or shelterbelts that improve or maintain function.

### **Reimbursement Considerations**

To qualify for funding, the applicant must own, rent, or be the leaseholder of critical or at-risk lands that have not yet been developed. Acreage to be maintained through this BMP must be identified in the application with accompanying maps. Agricultural Crown Land leaseholders must ensure terms and conditions of their lease are met.

Baseline condition required on application: None

## BMP number 138:

Water retention ponds

**Table 6: Acreage Payments Associated with BMP 138**

<b>Land Conversion Use</b>	Water Retention Pond
<b>Total three-year funding eligibility per acre of surface runoff and erosion protection:</b>	\$825

**Note:** This acreage payment reflects 100 per cent of BMP establishment and maintenance costs.

This BMP will encourage agricultural producers to install and maintain water retention ponds on their lands. Ponds are to be constructed to collect surface run-off, snowmelt, and other natural precipitation to aid in the prevention of erosion and nutrient losses. These ponds may be used for irrigation purposes during times of drought.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands. Proposed pond location must be identified in the application with accompanying maps showing land slope and run-off areas. Proposed lining material should be identified in the application. A shelterbelt of trees should be planted and retained nearby to help trap snow. Ponds must be fenced to prevent livestock and large wildlife animals from accessing the pond, and to deter human access.

Baseline condition required on application: None

## BMP number 52\*:

Establishment of pollinator strips or other perennial cover for pollinator habitat or other biodiversity purposes in fields or field margins of existing cropland (area planted with high value plants that encourage pollinators)

**Table 7: Acreage Payments Associated with BMP 52**

Current Land Use for Conversion	Forage	Fruit and Vegetable
Total three-year funding eligibility per acre:	\$900	\$4,050

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease and operate agricultural lands, this BMP will encourage producers to establish pollinator strips or habitats at field margins or within fields. These areas could include diversified shelterbelt areas, wildflower or tame flower species. Payment level will vary depending on existing normal annual management practices, such as fruit, vegetable, grain, annual forage production and total acreage on which this BMP is to be implemented.

When choosing species of plants for pollinator habitat, producers are encouraged to use native seed sources and/or natural regeneration to discourage introduction of invasive non-native species. When seeds are sourced from outside suppliers it is recommended that certified seed be used to minimize weed introduction.

## Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands. Acreage to be planted and maintained as pollinator areas must be identified in the application with accompanying maps, and proposed species of trees, shrubs, grasses, or flowers to be planted must be identified. The higher payment for fruit and vegetable land is reflective of the higher opportunity cost associated with taking land out of fruit and vegetable production.

Baseline condition required on application:

- Previous land use: annual, perennial, or grazing; and
- General soil texture: coarse, medium or fine

## 2. Enhancing Cropland Management

### BMP number 32\*:

Transition to zero tillage on annual cropland

**Table 8: Acreage Payments Associated with BMP 32**

Current Land Use for Conversion	Annual Forage (corn silage, oat pea or grain)		Vegetable	
	1 acre or less	Additional acres after first	1 acre or less	Additional acres after first
<b>Total three-year funding eligibility per acre:</b>	\$4,830	\$1,230	\$7,980	\$4,380

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers growing annual crops including row crops, grains, corn silage, or annual forages, the intent of this BMP is to promote the transition of farming practices from conventional tillage and seed bed preparation to the use of zero tillage for sod seeding, direct seeding and surface seeding.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of cropland under an annual production system, and currently utilize conventional tillage methods. Payment level will vary depending on existing normal annual management practices, such as vegetable, grain, annual forage production and total acreage on which this BMP is to be implemented. Acreage payments include depreciation on equipment, input costs including seed, limestone, fertilizer and opportunity costs associated with conversion to zero tillage. The higher payment for vegetable land is reflective of the higher opportunity cost associated with vegetable production. Acreage to be seeded using zero tillage must be identified on accompanying farm maps.

Baseline condition required on application:

- General soil texture: coarse, medium, fine; and
- Baseline tillage practice

## BMP number 27\*:

Strip planting of perennial cover to create grassed waterways or to manage salinity within a field (includes terraces and farmable berms)

**Table 9: Acreage Payments Associated with BMP 27**

Current Land Use for Conversion	Annual Forage (corn silage, oat pea, or grain)		Fruit and Vegetable	
	1 acre or less	Additional acres after first	1 acre or less	Additional acres after first
<b>Total three-year funding eligibility per acre:</b>	\$1,830	\$655	\$2,880	\$1,750

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease and operate agricultural lands near waterways, the intent of this BMP is to encourage producers to implement the practice of strip planting to minimize runoff risks and erosion. This may also include the establishment of perennial forage species on field access points, such as where culverts are installed.

## Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands containing waterways. Acreage payments include depreciation of seeder, cost of seed, limestone, fertilizer and opportunity cost of land taken out of production. Acreage to be planted and maintained must be identified in the application with accompanying maps, and proposed species of grasses to be planted must be identified. Payment level will vary depending on existing normal management practices, such as fruit, vegetable, grain, or annual forage production and total acreage on which this BMP is to be implemented. The higher payment for fruit and vegetable land is reflective of the higher opportunity cost associated with fruit and vegetable production.

Baseline condition required on application:

- Previous land use: annual, perennial, or grazing; and
- General soil texture: coarse, medium or fine

## BMP number 9\*:

Increasing soil-building crops/legumes in rotations or full season cover crops

**Table 10: Acreage Payments Associated with BMP 9**

Current Land Use for Conversion	Annual Forage (corn silage, oat pea or grains)		Fruit and Vegetable	
	1 acre or less	Additional acres after first	1 acre or less	Additional acres after first
<b>Total three-year funding eligibility per acre:</b>	\$3,240	\$1,440	\$4,815	\$3,015

**Note:** These acreage payments reflect 50 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease and operate existing agricultural lands, the intent of this BMP is to encourage producers to incorporate soil building crops or legumes into their farmland. These crops may be full season (e.g. oat-peas), intercropped (between rows) or winter seeded (winter rye). These cover crops will conserve soil and water, could potentially reduce soil compaction, increase nitrogen fixation, or provide other environmental benefits. Producers are encouraged to consult with the RALP Coordinator to implement appropriate soil building or legume crops on their farms.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands that would normally be bare soil including, but not limited to, over winter, inter-row areas. Acreage to be planted must be identified in the application with accompanying maps, and proposed plant species. Acreage payment includes depreciation of seeder, and cost of limestone, fertilizer, and seed. Payment level will vary depending on existing normal management practices, such as fruit, vegetable, grain, or annual forage production and total acreage on which the BMP is to be implemented.

Baseline condition required on application:

- Baseline rotation sequence (optional)

## BMP number 10\*:

Cover Crops (intercropped, or winter)

**Table 11: Acreage Payments Associated with BMP 10**

Current Land Use for Conversion	Annual Forage (corn silage, oat pea or grains)		Fruit and Vegetable	
	1 acre or less	Additional acres after first	1 acre or less	Additional acres after first
<b>Total three-year funding eligibility per acre:</b>	\$3,240	\$1,440	\$4,815	\$3,015

**Note:** These acreage payments reflect 50 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease and operate existing agricultural lands, the intent of this BMP is to encourage producers to incorporate soil-building crops or legumes into their farmland, improve soil health, and prevent erosion. This BMP will apply to newly cleared land in Labrador to encourage soil building before cropping begins. These crops may be full season (e.g. oat-peas), intercropped (between seasons) or winter seeded (winter rye). These cover crops will conserve soil and water, could potentially reduce compaction, increase nitrogen fixation, or provide other environmental benefits.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands that would normally be bare soil. Acreage payment includes depreciation of seeder, and cost of limestone, fertilizer, and seed. Payment level will vary depending on existing normal management practices, such as fruit, vegetable, grain, or annual forage production and total acreage on which the BMP is to be implemented. Acreage to be planted must be identified in the application with accompanying maps, proposed species and management must be identified.

Baseline condition required on application:

- Baseline rotation sequence to provide field crop rotation history (optional)



## BMP number 15\*:

Increasing frequency of perennials in annual rotations (including biomass crops)

**Table 12: Acreage Payments Associated with BMP 15**

Current Land Use for Conversion	Annual Forage (corn silage, oat pea, or grain)		Vegetable	
	1 acre or less	Additional acres after first	1 acre or less	Additional acres after first
<b>Acreage Parameters</b>				
<b>Total three-year funding eligibility per acre:</b>	\$4,830	\$1,230	\$7,530	\$3,930

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease and operate agricultural lands, the intent of this BMP is to encourage producers to increase the use of perennial plantings on their farms. Examples include, but are not limited to, adding forage plantings into an existing three-year vegetable crop rotation, planting perennial vegetable crops (asparagus), planting fruit trees or shrubs, and reducing duration of use of grain or corn in a forage production rotation.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands under an annual cropping system. Acreage to be planted must be identified in the application with accompanying maps, and proposed perennial species identified. Acreage payment includes depreciation on seeder, limestone, seed, fertilizer, and opportunity cost of taking land out of annual crop production. The higher payment for vegetable land is reflective of the higher opportunity cost associated with vegetable production. Payment level will vary depending on existing normal annual management practices, such as vegetable, grains, or annual forages production and total acreage on which the BMP is to be implemented.

Baseline condition required on application:

- Baseline crop rotation: length of rotation and number of years as forage

## BMP number 28\*:

Strip tillage

**Table 13: Acreage Payments Associated with BMP 28**

Current Land Use for Conversion	Annual Forage (corn silage, oat pea, or grain)		Fruit and Vegetable	
	1 acre or less	Additional acres after first	1 acre or less	Additional acres after first
<b>Total three-year funding eligibility per acre:</b>	\$4,830	\$1,230	\$7,530	\$3,930

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease and operate agricultural lands, the intent of this BMP is to encourage producers to incorporate strip tillage production methods. These methods can be implemented on a variety of crops to conserve soil and water resources.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands using cropping systems that would allow the implementation of strip tillage, such as row cropping, silage corn, sweet corn production or grains. Acreage to be planted must be identified in the application with accompanying maps and approximate row widths. Acreage payment includes depreciation on seeder, limestone, seed, and fertilizer. Payment level will vary depending on existing normal management practices, such as fruit, vegetable, grain or annual forage production and total acreage on which this BMP is to be implemented.

Baseline condition required on application: None

## BMP number 53\*:

Establishment of shelterbelts or tree buffers for farmyards, livestock facilities, and fields as well as intercropping with trees on annual cropland

**Table 14: Acreage Payments Associated with BMP 53**

Current Land Use for Conversion	Forage			Fruit and Vegetable		
	Native tree seedlings	Native tree seedlings with ¼ fruit trees	Non-Treed Buffer Areas	Native tree seedlings	Native tree seedlings with ¼ fruit trees	Non-Treed Buffer Areas
Total three-year funding eligibility per acre:	\$4,737	\$5,847	\$900	\$7,887	\$8,997	\$4,050

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease and operate agricultural lands, the intent of this BMP is to encourage producers to create and/or enhance existing windbreaks or shelterbelts on farms and other agricultural premises.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands. Acreage to be planted must be identified in the application with accompanying maps and supply expected planting density and species of trees or shrubs. Payment level will vary depending on chosen planting species and previous cropping history, such as vegetable, grain or annual forage production. Acreage payments include depreciation on tree planting equipment, purchase of tree seedlings, temporary fencing of area if required, ongoing maintenance over the three-year period, and opportunity cost of land being taken out of production. The higher payment for fruit and vegetable land is reflective of the higher opportunity cost associated with taking land out of fruit and vegetable production. Payment level will vary depending on existing normal annual management practices, such as vegetable, grain or annual forage production and total acreage on which this BMP is to be implemented. Shelter belts should be maintained as necessary to replace dead/damaged trees and pruned/cut as needed to prevent encroachment.

Baseline condition required on application: None

## BMP number 36\*:

Biochar Soil Amendments

**Table 15: Acreage Payments Associated with BMP 36**

<b>BMP to be Implemented</b>	Agricultural lands requiring biochar amendment
<b>Total three-year funding eligibility per acre:</b>	\$4,350

**Note:** This acreage payment reflects 100 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent or lease and operate agricultural lands, the intent of this BMP is to encourage producers to implement the use of biochar as a soil amendment. This soil amendment can improve soil structure and water retention capacity. Applicants should contact the RALP Coordinator for soil amendment application practices.

### **Reimbursement Considerations**

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural lands. Acreage to which biochar is to be applied must be identified in the application with accompanying maps. Acreage payments include the cost of biochar purchase and application.

Baseline condition required on application: None

### 3. Enhanced Pasture and Grassland Health

#### BMP number 58\*:

Increasing the use of alfalfa or other locally adapted and persistent N-fixing perennial legumes in pasture and hay

**Table 16: Acreage Payments Associated with BMP 58**

<b>BMP to be Implemented</b>	Increased use of legumes, 1 or fewer acres	Increased use of legumes, greater than 1 acre
<b>Total three-year funding eligibility per acre:</b>	\$4,140	\$1,440

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For agricultural producers that own, rent, lease or hold a license to occupy to operate agricultural pasture lands, and operate forage production lands, such as pasture, silage, or hay. The intent of this BMP is to encourage producers to plant nitrogen fixing species such as alfalfa, or various clovers. This may include full area plantings or specific area rejuvenation, such as over-seeding or frost seeding. A pasture management plan is encouraged to be included with application.

#### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of existing agricultural forage production lands. Acreage to be planted/maintained must be identified in the application with accompanying maps, and proposed nitrogen fixing species identified. Acreage payments are based on seeder depreciation, costs of limestone, fertilizer, seed and ongoing maintenance costs for the three-year term.

Baseline condition required on application:

- Baseline species composition (crops by estimated per cent coverage)

## 4. Enhanced Grazing Management

### BMP number 63\*:

Rotational grazing of tame pasture (including expenses such as cross-fencing and offsite watering)

**Table 17: Acreage Payments Associated with BMP 63**

<b>BMP to be implemented</b>	Rotational grazing of tame pasture
<b>Total three-year funding eligibility per acre:</b>	\$2,649

**Note:** This acreage payment reflects 100 per cent of BMP establishment and maintenance costs.

To qualify for funding, the applicant must own, rent, lease or hold a license to occupy to operate agricultural pasture lands. The intent of this BMP is to encourage producers to implement the use of rotational grazing. This must include the use of cross fencing, use of non-surface watering systems, and the use of portable shelters where needed. A pasture management plan is encouraged and should include proposed paddock size, animal carrying capacity, and rotational plan.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the license to occupy or leaseholder of agricultural pasture lands. Number of animals and acreage to be put under rotational grazing management must be identified in the application with accompanying maps and detailed plans outlining the pastureland to be cross fenced in grazing blocks of five or fewer acres with identified source of adequate non-surface water provided to animals, identified adequate shelter, and frequency of rotation. Extensive grazing of low-density livestock in large paddocks would not qualify for funding.

Baseline condition required on application:

- Head (number) of cattle and/or sheep grazing in conventional system (average number of head over the year) (optional)

## **BMP number 51\*:**

Enhanced riparian area grazing management

**Table 18: Acreage Payments Associated with BMP 51**

<b>BMP to be Implemented</b>	Riparian Area Grazing
<b>Total three-year funding eligibility per acre:</b>	\$240

**Note:** This acreage payment reflects 100 per cent of BMP establishment and maintenance costs.

For producers that own, rent, lease or hold a license to occupy to operate agricultural pasture lands, the intent of this BMP is to aid producers in maintenance of exclusionary fencing to prevent animals from entering surface waters. A pasture management plan is encouraged and should include details of this fencing.

### **Reimbursement Considerations**

To qualify for funding, the applicant must own, rent, lease or hold a license to occupy to operate agricultural pasture lands. Acreage to be maintained as riparian areas must be identified in the application with accompanying maps. Pastureland must have exclusionary fencing in place and provide an alternative water source to animals to be eligible. The acreage payment includes cost of maintaining fences around riparian areas.

Baseline condition required on application: None

## BMP number 64\*:

Silvopasture

**Table 19: Acreage Payments Associated with BMP 64**

<b>Current Land Use for Conversion</b>	Pasture	
<b>Project Parameters</b>	Native tree seedlings	Native tree seedlings with ¼ fruit trees
<b>Total three-year funding eligibility per acre:</b>	\$4,737	\$5,847

**Note:** These acreage payments reflect 100 per cent of BMP establishment and maintenance costs.

For producers that own, rent or lease and operate pasture lands, the intent of this BMP is to aid producers in the planting and maintenance of trees to provide natural windbreaks or shelter for animals. A pasture management plan is encouraged to be included with the application.

### Reimbursement Considerations

To qualify for funding, the applicant must own, rent, or be the leaseholder of agricultural pasture lands. Acreage to be planted/maintained as treed areas must be identified in the application with accompanying maps. Acreage payments include depreciation on tree planting equipment, purchase of tree seedlings, temporary fencing of area if required, ongoing maintenance over the three-year period, and opportunity cost of land being taken out of production.

Baseline condition required on application: None



**Appendix: Resilient Agricultural Landscape Program (RALP) Beneficial Management Practices (BMPs) in Newfoundland and Labrador**

Beneficial Management Practice	Carbon Sequestration?	Baseline Condition Component (Current Practice)	BMP Quantitative Variable	BMP Description Components
[9] Increasing soil-building crops/legumes in rotations or full season cover crops	Yes	<ul style="list-style-type: none"> <li>Baseline rotation sequence (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) of intervention</li> </ul>	<ul style="list-style-type: none"> <li>Is the crop overwintering?</li> <li>Crop type and cover crop species used (optional)</li> <li>timing of seeding (under-seeded in spring or fall planted) (optional)</li> <li>Intervention rotation sequence (optional)</li> </ul>
[10] Cover Crops (intercropped or winter)	Yes	<ul style="list-style-type: none"> <li>Baseline rotation sequence (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) of intervention</li> </ul>	<ul style="list-style-type: none"> <li>Practice implemented (intercropped or winter cover crop)</li> <li>Crop type and cover crop species used (optional)</li> <li>Timing of seeding (under-seeded in spring or fall planted) (optional)</li> <li>Intervention rotation sequence (optional)</li> </ul>
[15] Increasing frequency of perennials in annual rotations (including biomass crops)	Yes	<ul style="list-style-type: none"> <li>Baseline crop rotation (length of rotation and number of years as forage)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) implicated</li> </ul>	<ul style="list-style-type: none"> <li>Perennial species increased</li> <li>Intervention crop rotation sequence (length of rotation and number of years as forage)</li> </ul>
[27] Strip planting of perennial cover to create grassed waterways or to manage salinity within a field (includes terraces and farmable berms)	Yes	<ul style="list-style-type: none"> <li>Previous land-use use (annual, perennial, grazing)</li> <li>General soil texture (coarse, medium or fine)</li> </ul>	<ul style="list-style-type: none"> <li>Area (acres) converted</li> </ul>	<ul style="list-style-type: none"> <li>Tree/shrub species planted (or cover type)</li> </ul>
[28] Strip tillage	Yes		<ul style="list-style-type: none"> <li>Average area (acres)/year under strip tillage instead of conventional tillage</li> </ul>	<ul style="list-style-type: none"> <li>Tillage timing: spring or fall</li> </ul>

**Appendix: Resilient Agricultural Landscape Program (RALP) Beneficial Management Practices (BMPs) in Newfoundland and Labrador**

Beneficial Management Practice	Carbon Sequestration?	Baseline Condition Component (Current Practice)	BMP Quantitative Variable	BMP Description Components
[32] Transition to zero tillage on annual cropland	Yes	<ul style="list-style-type: none"> <li>• General soil texture (coarse, medium, fine)</li> <li>• Baseline tillage practice</li> </ul>	<ul style="list-style-type: none"> <li>• Area (acres) converted to zero tillage</li> </ul>	
[36] Biochar Soil Amendments	Yes		<ul style="list-style-type: none"> <li>• Area (acres) of intervention</li> </ul>	<ul style="list-style-type: none"> <li>• Source of biochar material</li> </ul>
[47] Avoided conversion and maintenance of natural features on critical and/or at-risk agricultural landscapes such as grasslands, wetlands, and woodlots ( <b>ONLY RALP</b> )	Yes		<ul style="list-style-type: none"> <li>• Area (acres) being conserved</li> </ul>	<ul style="list-style-type: none"> <li>• Type(s) of land and/or vegetation</li> </ul>
[49] Convert marginal and high-risk annual cropland to permanent grassland (or perennial biomass crops) (includes establishment of native or tame forages)	Yes	<ul style="list-style-type: none"> <li>• General soil texture (coarse, medium or fine)</li> </ul>	<ul style="list-style-type: none"> <li>• Area (acres) converted</li> </ul>	<ul style="list-style-type: none"> <li>• Species seeded (or cover type)</li> </ul>
[50] Creation or widening of buffers (grasses, trees or shrubs) in agricultural fields adjacent to surface water sources, as well as other actions to protect existing riparian areas such as reshaping of edges and fields.	Yes	<ul style="list-style-type: none"> <li>• Previous land-use use (annual, perennial, grazing)</li> <li>• General soil texture (coarse, medium or fine)</li> </ul>	<ul style="list-style-type: none"> <li>• Area (acres) converted</li> </ul>	<ul style="list-style-type: none"> <li>• Tree/shrub/cover species planted (or cover type)</li> <li>• Number of trees/shrubs (if applicable)</li> </ul>
[51] Enhanced riparian area grazing management	Yes		<ul style="list-style-type: none"> <li>• Area (acres) of intervention</li> </ul>	

**Appendix: Resilient Agricultural Landscape Program (RALP) Beneficial Management Practices (BMPs) in Newfoundland and Labrador**

Beneficial Management Practice	Carbon Sequestration?	Baseline Condition Component (Current Practice)	BMP Quantitative Variable	BMP Description Components
[52] Establishment of pollinator strips or other perennial cover for pollinator habitat or other biodiversity purposes in fields or field margins of existing cropland (area planted with high value plants that pollinators like)	Yes	<ul style="list-style-type: none"> <li>• Previous land-use use (annual, perennial, grazing)</li> <li>• General soil texture (coarse, medium or fine)</li> </ul>	<ul style="list-style-type: none"> <li>• Area (acres) converted</li> </ul>	<ul style="list-style-type: none"> <li>• Species seeded or planted (or cover type), including ratio of trees to shrubs and forages</li> </ul>
[53] Establishment of shelterbelts or tree buffers for farmyard, livestock facilities, and fields as well as intercropping with trees on annual cropland	Yes		<ul style="list-style-type: none"> <li>• Number of trees/shrubs (purchased)</li> </ul>	<ul style="list-style-type: none"> <li>• Tree and/or shrub species used</li> <li>• Area planted (acres)</li> <li>• Estimated percent survival of planted species (at end of project)</li> </ul>
[58] Increasing the use of alfalfa or other locally adapted and persistent N-fixing perennial legumes in pasture and hay	Yes	<ul style="list-style-type: none"> <li>• Baseline species composition (crops by estimated % coverage)</li> </ul>	<ul style="list-style-type: none"> <li>• Area (acres) of implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Perennial legume increased</li> <li>• New species composition (estimated % of area covered in new legume)</li> </ul>
[60] Planting of trees/shrubs on marginal or high-risk cropland	Yes	<ul style="list-style-type: none"> <li>• Previous land-use use (annual, perennial, grazing)</li> <li>• General soil texture (coarse, medium or fine)</li> </ul>	<ul style="list-style-type: none"> <li>• Number of trees/shrubs (purchased)</li> </ul>	<ul style="list-style-type: none"> <li>• Tree/ shrub species</li> <li>• Area planted (acres)</li> <li>• Estimated percent survival of planted species (at end of project)</li> </ul>
[63] Rotational grazing of tame pasture (including expenses such as cross-fencing and offsite watering)	Yes	<ul style="list-style-type: none"> <li>• Head (number) of cattle grazing in conventional system (average number of head over the year) (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• Area (acres) converted to rotational grazing</li> </ul>	<ul style="list-style-type: none"> <li>• Head (number) of cattle grazing in rotational system (average number of head over the year) (optional)</li> </ul>
[64] Silvopasture	Yes		<ul style="list-style-type: none"> <li>• Number of trees (purchased)</li> </ul>	<ul style="list-style-type: none"> <li>• Tree species used</li> <li>• Area planted (acres)</li> <li>• Estimated percent survival of planted species (at end of project)</li> </ul>

<b>Appendix: Resilient Agricultural Landscape Program (RALP) Beneficial Management Practices (BMPs) in Newfoundland and Labrador</b>				
<b>Beneficial Management Practice</b>	<b>Carbon Sequestration?</b>	<b>Baseline Condition Component (Current Practice)</b>	<b>BMP Quantitative Variable</b>	<b>BMP Description Components</b>
[65] Wetland restoration, construction of new wetlands	Yes		<ul style="list-style-type: none"> <li>Approximate area (acres) of restored/new wetland</li> </ul>	
[138] Water Retention Ponds	No		<ul style="list-style-type: none"> <li>Estimated drainage area (acres)</li> </ul>	<ul style="list-style-type: none"> <li>Volume (acre/feet)</li> </ul>