

## **Inventory of Federal Environment Programs for Agriculture**

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### **Agricultural Clean Technology Program**

As part of the Government of Canada's strengthened climate plan, A Healthy Environment and a Healthy Economy, the new Agricultural Clean Technology (ACT) Program aims to create an enabling environment for the development and adoption of clean technology that will help drive the changes required to achieve a low-carbon economy and promote sustainable growth in Canada's agriculture and agri-food sector.

The ACT Program offers support under 2 streams:

- [Adoption Stream](#)
- [Research and Innovation Stream](#)

### **Agricultural Clean Technology Program: Research and Innovation Stream**

The Research and Innovation Stream will support pre-market innovation, including research, development, demonstration and commercialization activities, to develop transformative clean technologies and enable the expansion of current technologies.

Program funding for the Research and Innovation Stream is \$50 million over 7 years, with this stream ending March 31, 2028.

### **Eligible activities under the Research and Innovation Stream are of the following nature and type:**

- **Green energy and energy efficiency** including better management of energy intensive processes and introduction of energy generation. Examples include, but are not limited to:
  - more efficient lighting, insulation, heating, refrigeration, ventilation
  - technologies that help make energy intensive processes more efficient
  - development of zero-emissions on-farm equipment and machinery
  - energy generation technologies including:
    - biodigesters
    - heat pumps
    - solar panels

- **Precision agriculture** which uses a wide range of technologies to gather and process data for the purpose of guiding targeted actions that improve the sustainability, efficiency and productivity of agricultural operations. Examples include, but are not limited to:
  - driver assistance and machine auto-guidance
  - decision support tools and technologies that improve in real time input, use and nutrient management
- **Bioeconomy** which utilizes agriculture waste and by-products for energy and bio-product generation. Examples include, but are not limited to:
  - biofuels and digestate production used as bioenergy, soil nutrients and water
  - manure management technologies
  - agri-based products, such as:
    - bioplastics
    - biomass-based construction products and car parts

**Eligible activities under the Research and Innovation Stream are of the following nature and type:**

- Applied research and development of clean technologies
- Piloting and evaluating clean technologies
- Demonstration and knowledge and technology transfer activities
- Commercializing and scaling up clean technologies
- Other activities that support the Research and Innovation Stream as determined by the program

**Eligible applicants under the program are:**

- for-profit organizations, including agri-food processors
- not-for-profit organizations, including co-operatives
- Indigenous groups

**Eligible activities**

- applied research and development of clean technologies
- piloting and evaluating clean technologies
- demonstration and knowledge and technology transfer activities
- commercializing and scaling up clean technologies
- other activities that support the R&I Stream as determined by the program

**Funding**

- non-repayable for research, development and demonstration activities
- repayable where activities involve commercialization and scale-up
- The maximum amount payable to a recipient will generally not exceed \$2 million per project.
- The maximum amount payable to a recipient with multiple projects will generally not exceed \$5 million.

**Cost-sharing**

- A maximum contribution of 50% from the program
- A minimum contribution of 50% from the applicant

The program may provide a more favourable cost-share ratio (60:40) where the majority of the business (more than 50%) is owned or led by one or more under-represented groups.

## **Agricultural Clean Technology Program: Adoption Stream**

The Adoption Stream will support the purchase and installation of commercially available clean technologies and processes with a priority given to those that show evidence of reducing greenhouse gas (GHG) emissions, and other environmental co-benefits.

Program funding for the Adoption Stream is up to \$100 million over 5 years, with projects ending March 31, 2026.

### **Eligible activities under the Adoption Stream are of the following nature and type:**

- Green energy and energy efficiency, including better management of energy intensive processes and technologies. For example:
  - purchase and installation of new and upgraded grain dryers (including commercial dryers) and barn heating
  - adoption of technologies to power farms with clean energy (for example, fuel switching)
- Precision agriculture, including management strategies that gather, process, and analyze data; and decision support tools and technologies that improve real time input use and nutrient management
- Bioeconomy, including technologies that use agricultural waste and by-products for energy and bio-product generation

### **Eligible applicants are:**

- for-profit organizations, including farm businesses and agri-food processors
- not-for-profit organizations, including co-operatives
- individuals, sole proprietors
- Indigenous groups

Eligible applicants must be individuals (legal entities) capable of entering into legally binding agreements. All eligible applicants must be Canadian entities (incorporated in Canada).

### **Eligible activities**

Examples of eligible activities under the Adoption Stream include, but are not limited to, on-farm and agri-food sector investments in the adoption of:

- energy efficiency improvements that enable better management of energy intensive agricultural processes, including the purchase and installation of:
  - energy-efficient, low-emissions equipment (for example, commercial grain dryers) where an efficiency gain can be demonstrated
  - technologies to power farms with clean energy (for example, fuel switching, such as conversion from diesel)
  - energy-efficient watering systems for livestock and irrigation systems
  - energy-efficient heating systems for functional on-farm structures like barns
  - heat pumps and frequency converters

- solar panels and solar-powered technology, including for ventilation, farm equipment, sensors, etc.
- precision agriculture that contributes to more precise, and therefore reduced input use, including the purchase and installation of:
  - nutrient management technologies that optimize fertilizer application (that is, rate and placement) and other inputs including variable rate application technologies and GPS auto-steer guidance systems
  - technologies and systems to collect and analyze data that enable reduced input use, including soil sensors, yield monitors, remote imagery and related geographic information systems technologies
  - technologies that enable feed grain processing for improved digestibility and reduced enteric fermentation, such as steam flaking
- bioeconomy solutions that use agricultural waste and by-products to generate energy or create bio-products, including:
  - purchase and installation of technologies and equipment to support improved manure management and processing waste into bioenergy products and other useful outputs, including:
    - Anaerobic digesters for processing agricultural waste into bioenergy
    - Bio-product boiler systems for heating greenhouses and nurseries
  - implementing solutions that use agri-based products, such as bioplastics
- other priorities and activities that support the objective of the Adoption Stream

### **Funding**

- The Adoption Stream will focus its support on projects valued at \$50,000 or more of total eligible project costs.
- The maximum amount payable to a recipient will generally not exceed \$2 million per project.
- The maximum amount payable to a recipient with multiple projects will generally not exceed \$5 million.

### **Cost-sharing**

#### Adoption Stream (For-profit)

- A maximum contribution of 50% from the program
- A minimum contribution of 50% from the applicant

The program may provide a more favourable cost-share ratio (60:40) where the majority of the business (more than 50%) is owned or led by one or more under-represented groups.

#### Adoption Stream (Not-for-profit)

- A maximum contribution of 75% from the program
- A minimum contribution of 25% from the applicant

## [Agricultural Climate Solutions Program](#)

The goal of the Agricultural Climate Solutions Program (ACS) is to accelerate co-development, testing, adoption, dissemination and monitoring of technologies and practices, including beneficial management practices (BMPs), that sequester carbon and/or mitigate greenhouse gas (GHG) emissions.

Through a collaborative approach, projects will focus on the on-farm co-development, testing, adoption and monitoring of new BMPs and technologies. Projects funded under ACS will follow the living lab innovation model. A living lab is an integrated approach to agricultural innovation that brings together farmers, scientists, and other participants to co-develop, test, and monitor new BMPs and technologies in a real-life context where they will be used: on Canadian farms. More information about the living lab model and its core principles can be found in the [Living Laboratories Initiative](#).

ACS will consider projects within the following 2 priority areas:

- Carbon sequestration (for example, cover crops, intercropping, conversion of marginal land to permanent cover, shelterbelts, inclusion of pulses in rotations)
- Greenhouse gas mitigation (for example, nutrient management, feeding strategies)

Please note that during the 2021-22 funding cycle, the emphasis will be on supporting proposals that include the advancement of carbon sequestration as an important part of their project activities.

In addition, projects should indicate if they could support the achievement of other relevant environmental benefits, such as:

- improving soil health and water quality
- water conservation
- increasing biodiversity
- maximizing habitat capacity

The aim of the 2021 grant funding is to facilitate establishing a Canada-wide network of living labs. Eligible organizations in all provinces are welcome to submit their applications for 2021 grant funding to support the preparation of proposals leading to the development of living labs in their province. Please note that while the 2021 granting process is open across the country, the focus will be placed on helping organizations in provinces that currently do not host a living lab established as part of the Living Laboratories Initiative - Collaborative Program (LLI-CP, 2018-23). Currently, provinces of Prince Edward Island, Quebec, Ontario and Manitoba each host a living lab under LLI-CP.

A second call for grant proposals will be offered in 2022.

For more information on participating, visit [Who is eligible](#) and [How to Apply](#).

## **Surplus Food Rescue Program**

The Surplus Food Rescue Program is part of the government of Canada's emergency response to the current COVID-19 crisis. This is a time-limited program to help manage and redirect existing surpluses to organizations addressing food insecurity and to avoid food waste. It will provide an opportunity for non-profit and for-profit organizations across the supply chain to bid on significant volumes of surplus products at the cost of production or less, processing them where necessary for longer shelf life and distributing to food serving agencies.

### **Priorities for funding**

The program will award contributions to organizations who have a turn-key approach to managing surplus food and who:

- can acquire and move the most surplus product (must identify amount to be moved)
- use the most cost-effective approach for acquiring food (acquiring product at or below the cost of production and through donations as applicable)
- use the most cost-effective approach for processing (only process if cannot be distributed otherwise and at minimal cost)
- are most efficient, from wholesale purchase to food serving agencies
- are most efficient, from wholesale purchase to food serving agencies (drawing down on surplus quickly)
- can make sure food reaches the most vulnerable and remote communities (target of 10% for northern communities)
- have partnerships along the supply chain including food serving agencies already established

Smaller organizations proposing to handle smaller amounts of surplus may be funded if they are serving a specific vulnerable region, not otherwise well-served, and use innovative methods to deal with the surplus.

### **Eligible applicants**

- Community or charitable organizations
- Indigenous groups
- Cooperatives
- Regional and municipal governments and agencies

### **Eligible projects**

Eligible projects are those that handle the full logistical requirements needed to move surplus commodities through the entire value chain as quickly, efficiently, and cost-effectively as possible. This means covering the essential steps of acquiring product at wholesale cost, processing, transporting, as well as ensuring the shelf-life stability of surplus products, resulting in the least amount of food waste.

Projects can cover one or more commodities, depending on the demonstrated ability to manage all requirements for said commodities. Regional or national approaches may be used.

## **Agricultural Climate Solutions**

Agricultural Climate Solutions (ACS) is a \$185 million, 10-year program that will help develop and implement farming practices to tackle climate change. Through agricultural practices such as shelterbelts or cover crops, farmland can trap and store carbon and reduce greenhouse gases.

ACS is a program under the more than \$4 billion Natural Climate Solutions Fund. AAFC is partnering with Natural Resources Canada (NRCan) and Environment and Climate Change Canada (ECCC) to develop projects that invest in natural climate solutions, including NRCan's Growing Canada's Forests program and ECCC's Nature Smart Climate Solutions Fund.

### **Farmers contributing to reaching Canada's emissions targets**

The agriculture sector, through ACS, is supporting the goals of Canada's Strengthened Climate Plan to improve nature and climate benefits by capturing carbon to reduce greenhouse gas emissions, support nature's resilience, and improve Canadians' quality of life. The Government of Canada has set a clear ambition – exceeding the target of cutting greenhouse gas emissions by 30 per cent below 2005 levels by 2030, and towards net-zero emissions by 2050.

ACS will develop regional collaboration hubs on farms, known as “Living Labs”. Farmers and farm groups will be at the centre of decision making, innovation and on-farm activities at each hub. ACS includes transferring knowledge to other farmers so that they can deploy solutions that are tailored to their region and promote environmental sustainability and resiliency in the agriculture sector.

Collaborators will implement projects that also contribute to environmental co-benefits, such as:

### **Sequestering carbon and reducing greenhouse gases**

Like Canada's forests, Canada's millions of acres of farmland have the potential to trap and store carbon and reduce greenhouse gases from the atmosphere. The initiative will contribute to meeting or exceeding Canada's current greenhouse gas reduction target of 30% (below 2005 levels) by 2030 and towards net-zero greenhouse gas emissions by 2050.

### **Conserving soil that is healthier and more resilient**

Rich and healthy soil is the heartbeat of all farms. The use of cover crops and intercropping are just two of many ways that farmers can improve soil quality, trap and store more carbon, and reduce the negative environmental effects caused by soil erosion.

### **Finding ways to conserve clean water**

From soil to streams, water is essential to healthy crops and populations. Farming practices can help conserve one of humankind's greatest resources and safeguard clean water for communities.

### **Protecting biodiversity for sustainable farms**

Biodiversity is the variety of all life on Earth, from tiny organisms to plants, animals and humans. Protecting the diversity of life on farms can result in healthy fields with fewer pest problems. Plus, a larger number of plant species means a greater variety of crops and diversified farm incomes.

### **Reducing effects of climate change to help all Canadians**

Environmentally sustainable farms help to combat climate change, reconnect our rural and urban communities, and contribute to the well-being of all Canadians with healthy food and clean air and water.

### **Application process**

Projects in each province will be selected based on the potential to store carbon and/or reduce greenhouse gases. To be eligible for the Agriculture Climate Solutions program, applicants must form a large network of partnerships within a province, including with agricultural non-profits, Indigenous organizations and



environmental groups. Non-repayable funding available through ACS will be deployed in several phases starting in April 2021.

- **Phase 1: Grant funding applications (April 1 to June 15, 2021)** – AAFC is accepting proposals for grants of up to \$100,000 from eligible organizations to support them in developing a network of participants, based on the [living labs model](#), to develop and submit comprehensive project proposals for contribution funding to establish an ACS project.
- **Phase 2: Contribution funding applications (Fall 2021)** – Applications for funding support of up to \$10 million per project and, if requested, research and development support from a team of government department scientists led by AAFC, is slated to open in Fall 2021. It is expected that approved projects will start in the spring 2022. The receipt of grant funding in Phase 1 will not be a requirement to apply for Phase 2 contribution funding and AAFC research and development support.

A second intake of grant applications and contribution funding applications for additional ACS projects will begin in spring 2022.

### **Budget 2021 – Returning portion of Carbon Tax Proceeds**

Budget 2021 announces the government’s intention to return a portion of the proceeds from the price on pollution directly to farmers in backstop jurisdictions (currently Alberta, Saskatchewan, Manitoba, and Ontario), beginning in 2021-22. It is estimated farmers would receive \$100 million in the first year. Returns in future years will be based on proceeds from the price on pollution collected in the prior fiscal year, and are expected to increase as the price on pollution rises. **Further details will be announced later in 2021 by the Minister of Finance.**