



Climate Action Initiative  
BC AGRICULTURE & FOOD



# Farm Adaptation Innovator Program

## 2018–2023

### PROGRAM GUIDE

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*The Farm Adaptation Innovator Program is part of the BC Agriculture and Food Climate Action Initiative supported by the Canadian Agricultural Partnership, a five-year investment by federal, provincial and territorial governments to strengthen the agriculture and agri-food sector.*



*Program delivery partners:*





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# Farm Adaptation Innovator Program 2018-2023 Program Guide

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# Farm Adaptation Innovator Program 2018-2023 Program Guide

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## 1. Program Description

The Farm Adaptation Innovator Program (FAIP) provides direct financial assistance to projects including applied research, pilots and demonstrations which will increase the capacity of B.C. farmers to adapt to climate change and weather related production risks and impacts. Some of the predicted climate change impacts for B.C. include:

- Increased average temperatures and total annual precipitation
- Increased spring-time precipitation potentially resulting in delayed planting, shorter growing season in some years, and increased flooding
- Reduced winter snowfall resulting in accelerated spring run-off, leading to dry conditions later in the growing season
- Extended hot dry periods during the growing season (growing season drought)
- Increased variable and extreme conditions, e.g., intense rainfall leading to flooding, runoff and erosion; hot and dry conditions resulting in more frequent/intensive wildfires

The goals of the program investment are to build adaptive capacity, and to encourage the adoption of effective farm practices to help mitigate these impacts. Please refer to Appendix A for a detailed explanation of adaptive capacity in relation to the program.

Projects may be local, regional or provincial in scope. However, the resulting knowledge, practice, technology or approach must be applicable at a farm-level scale by an individual farm operator or group of farm operators. Funding will be distributed over a five-year period (winter 2018 – winter 2023).



## 2. Program Partners

The Farm Adaptation Innovator Program is funded by the Canadian Agricultural Partnership, a five-year investment by federal, provincial and territorial governments to strengthen the agriculture and agri-food sector. This programming is part of the BC Ministry of Agriculture's on-going commitment to climate change adaptation in the agriculture sector.

### *BC Agriculture & Food Climate Action Initiative*

Working through BC Agricultural Research and Development Corporation (ARDCorp), with the guidance of an industry-led committee (the Climate Action Initiative Advisory Committee), BC Agriculture and Food Climate Action Initiative (CAI) delivers two climate adaptation programs: the Farm Adaptation Innovator Program and Regional Adaptation Program.

CAI's role in FAIP is to coordinate the call for Expressions of Interest and application intakes, work with applicants to ensure project concepts and proposals are as strong as possible, as well as to remain in communication with project leads during the life of projects (to offer input/guidance about changes to project parameters, assist with progress reporting, etc.). CAI is the primary point of contact for all issues pertaining to project requirements, reporting and to address any questions or concerns.

Assistance is available from CAI to develop project proposals and to enhance project capacity in specific areas such as communications and knowledge transfer. Contact the FAIP Coordinator for more information.

### *Investment Agriculture Foundation of BC*

The funding for FAIP projects is administered through the Investment Agriculture Foundation of BC (IAF). This means that successful proponents will sign a Contribution Agreement with IAF before receiving funding and that payments of project instalments will come from IAF. IAF also participates in the Climate Change Adaptation Programming Review Committee that selects projects and reviews final reports.



### 3. Program Objectives

The objectives of the Farm Adaptation Innovator Program are to:

- Demonstrate the suitability of farm practices, approaches and technologies for mitigating climate change impacts and weather related production risks, and identify new production opportunities
- Promote innovation in farm practices, approaches and technologies that support adaptation
- Develop knowledge, information resources and human resource capacity within the agricultural community to support adaptation
- Increase the effectiveness of networks, associations and organizations to support adaptation by promoting resource sharing and collaboration

### 4. Applicant Eligibility

- Individual BC agri-foods sector producers or groups of BC agri-foods sector producers
- BC agri-food industry associations/organizations
- Input, technology, support and advisory services providers
- Academic institutions and/or other organizations and private sector businesses
- BC First Nation governments, organizations, individuals and corporations
- BC local governments, including regional districts and municipalities

### 5. Project Eligibility

Funding is available to support projects in four different farm practice categories:

- Soil and Crop Management (includes horticulture, orchards, viticulture, seeded forage and forage grown for seed)
- Livestock, Pasture and Range Management (includes livestock water)
- Water Management
- Whole Farm and Business Management

FAIP projects must include monitoring and knowledge transfer activities. The capacity of the project team must be well suited to accomplishing the elements of the proposed project. Prospective applicants should consider these requirements when developing their project concept and project partnerships.



A series of example projects and their related adaptation goals for each of the farm practice categories is listed in Appendix B.

Note: Projects that are eligible for funding Beneficial Management Practices (BMPs) under an approved individual, group or area Environmental Farm Plan (EFP), may receive additional funding under FAIP if they meet program objectives and project eligibility criteria. More details are provided in Appendix C.

## 6. Previous Research and Identified Priorities

CAI has been working with the BC agriculture sector to establish priorities for climate change adaptation since 2011. Applicants are encouraged to review previous work in your region and commodity sector to increase alignment with identified priorities. Resources include:

- [www.bcagclimateaction.ca/projects](http://www.bcagclimateaction.ca/projects) (CAI past projects, listed by program and region)
- **A summary of research priorities** identified through CAI projects, available by contacting [shauna@bcagclimateaction.ca](mailto:shauna@bcagclimateaction.ca).

You may contact CAI with questions related to previous research and identified priorities.

## 7. Evaluation Process and Criteria

Projects must meet FAIP objectives and project eligibility requirements. The first stage of evaluation will assess project concepts submitted through the Expression of Interest (EOI) process. The project concepts (EOI forms) will be screened for eligibility and evaluated based on the criteria below. Select proponents will then be invited to submit a full project application, which will be reviewed by the Climate Change Adaptation Programming Review Committee.

Evaluation of project concepts and full project applications will be based on the following.

### Required components:

- Potential benefits for mitigating climate change impacts or weather related risk
- Evaluation of effectiveness (project experimental design/ monitoring design)
- Knowledge transfer (demonstration, communication – e.g., field days, fact sheets, tools)
- Project collaboration
- Capacity of applicant and collaborators to fulfill project deliverables



**Desirable components:**

- Innovation
- Climate change mitigation and environmental co-benefits

Evaluation criteria for each of the components are listed in **Table 1**. Projects that score high in all components may receive a greater cost-share (up to 100% of the total cash costs within the program funding cap – applies to only the stacked portion for projects with EFP-BMP funding). Technical experts may be consulted to assist in the evaluation of project applications and supporting documentation.

**Table 1: Project components and evaluation criteria**

Component	High	Moderate	Low
<b>Required components</b>			
<b>Potential benefits for mitigating climate change impacts or weather related risks</b>	Practice, approach or technology shows high potential to be effective for mitigating climate change or weather related impacts or identifying opportunities	Practice, approach or technology shows moderate potential to be effective for mitigating climate change or weather related impacts or identifying opportunities	Project or practice shows limited potential to be effective or is likely to be effective only under specific conditions
<b>Evaluation of effectiveness – monitoring design</b>	Project has robust monitoring to determine effectiveness as well as economic cost-benefit or cost-effectiveness analysis. There is professional technical or academic oversight that includes an applied research design	Project has monitoring to determine effectiveness as well as economic cost-benefit or cost-effectiveness, but limited professional technical or academic oversight	Project includes limited measures to monitor effectiveness, and/or cost-benefit
<b>Knowledge transfer</b>	The knowledge transfer plan has broad engagement during the project and after completion. Knowledge or intellectual property remains in the public domain. Multiple communication methods and products (e.g., field days, workshops, or publications) are used to transfer knowledge	The knowledge transfer plan, relies on one or two communication methods, only after project completion, some knowledge or intellectual property is retained by the applicant, but can still be duplicated by other companies, producers or organizations	The knowledge transfer plan relies only on one communication method, or the project is primarily for the benefit of the applicant. Limited rights to intellectual property will hamper knowledge transfer and adoption of the innovation



Component	High	Moderate	Low
<b>Required components</b>			
<b>Project collaboration and In-Kind Support</b>	Project has one or more significant project linkages to other organizations or institutions; in-kind support includes knowledge and capacity/expertise (e.g., P Ag., soil sampling, GIS or other professional services, graduate research assistant with academic oversight)	Project has at least one linkage to an outside organization or institution, with some additional knowledge capacity/expertise made available in-kind	No collaborative linkages; in-kind resources contributed to the project are only administrative or cash and do not add to knowledge building and transfer
<b>Capacity of applicant and collaborators</b>	The project team has demonstrated capacity, such as previous project experience, institutional or industry support, technical expertise and sufficient financial means, to meet project objectives and deliverables	Project team has limited experience or lacks technical or financial capacity in some areas of project objectives and deliverables	No past project experience; lack of technical or financial capacity; limited collaboration to meet project objectives and deliverables
<b>Desired components</b>			
<b>Innovation or originality</b>	Practice, approach or technology is new to BC, not generally available or widely adopted; or piloting a significant advancement of an existing practice, approach or technology	Practice, approach or technology is new to the commodity sector or practice category, but may be in use or being applied in another sector in BC; or has not been previously tested under regional conditions	Practice, approach or technology is new to location but widely adopted in other parts of BC
<b>Environmental (soil, water, biodiversity) and climate change mitigation co-benefits</b>	The practice, approach, or technology shows high potential for increasing health and resilience of environmental systems (water, soil, and biodiversity); the practice, approach, or technology shows high potential for reducing GHG emissions on farm (carbon sequestration, reduction of fuel use, etc.)	Practice, approach or technology would likely have a slightly positive or neutral impact on water, soil, and biodiversity and a slightly positive or neutral impact on GHG emissions	Practice, approach or technology would likely have a negative impact on water, soil, and biodiversity values on farm and/or may result in an increase in GHG emissions

*NOTE: References to research reports or studies or other documentation can be used to support project innovation and potential effectiveness. Letters indicating participation or memoranda of understanding are sufficient to indicate project collaboration and in-kind support.*





## 8. Funding Details

Farm-level adaptation is an on-going and continuous process, and the knowledge and information gained from some project activities needs to be documented over several growing seasons to collect meaningful results. For that reason, FAIP will fund multi-year projects of up to four years.

- FAIP will prioritize multi-year projects of up to four years (up to January 31, 2023)
- Program funding is limited to \$75,000 annually, with a project lifetime cap of \$225,000 for multi-year projects
- The program will fund up to 80% of the total project cash costs within the project funding caps (may fund up to 100% of the total project cash costs of highly ranked projects based on the evaluation components)
- The program will fund up to 80% of the cash costs in areas identified for top-up for projects developed in conjunction with the EFP and BMP programs
- Proposals for continued monitoring for previous FAIP projects will be considered
- Cash contributions from collaborating partners (including partners outside government) are encouraged but not required, and these funds may be used to cover the remaining cash costs not funded by the program
- In-kind contributions of labour, equipment and expertise are encouraged and should be documented in the application, however they do not affect the funding allocation
- Funding from all government sources cannot exceed 100% of the total project cash costs
- All projects must abide by all applicable federal, provincial and local government laws and regulations, including, but not limited to, the Canadian and B.C. environmental assessment and protection acts, trade agreements, and zoning bylaws
- After the initial year of funding, further funds dispersal will be based on completion of annual progress reports and project deliverables

### Eligible Costs:

- Costs of goods, services, supplies, and all related shipping or transportation costs
- Incremental labour costs specifically required for the project such as contract salaries, benefits and specific per diem fees (this is not applicable for full-time staff of the applicant)
- Incremental costs for rental of facilities, equipment or machinery required specifically for the project
- Incremental costs of travel that are directly related to the project
- Farm infrastructure, if the investment is required for the demonstration, pilot or research project



- Administration costs – the accepted rate for administration of a project under the FAIP fund is 10% of cash costs, with an absolute cap of 15%. Administration rates greater than 10% must be related to a higher level of service and described in the funding application.

#### **Ineligible Costs:**

In general, the following costs will not be funded, unless they are specifically required for the demonstration, pilot or research project. Any items of this nature would need to be supported by the application. For example, some components of an in-field tile drainage system could be funded if integral to the demonstration and applied research.

- Buildings and commodity processing infrastructure and equipment
- Purchase or lease of land or buildings
- Livestock, feed and supplements
- Land rental
- New building construction
- Permits and approvals
- Normal production practices of participating producers
- Typical farm equipment
- Tile drainage systems
- Crop storage facilities
- Global Positioning Systems (GPS)
- Costs not specifically required for the implementation of a project
- Normal operating costs associated with carrying out a business, such as salaries and benefits of non-contract staff, office space, utilities, phone, materials, labour, board, committee and annual meetings
- Normal costs of establishing or maintaining the business entity, organization, association or farm
- Any cost, including a tax that is eligible for a rebate, credit or refund
- Travel costs beyond those provided for in the application budget
- Financing charges and loan interest payments
- Gifts and incentives
- Expenses incurred for other approved CAP projects
- Multi-use items (e.g. items that can reach beyond the scope of the project such as computers, printers, etc., which are not specifically required for the project)
- Permits and approvals



## 9. Application and Reporting Requirements

### Expression of Interest Form

- Project proponents must complete the FAIP Expression of Interest (EOI) form

### Application Form

- Project proponents invited to submit a full proposal must use the supplied FAIP application form
- A project budget must be submitted using the Excel template provided

### Contract and Funding Verification

- If an application is approved for funding, the individual/organization will be required to enter into a contribution agreement that sets out terms and conditions for funding
- Other funding sources must be verified – with a letter from the funder – before the agreement can be executed
- Applications may be submitted for consideration without all funding sources confirmed – successful applications may be used to help secure funding before entering the funding agreement

### Annual Progress and Project Completion Reports

- Annual progress reports are required for all multiple year projects
- All projects must submit a project completion report in the final year of funding that includes a summary of the results of the effectiveness monitoring and knowledge transfer activities as well as a reconciliation of the project budget
- Templates for annual progress and project completion reports will be provided
- Annual progress reports and project completion reports are mandatory to meet internal reporting requirements

## 10. Project Deliverables

At a minimum, all projects must complete the following deliverables to meet the final output requirements of the program:

- **A final project report** prepared for public distribution that provides a summary of the results of the effectiveness monitoring and other relevant knowledge gained through the project activities
- **At least one fact sheet for producers** that summarizes key results and relevant technical guidance. A fact sheet template will be provided and a technical expert must review the fact sheet before it is released.



## 11. Other Requirements

- Projects that require Engineering or Technical design should include these elements in the project application and budget; this work must be carried out by a Qualified Professional (QP) or by an individual with demonstrated training and experience.
- An appropriate QP must be employed for project activities if required by regulatory statute. The QP must be registered in British Columbia with the appropriate professional organization, and acting under that associations code of Code of Ethics and subject to disciplinary action by that association. He or she must be someone who through demonstrated suitable education, experience, accreditation and knowledge relevant to the particular matter, may be reasonably relied on to provide advice within his or her area of expertise.
- All projects must abide by all applicable federal, provincial and local government laws and regulations, including, but not limited to, the Canadian and BC environmental assessment and protection acts, trade agreements, and zoning bylaws.

## Appendix A: Adaptive Capacity Description

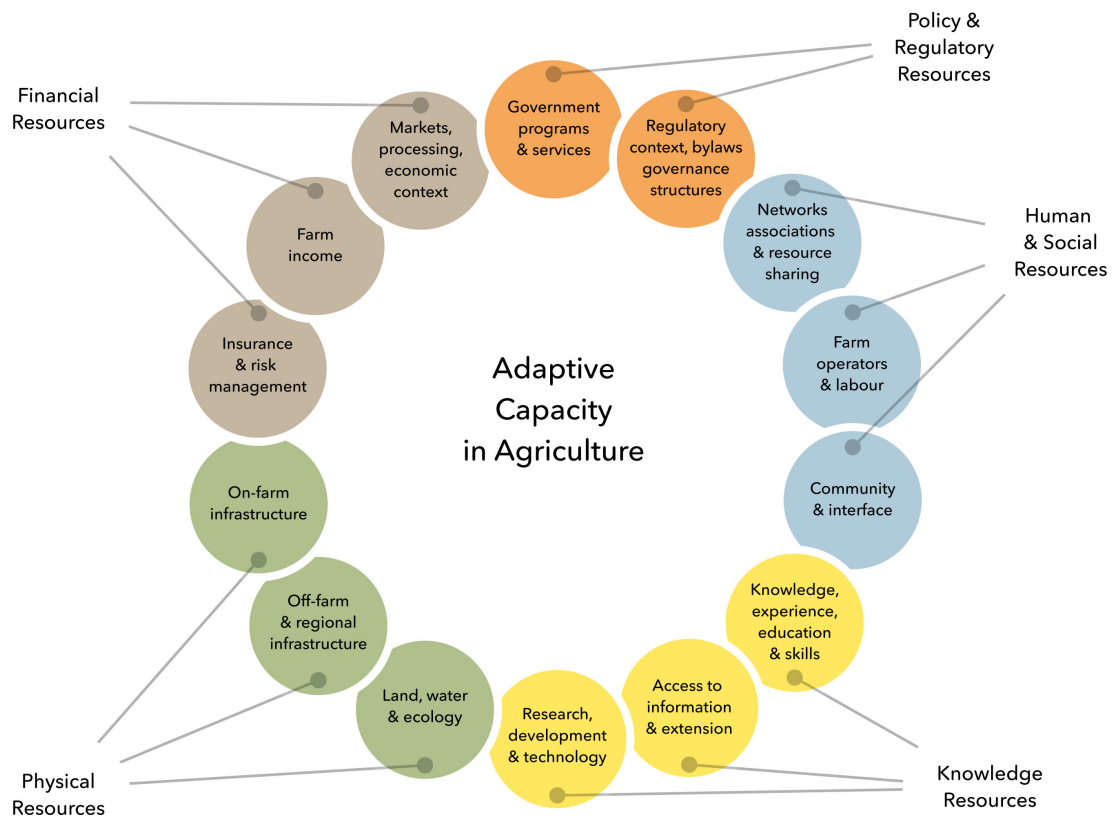
Adaptive capacity describes the presence of necessary resources and the ability to mobilize those resources to effectively respond to challenging conditions in both the immediate and long-term. **Figure 1** outlines many elements that factor into the agriculture sector's ability to adapt and expresses them as five interrelated types of resources: financial, physical, human & social, knowledge and policy and regulatory. FAIP focuses on three of these resource areas:

- **Physical Resources**
  - *Land, water, ecology* –practices and management that support farm land, water and ecological systems and reduce climate change weather related production risks
  - *Farm infrastructure* – infrastructure such as water storage, irrigation systems or drainage or water control works
- **Knowledge**
  - *Knowledge, experience, education and skills*
  - *Access to information and extension* – approaches that effectively match modes of farmer information acquisition with new knowledge (knowledge transfer)
  - *Research, development and technology* –applied farm research, development and technology



- **Human and Social Resources**
  - *Farm operators and labour* – increasing the business management and planning abilities of farm operators and labour
  - *Networks, associations, and resource sharing* – increasing the effectiveness of organizations to better serve and build the capacity of farmers

Figure 1: Areas of Adaptive Capacity in B.C. Agriculture





## Appendix B: Project and Adaptation Goal Examples

Example projects and their related adaptation goals for each farm practice category are listed in **Table 2**. The examples are multi-faceted projects and are meant to assist applicants to develop suitable projects. Proponents should keep in mind that smaller-scale projects focused on a specific aspect of a practice and/or a specific climate or weather related impact are fundable provided program requirements are met.

**Table 2: Eligible farm practice category, adaptation goals and project examples**

Farm Practice Category	Adaptation Goals	Project Examples
<b>Soil and Crop Management (includes horticulture, orchards)</b>	Increase potential to benefit from warmer temperatures and a longer growing season	Conduct local and regional field trials to extend knowledge around future climate-suitable crops and varieties
	Reduce impacts of shortened growing or harvest seasons, delayed planting	Pilot and demonstrate crop protection and season extension technologies (i.e. crop tunnels, shelterbelts, vegetative buffers) including cost-benefit analysis
	Minimize and manage salinity of agricultural soils (where expected, e.g., Lower Mainland)	Pilot technologies, practices & crops for managing salinity
	Reduce crop water needs and increase crop water use efficiency, while maintaining plant tolerance to saturated conditions	Pilot a field technology for measuring the effectiveness of soil moisture conservation practices (e.g., tool to measure crop residues)
<b>Livestock, Pasture and Range Management</b>	Increase understanding of climate-related changes in local ecological systems and identify management options for adaptation	Monitoring of ecosystem processes, including nutrient cycling, soil organic carbon, microbial activity, and adaptive processes, economics and managerial development under Management-intensive grazing (MiG), silvopasture and winterfeeding systems
	Develop drought resistant livestock water development technologies	Demonstrate livestock water development techniques, including closed storage and spring development, alternative riparian protection strategies and the use of natural barriers to maintain riparian function
	Minimize and manage the impacts of changing pest, disease, invasive species, and weed distribution and prevalence	Support producer education and mentorship for practices associated with improved pest identification and invasive species management



Farm Practice Category	Adaptation Goals	Project Examples
<b>Water Management</b>	Reduce or prevent accumulation of excess moisture on agricultural land Mitigate the impacts of flooding	Pilot alternative drainage management strategies, such as combining water storage with drainage and irrigation, subsurface drainage techniques in different farming systems.
	Increase options and resources for managing prolonged dry conditions Enhance application and delivery of irrigation water Increase farm water use efficiency and conservation Support the capture, storage, and utilization of precipitation Support water reuse technologies (where applicable)	Pilot or demonstrate improved technical resources for climate-resilient water storage planning, design, and management incorporating climate information to determine future required storage capacity, location constraints, engineering for extreme events, reduction of sedimentation, etc.
	Reduce or prevent accumulation of excess moisture on agricultural land Mitigate the impacts of flooding Increase natural water retention and storage (where appropriate)	Pilot or demonstrate updated farm drainage/ runoff engineering standards using climate-adjusted information; integrate with planning and technical manuals
<b>Whole Farm and Business Management</b>	Increase farmer's ability to understand, anticipate and plan for climate change-related risks and demands facing the farm business	Develop and demonstrate a whole-farm planning approach, considering farm flexibility, enterprise and/or location diversification and ecological risks related to climate change
	Help farmers develop strategies and practices to adapt to climate change and capitalise on potential opportunities Increase availability of climate change adaptation-related technical resources and training opportunities and human resources development for farmers	Develop resources for farm/ranch level drought resilience planning such as locally relevant resources and tools (workshops, informational guidebooks, extension supports, etc.)
	Increase monitoring and information available to inform farm business decisions in changing conditions	Develop and demonstrate whole-farm risk assessment tool which identifies and evaluates business risks and climate and weather related production risks



## Appendix C: Eligible Projects and the EFP Program

### Eligible Projects and the Environmental Farm Plan (EFP) Program

Several beneficial management practices (BMPs) funded under the British Columbia Environmental Farm Plan (EFP) program support farm adaptation to climate change related impacts. Projects that are eligible for funding BMPs under an approved individual, group or area EFP, may receive additional funding under the *Farm Adaptation Innovator Program* if they demonstrate or pilot new implementation approaches, technologies, facilitate monitoring (applied research), or knowledge transfer in addition to the risk mitigation component.

Examples might include:

- Projects to evaluate the effectiveness and/or economics of accepted BMPs under expected future climate conditions (e.g., demonstrate regulation of water quantity as well as water quality)
- Projects that demonstrate innovation and new approaches to the implementation of recognized BMPs and have a multi-faceted knowledge transfer plan

Projects of this type will be required to adhere to the funding caps and stacking requirements outlined in the BMP program guide for those parts of the project that involve implementation of BMPs (e.g., farm infrastructure investment, required plans). The identified areas for top-up through the *Farm Adaptation Innovator Program* (i.e., innovation, monitoring, demonstration, knowledge transfer) should be clearly identified in the application and budget documents. BMP funding caps and stacking requirements would not apply if the project proposed under the *Farm Adaptation Innovator Program* is based on BMPs that were completed in previous fiscal years.