

GOVERNMENT RESPONSE TO THE THIRTEENTH COMMITTEE ON AGRICULTURE AND AGRI-FOOD, ENTITLED: STEWARDS OF THE LAND: EXAMINING CANADIAN AGRICULTURE'S ENVIRONMENTAL CONTRIBUTION

The Government of Canada is pleased to respond to the Thirteenth Report of the Standing Committee on Agriculture and Agri-Food (the Committee) entitled *Stewards of the Land: Examining Canadian Agriculture's Environmental Contribution* (the Report).

The Government commends the members of the Committee, and the witnesses who appeared before it, for their insight and commitment toward addressing the environmental contributions of agriculture. The Government supports the broad, positive approach, and many of the recommendations put forth by the Committee.

The Government appreciates the comprehensive recommendations developed by the Committee and is working collaboratively with other government departments, our provincial and territorial counterparts, and sector stakeholders to address the challenges highlighted throughout the Report. Details are provided below regarding the Government's Response to the specific recommendations of the Committee in this regard.

The Response is the product of a collaborative effort among implicated federal departments and agencies including: Agriculture and Agri-Food Canada (AAFC); the Canadian Food Inspection Agency (CFIA); Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC); Environment and Climate Change Canada (ECCC); Health Canada(HC)/Pest Management Regulatory Agency (PMRA); Indigenous Services Canada (ISC); Innovation, Science and Economic Development Canada (ISED); Natural Resources Canada (NRCan); and certain Regional Development Agencies (RDAs).

The issues impacting the Canadian agriculture sector and the environment are complex, where agricultural activities help to ensure a stable food supply, can contribute to preserving the environment through beneficial management practices, and can also be impacted by natural disasters and extreme weather events. The Government of Canada has and will continue to support resilience in the agriculture sector, ensuring that Canadian agriculture remains a leader in innovating and adopting new technologies to improve environmental performance, reducing GHG emissions, storing carbon in agricultural soils and providing important habitat for wildlife, including pollinators.

RECOMMENDATION 1

The Committee recommends that the Government of Canada create a framework to encourage Canadian farmers who use nature-based solutions to climate change on their farms, in recognition of the good work already being done by farmers to reduce farm emissions, including no-till, low-till, cover cropping and intercropping agroecological farming methods, for example, by considering paying them for the ecosystem services they provide.

The Government of Canada supports this recommendation in principle. Widespread adoption of nature-based solutions on agricultural lands has significant potential to help in the mitigation and adaptation to climate change. An early adopter is someone who adopts a practice or invention before most others. They play a critical role in the success of new innovations and practices by showing leadership and providing a feedback loop that helps later adopters make decisions on whether or not to adopt the practice or innovation. As production practices that incorporate environmental and climate considerations have not been widely adopted across the sector, farmers choosing to apply nature-based practice to their production systems are helping build knowledge on what works best in different environments which in turn reduces uncertainty and risk that can act as barriers to widespread adoption. Recognizing this, the Government is making significant investments in science and research, programming, and partnerships designed to encourage information sharing and support farmers seeking to adopt

new technologies and beneficial management practices that contribute to the fight against climate change.

The Agricultural Climate Solutions (ACS) Program, is a multi-stream program to help develop, evaluate and support adopting farming practices that tackle climate change. The Living Labs Initiative, a \$185 million, 10-year (2021-2031) program under the ACS, creates research hubs that bring together farmers, scientists and other stakeholders to co-develop, test, and monitor new practices and technologies in a real-life context on working farms. One of the core principles of the Living Labs Initiative is that farmers must be key collaborators through the entire process at each hub. This core principle explicitly recognizes the important role that early adopters play in advancing innovations by disseminating their knowledge and experience, helping accelerate the adoption of solutions that are tailored to their region by other farmers, resulting in increased environmental sustainability and resilience of the sector.

The Government of Canada's On-Farm Climate Action Fund (OFCAF) stream under the ACS finances projects that support farmers in adopting and implementing immediate on-farm beneficial management practices that store carbon and reduce greenhouse gas emissions specifically in the areas of nitrogen management, cover cropping and rotational grazing. Originally a \$200 million investment over three years (2021-2024), Budget 2022 included \$469.5 million over six years to expand the OFCAF. For example, early adopters can benefit from funding through incremental implementation and key Knowledge Transfer activities. As the program develops, the list of eligible Beneficial Management Practices and other program parameters will be refined.

The Government of Canada remains committed to working with provinces and territories to support and incentivize on-farm nature-based beneficial management practices through the \$3.5 billion Sustainable Canadian Agricultural Partnership (Sustainable-CAP), the current five-year (2023-2028), federal, provincial and territorial policy framework. For example, the \$250 million FPT cost-shared Resilient Agricultural Landscape Program (RALP) uses an ecological goods and services (EG&S) payment approach to incentivize producers to conserve and enhance the resiliency of agricultural landscapes through the adoption of on-farm land use and management practices such as maintaining and restoring grasslands and wetlands; piloting innovative agriculture practices; and enhancing riparian and on-farm wildlife area. The program was designed to give provinces flexibility in program implementation to account for regional differences.

The Government of Canada is developing a Sustainable Agriculture Strategy (SAS) which is a coordinated federal approach to establish a long-term vision and strategic approach to agri-environmental issues, including climate adaptation and resilience, climate change mitigation, water, biodiversity, and soil health. Extensive consultations were done with the sector throughout 2023, including ongoing discussions with the SAS Advisory Committee. Rewarding early adopters was a common theme heard throughout consultations. Some examples provided by stakeholders of how early producers could be rewarded were provided including awarding prizes for early adoption, developing public communication campaigns featuring early adopters, or viewing early adopters as success stories, mentors, and leaders in the sector to encourage adoption of practices by others. Together with the sector, the SAS could assist in exploring ways in which early adopters could be recognized as leaders.

Early participation in industry-led environmental initiatives is recognized by Farm Credit Canada (FCC), a crown corporation, with the launch in 2022 of its Sustainability Incentive Program for customers participating in industry-led sustainability initiatives. This program provides annual incentive payments to eligible customers who meet the partners' sustainability program requirements. In its first year, the sustainability incentive program received 262 successful applications and paid over \$370,000 in incentives to producers.

Work on how to recognize additional environmental actions being taken by producers going forward to reduce farm emissions is ongoing. *Canada's GHG Offset Credit System* can play a role in encouraging farmers to adopt nature-based solutions and go beyond business as usual and common practices by providing an opportunity to earn revenues from GHG reductions or removals. *Canada's GHG Offset Credit System* is developing a protocol for Enhanced Soil Organic Carbon. Under *Canada's GHG Offset Credit System* proponents must meet the requirements outlined in the *Canadian GHG Offset Credit System Regulations* and the applicable protocol in order to be issued federal offset credits for their project activities. By implementing the practices identified in the protocol, agricultural land managers could not only benefit from the opportunity to generate offset credits, but could also benefit from enhancements in the environmental health and productivity of Canada's agricultural lands.

RECOMMENDATION 2

The Committee recommends that the Government of Canada work to encourage best practices by which farms in eastern Canada can sequester more carbon per hectare, such as reducing soil compaction.

The Government of Canada supports this recommendation. As both a source of and a sink for greenhouse gases, agricultural lands have a key role to play in efforts to mitigate and adapt to climate change. The increased use of specific beneficial management practices (BMPs) such as cover cropping and shelterbelts has the potential to sequester important carbon by the 2050 horizon. The large variations of landscapes and growing conditions that exist across Canada requires that local and regional circumstances be taken into consideration. Voluntary and informed decision-making by farmers on which BMPs best suit their environment are key to successful outcomes in both emissions reductions efforts, and in long-term improvements in soil health and water quality.

The Government of Canada supports region-specific agriculture programs, services and projects that promote and accelerate on-farm adoption of BMPs that sequester carbon. AAFC's Research and Development Centers in eastern Canada are assessing on-farm management practices that impact carbon sequestration in soils. This includes agronomic practices, on-farm wetland management strategies, optimizing cover crops and crop rotation strategies, improving biodiversity, and supporting understanding of the soil microbiome.

The Sustainable Canadian Agricultural Partnership (Sustainable-CAP), is a five-year (2023-2028), \$3.5 billion dollar federal, provincial and territorial cost-shared investment that supports programs to raise producer awareness of environmental risks specific to their region (example, Environmental Farm Plan programs), and how to mitigate these risks through the adoption of the appropriate on-farm technologies and BMPs. Farmers in eastern Canada, like farmers across Canada, can receive support for eligible BMPs that best address the regional differences.

The Agricultural Climate Solutions (ACS) program, through its On Farm Climate Action Fund (OFCAF) (\$200 million in 2021 for one year and \$469.5 million in 2022 for 6 years) and the Living Labs Initiative (\$185 million over 10 years), funds several projects in eastern Canada that support efforts to sequester carbon, reduce greenhouse gas emissions and generate other environmental co-benefits such as air, water, and soil quality. As well, each of the eastern provinces have established Living Lab projects, which support the co-development and testing, and enable broadscale adoption of technologies and practices that sequester carbon and/or mitigate GHG emissions that are best suited to the region.

The Agricultural Clean Technology Program (ACT) (\$470.7 million over 7 years) provides non-repayable contributions to aid in the development and adoption of clean technology and upgrades that will reduce GHG, fertilizer, and methane emissions. ACT has funded and

continues to assess applications from Canadian farmers and processors who have, or would like to use, clean technology to reduce GHG emissions.

ECCC is developing a federal offset protocol for Enhanced Soil Organic Carbon under *Canada's GHG Offset Credit System* that will provide opportunities for farmers to generate offset credits for beneficial management practices on agricultural land that sequester carbon. Management practices would need to be beyond business-as-usual practices, including any legal requirements and carbon pricing. By going above business-as-usual practices on their farms, agricultural land managers will not only benefit from the opportunity to generate offset credits, but will also benefit from enhancements in soil health and productivity on Canada's agricultural lands. The development of this protocol is complex but underway, and the goal is to complete various assessments and analyses in the first quarter of 2024 enabling ECCC to confirm when a draft protocol would be published for public comment.

RECOMMENDATION 3

The Committee recommends that the Government of Canada, in collaboration with provinces and territories: invest in research and technology to help cattle producers build upon conservation practices already in use; develop a comprehensive plan to protect and restore native grasslands, to better understand land conservation and reduction of industry emissions, while increasing carbon sequestration; and consider ways to continue to enhance and incorporate the role of livestock animals in regenerating grasslands.

The Government of Canada supports this recommendation in principle. Agricultural grasslands, including grazing pastures and hay lands, provide important ecological goods and services, as they help regulate the flow and quality of water, protect fragile soils from erosion, recycle nutrient content, and support the protection of wild animal and plant biodiversity. The Government of Canada has made significant investments in research and technology initiatives aimed at supporting the adoption of beneficial management practices (BMPs) that contribute to the restoration and protection of native grassland, while also supporting cattle producers in their sustainability objectives. In adopting the Kunming-Montreal Global Biodiversity Framework (KMGBF) and working to update the National Biodiversity Strategy and Action Plan to implement that Framework, the Government has reaffirmed its commitment to protect and conserve 30% of Canada's land areas by 2030.

Under the Natural Climate Solutions Fund, ECCC administers the Nature Smart Climate Solutions Fund (NSCSF), a \$1.4 billion, ten-year fund meant to reduce 5-7 megatons of GHG emissions annually. The fund will achieve this by supporting projects that conserve, restore, and enhance wetlands, peatlands, grasslands, and forests to store and capture carbon. Through the NSCSF, the Government is also investing in projects to improve our knowledge on the status and location of grasslands, such as the \$933,100 contribution to the Canadian Forage and Grassland Association's *Developing a Functional Grassland Inventory for Canadian Agriculture* project. This project is supporting greater collaboration and communication between different grassland mapping initiatives and will provide additional validated data to improve existing inventories of native and tame grasslands across Canada.

Conservation and restoration of native grasslands was identified as a priority under the Strategic Conservation Framework for Species at Risk - Agriculture Sector, developed in consultation with the agriculture sector and other stakeholders as part of the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada. Through initiatives developed under this Framework, the Government remains committed to working with partners and stakeholders to invest in projects aimed at protecting and restoring grasslands, and engaging producers in voluntary stewardship activities that benefit grasslands and the biodiversity they support. One example is the successful collaboration between

conservationists and beef producers on conservation activities to protect critical habitat in the Grasslands Natural Region of southeast Alberta under the Species at Risk Partnership on Agricultural Land (SARPAL) initiative.

The Sustainable Canadian Agricultural Partnership (Sustainable-CAP) is the current five-year (2023-2028) federal, provincial, and territorial policy framework to strengthen the competitiveness, innovation, and resiliency of the agriculture and agri-food sector. Sustainable-CAP is a \$3.5 billion federal-provincial-territorial cost-shared investment to support region-specific agriculture programs and services, including the development and adoption of conservation practices by cattle producers. This includes the new \$250 million Resilient Agricultural Landscape Program which supports on-farm land use and management practices such as maintaining and restoring grasslands and wetlands.

The AgriScience Program, a strictly federally delivered Sustainable-CAP program, committed \$12 million to the Canadian Cattle Association Beef Cattle Research Council to establish a beef and forage research cluster. This investment, along with approximately \$10 million in matching industry funds, aims to drive the growth of Canada's beef industry through research, innovation, and technology transfer, while improving their environmental footprint.

The Government of Canada is developing a Sustainable Agriculture Strategy (SAS) which is a coordinated federal approach to establish a long-term vision and strategic approach to agri-environmental issues, including climate adaptation and resilience, climate change mitigation, water, biodiversity, and soil health. Extensive consultations were done with the sector throughout 2023, including ongoing discussions with the SAS Advisory Committee. Throughout consultations, various stakeholders noted the need to promote diversified agricultural landscapes, including the importance of grasslands for carbon sequestration. The SAS will help identify research priorities and innovations to support agri-environmental outcomes in various commodity sectors, such as cattle production.

The Government of Canada has also been investing in science and research, and federal programs, aimed at supporting the evaluation, development and adoption of on-farm practices that increase carbon sequestration and help to lower sector carbon emissions. These programs have included a focus on land management practices that recognize and seek to build on known beneficial management practices for cattle producers, such as rotational grazing and restoring grasslands. For example, the Agricultural Methane Reduction Challenge, launched in November 2023, commits up to \$12 million to innovators advancing low-cost, scalable, and economically viable practices, processes, and technologies that can reduce enteric methane emissions from the cattle sector.

Partnerships between federal and provincial governments, producers, and Indigenous partners to improve livestock grazing management practices to fight climate change are being explored through funding provided under the Living Labs Initiative. The OFCAF supports producers by covering eligible costs for professional consultants who work directly with producers to develop rotational grazing plans conducive to their operations and that align with the ACS objectives. Additionally, several AAFC Research and Development Centres are participating in native grassland restoration projects, especially in the western Canadian native grassland region.

RECOMMENDATION 4

The Committee recommends that the Government of Canada, in partnership with stakeholders as well as with provincial, territorial, and municipal governments:

- a. collect information on grasslands, pasturelands, and wetlands, to balance urban expansion, agricultural production, and environmental protection, in respect of their respective jurisdictions;**

b. investigate methods by which to reclaim unused federal land for the purpose of converting it into productive farmland, blended with native ecosystems; and

c. promote regenerative agriculture in urban and suburban areas.

a. Collect information on grasslands, pasturelands, and wetlands, to balance urban expansion, agricultural production, and environmental protection, in respect of their respective jurisdictions

The Government of Canada supports this part of the recommendation. Agricultural grasslands, pasturelands and wetlands provide important ecological goods and services, as they help regulate the flow and quality of water, protect fragile soils from erosion, recycle nutrient content, and support the protection of biodiversity. The Government is committed to working with stakeholders, and provincial, territorial and municipal governments in the collection of information on grasslands, pasturelands and wetlands. An improved understanding of land-use and composition changes is key to informing policies that protect agricultural grasslands, pasturelands and wetlands.

Information on grasslands, pasturelands and wetlands is generated from a number of sources, including a time-series map that tracks changes in land-use classes, including cropland, grasslands, wetlands and urban. AAFC, drawing from Agriculture Climate Solutions (ACS) funding, making investments toward improving its ability to distinguish between native and tame grasslands and better inventory their current extent and change over time. Another source of land data is the Census of Agriculture (CoA), which is conducted every five years. The CoA provides a comprehensive profile of the physical, economic, social and environmental characteristics of Canada's agriculture industry, and includes information on pasturelands and wetlands.

Sources of more accurate and detailed information are being developed. Through the Nature Smart Climate Solutions Fund (NSCSF), the Government of Canada awarded \$933,100 to the Canadian Forage and Grassland Association's Project: *Developing a Functional Grassland Inventory for Canadian Agriculture*. This project creates greater collaboration and communication between various grassland mapping initiatives and will provide additional validated data to improve existing inventories of native and tame grasslands across Canada. This project will help better inform and focus program and policies designed to help support actions on the ground to restore, conserve and enhance grasslands in agricultural working landscapes.

Also through the NSCSF, ECCC is building high quality geospatial coverage of wetlands. The focus of data acquisition is on peatlands and coastal wetlands to ensure that the database contains the necessary information to support modelling of the greenhouse gas sequestration benefits of wetlands. Furthermore, ECCC is collaborating with provincial, territorial, federal and other partners to conduct targeted mapping and inventory, and developing consistent national mapping standards. Through designing, constructing and openly publishing an inventory of validated data, the information will be accessible to a wide range of users for multiple purposes, including training and validation of remote sensing data with wider geographic coverage. Starting this year, ECCC will also be working with Indigenous partners to increase their capacity to participate in the collection of inventory data and to ensure that the inventory supports their conservation efforts.

b. investigate methods by which to reclaim unused federal land for the purpose of converting it into productive farmland, blended with native ecosystems

The Government of Canada acknowledges this part of the recommendation.

The continued use and operation of federally administered real property assets including lands is governed by various Federal Acts, Policies and Regulations. A fulsome life-cycle approach begins with the asset's initial planning, acquisition, use and maintenance and often its eventual disposal or close-out. Under this framework, there is a process for the lands that are determined to be surplus, including how this surplus property potentially becomes available to the public for private use which can include productive agriculture.

When a custodial department (e.g., AAFC), at any stage of the life-cycle no longer has a defined program purpose/operational requirement for one of its real property assets, it is mandated to declare said asset surplus. Surplus real property is disposed of through a federally prescribed process in line with the Treasury Board Policy on the Planning and Management of Investments, as well as the Directive on the Management of Real Property. Declaring real property surplus makes it available to other levels of government and if no interest is expressed, potentially the property could be made available to the general public, if appropriate. As a first step in the disposal process, the surplus property is offered on a hierarchical basis to other federal departments and agent Crown corporations, the underlying provincial departments and local municipality in which the real property is located. At the federal level, this would involve acquisition by the interested party under a mandated program purpose, supporting the eventual Transfer of Administration between the appropriate Ministers.

c. promote regenerative agriculture in urban and suburban areas

The Government of Canada supports this part of the recommendation.

Regenerative agriculture considers every aspect of the land's ecological system, from the soil, to the water, to the diversity of plant life, ensuring every part of the ecosystem is healthy and working well together. It can also improve biodiversity and increases the land's resilience to climate change.

The Government of Canada works collaboratively with other jurisdictions to research, promote, and support the adoption of beneficial management practices (BMPs) such as cover cropping, no-till or reduce tillage, crop diversity and other sustainable agricultural production BMPs, which are in line with the principles of regenerative agriculture regardless of whether it is practiced in rural, suburban, or even urban spaces.

The AAFC's Taste the Commitment Campaign website features a series of videos, article, fact sheet and learning resources that showcase how Canadian farmers are bringing responsibly grown food to the table. Several of these videos focus on promoting urban agriculture and how food is being produced using sustainable farming methods, including regenerative agriculture practices. One example is the story Highfield Regenerative Farm – the conversion of 15-acre of unused of land into an urban farm that focuses on regenerative agriculture and produces food for the community. The Taste the Commitment website also provides linkages to AAFC programs and services to support efforts for sustainable food production, including the ACS Living Labs Program and OFCAF.

RECOMMENDATION 5

The Committee recommends that the Government of Canada develop a national soil strategy action plan to improve soil monitoring, data-sharing and promote best practices to improve and protect soil health, in collaboration with researchers, land holders, industry, provincial and territorial governments, respecting their jurisdictions, as well as First Nations, and academics, in a manner similar to the analysis and evaluation of the strategy introduced by the government of Australia in 2022.

The Government of Canada supports this recommendation in principle. Soil conservation and soil health are core priorities for the Government, which recognizes that the health of Canada's soils is the foundation for a healthy economy, environment, and population, and is paramount to having sustainable food and forestry sectors while supporting livelihoods. In addition to agriculture and forestry products, healthy soils also provide invaluable ecosystem services such as helping to regulate and purify water, creating habitat for biodiversity, storing vast amounts of carbon and mitigating climate change. Soil health is also a key theme of the Sustainable Agriculture Strategy being developed by Agriculture and Agri-Food Canada and is specifically identified as an ecosystem function and service to be restored and maintained in the Kunming-Montreal Global Biodiversity Framework which Canada adopted in December 2022.

The Government of Canada has a long history of research and activities that develop, promote and support soil health knowledge, mapping, and beneficial practices, and does so in collaboration with Indigenous peoples, provinces and territories, academia, and interested stakeholders. Similarly, the development of a national soil strategy action plan would need to include multiple economic sectors and all regions of Canada, recognizing the diversity of soils and the variety of stakeholders concerned by the future of agriculture, peatland, and forest soils in Canada. The development and implementation of a national soil strategy action plan could build off of work already underway in the sector and requires a long-term commitment and dedicated resources.

The protection and management of soil resources is a shared federal-provincial-territorial jurisdiction and some jurisdictions have already developed soil health strategies or legislation, such as in Ontario. Collaboration across governments would therefore be paramount, in addition to engaging with Indigenous peoples, academia, landowners, agriculture and forestry producers, non-government organizations (e.g., Soil Conservation Council of Canada) and other important stakeholders. The Government of Canada is committed to further engagement and activities that build on our solid foundation, to advance soil health related issues with all willing and interested partners.

Canada also has a contingent of globally renowned soil scientists in AAFC and NRCan, and dedicates significant science and innovation resources to soil science and health. Additionally, the Government of Canada has developed a number of science-based agri-environmental indicators to track and monitor the health of our agricultural soils, including indicators of soil erosion risk, soil salinization risk, soil cover, and soil organic matter change. The Government also develops and evaluates on-farm practices that can dramatically improve soil health, like no-till seeding, reduction in summer fallow, and increased planting of cover crops. Multiple departments and agencies collaborate to support research to better understand the soil carbon cycle leading to the development of effective practices that sequester carbon and reduce soil compaction. However, opportunities for improvement remain. The quality and accuracy of available soil information and properties varies considerably from region to region and is particularly poor for non-agricultural land. The broad harmonization of accurate and accessible data could contribute to a better understanding of the factors that affect the health of Canada's soils.

RECOMMENDATION 6

The Committee recommends that the Government of Canada recognize the importance of the 4R Nutrient Stewardship Program as a sustainable fertilizer management tool and encourage the adoption of other “smart” fertilizer application methods.

The Government of Canada supports this recommendation and recognizes the importance of sustainable fertilizer management tools such as the 4R Nutrient Stewardship Program, and other “smart” fertilizer application methods.

The Government of Canada has set a national target to reduce emissions from the application of fertilizer by 30 percent below 2020 levels by 2030. This target builds on the sector's work to date, with the goal of reducing fertilizer-related emissions while maintaining the sector's competitiveness and maximizing food production. The Government is committed to collaborating with stakeholders, producers, industry, partners and academia to expand the use of beneficial management practices and is already providing significant new funding to support the sector's efforts to reduce GHG emissions, including over \$1.5 billion in new and expanded funding announced through Budget 2021 and 2022.

The fertilizer GHG emissions reduction target was established with the knowledge that there are existing approaches available, and that when beneficial management practices are adopted at scale, they will contribute to reductions in nitrous oxide emissions from fertilizer application. These includes BMPs that are aligned with the principles of the 4R Nutrient Stewardship program, as well as other practices such as reduced tillage, cover cropping, irrigation and drainage management, and investments in clean technology and innovation.

As growing conditions vary across the country, beneficial management practices that improve nutrient use efficiency while GHG emissions and nutrient losses that account for unique local and regional circumstances will be the cornerstone of Canada's approach to reducing emissions from the application of fertilizers. The Government of Canada is focused on voluntary efforts as a means to improve nitrogen management and optimization of fertilizer application, which will not only help to reduce emissions but can also result in long-term improvements in soil health and water quality.

The Government of Canada continues to work in collaboration with industry, government, producers and other partners and stakeholders through a Fertilizer Emission Reduction Working Group, established in 2023 under the Sustainable Agriculture Strategy Advisory Committee. The Working Group is focused on developing a strategy to address challenges in reducing emissions from fertilizer application, including those around data and measurement, beneficial management practices, innovation, and extension and communication.

We are committed to a collaborative approach and ongoing dialogue with industry, provinces, and territories to ensure the long-term competitiveness of the agriculture sector and the health of our water, air and soil for generations to come.

RECOMMENDATION 7

The Committee recommends that the Government of Canada support the livestock sector in reducing methane emissions and its impact on climate change by creating a new environmentally-driven and science-based regulatory pathway for agricultural and veterinary products with environmental benefits, such as 3-NOP feed additives.

The Government of Canada supports this recommendation through the existing regulatory process. Substantial work has gone into ensuring that existing science-based pathways support agricultural and veterinary products with environmental benefits.

The manufacture, sale and import of livestock feeds are regulated under the *Feeds Act* and its regulations administered by the CFIA. All new or modified single feed ingredients undergo a pre-market assessment to confirm they are:

- Safe for livestock, workers/bystanders, humans consuming foods of animal origin, and the environment;
- Effective for their intended purpose; and
- Labelled correctly.

Similarly, veterinary drugs are regulated under the *Food and Drugs Act*, and its regulations. Veterinary drugs are assessed by HC for safety, effectiveness and quality. There are existing regulatory pathways for veterinary drugs, which would include those with environmental benefits.

HC and the CFIA work closely to administer their respective regulatory frameworks in determining classifications in a manner that provides transparency and a consistent decision process. Products that are intended to reduce methane emissions may be regulated as a veterinary drug or a feed depending on a number of criteria that are described in the “Guidance document on the classification of veterinary drugs and livestock feeds” published on HC’s website. The document provides guidance, criteria and examples to help clarify the regulatory differences between veterinary drugs and feeds, and assists in determining the appropriate regulatory oversight for a product destined for oral use in livestock species.

Successful applications are important to both the government and industry. As such, both HC and CFIA work with industry to support development of products and in navigating the regulatory process. Specifically, CFIA, and HC work with industry on research and study design, to ensure clear understanding of regulatory requirements/process, and provide pre-consultation meetings to clarify their product’s classification in advance of filing a submission.

Through consultation and collaboration with industry stakeholders and HC, in 2023 the CFIA established a new category of specialty feeds called gut modifiers that recognizes that feeds can modify the gastrointestinal (GI) environment for purposes that are not related to the treatment or prevention of clinical disease. Once ingested, gut modifiers act in the animal’s GI tract on the feed itself or by modifying the GI environment to provide a benefit to the animal or the environment.

The Government of Canada recognizes the potential benefit of agricultural and veterinary products like gut-modifiers to reduce methane emissions.

In December 2023, the CFIA completed a consultation and in January 2024 approved the single ingredient feed, 3-Nitrooxypropanol (3-NOP), as a gut modifier product for use in cattle. This approval introduced a new subclass of gut modifier ingredients for the mitigation of environmental impacts related to livestock production.

In January 2024, the CFIA also registered Bovaer 10 as the first 3-NOP-containing feed with the potential to reduce rumen methane emissions in dairy cows and cattle for meat production, with the exception of bulls intended for reproduction.

The creation of the new subclass of gut modifier products and registration of Bovaer 10 were based on a rigorous scientific evaluation of efficacy, as well as animal, human, and environmental safety.

RECOMMENDATION 8

The Committee recommends that the Government of Canada further its support for Indigenous-led research to promote Reconciliation and the use of Indigenous knowledge systems in sustainable farming and agriculture.

The Government of Canada supports this recommendation. The Government of Canada, as highlighted in AAFC’s Indigenous Strategy, is committed to working toward Reconciliation by reestablishing and healing relationships between Indigenous Peoples and Canada, supporting Indigenous-led and defined participation in research and agriculture, and respecting Indigenous knowledge systems. AAFC strives to support Reconciliation by respecting the inherent, constitutionally-recognized and Treaty rights of Indigenous Peoples, recognizing their unique cultures and practices, account for their diverse needs, and responding to their self-determining goals. This includes the revitalization of Indigenous food systems to incorporate Indigenous scientific knowledge and recognizing Indigenous Peoples’ special relationship to

food, which is closely linked to cultural identity and holistic well-being. This commitment is exemplified through projects like the Bridge to Land Water Sky Living Lab, an initiative led by Mistawasis Nêhiyawak in collaboration with Muskeg Lake Cree First Nation to support on-farm climate action, funded through the Agricultural Climate Solutions program.

AAFC's Strategic Plan for Science includes a focus on Reconciliation and the co-development of science projects that meet the needs of Indigenous communities, committing to building relationships and partnerships with these communities to address their self-determined goals, values, and priorities as they relate to food systems and agricultural research and innovation. To aid the co-development of science projects that can benefit Indigenous communities, AAFC created the Indigenous Science Liaison Office to ensure long-term relationship-building between AAFC and Indigenous communities across Canada.

The Government of Canada acknowledges the importance of (1) Indigenous data sovereignty; (2) respect and recognition of Indigenous knowledge systems; and (3) the social, environmental, and economic opportunities. Towards these goals, AAFC and the Department of Fisheries and Oceans host and co-lead the Interdepartmental Indigenous Science, Technology, Engineering and Math (I-STEM) Cluster. Launched in December 2019, the I-STEM Cluster informs and enhances departmental policies, programs, and activities related to the STEM disciplines to increase and expand support for Indigenous priorities in environmental stewardship, research, and technology development and transfer. The I-STEM Cluster achieves this through the development of learning products and tools tailored to the natural sciences in areas such as Indigenous data sovereignty, Indigenous research ethics, the equitable bridging of Indigenous and Western knowledge systems, and I-STEM specific advice on federal policy and program design. With its 15 member departments and agencies, the I-STEM Cluster exemplifies a coordinated and efficient whole-of-government effort taking concrete steps towards Reconciliation.

RECOMMENDATION 9

The Committee recommends that the Government of Canada recognize environmentally positive measures by:

- **working with industry and researchers to approve a method for assessing the environmental contribution of an innovation that provides fair value to farmers implementing these innovations;**
- **supporting growth and investments in the plant-based proteins agriculture and agri-food sectors;**
- **giving farmers access to funding using a decentralized approach, not necessarily as part of a set government program, since entrepreneurs are in a better position to decide the right time to invest; and**
- **providing recognition and compensation for environmentally positive measures introduced in the past.**

The Government of Canada supports the principle that environmentally positive measures should be recognized. Research and development are essential to addressing the challenges facing the sector and enhance the agriculture and agri-food sector's ability to increase agricultural productivity, improve environmental performance, and address threats to the agriculture and agri-food value chain. The Government is making significant investments in agricultural science as it is a key lever to the development of a competitive, innovative, resilient, and sustainable Canadian agricultural sector. Through support for science, research, innovation, metrics, knowledge transfer, assurance systems, and the development and adoption of beneficial management practices, the Government is supporting the sector in its efforts to increase the environmental sustainability of the Canadian food system and thereby secure food security and Canada's agricultural sector as a preferred agri-food supplier to high-value markets.

There are programs that support agricultural and food-system science and innovation under the Sustainable Canadian Agricultural Partnership (Sustainable-CAP) - the new 5-year federal, provincial, and territorial cost-shared agricultural policy framework, as well as the Natural Climate Solutions Fund (NCSF), which includes AAFC's Agricultural Climate Solutions (ACS) program. Through the ACS program's \$185 million, 10-year Living Labs Initiative stream, AAFC brings together producers, scientists, and academia to co-develop, test, and enable adoption of technologies and practices, including beneficial management practices that sequester carbon and/or mitigate GHG emissions. The ACS OFCAF supports farmers in adopting beneficial management practices that store carbon and reduce GHGs, specifically in the areas of nitrogen management, cover cropping and rotational grazing. Originally a \$200 million investment over three years (2021-2024), Budget 2022 included \$469.5 million over six years to expand the OFCAF.

AAFC also leverages its scientific research capacity to develop data, new knowledge, and new technologies whose results are transferred to the sector. For example, recognizing that GHG emissions measurement poses technical challenges for the sector, AAFC scientists are continuing to improve the Holos model, a software application that estimates GHG emissions and changes in soil carbon in Canadian farming systems at the farm level. The Holos model is open source, making the model available to industry and stakeholders to adapt for their purposes, and allowing for joint development of the model.

The Agricultural Clean Technologies (ACT) program, a seven-year, \$470.7 million initiative, provides support for the development and adoption of clean technology that will reduce GHG emissions and promote sustainable growth in Canada's agriculture and agri-food sector. Under the ACT, AAFC provides support for pre-market innovation, including research, development, demonstration and commercialization activities, including those that could improve data, measurement and verification of the contributions of the agricultural sector to environmental sustainability.

The Government of Canada supports growth and investments in the plant-based proteins agriculture and agri-food sectors and has made industry-specific investments in this area. Through the 2023-2029 Global Innovation Clusters program, ISED will invest up to \$323 million in Protein Industries Canada (PIC), to build Canada's global competitive advantage in the plant-based proteins sector. PIC supports collaborative technology development projects between businesses, academia, and other players across Canada to increase the value of key Canadian crops — such as canola, wheat, and pulses — and serve growing markets in North America, Asia and Europe for plant-based foods and new food products. To date, PIC has announced 55 projects, representing a total co-investment of \$502 million (\$177 million of which is program funding). PIC is expected to generate significant economic impacts in the plant-based proteins agriculture and agri-food sector by creating a stronger ecosystem, de-risking adoption of technology, maximizing the value of intellectual property, and forging new partnerships that increase firms' market potential.

The Government of Canada is also supporting investments in science, research and development, innovation, scale-up and technology adoption in the plant-based proteins sector, including through AAFC's AgriScience and AgriInnovate Programs under the Sustainable-CAP, as well as AAFC's Strategic Plan for Science. Recognizing that environmental considerations are increasingly being incorporated into business strategies, the Government of Canada is providing a broad range of tools and services to meet the diverse needs of innovators and entrepreneurs. Tools include tax incentives such as the Scientific Research and Experimental Development tax credit; access to facilities, equipment and advisory services; and growth funding through Crown corporations such as Farm Credit Canada (FCC), the Business Development Bank of Canada, Export Development Canada, and the new Canada Innovation Corporation that will be established as well as industry-led assurance systems.

Industry assurance systems can improve recognition of the ecosystem services that the agricultural sector is generating. Through financial support and the provision of scientific

expertise, the Government of Canada, along with provinces and territories, helps the sector adopt/implement assurance systems to improve biosecurity, food safety, traceability, animal welfare, and environmental sustainability. For example, funding through the AgriAssurance program supported the establishment and activities of the Canadian Roundtable for Sustainable Beef, the Certified Sustainable Beef framework, the Dairy Farmers of Canada's (DFC) proAction, and the Canadian Roundtable for Sustainable Crops.

These industry-led assurance systems can be leveraged to recognize current and past environmentally positive measures being taken by the sector. For example, the FCC sustainability incentive launched in 2022 provides annual incentive payments to eligible customers who meet the program partners' sustainability program requirements. Program partnerships include the Canadian Roundtable for Sustainable Beef, McCain Regenerative Agriculture Framework, Cargill RegenConnect™, DFC, Lactanet, and Ducks Unlimited Canada. FCC continues to look for partnership opportunities with additional industry-led sustainability initiatives.

RECOMMENDATION 10

The Committee recommends that the Canadian Food Inspection Agency (CFIA), as part of its new risk assessment of United States bee imports, assess the possibility of allowing imports from smaller entities (e.g., states, municipalities and individual businesses), within the United States, notably those located in safe zones in northern climates that meet Canadian requirements, while also addressing Canadian beekeeper concerns over bees with so-called "Africanized" genetics. If the CFIA chooses not to allow additional imports from the United States, it should explain its reasons for this decision and make clear the corrective actions United States beekeepers would have to take to reduce the risk associated with their imports.

The Government of Canada acknowledges this recommendation. The CFIA mandate under the *Health of Animals Act* is to protect Canadian animal health, which includes the health of the Canadian bee population. Restrictions for importing bees into Canada are in place to help protect the Canadian bee population.

The CFIA is conducting a new risk assessment based on guidelines provided by the World Organisation for Animal Health to evaluate the risks associated with the importation of honey bee packages from the United States to Canadian honey bee health. The risk assessment process involves the identification of disease or honey bee pests that pose a risk to the Canadian honey bee population, assessing the risk of introducing the diseases or pests into Canada through imports and the consequences of such introduction. The risk assessment is expected to be completed in the first quarter of 2024.

CFIA has and continues to put significant efforts into assessing the potential new approved sources of bee packages and queen bees internationally, on a scientifically-approved basis. Honey bee packages have recently been approved for import from Ukraine and Italy.

RECOMMENDATION 11

The Committee recommends that the Government of Canada in partnership with the beekeeping sector and the provinces and territories:

- a. invest more in apiculture research with the goal of making Canada self-sufficient in producing and selecting queens and bees;**
- b. investigate the existence and extent of possible causal relationships between soil degradation, climate change, and increased concentrations of parasites of desired species like honey bees, including but not limited to varroa mites, hive beetles, and wax moths;**
- c. employ advanced technology to protect and facilitate breeding of pollinators; and**

d. support greater networking among government, academia and industry research and development centres on all causes of insect pollinator mortality.

a. invest more in apiculture research with the goal of making Canada self-sufficient in producing and selecting queens and bees

The Government of Canada supports this part of the recommendation in principle. Self-sufficiency in producing and selecting queens has long been recognized as desirable for the industry to lessen dependency on imports from foreign countries, but difficult to achieve with Canada's short production season. AAFC works with provincial authorities, beekeeping associations and relevant researchers to advance apiculture and the honey industry in Canada. While beekeeping is primarily regulated by the provinces, AAFC collaborates through the Canadian Association of Professional Apiculturists (CAPA), the Canadian honey Council (the national organization of beekeepers) and other collaborative sector organizations to advance research supporting honey bee science, including the improvement of honey bee breeding and strategies to mass winter queen bees.

b. investigate the existence and extent of possible causal relationships between soil degradation, climate change, and increased concentrations of parasites of desired species like honey bees, including but not limited to varroa mites, hive beetles, and wax moths

The Government of Canada supports this part the recommendation. AAFC expertise and infrastructure examines introduced or resistant well-established forms of diseases and parasites, recognizing the potential of climate change to accelerate the natural movement of pests and parasites of honey bees, or impact their survival during winter months. For example, AAFC currently collaborates on the 'BeeCSI: Omic for assessing bee health' large-scale project funded by Genome Canada and the Genomics Research and Development Initiative to develop a real-time diagnostic tool for bee health. This project includes collaborators from every major Canadian university with a honey bee lab. AAFC scientists are also examining American foulbrood, a serious bacterial disease of honey bees, in an effort to determine improved detection methods for prediction of outbreaks and management of antibiotic-resistant strains. Research is underway on novel compounds to control varroa mites, which is considered the top pest of beekeepers in Canada, and around the world, and the major source of winter losses. AAFC is also examining emerging parasites and pathogens, such as the new internal parasite of honey bees, *Lotmaria passim*, which has the potential to cause serious losses in honey bee colonies.

c. employ advanced technology to protect and facilitate breeding of pollinators; and

The Government of Canada supports this part of the recommendation. AAFC has been involved in previous large-scale genomic projects, with university collaborators, which have developed, and continue to improve, 'Omic markers for the selective breeding of honey bee queens. Successive projects have involved the development of genomic and proteomic tools for the selective breeding of healthy and productive bee colonies in Canada which are more resistant to pests and diseases. These studies also developed models to evaluate the economic and social impacts of these 'Omic-based selection approaches and predicted the overall gains conferred by using these techniques. The real-time diagnostic tools for honey bee health under development through the 'BeeCSI: 'Omic tools for assessing bee health' will also support bee health protection, as the tools aims to characterize proteomic, genomic and microbiome signatures of stress in bees to various diseases, parasites and agricultural pesticides.

d. support greater networking among government, academia and industry research and development centres on all causes of insect pollinator mortality

The Government of Canada supports this part of the recommendation. AAFC scientists are actively involved in networking and collaborating with partners to support bee research. These

scientists are members of industry and science organizations (e.g., Canadian Association of Professional Apiculturists). Pollinator survival has been a major topic of discussion with CAPA over recent years, and the organization has served as a forum for organizing large-scale projects that examine bee health and survival. AAFC also collaborates internationally. For example, the United States Department of Agriculture (USDA)-AAFC Joint Areas of Cooperation in Agricultural Research and Development, promotes direct cooperation with the USDA-Agricultural Research Service researchers on the priority focus area on pollinator health. In addition, AAFC is a member of the steering committee of the Commission for Environmental Cooperation native pollinator initiative focusing on coordinating bee monitoring efforts in Canada, United States and Mexico and development of an online native bee distribution tool for North America.

RECOMMENDATION 12

The Committee recommends that the Government of Canada support the research and development of new biopesticides.

The Government of Canada supports this recommendation. The PMRA and AAFC have been partnering on the research and regulation of new biopesticides. Since 2003, AAFC and PMRA, through the Minor Use Pesticide Program (MUPP), have successfully collaborated to address the needs of Canadian growers and improve the agriculture and agri-food sector's capacity to remain competitive in the marketplace.

AAFC has conducted research on the development of promising biopesticides for many years and some have been patented and/or licenced to commercial partners. AAFC's Strategic Plan for Science describes outcomes, including increasing availability and awareness of alternative pesticides, to be achieved through mission-driven science.

At present, PMRA offers pre-market incentives for the registration of lower risk pesticides through expedited timelines and reduced fees - particularly for biopesticides. PMRA also offers free advice and guidance to innovators to prepare registration packages for the approval of new biopesticides and non-conventional pesticides. AAFC also works with existing biopesticide products. The Pest Management Centre (PMC) at AAFC conducts field and greenhouse studies to support regulatory submissions to the PMRA and co-develops integrated, sustainable approaches to crop protection, including the use of biopesticides. Since 2005, PMC has worked with companies to successfully register 29 new biopesticide products comprising almost 1000 new uses. Health Canada is currently advancing a proposal to review its cost-recovery regime for pesticides, which was last updated in 2017 and is out-of-date with actual costs of regulatory activities. As part of this fee review, Health Canada is proposing a new mitigation measure that aims to maintain and increase access to biopesticides for farmers and users in Canada.

In the future, these efforts could also support the Government of Canada's commitments under the Kunming Montreal Global Biodiversity Framework to reduce the overall risk from pesticides by at least half, including through integrated pest management, taking into account food security and livelihoods.

RECOMMENDATION 13

The Committee recommends that the Government of Canada ensure the Pest Management Regulatory Authority has the necessary resources to fulfill its mandate and that it conduct a comprehensive study on pesticides, including neonicotinoids, that examines their impact and cumulative effect on humans, bees, and native pollinators as well as their economic impact on the agricultural industry.

The Government of Canada supports the first part of this recommendation with respect to Health Canada's (HC) PMRA having the necessary resources to fulfill its mandate. The Government of Canada also supports the recommendation to study pesticides, including neonicotinoids, and examine their impact on humans, bees, and native pollinators. The Government acknowledges the recommendation on conducting a study of the economic impact

of pesticides on the agricultural industry and notes that this is beyond the mandate of the PMRA.

PMRA is responsible for the regulation of pest control products in Canada and is an important collaborator with AAFC, whose scientists conduct research to understand the impacts of beneficial management practices on bees and native pollinators and pesticide risk reduction strategies and alternative pesticides that minimize impacts on non-target species.

PMRA remains committed to deliver on its mandate by continuing to regulate pesticides through science-based assessments to protect the health of Canadians and the environment. This includes helping to protect the health of bees and other pollinators by minimizing their exposure to pesticides. Health Canada periodically re-evaluates pesticides that are on the market to determine whether they continue to meet modern health and environmental standards. Health Canada has conducted several post-market reviews of neonicotinoid pesticides and published in 2019, pollinator-focused (e.g., bees) re-evaluation decisions for clothianidin, imidacloprid and thiamethoxam. As a result, Health Canada cancelled several uses of these pesticides to protect pollinators and added further restrictions to other uses, such as prohibiting spraying of some crops before or during bloom. Other post-market reviews completed in 2021 resulted in the cancellation of additional uses in order to protect birds, mammals and aquatic organisms.

In the context of cumulative effects, the *Pest Control Products Act (PCPA)* requires that Health Canada consider cumulative effects, in relation to health risks, of pest control products that have a common mechanism of toxicity. A cumulative health risk assessment framework has been developed by Health Canada and the process is outlined in the Science Policy Note SPN2018-02 entitled, *Cumulative Health Risk Assessment Framework*. Upon completion of the ongoing re-evaluations of neonicotinoids, it will be determined whether a cumulative health risk assessment for this class of pesticides is necessary.

In August 2021, the Government of Canada invested \$42 million over three years in PMRA to further strengthen the capacity and transparency of the pesticide review process in Canada. This funding supported: the targeted review of the *PCPA*, improving the availability of independent data and advice to further inform pesticide review decisions, and increased transparency of decision-making.

PMRA has established a Transformation Agenda to deliver on the Minister's mandate. PMRA has completed several key steps in the transformation by implementing, on a pilot basis, some of PMRA's modernized business processes, collecting real-world data to inform the development of national pesticide monitoring programs, and decision-making, consulting Canadians on a targeted review of the *PCPA*, seeking independent scientific advice to better inform its decisions, and taking concrete steps to improve transparency. PMRA's transformation supports robust oversight of pesticides in Canada, strengthening human health and environmental protection. Moving forward, the Government of Canada is considering appropriate approaches for funding, including advancing a proposal to update and modernize the pesticide fee regime to support sustainable regulation in Canada.

To make pesticide management more robust, on June 20, 2023, the Ministers of Health, Environment and Climate Change Canada, and Agriculture and Agri-Food, announced next steps toward a sustainable approach to pesticide management. To that effect, HC published its *Notice of Intent (NOI): Strengthening the regulation of pest control products in Canada*, which proposes changes to the *Pest Control Products Regulations (PCPR)* to address key stakeholder concerns related to transparency, and the consideration of cumulative environmental effects and species at risk during pesticide reviews.

As per the NOI and proposed changes to the PCPR, HC will consider cumulative effects on the environment during risk assessments where information and methodology are available, including for neonicotinoids.

RECOMMENDATION 14

The Committee recommends that the Government of Canada work with the provinces and territories to develop a strategy to utilize and diversify natural infrastructure, including wild forages, to protect native pollinators on agricultural land.

The Government of Canada supports this recommendation in principle. The Government recognizes the importance of native pollinators and that working agricultural landscapes can provide valuable habitat for wildlife in Canada. It is acting to promote, support, increase and diversify natural infrastructure, and is working closely with producers, other stakeholders, provinces and territories in this area.

Through the Sustainable-CAP, federal, provincial, and territorial governments provide cost-shared programs to raise producer awareness of environmental risks and to accelerate the adoption of beneficial on-farm technologies and practices, some of which create and diversify natural infrastructure and improve native pollinator habitat. The Resilient Agricultural Landscape Program is a \$250-million cost-shared Sustainable-CAP program that will help producers conserve and enhance the resiliency of agricultural landscapes through the adoption of on-farm land use and management practices, such as enhancing riparian and on-farm wildlife areas, maintaining and restoring grasslands and wetlands, and piloting regenerative agriculture practices, all of which are beneficial for pollinators. In addition, ECCC's Species at Risk Partnership on Agricultural Land (SARPAL) initiative supports projects that increase agriculture sector engagement in protecting species at risk and/or critical habitat on agricultural land.

Agricultural grasslands, including grazing pastures and hay lands, provide important ecological goods and services, as they help support the protection of wild animal and plant biodiversity, including native pollinators. The Nature Smart Climate Solutions Fund (NSCSF), a \$1.4 billion, ten-year fund to eliminate 5-7 megatons of GHG emissions annually, supports projects that conserve, restore and enhance wetlands, peatlands, grasslands, and forests to store and capture carbon. The NSCSF will invest in improving knowledge of where grasslands are, where they've been lost, and where they are at risk of being lost. This work will inform the Government of Canada's future investments in conserving and restoring grasslands to maximize carbon storage and sequestration, along with biodiversity and the well-being benefits for Canadians.

Through the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada, a multi-stakeholder planning team developed a Strategic Conservation Framework for Species at Risk – Agriculture Sector which identified the conversion and degradation of native grasslands as a priority. Through funding provided by Canada's Nature Fund, ECCC is working in partnership with stakeholder on projects to protect and restore grasslands and the biodiversity they support, including native pollinators.

The Government of Canada has invested in science and research for the benefits of native pollinators on agricultural land. In line with the collaborative approach under AAFC's Strategic Plan for Science, the department continues to bring provinces and territories, academia, industry partners, and Indigenous communities together to work on the challenges faced by Canada's agriculture sector including with respect to natural infrastructure. AAFC conducts research on land use and pollinators, including investigating how riparian-zone management on farms could increase and maintain pollinator populations. Through the Agricultural Climate Solution – Living Labs initiative, the relationship between landscape pattern, floral diversity and native pollinators is being examined. The focus is on elucidating the co-benefits of carbon sequestration/greenhouse gas mitigation actions on native pollinator communities.

The Government of Canada recognizes the crucial role that wild forages and native pollinators play in maintaining biodiversity and supporting agricultural ecosystems. The Government of Canada has committed to the Kunming-Montreal Global Biodiversity Framework (KMGBF) developed at COP15 of the UN Convention on Biological Diversity (CBD). The KMGBF target 10 focuses on the sustainable management of key productive sectors including agriculture, and

target 4 focuses on species recovery. In December 2023, the Government of Canada launched public consultation on a Milestone Document include a draft National Biodiversity Strategy and Action Plan (NBSAP), which will frame how Canada will advance toward the targets of the KMGBF. Following the consultation period, Canada will finalize the NBSAP in preparation for COP16 of the CBD in the fall of 2024.

AAFC's work with the Industry-Government Honey Bee Sustainability Working Group identified priority areas of action. While some of the proposed actions fall outside of AAFC's mandate (i.e., belonging to the purview of provinces and/or industry stakeholders), the Department continues to seek mechanisms to support honey bee sustainability. AAFC will work closely with the Industry-Government Working Group on advancing these priority areas of action in order to support the sustainability of the Canadian honey and beekeeping sector.