NATIONAL PLANT *and* ANIMAL HEALTH PLANNING FORUM

◦ Agriculture ◦ Food Processors ◦ Horticulture ◦ Industry ◦ Aquaculture ◦

Government ◦ Forestry ◦ Academia ◦ Seed ◦

Crop Specialist ◦ Apiculture ◦ Fertilizer

168 participants *representing* **95 organizations**

33 national industry associations

9 provincial government departments

5 universities

10 federal government departments

13 provincial industry associations

4 countries

◦ Wildlife ◦ Animal Feed ◦ Producers ◦ Transportation ◦ Veterinarians ◦

WebEx
- 250 people joined virtually for the plenary session during the morning of the first day

Twitter
- 61 users tweeted 788 times using #CanPAH/#SVACan
- Potential reach of 419,576 people

Organized *and* Delivered

by representatives from federal, provincial and territorial governments, industry and academia, facilitated by the Canadian Food Inspection Agency.

December 6-7, 2016
Ottawa, ON

Planning Forum Summary

The Planning Forum in Brief

The Objectives

- Bring together all partners to *collaborate on the future* of plant and animal health in Canada
- Prioritize and plan *key actions* that will enhance plant and animal health in Canada

The Process

- *Pre-Forum webinar* from Plant Health Australia, Animal Health Australia and the Australian agricultural industry on government-industry partnerships in plant and animal health
- *Plenary discussions and voting* on strategic content for the Plant and Animal Health Strategy (PAHS)
- *Presentations* on Canada's approach to responding to animal health emergencies and Australia's program delivery model
- Thematic *break-out sessions* organized to draft action plans
- *Kiosks* shared information on plant and animal health initiatives
- *Social media* supported dialogue on plant and animal health in Canada
- *Idea wall* allowed participants to express innovative ideas
- Forum *evaluation* conducted to help assess the success of the forum
- The *agenda* for the Planning Forum can be found in Appendix 1 and a *list of organizations* represented at the Planning Forum can be found in Appendix 2

The Results

- Active *multi-stakeholder discussion* on a variety of topics related to the future of plant and animal health
- *Prioritized and planned key actions* to enhance plant and animal health in Canada
- Listing of *multi-stakeholder volunteers* to participate in working groups that will be organized to further develop the plant and animal health strategy

Cementing the Strategic Content

The scope, vision and objectives for the Plant and Animal Health Strategy had been evolving over time via extensive discussion with stakeholders. During a plenary session at the forum, participants were invited to electronically vote, in real time, on the most recent iterations, as well as newly developed guiding principles for the Plant and Animal Health Strategy. There was then opportunity for stakeholders to provide explanations for their casted vote. At times, votes were cast a second or third time, depending on participant reaction. Votes presented below are the final votes cast.

Scope

From

Scope Category	What's Included	What's Excluded
Risks to the Plant and Animal Resource Base	• Plant pests • Animal diseases • Contamination events affecting key inputs to the agriculture sector	• Intentional tampering • Extreme weather events • Challenges with critical infrastructure
Sectors	• Agriculture • Aquaculture and wild fisheries • Forestry • Apiculture	
Activities	• Prevention and mitigation • Preparedness • Response • Recovery	

To

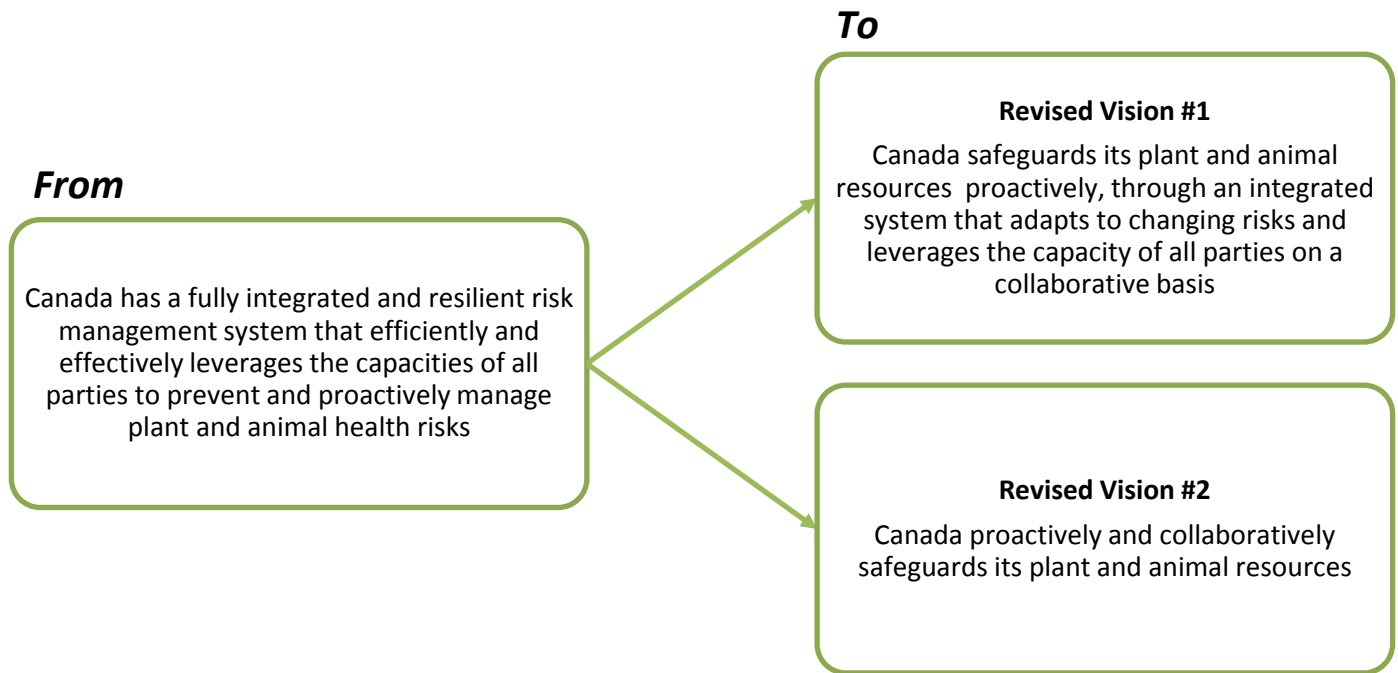| Scope Category	What's Included	Clarification Examples
Risks to the Health of the Plant and Animal Resource Base	• Plant pests • Animal diseases • Vectors • Inputs to the sectors • Impacts of climate change on the ability of pests, disease or vectors to establish and spread	• Pests includes pathogens, insects, weeds • Emerging diseases • Contamination of inputs
Sectors	• Agriculture • Aquaculture • Forestry • Apiculture • Unmanaged populations that may impact the managed environment • Technologies used for pest and disease control • Services providers to primary producers	• Crops, horticulture, traditional livestock • Wild and captive cervids • Managed and unmanaged forests • Transporters
Activities	• Prevention and mitigation • Preparedness • Response • Recovery	• Surveillance • Foresighting • Awareness and outreach • Exercises

Voting Results on Revised Scope

		Plenary Comments
24%	Completely Agree	• Do not see pet food in the sector list
51%	Somewhat Agree	• Concern when building a combined plant and animal health strategy. This will divert from "one health"
10%	Neutral	
12%	Somewhat Disagree	
2%	Completely Disagree	
100%	Total	

Vision

From

Canada has a fully integrated and resilient risk management system that efficiently and effectively leverages the capacities of all parties to prevent and proactively manage plant and animal health risks

To

Revised Vision #1

Canada safeguards its plant and animal resources proactively, through an integrated system that adapts to changing risks and leverages the capacity of all parties on a collaborative basis

Revised Vision #2

Canada proactively and collaboratively safeguards its plant and animal resources

Voting Results on Revised Vision

		Plenary Comments	
47%	Prefer Revised Vision #1	Support for Vision #1 "Integrated" is a good word to use - Provides a direction; vision #2 is more like a result	Support for Vision #2 - Keeps it simple, otherwise, cumbersome; elements of #1 can be part of principles - Uses plain language - Vision #1 is too much of the "how"
45%	Prefer Revised Vision #2		
8%	No preference	General Comments - Get worried when discussing "systems" - Need statements of where we are going. What are we trying to do? "Agriculture" is not mentioned - Like the term "safeguard" "All parties" is unclear	
100%	Total		

Objectives

From

Objective #1
Robust, shared intelligence and awareness to support informed action

Objective #2
Integrated and proactive management of risks to prevent occurrence and reduce impacts of risks

Objective #3
Focussed engagement to support market competitiveness

To

Objective #1
Canada has the necessary information and awareness needed to support forward-looking risk management and evidence-based decisions

Objective #2
Canada has a comprehensive, effective and integrated system for proactively reducing and managing plant and animal health risks

Objective #3
Canada has robust and responsive plant and animal health systems that foster economic growth and support market competitiveness for Canadian products

Voting Results on Revised Objectives

Objective #1	Objective #2	Objective #3	
25%	41%	41%	Completely Agree
47%	43%	34%	Somewhat Agree
12%	9%	12%	Neutral
11%	5%	11%	Somewhat Disagree
5%	1%	2%	Completely Disagree
100%	100%	100%	Total
Plenary Comments			
• Should include "proactive gathering of information" • Should be what you want to see • Lost the word "shared"	• Missing "preventing"	• "Economic growth" reference is good; therefore growing agricultural base and productivity, and not just focused on emergencies • Would like to see reference to "sustainability" • Add "global trade competitiveness" • Would like to see a sense of urgent response (e.g., timeliness)	

Guiding Principles

Voting Results on Guiding Principles

		Plenary Comments
16%	Completely Agree	• Add "share"; could have "collaboration and sharing"
41%	Somewhat Agree	• Add "transparency"; could be with "sharing"
13%	Neutral	• The idea of health is missing – human and environment
27%	Somewhat Disagree	• Intuitive in vision and objectives and duplicating – "collaboration", "risk-based", "sharing"; keep these as principles and simplify vision and objectives
3%	Completely Disagree	• Not sure about "respecting roles and responsibilities"; consider change to "define and respect"
100%	Total	• Would rather see "shared accountability"; there are no legislative boundaries for a lot of this, therefore, no roles and responsibilities
		• Add "proactive" and "prevention focus"

Presentations

Animal Health Emergency Response Exercise

Dr. Sandra Stephens, National Operations Veterinary Specialist in Animal Health – Traceability and Terrestrial Animal Disease Control, CFIA, provided an overview of why certain control measures are taken for certain diseases and what forum participants should consider in preparation for an urgent animal disease incident. Dr. Stephens stressed the importance of collaboration amongst the partners in order to achieve a successful response. One example Dr. Stephens referred to was the 2014 response to Avian Influenza in British Columbia where governments working closely with industry led to a very effective response. She explained that many measures and considerations would also be applicable to a plant emergency.
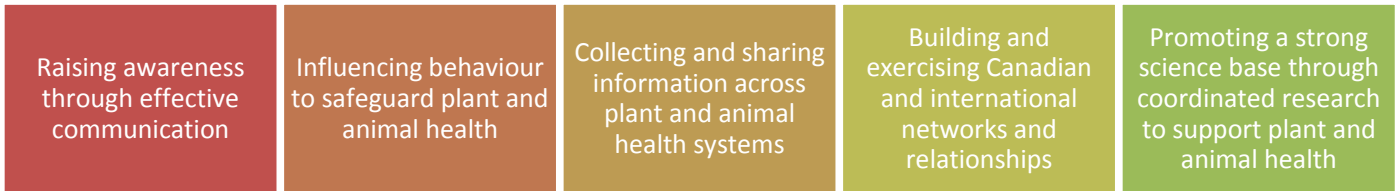
Government – Industry Partnerships: The Australian Experience

To raise forum participants' awareness of alternative models that could be considered for the Plant and Animal Health Strategy, Dr. Susanna Driessen, General Manager of Emergency Response and Preparedness, Plant Health Australia presented on the Australian experience with the creation and operation of Plant Health Australia (PHA), as well as the governtment/industry legally-binding deeds. Reference was also made to Animal Health Australia (AHA). Dr. Driessen explained both PHA and AHA were created to serve as the national coordinators of the government-industry partnership for plant and animal biosecurity in Australia.
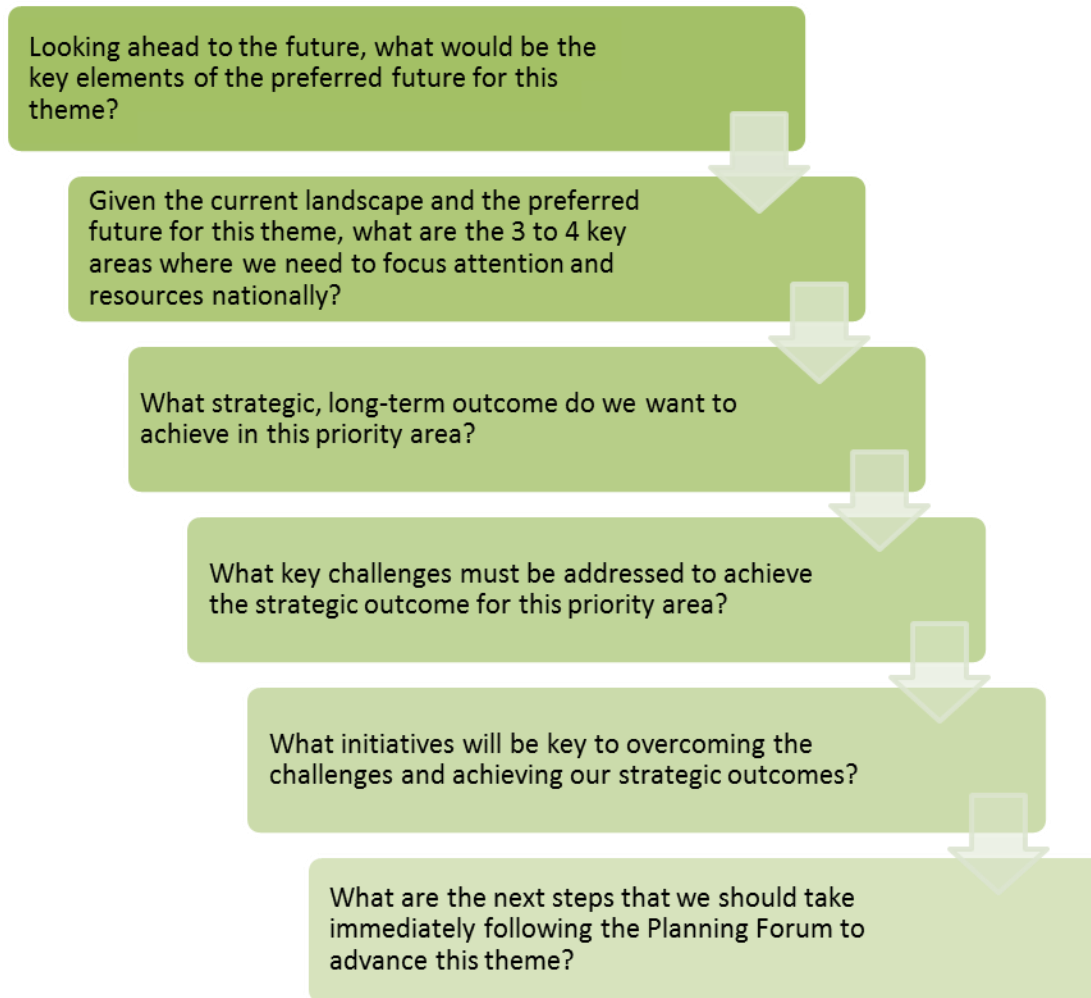
Breakout Sessions

Forum participants were assigned to one of five concurrent breakout sessions based on the following themes:

Raising awareness through effective communication	Influencing behaviour to safeguard plant and animal health	Collecting and sharing information across plant and animal health systems	Building and exercising Canadian and international networks and relationships	Promoting a strong science base through coordinated research to support plant and animal health

In each breakout session, participants worked in small groups to answer a series of questions:

Looking ahead to the future, what would be the key elements of the preferred future for this theme?

Given the current landscape and the preferred future for this theme, what are the 3 to 4 key areas where we need to focus attention and resources nationally?

What strategic, long-term outcome do we want to achieve in this priority area?

What key challenges must be addressed to achieve the strategic outcome for this priority area?

What initiatives will be key to overcoming the challenges and achieving our strategic outcomes?

What are the next steps that we should take immediately following the Planning Forum to advance this theme?

The sessions yielded a series of prioritized initiatives that could be pursued through the Strategy.

Common key priority areas to all breakout sessions included:
- The development of tools, IT systems and databases for increased information sharing and reporting.
- Increase partnerships and collaboration, domestically and internationally, to facilitate information sharing and communication.
- Consistent assessment and evaluation of the efficacy and success of the Plant and Animal Health Strategy through performance indicators, leading to corresponding changes being implemented.

Additional details from the Breakout Sessions can be found in Appendix 3.

Kiosks

Industry, academia and governments (including from another country) set up 16 information kiosks at the forum. The kiosks provided an opportunity for organizations to promote their programs, including prevention activities and emergency management.
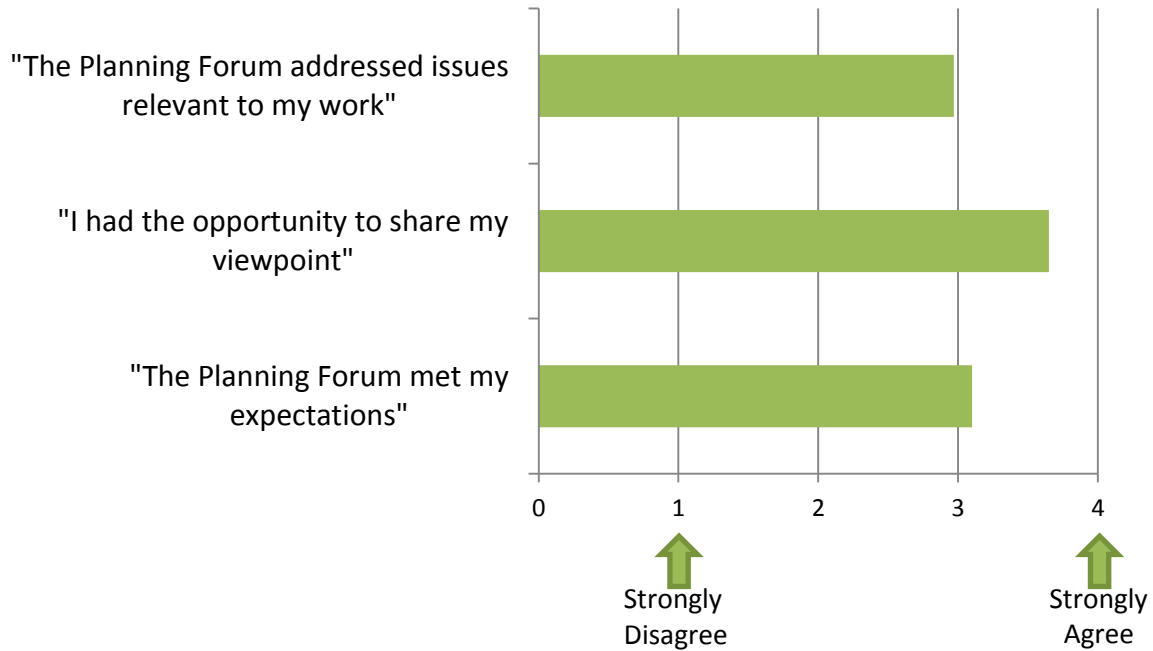

Idea Wall

Participants were invited to share their ideas on an idea wall. Over 50 innovative ideas were expressed, in response to the following:

1. *Uber for transportation, AirBnB for accommodation…what is the disruptive innovation for plant and animal health?*
2. *If you could change one thing about plant and animal health in Canada, what would it be?*
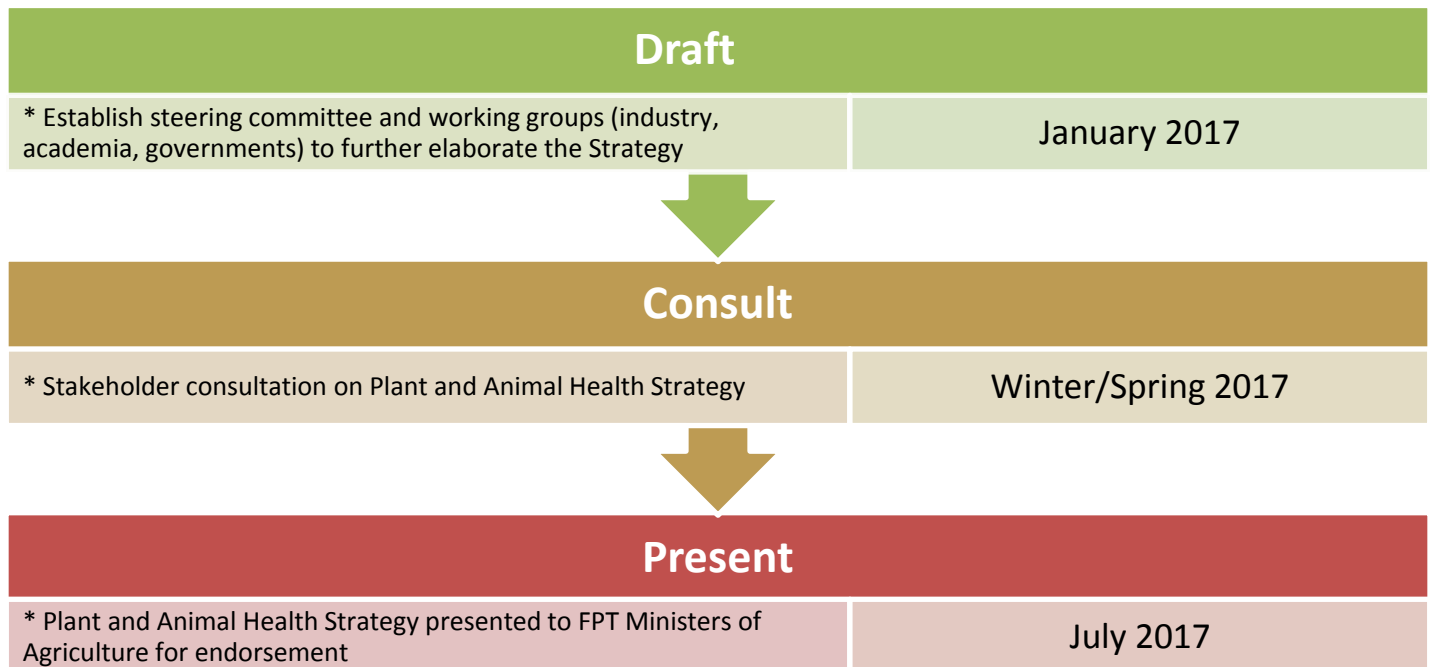3. *Advice on how to make the implementation of the strategy successful.*

Forum Evaluation

Average Score (n=49)

"The Planning Forum addressed issues relevant to my work"	~3.0
"I had the opportunity to share my viewpoint"	~3.6
"The Planning Forum met my expectations"	~3.1

Strongly Disagree ⬆ (at 1)
Strongly Agree ⬆ (at 4)

Next Steps

Draft	
* Establish steering committee and working groups (industry, academia, governments) to further elaborate the Strategy	January 2017

Consult	
* Stakeholder consultation on Plant and Animal Health Strategy	Winter/Spring 2017

Present	
* Plant and Animal Health Strategy presented to FPT Ministers of Agriculture for endorsement	July 2017

Appendix 1: Plant and Animal Health Planning Forum – Agenda

December 6 – 7, 2016 - Marriott Hotel, 100 Kent Street, Ottawa

Time	Tuesday, December 6, 2016				
07:45 – 08:15	Registration and refreshments (Outside Victoria Ballroom)				
08:15 – 08:25	**Welcome and Opening Remarks** Lead Facilitator: Lise Hebabi *Paul Glover, President, Canadian Food Inspection Agency (CFIA)*				
08:25 – 08:45	**Setting the Stage** *Dr. Harpreet S. Kochhar, Chief Veterinary Officer for Canada and Associate Vice President, Operations, CFIA* *William Greuel, Assistant Deputy Minister, Regulatory & Innovation, Saskatchewan Ministry of Agriculture* *Gord Kurbis, Director, Market Access & Trade Policy, Pulse Canada*				
08:45 – 10:10	**Plenary Discussion on the Plant and Animal Health Strategy** *Cementing the Scope, Vision and Objectives* *William Anderson, Executive Director, Plant Health and Biosecurity Directorate, CFIA*				
10:10 - 10:25	**Orientation to Breakout Sessions: Lead Facilitator, Lise Hebabi**				
10:25 – 10:45	*Break: Kiosks on a range of plant and animal health initiatives*				
10:45 – 12:30	**Breakout Session 1: Current and Future Landscape**				
	Raising awareness through effective communications	**Influencing behaviour to safeguard plant and animal health**	**Collecting and sharing information across plant and animal health systems**	**Building and exercising Canadian and international networks and relationships**	**Promoting a strong science base through coordinated research to support plant and animal health**
	Leader: Dr. Keith Lehman, Government of AB	Leader: Rebecca Lee, Canadian Horticultural Council	Leader: Dr. Ian Alexander, CFIA	Leader: Shauna Mellish, Government. of PEI	Leader: Dr. Grant Maxie, University of Guelph
12:30 – 13:30	*Lunch (provided): Kiosks on a range of plant and animal health initiatives*				
13:30 – 15:15	**Breakout Session 2: Priority Area and Specific Outcomes**				
	Raising awareness through effective communications	**Influencing behaviour to safeguard plant and animal health**	**Collecting and sharing information across plant and animal health systems**	**Building and exercising Canadian and international networks and relationships**	**Promoting a strong science base through coordinated research to support plant and animal health**
15:15 – 15:30	*Break: Kiosks on a range of plant and animal health initiatives*				
15:30 – 16:30	**Plenary: Reports from Breakout Sessions 1 and 2** *Breakout Session Leaders*				
16:30 – 16:45	**Plenary: Wrap-up of Day 1 and House-Keeping Items for Day 2** *Dr. Leslie Woodcock, Chief Veterinarian for Ontario, and Director, Animal Health and Welfare Branch, Ontario Ministry of Agriculture, Food and Rural Affairs* *Barry Ford, Marketing Director, Coast Forest Products Association and General Manager, Canada Wood*				

Time	Wednesday, December 7, 2016				
08:00 – 08:30	Check-in and refreshments (Outside Victoria Ballroom)				
08:30 – 08:40	**Remarks** *Martine Dubuc, Vice President, Science Branch and Chief Food Safety Officer for Canada, CFIA*				
08:40 – 09:40	**Plenary Presentation: Animal Health Emergency Response Exercise** Introduction: *Garnet Etsell, Multi-Sector Primary Producer, Abbotsford, B.C.* *Dr. Sandra Stephens, National Operations Veterinary Specialist, Animal Health – Traceability and Terrestrial Animal Disease Control, CFIA*				
09:40 – 10:20	**Breakout Session 3: Challenges and Priority Initiatives**				
	Raising awareness through effective communications	**Influencing behaviour to safeguard plant and animal health**	**Collecting and sharing information across plant and animal health systems**	**Building and exercising Canadian and international networks and relationships**	**Promoting a strong science base through coordinated research to support plant and animal health**
10:20 – 10:40	*Break: Kiosks on a range of plant and animal health initiatives from all partners*				
10:40 – 11:50	**Breakout Session 3: Challenges and Priority Initiatives (*continued*)**				
	Raising awareness through effective communications	**Influencing behaviour to safeguard plant and animal health**	**Collecting and sharing information across plant and animal health systems**	**Building and exercising Canadian and international networks and relationships**	**Promoting a strong science base through coordinated research to support plant and animal health**
11:50 – 13:05	*Lunch (provided)* *Presentation: Dr. Susanna Driessen, General Manager, Emergency Response and Preparedness, Plant Health Australia*				
13:05 – 14:50	**Breakout Session 4: Moving to Action**				
	Raising awareness through effective communications	**Influencing behaviour to safeguard plant and animal health**	**Collecting and sharing information across plant and animal health systems**	**Building and exercising Canadian and international networks and relationships**	**Promoting a strong science base through coordinated research to support plant and animal health**
14:50 – 15:10	*Break: Kiosks on a range of plant and animal health initiatives*				
15:10 – 16:10	**Plenary: Reports from Breakout Sessions 3 and 4** *Breakout Session Leaders*				
16:10 – 16:30	**Plenary: What is Next? How to stay involved** *Andrew Morse, Executive Director, Flowers Canada* *Phil Boyd, Executive Director, Turkey Farmers of Canada* *Dr. Keith Lehman, Chief Provincial Veterinarian, Animal Health and Assurance Branch, Alberta Department of Agriculture and Forestry* *Dr. Jaspinder Komal, Executive Director and Deputy Chief Veterinary Officer, Animal Health Directorate, CFIA*				

Appendix 2: List of organizations represented at the Planning Forum

Agriculture and Agri-Food Canada

Air Transport Association of Canada

Alberta Agriculture and Forestry

Angus GeoSolutions Inc.

Animal Nutrition Association of Canada

Association of Canadian Faculties of Agriculture and Veterinary Medicine

BC Cherry Association

BC Poultry Association

Bioenterprise Corporation

Canada Border Services Agency

Canada Wood Group

Canadian Animal Health Coalition

Canadian Association of Swine Veterinarians

Canadian Beef Breeds Council

Canadian Canola Growers Association

Canadian Federation of Agriculture

Canadian Food Inspection Agency

Canadian Hatching Egg Producers

Canadian Honey Council

Canadian Horticultural Council

Canadian Livestock Genetics Association

Canadian Lumber Standards Accreditation Board

Canadian Nursery Landscape Association

Canadian Pork Council

Canadian Poultry and Egg Processors Council

Canadian Produce Marketing Association

Canadian Seed Growers' Association

Canadian Sheep Federation

Canadian Veterinary Medical Association

Canadian Wildlife Health Cooperative

Canadian Wood Pallet and Container Association

Canola Council of Canada

Cargill Canada

Chicken Farmers of Canada

Christian Farmers of Ontario, Ottawa-St. Lawrence Chapter

CN

CropLife Canada

Dairy Farmers of Canada

Dairy Farmers of Ontario

Dairy Processors Association of Canada

Egg Farmers of Canada

Elanco Canada Limited

Environment and Climate Change Canada

Equestrian Canada

European Union Delegation to Canada

Feather Board Command Centre

Fertilizer Canada

Fisheries and Oceans Canada

Flowers Canada Growers

Génome Québec

Grain Farmers of Ontario

Grape Growers of Ontario

Health Canada

HyLife Ltd.

L'Union des producteurs agricoles

Lanark County Beekeepers Association

Manitoba Agriculture

Maple Leaf Foods Inc.

McGill University

Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec

Natural Resources Canada, Canadian Forest Service

New Brunswick Department of Agriculture, Aquaculture, and Fisheries

Nova Scotia Department of Agriculture

Ontario Association of Veterinary Technicians

Ontario Certified Crop Advisors Association

Ontario Invasive Plant Council

Ontario Livestock and Poultry Council

Ontario Ministry of Agriculture, Food and Rural Affairs

Ontario Ministry of Natural Resources and Forestry

Pest Management Regulatory Agency

Pet Food Association of Canada

Phytoclone

Plant Canada

Plant Health Australia

Presidents' Council

Prince Edward Island Aquaculture Alliance

Prince Edward Island Department of Agriculture and Fisheries

Prince Edward Island Potato Board

Production Lareault Inc.

PRTox Consulting Inc.

Public Health Agency of Canada

Pulse Canada

Railway Association of Canada

Registered Veterinary Technologists and Technicians of Canada

Equi-Health Canada

Saskatchewan Ministry of Agriculture

Sofina Foods

Standards Council of Canada

Turkey Farmers of Canada

United States Department of Agriculture

University of Calgary

University of Guelph

University of Ottawa

University of Saskatchewan

Western Canadian Swine Health Alliance

Appendix 3: Additional details from the breakout sessions

Raising awareness through effective communications

Key Elements of a Preferred Future

- Proactive, prioritized, reliable, consistent and coordinated information that helps build the correct message
- Formalized, resourced communication group to help (two-way) interactions among industry, government, academia and public
- Building awareness of impact of actions and connecting on an emotional level through use of stories
- Information overload: communication can become more effective if stakeholders come together and agree on a cohesive message
- Access or development of a network of expertise for relaying information to the relevant contacts
- Formalized, common approach with separate networks for plant and animal health adequately resourced to establish and maintain information and knowledge available as and when required to define targets (who) in a timely manner
- Feedback/evaluation mechanism

Key Priority Area: Define Scope

Outcome

Greater clarity, what's in and what's out, activate a proactive approach. Unite the common networks for plant and animal health and provide a unified communication framework

Challenges

- Engaging all stakeholders to achieve an inclusive and common vision
- The combination of plant and animal may make it difficult to have a clear scope
- Prioritization of criteria (i.e. short term vs. long term challenges, global vs. local challenges)

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Identify independent facilitator (broker)	S	Government, industry, commodity groups, non-governmental organizations (NGOs), producers, international organizations, public, academia
Define and communicate purpose and value of the strategy		Independent facilitator and government, industry, commodity groups, NGOs, producers, international, public, academia
Clarify the scope and priorities in detail (hold a retreat)		

Key Priority Area: Conduct Environmental Scan and Gap Analysis

Outcome

Identify the people and pathways within the scope, and develop the ability to create cohesive messages

Challenges

- Defining criteria to ensure key elements of the product/project/program are present while doing environmental scans/gap analysis
- There is a lack of standardized systems to share information with each other
- Engaging all in conducting a balanced scan

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Create a working group with qualified members who understand the importance and key elements of conducting the scan within the scope of the PAHS	S	All stakeholders should be involved. Gathering and analysis of information could be led by a hired third-party or mandated to an existing organization
Conduct and inventory of the existing communication products from all stakeholders		
Learn from other countries who have conducted similar types of exercises		

Key Priority Area: Define Issues, Define Responsibilities, Identify Resources, Build Infrastructure and Set Priorities

Outcome

Build an action plan for cohesive communications

Challenges

- Not all issues are the same. The plant and animal sectors vary, including the groups within each of the sectors. There are also regional differences across Canada
- Silos and barriers should be avoided, creating more integrated responsibilities with less gaps
- Resource allocation creates disparities between partners, as there is a fear of losing resources and priority
- Infrastructure for physical and technical (IT systems) has a lack of definition
- There are competing demands between groups when setting priorities

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Establish separate plant and animal networks	S (immediate)	Government – federal/provincial should decide and inform industry
Develop network-specific action plans (build on scan framework, establish targets and priorities, resource requirements, performance indicators)	M	Specific plant and animal networks
Assess/engage stakeholders (industry, NGOs, existing networks/committees)	S (ongoing)	Government lead – federal with provincial support and NGO involvement

Key Priority Area: Execute Action Plan

Outcome

Successful outcomes and areas for improvement leading to increased awareness, improved understanding and changed behaviour and practices

Challenges

- Unanticipated issues that arise and derail the current plan
- Dependent on the regular execution of a reassessment and readjustment of the Strategy

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Clearly defined roles and responsibilities	S	All stakeholders
Coordinated and targeted approach and advocacy to ensure no loss of momentum or buy-in	S/M/L	All stakeholders
Prompt attention to implementation of the plan after execution of previous steps	S	Identify leadership group that is public and private with a secretariat that has overarching responsibility for coordination (but not necessarily implementation)

Key Priority Area: Reassess and Readjust Plan

Outcome

Learn from failures and pursue successes; evaluate emerging issues

Challenges

- Determine the effectiveness if the desired awareness outcome was achieved by an audience to allow for adjustment and remodelling
- Define metrics for the variety of groups and their input and how to evaluate/agree among disparate groups
- Defining successfulness of the Strategy

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Secure and outline governance of a balanced and impartial leadership team	S	Equal representation of invested partners (¼ federal government, ¼ academia, ¼ provincial government, ¼ industry)
Implement assessment science to develop assessment metrics to validate the qualitative and quantitative properties of messaging	S	Scientific assessment and communications expertise
Identify priorities or deficiencies based on assessment metrics	M	Leadership team

Next Steps

- Initiate environmental scan
- Establish ongoing communications with the partners
- Provide communications tools directly from this forum to identify purposes and consequences of the PAHS
- Build awareness of what the world will look like once these strategies have been implemented

Influencing behaviour to safeguard plant and animal health

Key Elements of a Preferred Future

- The system:
    - Is integrated, scalable, and considers the long term
    - Has clear expectations for minimum requirements
    - Makes sense economically and sustainably
    - Communities of interest working together
    - Public-private partnerships with shared responsibility
    - Includes robust decision-making matrices to guide action
    - Facilitates monitoring and reporting at all levels
    - Includes financial incentives accessible to all – plant and animal
    - Is transparent – gives access to good news and bad news stories
- Industry
    - Have a true understanding of what Biosecurity is and the tools to implement
    - Make informed decisions on how to mitigate the risk and accept the consequences
- General public
    - Protecting plant and animal health is part of our social norms
    - Consumers accept to pay for plant and animal health
    - Engaged in citizen science to improve data collection, supported by a portal for 2-way communication, sharing and expertise
- All
    - It's personal: the responsibilities and consequences are realized at an individual level
    - Compliance is easy; people self-report

Key Priority Area: Incentives and Compliance

Outcome

All sectors have access to Incentive Programs/Compensation Programs which require producers/growers to be compliant with minimum biosecurity standards

Challenges

- Putting a price on value for compensation of plants
- Developing acceptable minimum biosecurity standards for all products if compensation is tied to implementation
- Compensation comes from the consolidated revenue fund, which is where all taxes go. Theoretically, compensation can be given to farmers until the entire country becomes bankrupt

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Devise a decision map that would determine the type of incentive (e.g. compensation, tax break, retraining, support for certification system that allows for market differentiation, etc.) according to pest/disease and sector/product affected	*Insufficient time to discuss*	*Insufficient time to discuss*

Key Priority Area: Partnerships and Collaboration

Outcome

Industry and Government working together for the seamless delivery of programs and operations as it relates to plant and animal health

Challenges

- Need support from leaders in industry, various governments who have the ability to authorize funding and actions
- Transforming high level dialogue into straightforward, easily understood roles and responsibilities
- Understanding 'who' is a partner, the needs of all partners, and their level of engagement

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Create structure to regularly convene stakeholders	*Insufficient time to discuss*	*Insufficient time to discuss*
Develop and implement MOUs between stakeholders identifying roles and responsibilities		
Establish continuity of funding for collaboration		

Key Priority Area: Minimum Standards

Outcome

A reduction in the frequency and impact of economically or environmentally damaging plant pest or animal disease related events

Challenges

- Varying levels and types of standards based on plant vs. animal, small vs. large productions, and local/regional/national/international producer groups
- Administrative burden associated with meeting minimum standards on multi-species, large-scale farm operations

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Develop and promote social networks that encourage peer to peer understanding of best practices with an initial focus on biosecurity	*Insufficient time to discuss*	*Insufficient time to discuss*
Analyze and understand the impediments to the implementation of biosecurity standards		
Evaluate, identify and prioritize pest and disease risks as they apply to minimum standards. This would include, approaches that address small versus large operations, integrated operations (multiple species, plants and animals) and different biosecurity levels (local, regional, network and national/international)		

Key Priority Area: Tools and Information Sharing and Reporting

Outcome

A comprehensive national monitoring and reporting portal for plant and animal health

Challenges

- How to standardize without losing the producer/sector relevance for the person inputting the data
- Leadership of the initiative, coordination of sectors and government, creating incentive for buy-in amongst different groups
- Maintaining the confidentiality of the data and information

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Assess which data points are needed and develop a common vision for building the infrastructure and system	*Insufficient time to discuss*	*Insufficient time to discuss*
Build on what's there already (e.g. production management software that producers are already using)		
Develop tools and the value proposition for the individuals that are actually collecting the data		

Key Priority Area: Education

Outcome

The entire supply chain (including the general public) is aware and involved in biosecurity practices

Challenges

- Coordination of messaging between the public, private and academia to eliminate duplication
- Identifying appropriate markets to educate and developing messaging for each targeted group
- Measuring the impact and success of the education campaigns

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Develop and sustain support for knowledge transfer programs that are focussed on growers and producers	*Insufficient time to discuss*	*Insufficient time to discuss*
Develop a youth education program as part of the early year curriculum with a focus on biosecurity		

Key Priority Area: Resources for Decision Making

Outcome

Sustainable long term funding for resources that allows for informed decision making

Challenges

- Overall lack of funding for plant and animal health for day to day resourcing, as well as for emergencies
- Silos within and between organizations (federal, provincial, academia, industry)
- The prioritization and allocation of resources

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Build an inventory of existing resources and identify gaps	*Insufficient time to discuss*	*Insufficient time to discuss*
Create a business model to achieve sustainable funding in order to address gaps		
Establish a dedicated body to coordinate activities, funding, priorities on a national basis		

Next Steps

- Convene stakeholders (decision makers from all stakeholders)
- Establish executive committee and structure to govern the work
- Develop a work plan and working groups
- Share broadly the Web ex on Australian model as a starting point to explore how it could be applied or adapted to Canada
- Do an international scan to see if there are other models to learn from
- Examine systems that are already available to see if they can be expanded to a national level or cross sectors

Collecting and sharing information across plant and animal health systems

Key Elements of a Preferred Future

- Data is collected from multiple sources in a standardized and integrated manner
- Risk intelligence is shared, assessed, and applied to decision making across all partners, and in negotiations with trading partners
- All partners recognize the value proposition to sustainably participate in data collection, analysis and sharing
- Data is collected, analysed and shared in real-time using automated systems
- Data sharing networks include bringing people together

Key Priority Area: Standardization, Compatibility, and Automation

Outcome

Consistent quality allows for meaningful interpretation and informed decision making with no disincentives to sharing

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Bring together a steering committee to assign a task to a force; Develop terms of reference (TOR); Environmental scan and gap analysis	D	Areas of expertise: data entry, data analysts, decision makers, IM/IT Sectors: Federal-Provincial-Territorial (FPT) governments, municipal, industry
Establish a standardization framework for relevant plant and animal health data	S/M	Same as above
Incorporate new technologies where applicable so that you incorporate automation where possible	Ongoing	Same as above

Key Priority Area: Networks, Human Resources, and Expertise

Outcome

Building and maintaining capacities in a community of a blend of expertise with essential and dedicated leadership able to anticipate and adapt to necessary changes in risk

Challenges

- Lack of depth (necessary expertise rests with single source) to establish a community
- Need a succession plan and a committed leadership for the community
- Common understanding of data management and curation

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Develop a model for a network of expertise (communities of practice)	S	Areas of expertise: data entry, data analysts, decision makers, IM/IT Sectors: FPT governments, municipal, industry
Identify leaders, implement the model and establish roles and responsibilities	S	Same as above
Identify skills and technical requirements, training needs, talents, and build capacity	Ongoing	Same as above

Key Priority Area: Demonstrating Value and Benefit

Outcome

Increased information sharing which benefits all participants in the value chain leading to higher levels of domestic and international confidence in Canada's capacity to safeguard human, animal and plant health

Challenges
• Fear of providing information might uncover a gap or cause issues
• Jurisdictional issues
• Ensuring confidentially

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Create a partnership approach in the drafting of Terms of Reference for the national initiative	S	Areas of expertise: data entry, data analysts, decision makers, IM/IT Sectors: FPT governments, municipal, industry, academia, and NGOs
Articulate the benefits for each participant, including benefits beyond health objectives, and identify appropriate incentives for participation (business case)	M	Same as above
Identify and foster new information sharing networks, where required	M	Same as above

Key Priority Area: IT Asset/System

Outcome

Canada has a platform that is developed in an open source code and which allows stakeholders to access a variety of integrated databases containing clean, atomic level (lowest useful) data that is easy to access, accurate, constantly updated, searchable, sustainable, and amenable for analysis

Challenges

- Security and confidentiality of the systems need to be maintained
- Data quality while filling in the text fields may vary depending on the scribe
- Financial challenges to create a robust system

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Establishment of a dedicated management and technical team able to support and advise	S	All stakeholders
Develop select pilot projects with willing participants	S/M	All stakeholders
Consult key players and stakeholders on an ongoing basis	Ongoing	All stakeholders

Key Priority Area: Governance, Accountability, and Accessibility

Outcome

Sustainable governance structure involving all stakeholders that is committed to open and transparent information sharing

Challenges

- Having a common and clear objective of what needs to be done
- Satisfy stakeholder needs
- Finding the right (designated people at the right level) people to be on the committee for each organization

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Define a clear mandate and terms of reference for a governance authority	S	All stakeholders
Establish the necessary agreements	S/M	All stakeholders

Key Priority Area: Needs Assessment		
Outcome		
Dynamic assessments of data/information/intelligence collection and analysis needs are conducted in order to address the strategy's objectives		
Challenges		
- In order to maintain consistent assessment there is a dependency on having networks already in place for key contacts - To maintain this activity, resources are required over time - Being comprehensive, given that the area is so large		
Top Initiatives Identified	**Time Frame S / M / L**	**Who Should Be Involved?**
Assess the needs for collecting and analysing data, information and intelligence.	S, and then ongoing	Input from existing networks; with oversight

Next Steps
- Assess feasibility of the initiatives put forth for information sharing   - Needs assessment - boil down and sort out the 10-12 key priorities   - Define value proposition for sectors and participants in the various networks   - Communications strategy   - Determine leadership and governance for the project

Building and exercising Canadian and international networks and relationships

Key Elements of a Preferred Future

- Barriers are removed, allowing for transparent information sharing
- Responsibility sharing between groups, identifying the right groups to act on their mandates
- Address gaps and roles and responsibilities between mandates
- Lab and diagnostic services to be modernized and use the private, accredited labs that are already modernized
- Collaborate with stakeholders, to create shared priority setting when dealing with market access and trade issues
- Enhance international trade through better communications and strengthened Canadian leadership
- Assurance programs, third party delivery
- Maintain existing research networks and include all stakeholders
- Sharing success stories to improve collaboration and networking, building on strengths
- Standardize provincial approaches
- Recognize the other partners (federal government/provincial government/industry) who play a role
- Cultural shift going forward to work toward common goals

Key Priority Area: Building Information Sharing for the Purpose of Prevention

Outcome

Key stakeholders are to have the information needed to make risk based decisions in a timely manner

Challenges

- Timely distribution of information (which relies on having IT systems in place)
- Consolidating information quickly – standardizing data collection
- Legalities of data access and information sharing

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Develop leadership and governance structure for information collection and dissemination	S-M	Key stakeholders
Complete needs analysis to determine info availability, gaps and who needs what	S	Governance structure (once established)
Identify what resources are available for implementation of actions by Canadian Animal Health Surveillance System and other initiatives as they arise	M-L	Governance structure (once established)

Key Priority Area: Strong Processes in Place to Facilitate Trust (e.g. internships) - Focusing on the Common Good

Outcome

Protocols to defend industry in a world of internet.

Facilitate the opportunities to develop trust (e.g. creating an environment that is non-punitive).

Have a trusting environment between industry and government.

Challenges

- Transparency
- How, what and when communication will occur
- How to manage information and the messages being send out

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Develop a protocol from farm to the regulatory authorities via a public-private partnership	S (<1 yr)	Producer, stakeholders, local veterinarians/establish a local plant health officer, CFIA and other regulatory bodies
Share best management practices in plant/animal health strategies to adapt for use among stakeholders in other sectors	S	Value chain roundtables, Canadian Federation of Agriculture, National Farm/Producer Associations (e.g. feather board command centre) including provinces
Support exchanges or internships between parties (e.g regulatory- industry-farmers)	S	FPT governments, industry

Key Priority Area: Clarifying Processes, Roles and Responsibilities

Outcome

All stakeholders understand, agree and act according to stated processes, roles and responsibilities, addressing gaps.

Challenges

- Identifying smaller groups and stakeholders that need to be involved in discussions
- Conflict between stakeholders (competing interests)
- Who takes the lead for action in terms of emergency response, prevention, identification of potential risks

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Define roles in plant and animal health networks	S-M	FPT governments, industry, NGOs, academia, public
Identify who takes the lead in the context of emergency management in the pre-border, border and post-border continuum	S	FPT governments, industry, NGOs, academia, public, foreign competent authorities
Define the appropriate processes for each of the action types (i.e., pre-border, border and post-border)	S-M	FPT governments, industry, NGOs, academia, public, foreign competent authorities

Key Priority Area: Enhancing National and International Relationships, Including Playing a Larger Leadership Role

Outcome

Strong, long-term international political leadership and influence in plant and animal sectors

Challenges

- Need a process to identify key players on an ongoing basis
- Implement new technology for Canada to become industry standards
- Develop strategic alliances (World Organisation for Animal Health, International Plant Protection Convention) for international standards

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Create an industry-government leadership group to further define how the relationship should function to advance national and international networks and support a resilient and sustainable business interest	S	FPT governments, broad industry and industry support groups
Lead and/or influence the development of equivalent international standards to facilitate trading relationships	M	FPT governments, broad industry and industry support groups
Create a training and development program for future leaders and provide opportunities to send Canadian technology and concepts to other countries	M	FPT governments, broad industry and industry support groups

Key Priority Area: Building Networks for Plant and Animal Health

Outcome

Canadian plant and animal health networks of expertise are established

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Develop a plan to establish a Plant Health Network (purpose, governance, membership, funding)	S	All stakeholders (FPT governments, industry, academia, NGOs, citizen scientists)
Implement the plan	M	Stakeholders in priority areas
Review, adjust and revise the plan	L	Stakeholders in priority areas

Next Steps

- Bringing people together that have passion and interest in order to:
    - Develop leadership and governance structures
    - Complete needs analysis to determine info availability, gaps and who needs what
    - Develop a protocol from Farm to the regulatory authorities via a public-private partnership
    - Share best management practices in plant/animal health strategies to adapt for use among stakeholders in other sectors
    - Support exchanges or internships between parties (e.g., regulatory- industry-farmers)
    - Identify who takes the lead in the context of emergency management in the pre-border, border and post-border continuum and define the appropriate processes for each of the action types
    - Develop a plan to establish a Plant Health Network (purpose, governance, membership, funding, etc.) and to further improve implementation of Animal Health Network
    - Create an industry-government leadership group to further define how the relationship should function to advance national and international networks and support a resilient and sustainable business interest

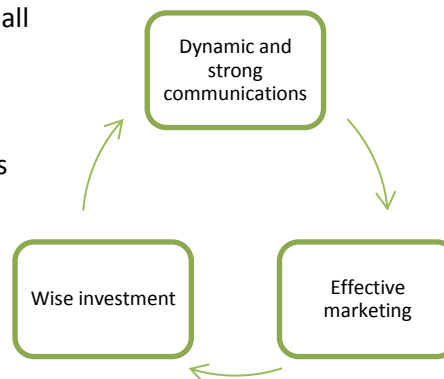## Promoting a strong science base through coordinated research to support plant and animal health

Key Elements of a Preferred Future

- There are no barriers to collaboration across different stakeholders
- Commodity based / national research coordination units are in place, governance is in place for research
- Framework for open science exists along with a repository for data
- Information technology system is in place for collaborative data sharing
- There is a flexible and dynamic funding model for research and capacity building that addresses both long term (e.g., research chairs) and short term needs (e.g., seed funding) and priority setting
- Foresighting and risk assessment are used to predict the future and support preparedness
- Knowledge is transferred and research results are applied
- Research is innovative and effective - new ideas are embraced and we explore how to achieve them
- There is a national repository or directory of expertise and physical resources (e.g. labs) for effective collaboration and identification of gaps
- Through clear communication strategies, research demand is driven by stakeholders
- Human resources from all sources are leveraged by connecting academia, regulatory organizations and industry (e.g., internships) and building capacity (e.g., training)
- Research in behaviour modification and economics is applied –social sciences are used to make policy changes
- Outcomes of all science-based programs are evaluated and drive improvements
- There is a focus on prevention
- There is collaboration internationally to avoid duplication of research efforts and international networks are established
- There are diagnostic labs that meet international standards with necessary quality control in place

Key Priority Area: Business Case to Support Strong Science Base

Outcome

- Develop compelling case to leverage investments of all players
- Communicate to non-specialist audiences (public, decision-makers)
- Include social, biological, environmental components
- Rationale for targeted investment
- Tell the story for plant and animal health and why it is important for Canadians

Dynamic and strong communications → Effective marketing → Wise investment → (cycle back to Dynamic and strong communications)

Challenges

- Buy-in and engagement of supporters of the concept
- Need to make development of a business change a priority
- How to quantify the risks and benefits

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Establish governance for developing business case (leverage emergency management framework for agriculture)	S	FPT governments, industry, academia for agriculture, fisheries and aquatics, forestry, etc.
Conduct analysis and write business case	M	TBD – Expertise must first be identified
Market business case	Ongoing once business case developed	Champions, all

Key Priority Area: Long-Term, Stable Funding Source

Outcome

Stakeholder driven long-term (i.e., anticipatory, foresight-driven) funding model supports longer-term, strategic research agenda based on needs of commodity groups

Challenges

- Identifying beneficiaries: public sector, private sector, risk makers vs. risk bearers, commodity clusters
- Ensure funding model encompasses large-scale and small-scale research needs
- Balanced allocation of funds between animal and plant health
- Dedicate a set percentage of budget to contingency plans for new projects
- Flexible scope for funding initiatives

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Review funding practices in other international partner jurisdictions	S	FPT governments (engage others as needed)
Identify beneficiaries (who should also be financial contributors)	S	TBD
Develop national level funding model based on available funds and demands	M	TBD - beneficiaries

Key Priority Area: Collaboration Enablers - IT Infrastructure for a Research Database & Inventory/Repository of Existing Capacity, Knowledge, Expertise, Infrastructure

Outcome

- Large capacity platform for data, research and results sharing hosted by 3rd party to avoid barriers
- Secure system with resolution of data ownership and confidentiality
- Establish a platform with all science data (e.g., similar to PubMed) that is easy to use and has incentives for its use
- Develop standard practices and methodologies to enable data sharing and access
- Effective communication and promotion plans to disseminate information to all stakeholders

Challenges

- Accessibility and ownership of data
- Physical issues – type of database, management, monitoring, funding, capacity
- Extreme variations in information to store, sort and retrieve

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?

Identify the areas for collaboration and who should collaborate	S	FPT governments, industry, associations, academia
Develop the funding model to sustain collaboration (e.g., for IT infrastructure)	M	FPT governments, industry, associations, academia
Develop systems and processes to support collaboration (e.g., IT, simple protocols, national repository for resources, expertise)	M-L	Consultants, IT specialists
Establish inventory/repository of existing capacity, knowledge, expertise, infrastructure		

Key Priority Area: Strong, National Network for Collaboration

Outcome

- More flexible use of human resources, equipment and funds between different research groups
- Results in more timely execution of research and more robust, sound results and outcomes to assist decision making from a broader research approach
- National, integrated structure (governance, network) for shared priority setting and to foster collaboration is recognized as primary reference body for coordination of research and supports safeguarding of plant and animal health

Challenges

- Feasibility – developing a framework, finding champions, priority setting
- Legal barriers and privacy, trust and research ownership

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Identify leader or champion to bring researchers together	S	FPT governments, industry
Establish incentive for participation (e.g., $$$)	S	All stakeholders
Overcome legal, administrative and cultural barriers to enable sharing of resources	M-L	All stakeholders

Key Priority Area: Focus on Prevention and Foresighting

Outcome

- Prioritize research and funding to identify priority areas for research
- Develop science-based response strategies for dealing with issues
- Reduce need for responses if you focus on prevention

Challenges

- Sector dependent – one size fits all is not appropriate
- Dependent on international trades / difficult to monitor / too big and broad
- Timelines to start research and development to support prevention practices

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Foster networking and discussion among different stakeholders to facilitate prevention and foresight	S, ongoing	Industry driven, all stakeholders
Develop a toolbox to support sectors to better understand and perform prevention and foresight activities	S-M	Industry, FPT governments, associations
Reinforce importance of international standard setting bodies to share information on risk and help develop preventative measures to mitigate risk	Ongoing	FPT governments

Key Priority Area: Implementation of Key Performance Indicators and Evaluation Process

Outcome

- Establish key performance indicators for research methods, progress, outcomes and implementation of results in field or policy
- Not just project-based, also at higher, programmatic level
- Ongoing gap analysis feeds into priority setting

Challenges

- Requires leadership and governance for implementation
- Getting buy-in from all parties
- Challenge to measure the impact and deliverables (especially with prevention)

Top Initiatives Identified	Time Frame S / M / L	Who Should Be Involved?
Review current research assessment methods in use national and internationally	S	Sub-group of experts, consultant
Determine potential expected research outcomes based on current gaps or needs	Ongoing	Collaborative group of FPT governments, industry, academia
Determine key performance indicators (characteristics and timelines) for expected research outcomes (proximate) as well as for programs overall (ultimate)	Ongoing	Collaborative group of FPT governments, industry, academia

Next Steps

- Form working groups, identify Champions
- Determine what is currently being done in research
- Identify sectors, commodities, interests, threats
- Inventory what is working well