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AFRICAN SWINE FEVER FORUM

FORUM DE LA PESTE PORCINE AFRICAINE

FORO DE LA PESTE PORCINA AFRICANA

| 30 april · avril · abril – 1 may · mai · mayo 2019 |

OTTAWA, CANADA

REPORT – *AFRICAN SWINE FEVER FORUM*

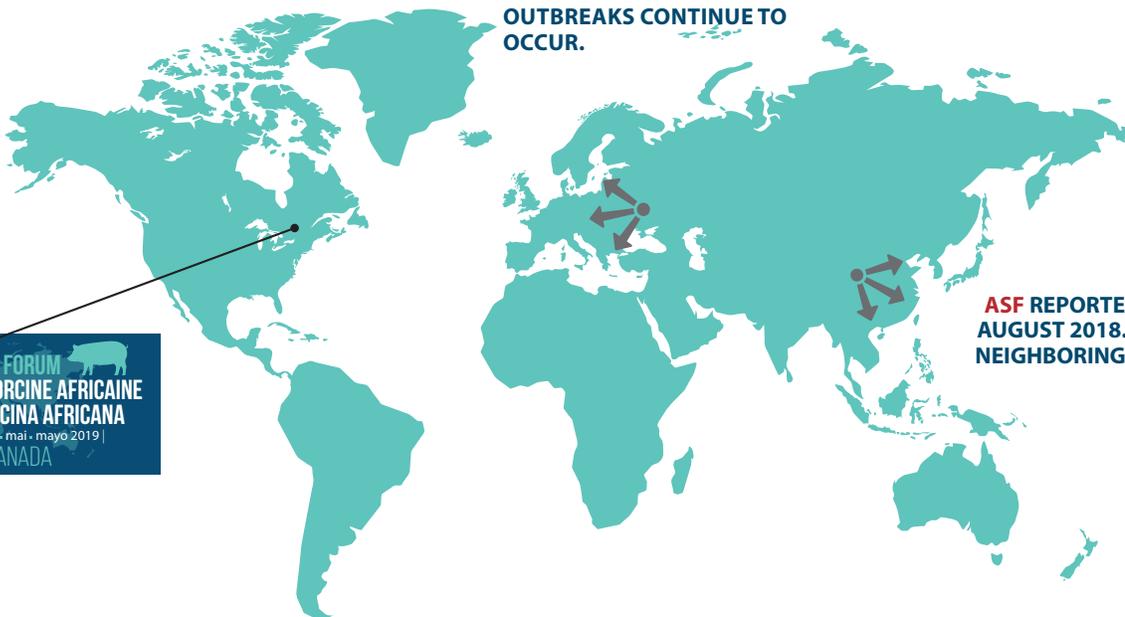
*to advance regional cooperation in the prevention
and mitigation of the impact of ASF in the Americas*

JOURNEY TO ASF FORUM

FIRST INCURSION OF ASF IN EUROPE IN 2014. FURTHER OUTBREAKS CONTINUE TO OCCUR.

ASF REPORTED IN CHINA AUGUST 2018. SPREAD TO NEIGHBORING COUNTRIES

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REVISED FRAMEWORK FOR THE PREVENTION & CONTROL OF AFRICAN SWINE FEVER

OBJECTIVE: To prevent entry and mitigate the impacts of ASF in the Americas

FOUR PILLARS FOR ACTION BASED ON A FOUNDATION OF SCIENCE

<p>PREPAREDNESS PLANNING 1</p> <p><i>Expected outcome:</i> Countries have a high state of readiness to swiftly control ASF should it enter the Americas region.</p>	<p>ENHANCED BIOSECURITY 2</p> <p><i>Expected outcome:</i> Key biosecurity measures are in place to prevent the entry of ASF into the domestic and wild pigs populations of the Americas, and mitigate its spread within these populations.</p>	<p>ENSURE BUSINESS CONTINUITY 3</p> <p><i>Expected outcome:</i> Mitigate the trade impacts of ASF on the swine sector, both nationally and internationally, while controlling and eradicating the disease.</p>	<p>COORDINATED RISK COMMUNICATIONS 4</p> <p><i>Expected outcome:</i> Effective risk communication on ASF with target audiences to encourage informed decision making, behaviour modification, and trust in governments and industry.</p>
<p>AREAS FOR ACTION</p> <ul style="list-style-type: none"> Increase readiness by validating ASF preparedness plans and testing response capabilities through exercises involving all stakeholders. Find solutions to deficiencies in ASF response capabilities and planning gaps. Optimize rapid ASF detection in the Americas by ensuring capacity for surveillance. Develop the appropriate process and capacity for rapid risk assessment to identify risks for ASF and inform policy decision as situations evolve. Continue to collaborate internationally on critical ASF research with particular attention to the development of vaccines and other tools to prevent or respond to an ASF outbreak. 	<p>AREAS FOR ACTION</p> <ul style="list-style-type: none"> Identify key threats, gaps, and best practices in national border biosecurity, including establishment of appropriate level of activity, informed by risk assessment. Establish coherent collaboration to ensure border authorities share intelligence and best practices to mitigate the entry. Foster collaboration and compliance to address biosecurity ensuring responsibilities of all stakeholders are identified. Involve stakeholders in government, industry, and academia to gain an understanding of the wild pigs populations, and share best management practices at borders and the interface with domestic pigs. 	<p>AREAS FOR ACTION</p> <ul style="list-style-type: none"> Ensure risk based movements of animals and animal products domestically to keep industry viable in the face of an outbreak. To provide guidance and technical support for the development of common standards for zone establishment to gain wider acceptance. Proactively negotiate the recognition of zoning approaches with trading partners to reduce impediments to trade. Work with international partners and the OIE to develop globally recognized and accepted guidance on the application of compartmentalization for ASF to gain wider acceptance, both in infected and uninfected countries. 	<p>AREAS FOR ACTION</p> <ul style="list-style-type: none"> Develop a consistent approach and strategies to communicating risk, adapted to the specific needs and circumstances, including disease status, of various countries. Identify or develop platforms and mechanisms for ongoing coordination of messaging and for sharing of communications-related information between countries. Establish mechanisms for monitoring public narrative on ASF to ensure information in media and social media is accurate. Develop notification protocols to update partners on disease status.



PARTNERSHIPS

Leverage existing partnerships or build new ones to engage stakeholders in areas which require collaboration to attain expeditious and responsive solutions to manage ASF. Clearly define the roles and responsibilities of the partners in accordance with their respective mandate.



GOVERNANCE

Optimize the potential of existing governance mechanisms at international, regional, sub-regional and national levels to ensure effective coordination and co-operation among all parties to implement appropriate measures to achieve common objectives for the prevention and control of ASF.

version 15.05.2019

EXECUTIVE SUMMARY

The African Swine Fever (ASF) Forum was held in Ottawa, Canada, on April 30 and May 1, 2019. The objective of the Forum was to advance regional cooperation in the prevention and mitigation of the impact of ASF in the Americas.

The [Draft Framework for the Prevention and Control of African Swine Fever](#)¹ was a starting point for building an enhanced understanding and approach to manage the threat of ASF. The Forum included panel presentations and discussions by ASF and animal health experts, industry, academia, regulators and other stakeholders. Table discussions were designed to elicit recommendations toward finalizing the *Framework*, as well as to strengthen and develop opportunities for collaboration.

Key messages emerging during the Forum included:

- ***In the Americas, countries are currently free of ASF:*** We have a window of opportunity to act decisively in coordinated manner.
- ***The spread of ASF is human driven:*** Increased awareness of ASF among all stakeholders and a common understanding of the infection pathways (legal and illegal imports, transport of live animals, feed, hunting, small scale farms, etc.) are needed to prevent incursion and mitigate economic loss should the disease be found.
- ***The epidemiology of ASF is complex and unique:*** The ASF virus can persist in pork meat products and survives in carcasses of wild pigs in the environment. This requires rigorous approaches to preparedness, biosecurity and environmental decontamination.
- ***Better understanding of the wild pig population is needed:*** This includes information on the numbers of wild pigs and the potential interaction of domestic and wild pigs in both individual countries and across the Americas region.
- ***Zoning and compartmentalization are key tools to minimize trade disruptions:*** Implementation depends on a strong partnership between industry and veterinary services, ideally agreed to in “peacetime.”
- ***A vaccine for ASF is crucial for its control and eradication:*** More investment is needed to support research to develop and commercialize a vaccine for ASF.
- ***Use existing partnerships and governance:*** From multidisciplinary working groups to national, regional and global organizations and alliances, successful solutions to ASF will be found through cooperation and collaboration.

Following the Forum, the organizers updated the Draft Framework to reflect the input of participants. Below is the text of the [Revised Draft Framework for the Prevention and Control of African Swine Fever](#).

¹ [Draft Framework for the Prevention and Control of African Swine Fever](#), version 24.04.2019

REVISED DRAFT FRAMEWORK FOR THE PREVENTION AND CONTROL OF AFRICAN SWINE FEVER

Objective: to prevent entry and mitigate the impacts of ASF in the Americas



Expected outcome: Countries have a high state of readiness to swiftly control ASF should it enter the Americas region.

AREAS FOR ACTION:

- Increase readiness by validating ASF preparedness plans and testing response capabilities through exercises involving all stakeholders.
- Find solutions to deficiencies in ASF response capabilities and planning gaps.
- Optimize rapid ASF detection in the Americas by ensuring capacity for surveillance.
- Develop the appropriate process and capacity for rapid risk assessment to identify risks for ASF and inform policy decision as situations evolve.
- Continue to collaborate internationally on critical ASF research with particular attention to the development of vaccines and other tools to prevent or respond to an ASF outbreak.



Expected outcome: Key biosecurity measures are in place to prevent the entry of ASF into the domestic and wild pigs populations of the Americas, and mitigate its spread within these populations.

AREAS FOR ACTION:

- Identify key threats, gaps, and best practices in national border biosecurity, including establishment of appropriate level of activity, informed by risk assessment.
- Establish coherent collaboration to ensure border authorities share intelligence and best practices to mitigate the entry.
- Foster collaboration and compliance to address biosecurity ensuring responsibilities of all stakeholders are identified.
- Involve stakeholders in government, industry, and academia to gain an understanding of the wild swine populations and share best management practices at borders and the interface with domestic pigs.

REVISED DRAFT FRAMEWORK FOR THE PREVENTION AND CONTROL OF AFRICAN SWINE FEVER

Objective: *to prevent entry and mitigate the impacts of ASF in the Americas*



ENSURE BUSINESS CONTINUITY

3

Expected outcome: *Mitigate the trade impacts of ASF on the swine sector, both nationally and internationally, while controlling and eradicating the disease.*

AREAS FOR ACTION:

- Ensure risk-based movements of animals and animal products domestically to keep industry viable in the face of an outbreak.
- Provide guidance and technical support for the development of common standards for zone establishment to gain wider acceptance.
- Proactively negotiate the recognition of zoning approaches with trading partners to reduce impediments to trade.
- Work with international partners and the OIE to develop globally recognized and accepted guidance on the application of compartmentalization for ASF to gain wider acceptance, both in infected and uninfected countries.



COORDINATED RISK COMMUNICATIONS

4

Expected outcome: *Effective risk communication on ASF with target audiences to encourage informed decision making, behaviour modification, and trust in governments and industry.*

AREAS FOR ACTION:

- Develop a consistent approach and strategies to communicating risk, adapted to the specific needs and circumstances, including disease status, of various countries.
- Identify or develop platforms and mechanisms for ongoing coordination of messaging and for sharing of communications-related information between countries.
- Establish mechanisms for monitoring public narrative on ASF to ensure information in media and social media is accurate.
- Develop notification protocols to update partners on disease status.

NEXT STEPS – THE JOURNEY AHEAD

- ◆ Countries should develop a **national action plan** for ASF prevention and control reflective of their pork sector and risk pathways.
- ◆ Under GF-TADS Americas Committee, **establish a Standing Group of Experts on ASF for the Americas** to build closer cooperation among countries to address preparedness and response to the disease in a collaborative and harmonised manner:
 - The multidisciplinary group requires expertise in: communications, biosecurity, destruction, disposal and decontamination, wild pig control, arthropod vectors, border security, epidemiology, disease modelling and laboratory science.
- ◆ **Promote a regional partnership** to share reference material, laboratory services, transfer diagnostic capacity to facilitate early detection of ASF in the Americas, and to advance the development of new rapid diagnostics, including field testing
- ◆ **Conduct sub-regional exercises to test country preparedness plans for ASF** and share lessons learned across the region.
- ◆ **Request the OIE to develop specific guidance on the implementation of zoning and compartmentalization for ASF** and how to adapt these measures to different production systems.
- ◆ **Support and invest in the Global ASF Research Alliance to continue to coordinate international research efforts** to address gaps, in particular for the development of a vaccine for ASF virus.



SESSION 1: OPENING SESSION

1.1 Welcoming Remarks from Co-Chairs

Dr. Jaspinder Komal, Chief Veterinary Officer, World Organisation Animal Health (OIE) Delegate for Canada, Vice President, Science Branch, Canadian Food Inspection Agency (CFIA), Canada, noted that the Forum participants are leaders in African Swine Fever (ASF) or important stakeholders in the pork industry. There is strong collaboration among the Chief Veterinary Officers (CVOs) of Canada, the United States and Mexico, which we are confident will lead to a North American approach for addressing ASF. This will be possible through the ideas and input generated at this Forum. ASF is a global problem that, due to its unprecedented speed of spread, has seized the attention of regulators, industry and academia. This Forum looks to identify how we can prevent the introduction of ASF into the Americas, and how to mitigate and eradicate it if there is an incursion. We have gathered experts and decision makers from around the globe, including the Americas, Europe, and Asia, to address ASF. The overarching goal of this event is to ensure that each stakeholder is keenly aware of their role in managing this serious disease. A draft *Framework* of key areas for action will be used to frame Forum discussions. **The four action areas are: 1) Preparedness Planning; 2) Enhanced Biosecurity; 3) Ensure Business Continuity; and 4) Coordinated Risk Communications.**

Dr. Jack Shere, Chief Veterinary Officer, Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (USDA), USA, noted that the Forum has been designed to challenge our thinking on this disease. There are many gaps in knowledge and understanding that need to be addressed, lessons to be learned from the experience of others and measures to be taken if we are to secure the North American continent against ASF. Our best defense for keeping ASF at bay is ongoing collaboration and teamwork.

1.2 Opening Remarks

Honorable Marie-Claude Bibeau, Minister of Agriculture and Agri-Food (AAFC), Canada, welcomed participants, noting that the broad representation of ASF experts and stakeholders from more than 15 countries reflects the fact that ASF cannot be solved by any one country, stakeholder or organization. Some of the countries or regions represented at the Forum are already suffering the impacts of ASF, including significant economic disruption. This disease threatens to continue to spread to other parts of the world unless we act now.

This Forum provides an opportunity to further strengthen international cooperation to stop the spread of ASF and to further the scientific understanding needed to perhaps one day even eradicate it. The results of the discussions at the Forum will help protect our pork industries, as well as the jobs and livelihoods of many of our citizens. Canada is taking steps in prevention, preparedness and response. We recently allocated up to \$31 million to increase the number of detector dogs at Canadian airports to help prevent undeclared pork products from entering Canada. In addition, we are placing import controls on plant-based feed ingredients arriving at Canadian marine ports from countries where ASF is already established. We are also working with our partners to have zoning recognized in the event of an outbreak in North America.





Greg Ibach, Under Secretary of Agriculture, U.S. Department of Agriculture (USDA), USA, noted that the Forum has grown from a North American symposium to an international gathering of animal health organizations and officials, as well as industry representatives, all committed to tackling the global problem of ASF. According to FAO data, pork accounts for 36% of the animal protein consumed in the world. A healthy pork industry is key to providing ample and affordable animal protein to the world's consumers.

A coordinated effort to eliminate ASF will require better diagnostic tests for early detection to help ensure our ability to control and contain ASF spread. But the development of preventative vaccines for ASF will be instrumental in eradicating this threat. Through the application of scientific principles of regionalization and other tools, as well as the standards and guidelines developed by the OIE, trade can be restored, and food security maintained. New scientific methods to establish safe avenues to move disease-free pork to consumers need to be found. A key goal for this Forum is to develop a oneness of purpose, focused on control, containment, diagnosis and prevention of ASF. Scientific collaboration between nations will be key to our success against this disease.

Dr. Matthew Stone, Deputy Director General, World Organisation for Animal Health (OIE), noted that the ASF events in China and Southeast Asia could happen in North America: all regions of the world are at risk from ASF. The OIE standards for commodity-based trade provide a scientifically sound means for harmonized risk management. All countries in the Americas should be consistently applying Chapter 15.1 of the Code to their imports of risk goods from infected zones in infected countries. Prevention of ASF requires the understanding of the complex issues related to risk pathways. It also requires coordination between public and private sectors of intelligence to inform risk management, and coordination among border agencies, airlines, shippers and importers. Preparedness requires early warning systems, surveillance and investigation programs supported by diagnostic capability.

All stakeholders need to understand their roles, especially in terms of biosecurity on farms, in processing plants and across all support industries including feed, genetics, equipment, transport and animal health. Preparedness involves contingency planning and strategic readiness for response coordination. It also encompasses trade risk mitigation: proactive measures to protect high-value exports, particularly genetics, such as agreements with key partners. The Global Framework for Transboundary Animal Disease in the Americas (GF-TADs), can provide the multi-country coordination and support mechanism necessary to build regional confidence in prevention and preparedness. This approach has been successful in the European Union (GF-TADs Europe). It's a whole-of-system approach that considers regional context, animal demography, farming systems, market chains and regulatory systems. The forthcoming OIE General Session in May 2019 will have a Technical Item on ASF, to provide a global situation update and highlight the strategic challenges. We hope to achieve support for a resolution to initiate a global strategy for ASF.

Dr. Etienne Bonbon, Senior Veterinary Advisor, EMC-AH / Animal Health Service, Food and Agriculture Organization of the United Nations (FAO), noted that the pig sector plays a key role as a source of quality animal protein. Pork is the most consumed meat from terrestrial animals, accounting for over 37% of global meat intake and global sales from pork exports by country totalled over \$30 billion US in 2017. The pig sector is a source of livelihood and income generation for millions of individuals and communities, both at the small-farm level and large commercial production.

ASF is placing the world's swine population under direct threat, and its direct and indirect impacts may jeopardize the international pork industry, as well as local and global food security. Immediate action and investment are required to enhance preparedness, prevention, early detection and early response. ASF is highly resistant and highly contagious, with mortality rates approaching 100%. There is currently no commercial vaccine available. As ASF can be introduced through contaminated feed or feed ingredients, and producers should only purchase swine feed from trusted sources that have appropriate biosecurity controls. Relevant sanitary measures at international and internal borders are the most important tool for minimizing the risk of introduction of the virus to domestic and wild pig populations. Increased awareness and passive surveillance schemes are critically important for detecting ASF in both domestic pigs and wild boar. Farmers and hunters need to be aware of the risks of ASF and the signs of infection and provided with incentives to report to veterinary authorities any unusual clinical signs. The introduction of ASF virus into wild boar or feral pig populations greatly adds to the complexity of disease control efforts. Effective collaboration methods between the forestry sector and game management authorities need to be established well ahead of the potential introduction of ASF. FAO's animal health service and technical cooperation operations, especially the Emergency Management Centre for Animal Health, with reference centres and institutional partners, especially the OIE, remain fully committed to assist and support the affected and threatened countries in enhancing emergency management capabilities.

Neil Dierks, Chief Executive Officer, National Pork Producers Council (NPPC), USA, reviewed some of the statistics related to pork production in the US. There are over 65,000 farms that derive income from pork or pork products, which equals approximately \$20 billion in farm receipts annually. About 50% of all agricultural income is derived from animal or animal products. The risk of ASF to the pork industry is significant. With prevention a key focus, government agencies (USDA, Customs and Border Protection) have invested in measures to stop the legal and illegal import of potentially contaminated product, for example using detector dogs at ports of entry. A coordinated response will be required in the case of an outbreak of ASF (or any other swine disease) in the US or North America. Working collaboratively and transparently with our trading partners will be key to maintaining the economic health and viability of the pork industry. In further developing the North American response to the prevention and control of ASF, the engagement and advice of those who draw their livelihoods from the sector – producers, packers, processors and others – will be crucial to ensure any potential solutions are based on reality.

Rick Bergman, President of the Board, Canada Pork Council (CPC), Canada, said that the many countries represented at the Forum reflects the priority of ASF. Everyone at this Forum is part of a team, ready and able to work together to fight ASF. If ASF were to breakout in Canada, there would be a terrible toll on the sector as every week there would be no market for approximately 425,000 slaughter hogs and 90,000 export pigs. The livelihood of 7,000 producers and more than 100,000 Canadians whose jobs depend on the pork industry would be devastated. Even though ASF has no human health effects, if it were to occur major chaos would result. In a world where food security is still an issue, this is unacceptable. We cannot wait for a crisis to occur – we need to use the tools that we have now, such as zoning and compartmentalization, and develop new tools for enhanced biosecurity. We are all contributors to a solution – by working together we can inspire and commit to protect what has taken decades to build.

1.3 Overview of the ASF Journey to 2019 and the Draft Framework for the Prevention and Control of African Swine Fever

Dr. Jack Shere

The *ASF Forum Backgrounder Document*² provides an overview of the history, control challenges, pathways for introduction and spread, and other information about ASF. Europe has been trying to eradicate the most recent incursion of ASF since 2014, with further outbreaks continuing. Europe has been able to use zoning and other strategies to continue trade. In August 2018, ASF was reported in China and has since spread to neighboring countries of Vietnam, Mongolia, and Cambodia. Since China notified the OIE of the outbreak, Canada, the US and Mexico have been working to address North American ASF preparedness. This has included work to harmonize testing procedures (along with New Zealand and Australia), conducting outbreak and trade disruption scenario exercises, increased border surveillance, including the use of detector dogs at key commercial, seaports and airports, and development of the *Draft Framework* and agenda for the Forum.

Dr. Jaspinder Komal

The Forum has been designed to make decisions and develop a concrete plan for the way forward. The Draft Framework provides a starting point for discussions around gaps, challenges and how to work together to find solutions to mitigate the threat of ASF. It includes four pillars for action based on a foundation of science and supported by partnerships and governance. The pillars and their expected outcomes are:

1. **Preparedness Planning** – Countries have a high state of readiness to swiftly control ASF should it enter the Americas region.
2. **Enhance Biosecurity** – Key biosecurity measures are in place to prevent the entry of ASF into the domestic and wild swine populations of the Americas and mitigate its spread within these populations.
3. **Ensure Business Continuity** – Mitigate the trade impacts of ASF on the swine sector, both nationally and internationally, while controlling and eradicating the disease.
4. **Coordinated Risk Communications** – Effective risk communication on ASF with target audiences to encourage informed decision making, behaviour modification, and trust in governments and industry.

These outcomes will be possible through the leveraging of existing partnerships and the development of new ones to engage stakeholders, build collaboration, and optimize the potential of governance mechanisms at international, regional, sub-regional and national levels.

² *ASF Forum Backgrounder Document*

SESSION 2: SETTING THE SCENE

Presentations provided an overview of the current ASF situation in the EU and China in terms of infection distribution and pathways, strategies for control, genetic factors, and other information to build a common understanding and to inform the *Draft Framework* discussions.

Dr. Francisco Reviriego-Gordejo, Adviser on crisis management in food animals and plants, Directorate General for Health and Food Safety, European Commission, EU, spoke about the EU experience in responding to ASF. Nine member states are currently affected by ASF (mostly in wild boar). The EU strategy focuses on wild boars, including reducing viral load in the environment through proper carcass removal and disposal. For domestic pigs, passive surveillance is key, along with PCR testing. There are seasonal factors, with the high peak of the disease occurring in the summer months. Key actions of the EU strategy include awareness campaigns for targeted groups; coordinated actions among farmers, hunters, other stakeholders and authorities; increased border checks; and enhanced biosecurity for all producers, including small non-commercial farmers. [Link to presentation](#)

Dr. Gao Lu, Assistant Researcher, China Animal Health and Epidemiology Centre, PRC, spoke about the current situation and control measures for ASF in China. As of April 21, 2019, there have been 129 outbreaks in 31 provinces. Three different strains have been detected. Swill feeding has been shown to account for 43.6% of infections, vehicle and personnel contact for 41.8% and 14.5% are related to live pig and pig product movement. Hundreds of tons of risk offal are smuggled into China. The complex live pig trade and movement networks mean there is high risk of disease transmission during transit. Risk management actions include restricting movement of live pigs and risk products, biosecurity measures during transport, and cleaning and disinfecting before and after loading. Reform of the animal health management system is underway, including animal health inspection certificates based on lab test, implementing zoning approaches, and testing of every batch of live pigs arriving at the slaughterhouse. A national ban on swill feeding was introduced in October 2018. Long-term and sustainable solutions are being developed with partners, including zoning and compartmentalization approaches. [Link to presentation](#)

Dr. Andriy Rozstalnyy, Animal Health Officer, Animal Health Service, Food and Agriculture Organization of the United Nations (FAO), provided an overview of the global status of ASF, lessons learned from ASF genotype II control, and why a global strategy for ASF is needed. As of April 2019, ASF has been detected in four countries in Asia, 11 countries in Europe and it is endemic in Sub-Saharan Africa. ASF can be transmitted from domestic pig to domestic pig, from wild pig to wild pig, and from wild pig to domestic pig. It can also be transmitted to pigs from contaminated objects and through contaminated swill. The drivers for a global strategy on ASF include the potential impact on economies and the livelihoods of farmers, food security, and conservation. Backyard pig keeping accounts for 43% of all pigs produced worldwide. The disease epidemiology has panzootic potential, especially in tropical areas. There are 24 genotypes, but we only have experience with genotype II and genotype I.

The Global Strategy for ASF looks to ensure the prevention and control of ASF is recognized as a global public good. It aims to control or eradicate ASF where it exists while protecting the ASF-free status of other continents/countries; enhance the prevention and control of other major diseases of swine as a result of the ASF strategy; and establish sustainable private-public partnerships on disease prevention and control.



The purpose of the strategy is to make transparent and available scientific knowledge for member countries to develop national and regional strategies and action plans.

[Link to presentation.](#)



Dr. Gregorio Torres, Acting Head of Science Department, World Organisation for Animal Health (OIE), spoke about the challenges and concerns related to addressing the global threat of ASF. Understanding the complexity of the virus and of the pork industry is important to prevention and control at the global level. Pork is the world's most consumed animal protein (37%), and therefore plays a key role in world food security. Pig production is a vital cultural component of some countries, where it is embedded into the fabric of society. The flow of pork and pork product imports and exports across international markets is very complex. At national levels, the value chain can also be complex, with various channels from producer to consumer. Each link in the value chain is a potential risk for transmission, but each link also represents an opportunity to prevent or control the spread of the disease. The pig production industry is often integrated with other agricultural areas, including aquaculture, fowl (duck) and vegetables.

The wild boar population and its connection to the domestic pig industry is another factor. Swill feeding is high-risk for the transmission of ASF, but the environmental impact of not feeding swill must also be considered. Although the size of commercial pig farms is increasing to meet demand, small farms (fewer than 100 pigs) still account for 43% of global production. Pork consumption, disease, trade and trade barriers are all contributing to changes in the sector. In moving forward, we need to ask: Do we have enough disease intelligence, capacity and resources to fight ASF on a global level? Are all the key private and public sector stakeholders identified and engaged? Do we have the mechanisms to coordinate action at regional and global levels? [Link to presentation](#)



QUESTION AND ANSWER EXCHANGE WITH PANELISTS

What are the challenges in communicating risk to stakeholders? In the EU, we are learning by doing. Communication must be targeted and tailored to the audience. Hunters are hard to reach. Farmers are easier to reach and require information that can be translated into behavioural changes. There is a lot of information available, and we are improving the way we reach our audiences. In China, the public awareness of ASF varies. Before the outbreak, the public did not realize the seriousness of the disease. After the outbreak, media reports spread misinformation and promoted fear. Unified messaging from high levels of government is important.

What is helping in terms of prevention and control of ASF in the wild boar populations? Consolidated knowledge is important – we cannot have mixed opinions and approaches. Learning from each other helps. For example, Belgium learned from the experience of the Czech Republic and has been able to contain the disease in wild boars to a limited area. We must find ways to bring hunters inside.

What are the key lessons learned in terms of preparedness from the FAO

perspective? Investment into contingency planning and emergency preparedness is important. We need to develop better understanding of the pig production system (where pigs are located, what biosecurity systems are in place across the value chain, where are the markets and who are the suppliers). When there are many backyard farms, it is important to ensure there is proper surveillance and that farmers report disease events. Passive surveillance is much more effective than active surveillance, but farmers need to be compensated. Because ASF is not a soil loading disease, some farmers believe that they can simply move the animals. So, it is important to consider the context of the pig production system in a country and the social and economic implications.

According to OIE figures, ASF is under-reported. What can be done to increase

ASF reporting? There is an OIE team working to encourage member countries to be transparent and to remind countries that reporting is mandatory. The OIE is promoting the importance of reporting for risk management and for the benefit of the whole OIE community. New incursions tend to be reported; however, reporting from endemic countries tends to be weaker. Member countries need to have the conversations with their peers to ensure transparency, which is a foundation of the OIE and a foundation of appropriate risk management.

OPEN FORUM



The clinical signs of ASF are very close to those of other diseases, so detecting its presence seems difficult. How then is passive surveillance appropriate?

Passive surveillance for ASF has been efficient because it is a disease that can't be mistaken, especially with *genotype II*. There is extremely high mortality. Some strains are less virulent, so early detection (observing dead or dying pigs) is key. The farmer then needs to take some action (e.g. bring in veterinarian). In the wild, it falls to the hunters, foresters and other users to see and report dead wild boar/wild pigs. Both farmers and hunters need to be educated about ASF and encouraged to report through incentives and support.

Has there been any detection of a sub-population of pigs that may be genetically immune or resistant to ASF?

No breed or variety of either domestic or wild pig has been identified to date be ASF resistant. A recent report noted that in Sardinia, which has an endemic status for ASF, about half the free-ranging pigs were ASF antibody positive. The social science component in Sardinia needs to be considered, which involves illegal free-ranging pigs. It is difficult to ascertain from a scientific perspective whether the pigs are more resistant. It does, however, need to be considered within the social context, not just the biological aspects. In addition, in Sardinia ASF is genotype I, with long persistence (since 1978). In Europe and Southeast Asia, the disease is genotype II. Nonetheless, it may be worthwhile to observe the effect of natural selection and what happens when populations (free-ranging, wild, domestic pigs) co-exist for long periods.

How well informed are African farmers about ASF and is OIE or AFO working to educate African farmers? FAO and partners in Africa developed and presented in 2017 a regional strategy for ASF control in Africa. The strategy is based on epidemiology, social-economic impact, and awareness. To help support countries in implementing the strategy, projects at the national and regional levels aim to improve surveillance, increase understanding of the current situation, improve laboratory diagnostics, and understand the mechanisms for better control. It's a complex situation, requiring investment in prevention and control and the support of partners and donors. OIE has programs to help support countries in meeting their obligations to report. There is a chain of events that needs to happen, from detection in the field to notification to the veterinary services. Incentives for reporting are key.

How can ASF, if detected on one farm, be prevented from spreading to a neighboring farm? Local authorities know how to contain the disease. There are protocols for slaughter, disposal of carcasses, disinfection, etc., that have been learned – and improved upon – from other animal diseases, such as avian influenza (AI). On-farm plans are important (biosecurity, disposal, reporting process, euthanasia, etc.). Much will depend on the state plan, but effective on-farm biosecurity can be key to containing the disease.

Did pork consumption decrease in China after the ASF outbreak?

In China, the public has confidence that the government will control the disease. The public realizes now that ASF does not affect food safety. Pork prices increased since ASF as the supply of pork decreased, because there is still high demand. Increasing prices leads to farmers wanting to increase production, leading to even greater need for effective biosecurity practices to be in place.

SESSION 3: PREPAREDNESS PLANNING

3.1 Preparedness Plans and Exercises

Dr. Jack Shere led a discussion of key issues and ideas with:

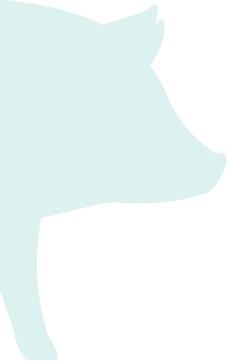
- Dr. Debbie Barr, Director, Animal Health, Welfare and Biosecurity Division, Canadian Food Inspection Agency (CFIA), Canada
- John Ross, Executive Director, Canadian Pork Council (CPC), Canada
- Dr. Jonathan Zack, Director, Preparedness and Incident Coordination, Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (USDA), USA
- Dr. Patrick Webb, Director of Swine Health Programs, National Pork Board (NPB), USA

What is the overall state of readiness in the pork industry? In the US, there is a national strategy as well as state strategies. The NPB plans for producers and packers strive to be consistent with state and national plans in terms of language and approaches. The NPB works on building awareness with producers on observational surveillance and how to report. As the industry moves away from some of the traditional diagnostic methods (whole blood, etc.), we are working with USDA and researchers to develop better testing methods. There are checklists for producers. Business continuity is a key area of concern. Improving our information sharing with state and federal agencies is a goal, so that good decisions can be made based on good data. ASF has highlighted the need for all these measures to be in place and is greatly raising the awareness and engagement of producers. There is still work to be done, but there is good penetration and adoption across the industry. In Canada, the level of engagement across the industry is also high and good progress is being made. It is important that the various prevention plans (producer plans, state/provincial plans and federal plans) are well aligned.

From a US federal perspective, what is the overall state of readiness? Preparedness, readiness and planning are measured with outcomes and actual response. In addition to the plans are the capabilities and capacity to act. In the US, experience has shown that the private sector, state, tribes and US federal government all must be together with the same plan. While infected premises must be dealt with, the bigger challenge is how to manage the non-infected premises. What are the expectations of the various stakeholders for the overall management of the outbreak? What are the implications for local, national and international commerce? Part of planning includes conducting exercises that bring all players together to identify gaps, develop capacities, clarify responsibilities and identify the infrastructure and tools that are needed. The driver for preparedness planning should be: What are you going to do tomorrow if it strikes today?

What is the Canadian perspective on readiness? One key area that is different, and which puts the issue in a Canadian context, is that Canada is much more export dependent than the US. Close to 70% of Canadian pork production is exported. The urgency and importance of ASF to our pork industry is clear. The preparation for ASF has been different than for other animal diseases. Whereas we previously would have established a team for response, we have established a team for preparedness. We have looked to identify critical gaps and improve both federal and provincial diagnostic capability as well as surge capacity. We continue to look at areas for improvement, and ways to strengthen existing measures and introduce new ones.





Preparation is nebulous – you can always prepare more. We continue to work with industry on awareness and education, and in reaching backyard and small producers, and will be looking into wild pigs in the future. There is commitment across the sector to collaboration and ensuring we are well prepared.

What are the gaps that US pork producers worry about? Producers who have participated in exercises struggle with mass depopulation and disposal. Strategies will change depending on the stage and the extent of the outbreak. But we need to look at other alternatives, such as using technology to do managed marketing off a positive site. This is not the traditional response approach, which is to stamp out the disease. ASF is not a zoonotic disease: we need to do all that we can to protect the industry without disposing of wholesome protein. Producers want to know what they can do to help in the initial stages of an outbreak. Producers want to know the process (state, federal) if the outbreak involves multiple states. Information and requirements, especially those related to business continuity, need to be consistent.

How can we better reach all farmers? It's a challenging task, but it may be simpler in Canada because there are fewer farmers. The provincial pork councils that are the members of the Canadian Pork Council have good reach to their constituents. As ASF becomes more of a risk, provincial organizations are spending more time and attention on it, with exercises and information dissemination. This awareness building then spreads out to the communities. The Canadian hog industry is highly integrated (50-60%), and the larger processors are engaging directly on ASF and reaching out to their producers and getting their systems in place. This information also reaches the independent producers. The Canadian Pork Council provides information to large- and small-scale producers and veterinarians. It can be difficult to reach small-scale producers and to get them to trust that ASF is not just a large industry problem. An advantage in Canada is a federally mandated full traceability system: every small producer must have a premise ID and report movement of animals.

How can the US-Canada-Mexico collaboration be improved? We can continue the collaboration of the past while identifying gaps (capabilities, infrastructure, etc.). The US Farm Bill should enable us to fast forward on some areas. Additional collaboration on ASF plans is needed. US, Canada and Mexico should engage in an exercise to go through the various protections, sectors, and scenarios for country, North American or Central or South American ASF incursion. We have a lot of vested interest in solving our closely connected problems should ASF occur.

What should a trilateral exercise on preparedness lead to? A real focus on a North American perimeter approach is key – what needs to be done to could keep us all protected? We need to have more in-depth and frank discussions about what happens in one country should another one be infected. Building on the zoning arrangements that are in place will minimize the impact, along with compartmentalization. We all face similar challenges and common concerns, for example regarding mass destruction and mass disposal, which is further complicated by social acceptance of methods of destruction, animal welfare concerns and real mental health concerns among producers and workers. Harmonization of diagnostics has been a positive step. We need to clearly understand what happens on Day Zero, Day 1 and onward of an incursion in the Americas or in Latin America.

What is the current state of preparedness and surveillance (active, passive) regarding ASF and wild boar/feral pig populations? In the US, we are beginning enhanced surveillance, including additional diagnostics for both CFS and ASF. Wildlife services will be instructed to report sick or dead wild pigs to the appropriate authority for testing. If a result is positive for ASF, attention can be focused on a specific area. There are issues, however, with reporting false positive results and/or proving a negative result. We must be sure before announcing a positive finding. In Canada, we are beginning to look at the wild pig population. The provinces have a key role in wildlife health. An ideal goal would be to have a national wild pig management strategy.

What are the funding challenges related to response when developing preparedness plans? The Canadian government has been actively looking at the Australian model (cost sharing among industry, state/provinces and federal agencies) as an option. From a producer perspective, cost sharing is very complex: if the sector collapses, losses could amount to as much as \$24 billion. It would be a national crisis. How the farms that are not infected are handled will be just as important as how the infected ones are handled. The challenge with ASF is that our current indemnity model is 50% of the value of the animals. However, there is flexibility to raise that percentage as needed in an emergency.

3.2 Rapid Risk Assessment for ASF

Dr. Helen Roberts, Policy, Science and Risk Advisor, Department for Environment, Food and Rural Affairs (DEFRA), UK, noted that she is a member of the European Food Safety Authority (EFSA) panel on Animal Health and Welfare and the ASF Working Group. Rapid risk assessment (RRA) includes the following definitions: Risk – the likelihood and consequence of a hazard occurring; Risk Assessment – the framework for answering a risk question with appropriate evidence, uncertainty, and assumptions; Rapid – 24 to 48 hours after the risk is identified. Risk identification considers four areas of threat: increase in cases, for example seasonal increases; new pathogen with unknown pathogenicity; jump to a new geographic area or new species of a known pathogen; and increased mortality or morbidity.

Maps are important tools for communicating and monitoring threats. In RRA, a standard risk question (the risk of pathogen A carried in commodity B from area X to Y during T time) is used and it covers most situations. This question can also be used during an outbreak when developing zones to continue trade. The first step is to establish a rapid risk assessment team. The team should have a common understanding of risk assessment, terminology, uncertainty and qualitative levels, and include disease specialists, epidemiologists, risk analysts, trade data and mapping specialists, entomologists, public health specialists, wildlife specialists and others as appropriate. Risk management is normally separate from risk assessment, although there may be occasions in an emergency where the risk assessors will also act as risk managers. International activities include the FAO rapid risk assessment guidance and the EFSA rapid risk assessment tools. An RRA cannot provide a quantitative result (it provides qualitative opinions including level of uncertainty) or an in-depth assessment of the effectiveness of control measures, and there is no time to undertake complex modelling or research and there is generally not a lot of the required data. [Link to presentation.](#)

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How much data do you need to make an RRA? Because it is a qualitative assessment rather than a quantitative one, a lot of data is not necessary, but it must be good data (poor data will give poor results whether it is an RRA or regular assessment). It is really about uncertainty and what is acceptable (what level of uncertainty can you live with?). The RRA can highlight where data is lacking, which can drive a larger risk assessment with more in-depth collection and exploration of the data.

Has RRA been used in North America? A lot of information is shared with CFIA and APHIS. The capability is there but needs to be further built, along with more sharing of RRA processes. In the US, the RRA and pro-active risk assessments have been done, primarily for FMD. It is especially used for determining risks related to movement of animals and the biosecurity measures that would be needed. The results of RRAs are influencing decision makers.

A key challenge of risk assessment is understanding current practices within the industry. In an RRA, how is intelligence on current practices drawn from industry/private sector? Being able to get quick responses and information is key, so ongoing communication and maintaining a strong relationship with industry is vital.

3.3 Research Gaps

Dr. Cyril Gay, Animal Production and Protection, Agricultural Research Service, U.S. Department of Agriculture (USDA), provided an overview of the Global African Swine Fever Research Alliance (GARA), research gaps and priorities and an update on ASF vaccine research. Launched in 2013, the GARA mission is “to establish sustainable global research partnerships that will generate scientific knowledge and tools to contribute to the successful prevention, control, and where feasible, eradication of ASF.” The alliance connects 36 research labs located in Europe, Asia and North America. Key research gaps identified by GARA include: ASF virology; viral pathogenesis; immunology; surveillance; epidemiology; disinfectants; feral swine and wild suidae; diagnostics; tick control; and vaccines. ASF is a complex disease with different manifestations in different parts of the world.

After decades of research, there is still little known about the immune mechanisms that allow the virus to invade or those that offer protection. As the virus enters new territories, new tools for surveillance will be needed and will vary with the phase of the incursion (beginning of the outbreak, during the outbreak and in recovery) and the territory. New epidemic cycles have been identified in new incursions, such as the wild boar in Europe. ASF is the only double-stranded virus that infects ticks, and this needs to be part of the research. The effective use of disinfectants needs to be validated for purpose (on farm, for trucks, etc.). There is a need to understand the mechanisms of tolerance and disease resistance associated with feral swine and wild suidae, including warthogs and bush pigs.

ASF in the blood can be detected as early as 2 to 3 days after infection; however, antibodies do not appear until 8 to 15 days. Good diagnostic tools are available, but there is no commercial test for confirmatory testing. There is still no cell line to grow the virus; this impacts virus isolation and vaccine production. The usual vaccine approach of isolate, inactivate and inject has been ineffective for ASF. More research on protective immunity is paramount to being able to move vaccines forward. The use of live attenuated vaccines has been possible, but there are safety concerns. Five candidate vaccines are ready to test; however, there are challenges related to knowledge transfer, ownership of intellectual property, public-private partnership, early vaccine as well as advanced vaccine development, and manufacturing. In North America, there are no facilities available to do advanced development, manufacture or stockpiling of these vaccines. [Link to presentation.](#)

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What is known about the involvement of ticks in the transmission of ASF? An important part of the epidemiology in Africa is the soft tick and warthogs, but there are unknowns around bush pigs and soft ticks. We still don't understand the susceptibility of other suidae, including wild pigs. Research is looking at new tick species and their potential impact to be a new cycle in a new geographic area for ASF. Studies are currently underway to determine if the various tick species in the US could be transmitters of ASF.

One of the challenges to develop a vaccine or diagnostic assay in the US is the select agent program. What steps have been taken to look at select agent exclusion for the ASF vaccine? ASF is a select agent, with specific regulations administered by APHIS. For vaccine development, it is critical that we have an exclusion to that select agent. This is done by generating the safety data for that vaccine strain so that it can be developed. Adequate safety data will reduce the timeline. The experience with FMD was prolonged, but for AI we were able to obtain a select agent exclusion within a few days of providing the required safety data to APHIS.



3.4 Revised Framework for the Prevention and Control of African Swine Fever

Based on the outcomes of the table discussions (report back in plenary and submitted table report books), the *Draft Framework* pillar for Preparedness Planning has been revised as follows.

PREPAREDNESS PLANNING



Expected outcome: Countries have a high state of readiness to swiftly control ASF should it enter the Americas region.

AREAS FOR ACTION:

- Increase readiness by validating ASF preparedness plans and testing response capabilities through exercises involving all stakeholders.
- Find solutions to deficiencies in ASF response capabilities and planning gaps.
- Optimize rapid ASF detection in the Americas by ensuring capacity for surveillance.
- Develop the appropriate process and capacity for rapid risk assessment to identify risks for ASF and inform policy decision as situations evolve.
- Continue to collaborate internationally on critical ASF research with particular attention to the development of vaccines and other tools to prevent or respond to an ASF outbreak.

SESSION 4: ENHANCING BIOSECURITY

4.1 Biosecurity at the Border

Fred Gaspar, Director General, Commerce and Trade, Canada Border Services Agency (CBSA), Canada. The CBSA works closely with CFIA to ensure that goods that pose a threat of introducing ASF to Canada are interdicted at the border. The CBSA is responsible for administering and enforcing CFIA policies as they apply at the border for travellers and commercial shipments. As travellers are a transmission risk for ASF, screening travellers for inadmissible pork and pork products is important for keeping ASF out of Canada. The CBSA also verifies if travellers have visited a farm while abroad and intercepts goods that may be contaminated with soil. Fines can be levied of \$1,300 to travellers who fail to declare pork products. Detector dog teams are used to detect illegal items and additional resources are deployed to flights arriving from ASF-affected countries.

On the commercial side, CBSA ensures shipments are released, refused, or referred for CFIA inspection in accordance with CFIA release recommendations. This includes targeting high-risk goods (e.g. pork products, feed) and inspecting goods that are potentially contaminated with soil (e.g. farming equipment). Information posters for ASF are displayed at Canadian airports and in international locations and have been produced in 13 languages. ASF advisories also appear on the CBSA webpages and social media. ASF messaging is part of other Canadian federal departmental communications, including Immigration, Refugees and Citizenship Canada (IRCC) where travellers go for electronic travel authorizations and visas to Canada. A key challenge is intercepting travellers carrying goods from ASF-affected countries who arrive in Canada on connecting flights from another country. [Link to presentation.](#)

Romelito Lapitan, PhD, Director, Agro/Bio-Terrorism Countermeasures, US Customs and Border Protection, Department of Homeland Security, USA

Border inspections are conducted by the Customs and Border Protection (CBP) at 328 land, air and marine ports of entry. There are 24,900 officers of which 2,486 are agricultural specialists in 146 ports of entry. There are also 120 agriculture canine units and x-ray equipment for examining baggage. Prevention of emerging and re-emerging animal diseases, including ASF, from entering the US is the goal of the program. Continuing education and current information for the agricultural officers is important. Alerts are issued on countries with ASF outbreaks and changes of regulatory requirements for immediate action by the agricultural specialists. Agricultural specialists board airlines and ocean vessels for regulated garbage compliance checks. CBP compels companies to file manifests in advance and to provide advance notification of incoming high-risk imports. The volume of travelers and trade creates a challenge – the amount is increasing but the manpower remains the same.

E-commerce is a window for illegal and non-compliant products that could be harboring pests and diseases as they enter the country. Focus on this area is expanding. Recently, an additional 60 canine teams were approved to be added to the agricultural specialist unit. Vigilance in the inspection process and continual adjustment of targets according to threat intelligence remain our key defense. [Link to presentation.](#)

Dr. Megan Niederwerder, DVM, PhD, Assistant Professor, Department of Diagnostic Medicine/Pathobiology, Kansas State University College of Veterinary Medicine, Manhattan, KS, USA

Porcine epidemic diarrhea virus (PEDV) was the last transboundary disease introduced into North America. Within 8 weeks of its detection in the US it had spread to nearly all the major swine producing states and within one year it had killed approximately 10% of the US herd. Several research studies indicated that virus had likely been introduced and spread through contaminated feed. For ASF, feed can become contaminated through risky agricultural practices in places where the disease is present. This feed is then shipped to North America, where it is transported across the country to feed mills. Because feed has direct access to pigs, ASF contaminated feed is of higher risk than contaminated pork products. Research on the risk of feed or feed ingredients serving as a route for ASF introduction and transmission was conducted on the basis of a three-part approach.

The first part looked at the survival of the virus in feed and feed ingredients under transboundary models. Nine of the twelve feed ingredients tested survived the effects of the temperature, light, heat and other factors simulating long distance shipping conditions to the US. The second part was designed to investigate oral dose and transmission in feed through natural drinking and feeding behaviour. This research showed that ASF is easily transmitted through the oral route. Higher doses are required for infection through complete feed when compared to liquid. The probability of infection increased with higher doses of either contaminated feed or liquid and the number of doses (there was 25% probability of infection at 1 exposure and 100% infection at 10 exposures).

The third part assessed tools for mitigating the risk of transmission in feed and feed ingredients, including the natural degradation of the virus over time during transport and storage, heat treatment and the use of antiviral chemicals. Feed production is highly centralized and widely distributed after manufacture and pigs consume it over several days. This makes feed a higher risk for transmission and therefore feed biosecurity is important. [Link to presentation.](#)

4.2 Biosecurity within the Border

Dr. Egan Brockhoff, Managing Partner, Prairie Swine Health Services and Veterinary Counsellor, Canadian Pork Council (CPC), Canada. National Biosecurity Standards for the Canadian pork industry was released in 2010. It was targeted to large commercial farms and veterinarians but did not apply to small farms and backyard pork producers. Though now out of date, it did help set the base and introduce the concepts of on-farm biosecurity. A new biosecurity module, PigSAFE PigCare, has now been introduced as part of the Canadian Pork Excellence program. Though not a mandatory part of the CPE, it provides an important resource of current biosecurity information for producers, veterinarians and feed suppliers. There are also extensive, open access biosecurity resources and tools available through provincial pork producer organizations and the CFIA and include biosecurity measures that are easily implemented at the farm level. Biosecurity is also important for other parts of the pork industry, such as feed mills and transporters. A certification program for transporters has been developed, and helps truckers understand how to control their movements (outside the truck, into controlled zone) to prevent disease transmission. Non-agricultural service providers, such as plumbers, electricians, utility workers, etc., also need to be provided with information on site entry protocols. The Animal Nutrition Association of Canada has created a National Biosecurity Guide for feed mills.

A key gap in biosecurity awareness and action is the small/backyard/hobby farm sector, which is not represented by a national organization. Specific biosecurity training and tools and husbandry education are needed for this sector. For example, these farmers may be feeding their pigs kitchen waste without realizing the threat of that practice to the pork sector. Biosecurity auditing tools are available through the Canadian Pork Excellence program. Audits generally take place monthly on large commercial farms; however, it is voluntary. The most important part of biosecurity is building a positive attitude: people must want to participate and see value in doing so. [Link to presentation.](#)

Dr. Paul Sundberg, Executive Director, Swine Health Information Centre, USA

Biosecurity is a series of hurdles between the outside and the pathogen and the pigs. The hurdles must be tackled according to the conditions of the specific farm. No one measure will keep out a pathogen – but when taken together there is a good chance of success. The Pork Quality Assurance Plus program is the standard in continuous production improvement in the US. Administered by the NPB, it covers topics such as food safety, animal welfare, environmental stewardship, worker safety, public health and swine health. PQA+ certification is required by all the major packers. The feed biosecurity issue is of concern. Producers are encouraged to source their feed ingredients from regions/countries that are ASF-free. But that is not always possible. Mitigation steps are then needed (holding times, other feed additives, feed that has been processed in a biosecure facility). The NPB has a lot of information, checklists and tools on its website about foreign animal diseases and risk prevention steps, including information about ASF, biosecurity protocols, and information for travellers and farm visitors.

A secure pork supply plan for the US is the next step. Within the secure pork supply plan, there is a module on biosecurity that includes a biosecurity checklist, manuals, templates, premises mapping for biosecurity, biosecurity forms and example plans. Its goal is to implement biosecurity and biocontainment measures to keep pathogens off the farm and to help prevent spread of a disease. The biosecurity module is designed to enable auditing by a third party. Principal gaps and threats to the pork industry include swill/plate waste feeding, pig contact with illegal entry of meat or meat scraps, pig contact with feral pigs/wild boar, contaminated feed components that could circumvent biosecurity processes, and the large number and variety of farms. [Link to presentation.](#)

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- There is an ongoing project funded by Global Affairs Canada, that involves OIE, Interpol, and FAO in a project to help countries better prepare for agro-terrorism/agro-crime. This is new territory to have these international technical agencies working with law enforcement.
- The American Feed Industry Association has biosecurity guides for feed manufacturers, as do the Canadian and European feed industry associations. These guides are regularly updated and include standards for biosecure facilities and information on the movement of feed trucks which would be useful in the course of an outbreak.



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- Lack of compliance of biosecurity measures is a key threat. How do we ensure implementation of biosecurity on a day-to-day basis? The motivation to implement and maintain consistent biosecurity measures is a real issue – it is a culture issue that must happen on the farm and be enforced internally. Within a zoning situation, regional biosecurity would have to be in place. Both on-farm and regional biosecurity requires looking at the entry pathways and putting the mitigating hurdles in place. It's about doing an assessment of the relative risks according to the entry pathways and addressing those pathways.

4.3 Approaches to Managing Spread in Wildlife: Examples from the Field

Moderator: *Caroline Ladanowski, Director, Wildlife Management and Regulatory Affairs, Canadian Wildlife Service, Environment and Climate Change Canada*

Dr. Petr Satran, Head of Animal Health and Welfare Unit, State Veterinary Administration, Czech Republic, provided an overview of the process to eradicate ASF in wild boar in the Czech Republic. The first ASF positive carcass was located on June 26, 2017 in an urban area. A total of 230 cases were found over 228 days. All cases were detected within the same zone, and there was no outbreak of ASF in domestic pigs. The main source of infection appears to be from cadavers, which remain infectious for a long time. The virus also persists in the environment. The stocking density of wild boar in the infected area was not precisely known but was thought to be relatively high. The lethality of the virus is high (95%), while the contagiousity is low (10%). The collection and disposal of carcasses is one of the most important steps in ASF control and eradication. Financial incentives were offered to hunters for reporting carcasses, which were then removed under biosecure protocols. Biosecurity measures for domestic pigs in the infected area were increased and included banning pigs in backyard farms, requiring farmers to report all sick/dead pigs which were then tested for ASF, and requiring authorization for the transport of pigs. The day following detection of ASF in wild boar, all hunting was banned in the infected area. Later on in the outbreak, hunting of wild boar was allowed only for selected and trained hunters who received compensation. All hunted and found dead wild boar were handled and moved under strict biosecurity measures and disposed in a biosecure rendering plant. The final depopulation of wild boar in the infected area was done by police snipers, again under strict biosecurity protocols. [Link to presentation.](#)

Dr. Dale Nolte, Feral Swine Program Manager, Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (USDA), USA, spoke about the National Feral Swine Damage Management Program. Feral swine have been called “the world’s worst invasive alien species.” In 2012, there were 36 states with feral swine populations, up from 17 in 1982. The overall objective of the program is to minimize damage inflicted by feral swine and to implement strategies to eliminate feral swine in states with emerging or low populations. Program components include field operations, disease and population monitoring, research, planning, evaluation and monitoring, communication and outreach and regulatory actions. Interaction of feral swine and domestic livestock is high, with 40% of farms reporting feral swine interaction in the pasture. Recommended biosecurity measures to mitigate transmission of ASF between feral swine and domestic pigs include fencing and double fencing, confinement of domestic pigs, and biosecure storage of feed. It is expected that ASF would likely first occur in the feral swine population rather than domestic pigs. Surveillance of the feral population is therefore important and looks for morbidity and mortality.

A response effort would aim at eradication, with immediate culling within a 4km radius to remove all pigs, and population reduction at least 10km farther out. Key challenges include delayed detection leading to an increased area of infection, illegal movement of feral swine, and unknowns around the role of ticks. [Link to presentation.](#)

Dr. Roberto Navarro Lopez, Director, Exotic Animal Disease Commission, SENASICA, Mexico, described the biosecurity measures used in Mexico in response to the threat of ASF. Recent investments in modernizing the swine industry has seen Mexico's pork producing sector increase in both productivity and profitability. Mexico produces 1.4% of the world's pork meat (1.45 million metric tonnes), placing it 9th among pork producing countries. Most production (85%) is on commercial or semi-commercial farms, where biosecurity measures are in place. Other production includes backyard holdings, which are predominantly found in small communities and indigenous areas. Efforts are underway to increase awareness in this sector of the need to notify authorities of any high number of unexplained deaths. ASF prevention and mitigation activities at ports, airports and land crossings include specially trained officers, detector dogs and biosecurity measures such as disinfection mats and waste disposal. Mobile lab facilities can be moved to a suspected location to provide early confirmation of disease presence. Wild boar populations are widely distributed across Mexico. The risk interface between domestic pigs and wild pigs includes both direct and indirect means. Control models include non-lethal approaches (fencing, biosecurity at livestock facilities, chemical birth control) and lethal (traps, hunting). Overall, the best defense against ASF is the promotion and implementation of biosecurity measures, increased training, and the collaboration of agriculture, veterinary and wildlife authorities. [Link to presentation.](#)



QUESTION AND ANSWER EXCHANGE WITH PANELISTS

- **Canadian authorities with responsibility for wildlife will be investigating the wild pig populations to gain a better understanding of the size and location of wild pig populations in Canada.**
- **In the Czech Republic, if there were to be another ASF incursion in wild boar, what would you do differently?** Each outbreak is unique, with different wildlife populations, environment, hunters' associations, traditions, and domestic populations. Some general approaches would again be applied, but some measures will need to be specific to the situation after evaluation of those factors. Backyard holdings are a politically sensitive area, with social, cultural and economic issues to be considered. But backyard farms do present a huge risk for introduction of ASF to commercial pig production. In the case of a new outbreak, the first line of offense would be the culling of backyard pigs.

- ***What are the main priorities for action and trilateral cooperation?*** The main priority for the US is the sharing of information, especially on wild pig population locations, size and management approaches. The US has been conducting workshops with Mexico and expanding this to trilateral workshops would be effective. Mexico, US and Canadian cooperation in the past has been great. In 2007, we had a tri-party simulation for FMD, with meetings over the year to do the exercise, analyze the issue, and develop approaches. It would be useful to look at the lessons learned from those events and apply them to ASF. Fighting ASF requires the collaboration of our countries.



Were there any concerns about the spread of virus related to the disposal of wild pig carcasses through rendering? The rendering plant is designed for such material, so there were biosecurity and sanitary measures in place. In addition, the official veterinarian was on site. There was strict control of the transport of the carcasses (e.g. one vehicle was dedicated for this use), limited human interaction with the carcasses and no cross contamination. In some countries, the hunted wild boars are refrigerated, and samples taken. We believe it is better to take the carcass to the rendering plant under biosecurity measures.

There is a substantial feral swine population in southern Saskatchewan, which borders North Dakota. What is the risk for both countries? The US believes that the pigs are coming from Canada, but the dynamics are not well understood. Most of the northern states have been rendered feral swine free, so there is concern that new populations are coming down from Canada. A better understanding of the Canadian feral swine population is needed.

Regarding environmental contamination and viral persistence in the soil from a dead carcass, what is the experience and mitigation protocol? In the US, we follow state regulations on carcass disposal. Sometimes they are left in place for scavengers. When there is a disease event, they would be disposed of under veterinary services guidelines in the same way as domestic pigs. In the Czech experience, it is difficult to know the extent of environmental contamination. When a carcass is collected, the soil is disinfected. However, some carcasses are quite decomposed, making it difficult to take samples to determine infection. The environmental impact is also dependent on the season: in summer the carcass degrades very quickly, and it is not typically taken by scavengers; in winter, a dead boar is taken within a few hours.

What are the details of the compensation plan for hunters? In the Czech situation, the decision was made that all wild boar in the area were to be destroyed. Individual hunters were paid incentives to kill and paid because they could not hunt. Payments were also made to hunters' associations. There was no option that the meat could be tested and then consumed if negative.

4.4 Revised Framework for the Prevention and Control of African Swine Fever

Based on the outcomes of the table discussions (report back in plenary and submitted table report books), the *Draft Framework* pillar for Enhanced Biosecurity has been revised as follows.

ENHANCED BIOSECURITY



Expected outcome: Key biosecurity measures are in place to prevent the entry of ASF into the domestic and wild pigs populations of the Americas, and mitigate its spread within these populations.

AREAS FOR ACTION:

- Identify key threats, gaps, and best practices in national border biosecurity, including establishment of appropriate level of activity, informed by risk assessment.
- Establish coherent collaboration to ensure border authorities share intelligence and best practices to mitigate the entry.
- Foster collaboration and compliance to address biosecurity ensuring responsibilities of all stakeholders are identified.
- Involve stakeholders in government, industry, and academia to gain an understanding of the wild swine populations, and share best management practices at borders and the interface with domestic pigs.

SESSION 5: ENSURING BUSINESS CONTINUITY

5.1 ASF: Reframing the Challenge

Colleen Barnes, Associate Vice-President, Policy and Programs Branch, Canadian Food Inspection Agency, Canada, welcomed guest speaker **Mr. Michael McCain, Chief Executive Officer, Maple Leaf Foods, Canada.**

Mr. McCain spoke about the risk of ASF to the Canadian pork industry and the urgent need to shatter old paradigms if we are to tackle the challenge ahead. Since 1920, the OIE has been at the front lines of the war on animal disease. The world has changed considerably since then, with new rules, agriculture frameworks and intensive global trade. Careful planning for prevention and preparedness of all animal diseases, including ASF, is needed. But even with the best scientific rigor and excellent planning and prevention measures, most of these animal diseases will arrive on Canadian shores.

Maple Leaf Foods operates 205 hog sites that employ 714 people and 2 plants that employ 2,500 people processing nearly 4 million hogs annually. ASF poses a huge threat to these employees and their livelihood, as well as thousands of families who work in the pork value chain. Economists have pinned the impact of an ASF outbreak in Canada or the US at over \$45 billion, along with 125,000 job losses.

ASF is not about sick animals or human illness: it is about the economics of sudden trade embargoes. To allow this to happen is morally wrong – we have the skills, the intellect, and the tools to prevent this.

At Maple Leaf Foods, biosecurity is being increased, we are educating our staff, and advocating border protection policies. A compartmentalization project is underway. But it is not known if these and other similar actions will be enough in the global trade environment.

The goal of “prevent and prepare” is inadequate. The better goal is “keep the trade flowing.” To accomplish that we need to think differently, creatively and ambitiously. Consider these questions: Why does ASF in wild boar stop trade? How do we ensure decision makers fully understand what is at stake? Can we perfect diagnostics tests to prove that the protein is safe for human consumption? Can we have a progressive architecture that solves for risk and allows trade to continue? Can we have a vaccine? A kill step in the meat?

Going forward, let’s consider how we can change the paradigm, so that the OIE will allow trade to continue under well understood and reasonable circumstances and scenarios.

Three key areas in which to begin are:

- **Make aggressive zoning and compartmentalization an immediate action step and priority.**
- **Find testing protocols that show that even if ASF is present, the meat is safe to consume.**
- **Develop a technology to kill the virus during processing (high pressure pasteurization, irradiation, or something new).**

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- The impact of animal disease on farmers, farm workers and those indirectly linked to the pork industry has driven the establishment of international standards necessary to provide predictability about trade. OIE standards are set by 182 member countries, from first drafts that are developed by specialist commissions and elected experts, to two consultation rounds, and then adoption by the world assembly that is typically unanimous. The US and Canada are actively engaged in the process, with representation on the specialist commissions. It is important to separate the standards from their implementation by individual member countries, which varies around the world. The OIE international standards provide for a country to declare itself ASF-free while there is active infection in the wild pig population if there is good biosecurity in place. Belgium, where there is an active outbreak in wild pigs but no infection in the domestic pig population, has, in accordance with OIE standards, made a self-declaration of freedom from ASF. Now, it is up to individual OIE member countries to honor their obligations and continue to trade with Belgium. In response to these comments, Mr. McCain noted members of the pork industry believe that the current regulations are not enough to protect the pork sector and its jobs.
- The humanitarian problem is as serious as the animal health issues of ASF. It is important to recognize that while the OIE represents the direction set by many countries, the standards are not binding. Meetings such as this Forum are necessary to collectively address the threat of ASF. But is the level of fear justified? An outbreak of classical swine fever would be much worse. But ASF is a huge issue today and, given the nature of the market, there is a lot to lose.
- The consequences of ASF will impact the animals, the economy and the people in the pork production value chain. Measures that protect all are needed. When developing measures for prevention of the disease, it is important to consider how the measures will be enforced. All players need confidence that there are not unjustified trade barriers.

In closing, Colleen Barnes thanked Mr. McCain for his comments. She observed that the passion and concern of the members of the pork community inspire and motivate regulators and authorities to keep ASF out of Canada and North America. Your remarks are challenging us to use what we have, such as zoning, compartmentalization, testing and pathogen reduction, and to ensure that we act now before the disease arrives. We need to work in advance so that we can keep markets open rather than having to try to reopen them. Government knows that it cannot do this alone – success requires a partnership of government, industry and the international organizations of OIE and FAO.



5.2 The Use of Zoning for Disease Control and Business Continuity



Dr. Kelly Rhodes, Senior Staff Officer, Regionalization Evaluation Services, Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (USDA), USA, provided an overview of the US-Canada Zoning Arrangement, which provides mutual zoning recognition for business continuity. The zoning initiative is a tool for facilitating business continuity and trade. Its objective is “to establish parameters and agree on measures necessary for recognition of a disease control zone within each country’s territory, in order to reduce disruption of trade and the result economic impact.” Components of the initiative include reciprocal evaluations (assessment of risk), zoning arrangements (declaration of intentions), and a guidance framework (implementation). The US and Canada do not use a common zoning model, nor do they use common terminology. Nonetheless, both zoning models can be applied effectively. The zoning arrangement, signed in 2012, states, “In the event of a highly contagious FAD outbreak in either or both countries, each participant intends to accept the decisions of the other participant to establish, maintain or release a disease control and eradication zone.”

The Guidance Framework sets out the process for implementation and includes an operational plan, structure for maintaining the zoning arrangement, and a strategy for engaging with stakeholders. The zoning arrangement is based on trust as much as it is based on science. There are safeguards within the Framework, including the ability to request additional information, provisions for on-site monitoring, and a provision for “extenuating circumstances,” which allows for denial of the zoning request. Several common external factors of both countries support the effectiveness of the zoning approach, including similar veterinary infrastructure, equivalent animal health status, comparable animal industries, prior knowledge and collaborative efforts and stakeholder support. Future challenges include applying the zoning concept to wildlife outbreaks and ASF-specific issues. [Link to presentation.](#)

Dr. Francisco Reviriego-Gordejo, Adviser on crisis management in food animals and plants, Directorate General for Health and Food Safety, European Commission, EU, provided an overview of the EU experience with using zoning to preserve business continuity. In the EU, the planning is over, biosecurity has failed, and the panic is here. The question now is, what can we do to make the pig industry sustainable and ensure business continuity? A good veterinary system must be in place for successful regionalization/zoning. The EU harmonized veterinary control system includes pillars of prevention, detection, control and transparency. Pig identification, registration and traceability protocols ensure all holdings (even those with only one pig) are registered, all animals are ear-tagged or tattooed before leaving the holding, a movement document accompanies each consignment moved, and each movement is registered in a central database. Regionalization/zoning ensures the best possible disease control while minimizing the negative impacts of disease outbreaks on the EU single market (intra-EU trade) and on exports based on SPS agreement principles. The key principles of EU regionalization/zoning are rapid development of zones; flexibility depending on the area, disease, geography, administration of the country; predictability of processes and steps and roles and responsibilities; transparency; and risk based/proportionality. Basic response to an outbreak as outlined in EU legislation requires establishment of 3 and 10 km zones, and larger areas can be restricted if required. The overall EU rules for regionalization/zoning for ASF have four demarcation parts corresponding with four levels of risk: Part IV, which currently only includes Sardinia where there is long-standing persistence of ASF in pigs and wild boar; Part III where there is presence of ASF in both domestic pigs and wild boar; Part II where ASF is present only in wild boar (domestic pigs are free from ASF); and Part I which is composed of

areas with no detection of ASF, however they are considered higher risk due to their proximity to ASF in wild boar. In practice, geographical borders are used to create zones, such as rivers, highways, and fencing for their ability to demarcate a zone and restrict movement of animals. Administrative divisions (countries) are also used. The cornerstone of the zoning program is the origin of the pigs and not where the slaughterhouse is located. The use of zoning has maintained markets even when disease has been present for a long time. [Link to presentation.](#)

Dr. Jim Roth, Director, Center for Food Security and Public Health, Iowa State University, USA, raised the idea of creating an ASF Export Requirements Program. In the US, the extensive movements of pigs create certain challenges for zoning. In order to achieve business continuity, zones must have the right balance of gestation and farrowing capabilities, finishing capabilities, and access to packing plants. The Secure Pork Plan (Securepork.org) has been developed with industry, federal officials, and state officials. It was designed not to maintain exports but to show with a high degree of confidence that a farm within a control area has no evidence of infection so that the animals can move either to the next stage of production or to slaughter. It is designed to keep commerce going within the US for food security reasons. Article 15.1.14 of the OIE Terrestrial Animal Health Code (2018) contains recommendations for importation from countries or zones not free from ASF for fresh meat of domestic and captive wild pigs, which could be used to maintain exports according to the OIE rules. This presents an opportunity to develop an ASF Export Requirements Program, the purpose of which would be to demonstrate with a high degree of confidence that pork from a participating packing plant does not contain the ASF virus so it can be exported according to the OIE code. To create this Export Requirements Program, the support, engagement and funding of several groups would be needed. The swine production system would need to implement biosecurity according to the SPS plan prior to the outbreak, initiate surveillance at the beginning of an ASF outbreak, and conduct daily PCR testing of all dead animals to demonstrate lack of current infection. Packing plants, once an outbreak begins, would only accept pigs from premises participating in the ASF Export Requirements Program. USDA would need to have export certificates ready. The USDA and the swine industry would need to work to encourage trading partners to accept pork meat respecting the ASF export requirements. The status of pork production in the world is changing, and trading partners should recognize that there is very little risk for an ASF-positive country to import pork that meets the Exports Requirements Program. [Link to presentation.](#)

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Will the establishment of these zones (Canada and US) be protected against political interference? We are doing what we can to plan for the continuity of business, but there are some factors that are beyond the control of any regulatory agency. The most important thing that can be done is to ensure that the senior technical people maintain transparent and ongoing relationships and information exchange.

Are regulators and the sector becoming engaged on the concept of the Export Requirements Program? The concept has only recently been raised with the National Swine Disease Council – it's still early days.

Even though there were zoning measures in place, many markets were closed to Belgium. Were there things that you could do because of EU structure, for example using the Belgium pork for domestic supply and using pork from ASF-free countries to supply export markets? We want the free part of Belgium recognized as such – most of Belgium is ASF free. We want that acknowledgement and continued trade of pork.

In Canada, there is a lot of focus on grains and oilseeds and their by-products and their movement from countries with ASF. Are there zoning measures underway related to feeds from regions of Europe with ASF in wild boar populations? In the EU, animal by-products are high-risk commodities and subject to tight restrictions. Specific measures are applied according to risk. Scientific advice indicates that the risk for hay and straw is negligible, so there is no restriction. In Canada, controls are placed on all potential fomites, including feed, within a zone, and they should not be moving out of the controlled area.

Has compartmentalization been considered for the Exports Requirements Program? From the FAO perspective, the use of compartmentalization can provide more assurance to an importing country than regionalization/zoning in some cases. In this way, not only the herd is considered but all the related facilities and processes. The biosecurity in the secure pork plan does address biosecurity measures for feed, trucking and other areas; expanding into a compartment approach does have potential.

In the EU, regionalization/zoning has been very helpful in the control of the disease and maintaining the pork industry. The four demarcation parts ensures the robustness of the system and enables further splitting of zones. Restrictions must be very tight at the start: robustness at the beginning will help to create sustainability later.

5.3 The Use of Compartmentalization for Business Continuity

Dr. Matthew Stone, Deputy Director General, World Organisation for Animal Health (OIE) Compartmentalization is another strategic disease prevention and containment strategy, with application and relevance for international trade. Zoning is primarily based on a geographic basis using natural, artificial or legal boundaries. Compartmentalization is defined primarily by management and husbandry practices related to biosecurity. Although it doesn't have the history of application that zoning has, compartmentalization is an effective tool for risk management. Its implementation relies on documented biosecurity plans, international standards, and robust and transparent verification systems. Chapter 4.3 and 4.4 of the OIE Terrestrial Animal Health Code deals with zoning and compartmentalization. The principles of compartmentalization include documentation, diagnosis, supervision and control, separation from potential source of infection, surveillance, defined subpopulation and diseases, and emergency response. Examples of effective compartmentalization are FMD in sheep in Uruguay and AI-ND in poultry in the United Kingdom. In both cases, compartmentalization practices have enabled continued trade. A compartment specifies what disease(s) it relates to and which establishments (the functional units, their location and their inter-relationships). There needs to be a solid understanding of risk factors and pathways.

The biosecurity plan provides clear separation from sources of infection and includes documented evidence of animal health baseline and vaccination related to surveillance (both inside and outside the compartment), traceability, standard operating procedures, diagnostic capabilities, emergency response and notification procedures, etc. There must be a clear description of the process for supervision and control of the compartment, including the veterinary authority oversight. Compartmentalization is a good example of private-public partnership. There is a clear separation of rules, which generates the trust of trading partners. The OIE offers official status recognition for six animal diseases, but ASF is not one of them. OIE encourages self-declarations using the OIE framework for self-declaration. [Link to presentation.](#)

Dr. Joyce Bowling-Heyward, National Director, Animal Import-Export, Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (USDA), USA, spoke about the US experience with compartmentalization as a means for ensuring business continuity. Compartmentalization has worked successfully in the US poultry industry for the AI outbreak. Working closely with industry, the competent authority sets the minimum standards for the compartment based on management and husbandry practices, which may vary according to local practices. Practices on the East Coast may not be the same as on the West Coast; and US industry standards might not work in another country. Industry needs to make regular investments in biosecurity, training and monitoring, identifying each epidemiological factor that will affect compartments. Excellent traceability of animals and products is key; partners need to be assured that only animals or products from a disease-free compartment would be shipped in the event of an outbreak, but surveillance is the strongest underlining component of a compartment. All companies participating in the compartment must be able to show that general management protocols are in place, including on biosecurity training and compliance agreements for employees, contract staff and visitors; biosecurity risk assessment for each component of the compartment; and cleaning, sanitation and control of vehicles prior to entering biosecure areas. There needs to be documentation of the general physical traits of each compartment component (such as fencing, signage, etc.) and detailed diagrammatic descriptions for movement of people, vehicles, equipment, and animals between all components inside and outside the compartment. An emergency response plan and veterinary health plan are also requirements. APHIS has recently published a proposed rule with standards to accept international compartments of trading partners (comment period closes June 3, 2019). [Link to presentation.](#)

Dr. Krista Howden, Consultant, Maple Leaf Foods, Canada, presented an overview of the application of compartmentalization for ASF in Canada. ASF is not a zoonotic disease and there are no food safety issues, but there would be human impacts with an outbreak in terms of job losses as well as impact on the food supply. Maple Leaf Foods conducted a pilot project to determine if it would be possible to implement compartmentalization for ASF and obtain recognition by trading partners. Zoning and compartmentalization are complementary tools. The Canadian swine industry already has many components to support compartmentalization, including strong national veterinary services and oversight for risk management, diagnostic capacity and emergency response, previous expertise with compartmentalization for Aquatics, national pork industry association representing 7,000 farms, and the traceability, biosecurity, animal care and welfare and other features of the Canada Pork Excellence program. There are challenges related to zoning, including Canada's vast geography and the complex network of movement within the pork sector.





So, compartmentalization may prove to be a better option for enabling ongoing trade and business continuity. Compartmentalization provides a way to mitigate business risk and to plan for disease during peacetime. In theory, if all the components and requirements of compartmentalization are in place, trading partners will know that you have mitigated the risk in advance, you have ongoing surveillance, there is ability to have continuous oversight of the compartment and the ability to give the trading partners knowledge on the health of the compartment at any point.

Key next steps include a compartmentalization strategy based on practice methods of bio-exclusion and modern methods of surveillance, promotion of public-private partnership, and regular simulation exercises to assess practicality and effectiveness. It will be important to increase our overall understanding of the risk pathways for introduction and the epidemiology of ASF specific to the Canadian context. [Link to presentation.](#)

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What will it cost a producer to comply? The real question is, what are the costs if we don't do something? The costs should be less over time and with more experience.

Are the USDA standards for compartmentalization the same as OIE standards? Yes, but the standards also must align with the practices of the industry. Compartmentalization for poultry is therefore different than pork, and compartmentalization for pork may vary depending on the region of the country. Standards will also vary country to country.

The new ideas of compartmentalization are exciting. In practice, even if the OIE recommends compartmentalization, it is the other countries that determine trade. When we do a risk analysis, the cost depends on the risk. Perhaps the idea of insurance coverage for exporters should be explored, along the lines of financial incentives for continuing trade.

Is the OIE document (checklist for compartmentalization) endorsed by all OIE member countries so that it is considered to be an international standard? Could it be customized to ASF? That document is specific to AI-ND. The May 2019 OIE general assembly agenda includes a discussion of ASF and a resolution that will guide the OIE work on ASF. We expect that the members will recommend that the same specifics be developed for ASF that supports countries for compartmentalization and zoning.

5.4 Revised Framework for the Prevention and Control of African Swine Fever

Based on the outcomes of the table discussions (report back in plenary and submitted table report books), the *Draft Framework* pillar for Ensure Business Continuity has been revised as follows.

ENSURE BUSINESS CONTINUITY



Expected outcome: *Mitigate the trade impacts of ASF on the swine sector, both nationally and internationally, while controlling and eradicating the disease.*

AREAS FOR ACTION:

- Ensure risk-based movements of animals and animal products domestically to keep industry viable in the face of an outbreak.
- Provide guidance and technical support for the development of common standards for zone establishment to gain wider acceptance.
- Proactively negotiate the recognition of zoning approaches with trading partners to reduce impediments to trade.
- Work with international partners and the OIE to develop globally recognized and accepted guidance on the application of compartmentalization for ASF to gain wider acceptance, both in infected and uninfected countries.

SESSION 6: COORDINATED RISK COMMUNICATIONS

6.1 Panel Discussion with Members of the International Risk Communications Group

Forum Facilitator Daniel Normandeau, President, ConversArt Consulting, Ottawa, Canada, led a discussion on Risk Communications with the following panelists:

- **Catherine Bertrand-Ferrandis, Head of Communications, World Organisation for Animal Health (OIE)**
- **Ed Curlett, Director, Public Affairs, Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (USDA), USA**
- **Andrea Moritz, Director, Media Relations, Issues Management and Ministerial Services, Canadian Food Inspection Agency, Canada**

What communications activities and strategies are your organizations doing to communicate the risk of ASF? The OIE generally communicates risk using tools and training at the country level. Throughout the Americas there is a very good network of organizations and specialists that keeps this going. The OIE has created a portal for ASF and a communication campaign about ASF, including a video that was distributed to all member countries. The information is aimed at large and small agricultural holdings, travellers, airport authorities, and hunters. In addition, posters have been created for specific stakeholders. The campaign was recently evaluated and found to have good uptake and understanding. Countries can adapt these tools and use them for their in-country campaigns. In the US, activities designed to raise awareness about ASF were started in fall of 2018. The usual suite of tools is used, such as the website, blogs, twitter, and press releases. APHIS has an industry and stakeholder registry, which enables direct distribution of content to people who have registered. The approach has been to tailor content to specific audiences: travellers, producers, veterinarians, and the general public. In October 2018, there was a seizure at the Atlanta airport of a roasted pig head. This was an opportunity to issue information about the risk and dangers of ASF and the measures to mitigate its entry into the US, such as detector dogs, working with industry partners, etc. Updated information on a new website (March 2019) includes infographics on risk pathways, biosecurity information, and videos. The website is particularly useful for being able to measure interest (number of views, click rates, etc.).

We are in continuous contact with industry and state partners to ensure correct messaging. In Canada, we have done a lot of the same things as OIE and the US. We have a national team working on ASF. Target audiences have been identified and prioritized based on risk pathways (travellers and new immigrants and industry for biosecurity messaging). Partnerships are being built with industry, provincial governments, and federal agencies to pool communications resources. For example, we have worked with the Canadian Border Services Agency (CBSA) on signage at airports, with Transport Canada to get access to airlines, and with Canada's Employment and Social Development department to reach temporary farm workers. We also work with Immigration, Refugees and Citizenship Canada to share information proactively, for example to target foreign students with information about the risk of contaminated "food from home" that may be sent to them or that visitors may bring.

What are the biggest challenges in getting the right messages to the right people? For the US, measuring success continues to be a challenge, including measuring change in human behaviour. We depend on industry standards regarding changing behavior. In Canada, a key challenge is getting heard and noticed within the information overload that exists. We need to find ways to make people not only aware of the information but to make them care about it. We need better understanding about what motivates behaviour to develop the right tools to change behaviour. For the OIE, a key challenge is the perception that ASF is low risk. Instead of top-down communications, we need to look at the grassroots to understand behaviour: why does a farmer not declare, why does a traveller hide product in their luggage? If we don't detect these behaviours, we can't deal with them.

What approaches have you taken to prevent misinformation? In Canada, we monitor the media and social media closely. There have been examples of misinformation, including a tweet that "ASF is in Canada" that was meant to say "ASF is not in Canada." An article published about this Forum called the disease "African Swine Flu." When we detect inaccuracies, we get in touch quickly to make the correction. Pooling resources rather than duplicating efforts is important. In the US, we also monitor for misinformation. Just as the social media channels are used to move misinformation rapidly, we must take advantage of that speed to counteract and correct misinformation.

How can the OIE help countries communicate the risks and counter misinformation?

There are three key words: preparedness, consistency, trust. Most of the time we are communicating in a crisis, so we need to prepare those communications in advance, know the target audiences in advance, and engage with them in advance of the crisis. You need to create networks of communicators in advance to ensure consistency of messaging. This advance planning and consistency will create trust in the source of the information and ensure collaborative relationships are in place.

How do you engage stakeholders in helping to communicate the right information to the right audiences at the right time? In the US, we first asked industry partners for input. We have regular meetings with all 50 state agriculture authorities, both regular meetings and special meetings. We need to continue and enrich this engagement, collaboration and cooperation. In Canada, we have working groups of subject matter experts and decision makers. We work with industry to ensure the communication strategy is on target. Continued engagement and information sharing are important especially with the members of the expert working groups. For the OIE, authentication of messages and feedback on how to improve are key. Industry is in contact with the stakeholders in the field and can tell us if our messages are resonating. It is also very important to develop trusted relationships with journalists, so that you are an authoritative source for them.

OIE Video on ASF. ([Link to video](#)) The 182 OIE member countries were the audience for the video. The video is simple, can be played on various screens, and easy to understand. Many countries have translated the video into their language.



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In the case of a North American outbreak of ASF, what's the first message out the door to consumers and the first to producers? Canada is working on a communications plan for Day Zero and Day One. There will be messaging about regionalization and zoning to gain the trust of trading partners to ensure continued trade from areas that are not affected. We have experience communicating about other diseases. Messages would promote a stamping-out policy and increased information on biosecurity to reduce the risk of further spread. In the US, the first message is that there is no human health risk. Farmers want to know as much as we can tell them about where it was found, the extent, what they should do, what we are doing and where to get information. Continuing to provide updates is important.

How can we put a human face on the story, as that is one way to change behaviour?

Indicators show that farmers are one of the most trusted sources of information. Making a human connection to the ASF story can definitely help messages resonate. In the OIE experience, if you show people doing the right things, if you show best practices with a human face, that is more effective than the message or information alone.

How do we keep our message on track during a crisis and deal with those who will be attacking the industry (confined animal operations, factory farming, animal rights, etc.)?

The key is to be prepared to answer those questions and tactics. It is part of preparedness to have messaging ready.

How do we, from a risk communications perspective, combat the risk of agro-terrorism with ASF? In the US, information on the investigation of the origin of the infection is highlighted, and that federal and state law enforcement are involved as appropriate. In Canada, we look the origin of the infection. Two years ago, a conference in Ottawa on bio-threat reduction brought together many stakeholders from defence, intelligence, scientific and agricultural sectors to address potential threats and build networks among these diverse sectors. Communication among networks of stakeholders is most important to create awareness of potential risks and threats.

Social media moves rapidly; does government and organizational communication have the regular and surge capacity to keep up?

Having approved messages and communications materials ahead of their need is key. Before a crisis hits, identify and understand the target audiences, have technical briefings with the media, meet with the provincial CVOs. In Canada, in social media we are actually very nimble, and have a flat approval structure, because we know how quickly information moves across social media. The establishment of networks and constant dialogue is important – we all have a responsibility to follow up and keep each other informed whether we work for industry or government. In addition to the many bilateral connections, multi-lateral networks are needed. Any network member can help rectify misinformation. In the US, the communicators are savvy about social media and can be timely in responding to misinformation. Relationships with industry and other levels of government are again key, as well as maintaining an up-to-date website that can be a reliable source of truth.

Has the government considered labelling the purveyors of misinformation and protestors as agro-terrorists? In the Canadian experience, it is important to recognize that a lot of their communication is aimed at emotions. If we see something that is factually incorrect, we can get the right information out. But it is likely not worth addressing emotional debates, because it only raises their profile and the profile of the misinformation.

6.2 Revised Framework for the Prevention and Control of African Swine Fever

Based on the outcomes of the table discussions (report back in plenary and submitted table report books), the *Draft Framework* pillar for Coordinated Risk Communications has been revised as follows.

COORDINATED RISK COMMUNICATIONS



Expected outcome: Effective risk communication on ASF with target audiences to encourage informed decision making, behaviour modification, and trust in governments and industry.

AREAS FOR ACTION:

- Develop a consistent approach and strategies to communicating risk, adapted to the specific needs and circumstances, including disease status, of various countries.
- Identify or develop platforms and mechanisms for ongoing coordination of messaging and for sharing of communications-related information between countries.
- Establish mechanisms for monitoring public narrative on ASF to ensure information in media and social media is accurate.
- Develop notification protocols to update partners on disease status.

SESSION 7: THE WAY FORWARD

7.1 Comments from Mexico

Before presenting their key messages and next steps, the Co-Chairs invited Dr. Juan Gay Gutierrez, General Director of Animal Health, Mexico, to provide some comments on the Forum and next steps. He noted that the exchange of experience and ideas at the Forum have been valuable for all. The type of cooperation we are seeing is not new, as there is a history of working together to solve animal health issues and stop devastation of our agricultural industries. Threats such as ASF bring countries together. Animal diseases cross barriers and borders, so we must act together. We know we cannot wait for the crisis, so we are collectively starting the communication process for once the illness is detected. This way, we will be ready when it arrives. The producers in Mexico want to continue this effort. A similar meeting in Mexico should be held to continue the cooperation and dialogue.

7.2 Key Messages and Next Steps

Dr. Jack Shere thanked participants, panelists and moderators for their sharing of perspectives, experience and key ideas. There is still a lot to be done. Mexico would like to continue the progress and host a meeting in the coming months. In the US, we have exercises planned. ASF will be on the agenda at the OIE General Session in May.

Key messages heard during the Forum that will be used going forward as we further refine the Framework and its recommendations include:

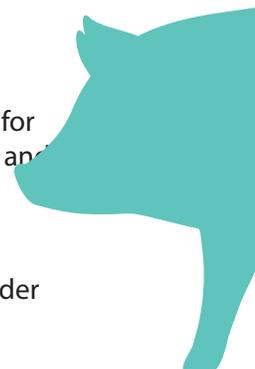
- American countries are currently free of ASF: we have a window of opportunity to prepare and to act decisively in coordinated manner.
- The spread of ASF is human driven, therefore, we need engagement and increased awareness among all stakeholders.
- The epidemiology of this disease is complex and unique with persistence of the virus in pork products and survival in carcasses of wild pigs in the environment. This requires rigorous approaches to preparedness, biosecurity and environmental decontamination.
- We need to gain a better understanding of the wild pig populations in our countries and the Americas region as a whole and develop a strategy to prevent and mitigate the risk should ASF be introduced.
- Zoning and compartmentalization are key tools to minimize trade disruptions and implementation depends on a strong partnership between industry and veterinary services, ideally agreed to in peacetime.
- The real game changer for control and eradication would be a vaccine – we need more investment to support research to get a vaccine for ASF to market.
- Use existing partnerships and governance to advance work on ASF nationally, regionally and globally.
- We need to learn from colleagues in EU and Asia and build on their experiences.
- Two key words are: coordination and collaboration. Action in-country and at a regional level will require a collective strategy with all partners and sectors.

- Ensuring heightened awareness makes passive surveillance a successful strategy. This needs to be communicated clearly and widely.
- We need to ensure veterinary conservation and border services have the appropriate authorities, including penalties and incentives, to ensure that disease prevention overrides the economic and cultural motivation that happens with ASF.
- Preparedness planning is the cornerstone for emergency response and disease control. Each country needs to develop a plan, exercise that plan, and then further refine it.
- Zoning has and can be used for ensuring safe trade. We need to ensure that we fully utilize and promote zoning approaches. Compartmentalization is another key tool to minimize trade disruptions. It requires even stronger relationships between industry and the veterinary services to be implemented.
- There are many biosecurity tools and guidelines – but are they working? What have we learned from other porcine diseases? Where are the loopholes and what are we doing to close them? What can industry do differently to enhance biosecurity for ASF?

Dr. Jaspinder Komal, noted that the recommendations that follow will be finalized and shared among participants.

DRAFT RECOMMENDATIONS/NEXT STEPS

- ◆ Countries should develop a national action plan for ASF prevention and control reflective of their pork sector and risk pathways.
- ◆ Under GF-TADS Americas Committee, establish a Standing Group of Experts on ASF for the Americas to build closer cooperation among countries to address preparedness and response to the disease in a collaborative and harmonised manner.
- ◆ The multidisciplinary group requires expertise in communications, biosecurity, destruction, disposal and decontamination, wild pig control, arthropod vectors, border security, epidemiology, disease modelling and laboratory science.
- ◆ Promote a regional partnership to share reference material, laboratory services, transfer diagnostic capacity to facilitate early detection of ASF in the Americas, and to advance the development of new rapid diagnostics, including field testing.
- ◆ Conduct sub-regional exercises to test country preparedness plans for ASF and share lessons learned across the region.
- ◆ Request the OIE to develop specific guidance on the implementation of zoning and compartmentalization for ASF and how to adapt these measures to different production systems.
- ◆ Support and invest in the Global ASF Research Alliance to continue to coordinate international research efforts to address gaps, in particular for the development of a vaccine for the ASF virus.



7.3 Closing Remarks



Dr. Siddika Mithani, President, Canadian Food Inspection Agency (CFIA), Canada, expressed her appreciation to participants for the great work on advancing the ASF Framework. She also thanked the sponsors from governments and industry as well as the Forum organizers. The objective of the Forum was to enhance collaboration on ASF in the Americas and develop a roadmap to prevent and respond to the threat of this disease in the region and globally. We must now continue to build on the progress, collaboration and relationships we have established here. We have a shared commitment to tackle this disease and protect our pork industries.