



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

Public opinion research with small-scale producers to support communications on African swine fever

Final report

Prepared for the Canadian Food Inspection Agency

Supplier name: Earnscliffe Strategy Group
Contract number: 39903-210590/001/CY
Contract value: \$129,699.47 (including HST)
Award date: December 4, 2020
Delivery date: March 26, 2021

Registration number: POR-069-20

For more information on this report, please contact the CFIA at:
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Canada 

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March 2021

This public opinion research report presents the results of the focus groups, telephone and online survey conducted by Earnscliffe Strategy Group on behalf of the Canadian Food Inspection Agency. The research was conducted from January to March 2021.

Cette publication est aussi disponible en français sous le titre : Recherche sur l'opinion publique auprès de petits producteurs pour appuyer les communications sur la peste porcine africaine

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1400 Merivale Road
Ottawa, Ontario K1A 0Y9

Catalogue Number: A104-206/2021E-PDF

International Standard Book Number (ISBN): 978-0-660-38837-3

Related publications (registration number): POR-069-20

A104-206/2021F-PDF (Final Report, French)
978-0-660-38838-0

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Executive summary

Purpose and objectives

Earnscliffe Strategy Group (Earnscliffe) is pleased to present this report to the Canadian Food Inspection Agency (CFIA) on the findings of the research with small-scale pork producers and pig owners to help inform future communications on African swine fever (ASF).

ASF poses a significant risk to the health of the Canadian swine herd, pork industry and the Canadian economy. This viral disease, while it only poses a threat to pigs, is highly contagious and can spread rapidly through both direct and indirect contact with infected pigs or pig products, and farm equipment. In an effort to mitigate the risks of ASF in Canada, the CFIA National Emergency Operations Centre for ASF examined risk pathways for how the disease could possibly enter Canada. The centre identified farmers with insufficient on-farm biosecurity practices and those that may possibly feed pork or pork products to pigs as a possible entry point.

To reduce the risk of ASF in Canada, the Canadian Food Inspection Agency (CFIA) intends to communicate with small scale pork producers and hobby farmers to inform them of the risk of ASF and to protect Canada's pigs by encouraging stronger on-farm biosecurity practices. The CFIA required research to inform its efforts to strengthen biosecurity practices and safeguard the Canadian pork industry. The research will be used to help inform future communications with small-scale pork producers and pig owners on ASF and other similar issues.

The specific research objectives of this study were to:

- gain a better understanding of small-scale farmers' level of awareness of ASF and what measures are in place on their farms to mitigate the risk of ASF;
- discover what resources may be needed and barriers for sound biosecurity practices;
- uncover how they stay informed on animal health issues (such as ASF) that could impact their farms and what sources of information they rely on (for example, associations, newsletters, publications, forums, etc.); and,
- gather feedback on how to best communicate with them on ASF and other potential foreign animal diseases and animal health issues.

The total contract value of this research is \$129,699.47, including HST.

Methodology

To achieve these objectives, Earnscliffe conducted a 2 part research program. The research program began with a dual-mode survey of:

- small-scale pork producers who do not belong to a national or provincial pork producer association; and,
- pig owners who do not have a registered farm business and do not belong to a national or provincial pork producer association.

A total of 355 small-scale pork producers (56) and pig owners without a registered farm business (299) were surveyed. The survey was conducted in collaboration with our quantitative sub-contractor, Leger. Small-scale pork producers were surveyed by telephone from Leger's virtual call-centre using their state-of-the-art Computer Aided Telephone Interviewing (CATI) system. Leger drew the sample from the Dun & Bradstreet list of registered farm businesses. Pig owners without a registered farm business were surveyed online using Leger's proprietary panel. The telephone interviews were conducted between January 29 and March 2, 2021 and the average interview length was 25 minutes. The online interviews were conducted between February 8 and March 8, 2021 and the

average interview length was 9 minutes. Due to the lack of information about the size and profile of the universes sampled, the data was not weighted.

The second phase was qualitative and involved a series of 20 interviews with small-scale pork producers who do not belong to national or provincial pork producer associations. 15 of the interviews were conducted in English and 5 were conducted in French. 13 of the interviews were conducted by phone and 7 were conducted via Zoom. The interviews were approximately 30 minutes in length. Participants were recruited using the Dun & Bradstreet list of registered farm businesses. The interviews took place between February 16 and March 4, 2021.

It is important to note that qualitative research is a form of scientific, social, policy, and public opinion research. This type of research is not designed to help reach a consensus or to make decisions, but rather to elicit the full range of ideas, attitudes, experiences and opinions of a selected sample of participants on a defined topic. Because of the small numbers involved the participants cannot be expected to be thoroughly representative in a statistical sense of the larger population from which they are drawn and findings cannot reliably be generalized beyond their number.

Key findings

- Awareness of ASF is not universal but is higher among farmers (61%) than among non-farmers (30%). Few participants in the qualitative research could provide details about ASF, indicating that deep understanding of the disease and what it could entail is not widespread.
- Concern about ASF exists, but few feel particularly concerned. Just 4% of farmers and 14% of non-farmers feel it poses a high risk to their pigs.
 - Half (50%) of farmers say they know how to prevent the spread of ASF to their pigs. A third (35%) of non-farmers agree.
 - Several participants in the qualitative research explained that ASF is not a concern for them because they do not think it is in Canada, and even if it were to enter Canada, they feel that it would be properly contained by the authorities and have faith in their own biosecurity measures to prevent the spread of disease.
 - The survey gauged respondents' confidence in government regulators' ability to quickly contain an outbreak and discovered that almost half (46%) offered low levels of confidence. While this result appears to contradict the qualitative finding above, the low level of concern farmers indicated in the qualitative research may stem from the assumption that this would be something they would primarily contain on their own. Fully 70% of farmers surveyed indicate feeling ASF poses little or no risk to their pigs, 86% of farmers said they would be contacting a veterinarian if their pigs showed symptoms of illness and only 25% disagreed with the statement that they know all of the best practices for containing ASF. Alternatively, the difference may be in the interpretation of the word "quickly". Encouragingly, those who are very concerned about pig diseases are also more confident in government regulators' ability to control the spread.
- More than three-quarters (79%) of farmers and 60% of non-farmers say that they have measures in place to prevent the spread of disease.
 - Notably, fewer non-farmers undertake many of the measures investigated in the quantitative survey compared to farmers. They also are more likely to let their pigs interact with other animals and visitors.
 - The qualitative research suggests that there is likely a broad spectrum of biosecurity measures. Many mentioned vaccinating their pigs. A few indicated that they limit outside interaction with their pigs and ensure all those who come into contact with them have clean clothes, sanitize

properly, etc. Some are particular about the kind of feed they use, but the kind of feed they view as the healthiest varies.

- Both phases of research demonstrate that there is no universal approach to efficiently communicate with these pig owners as they have widely varying sources of information – both informal and formal – on pig care.
- Veterinarians emerge, in both the quantitative and qualitative research, as trusted sources of information. While less than half of those surveyed sought veterinary care for their pigs in the past year (39% of farmers and 41% of non-farmers), the qualitative research suggests that even those who do not regularly seek care from veterinarians trust them and would not hesitate to reach out to one if they felt it was necessary.
- Informal communication channels between farmers also seem important. Half (54%) of farmers and a quarter of non-farmers (24%) rely on them. Interviewees indicated that these sorts of informal networks could include text or WhatsApp chains, direct conversations with local farmers or their feed supplier.
- The internet, including social media, specific websites and provincial government websites, are other information sources that these audiences rely on.
- Pork councils, boards and industry associations are a source that some use, but participants in the qualitative research noted 2 reasons why they pay less attention to them and likely won't join as members:
 - Some disagree with the idea of raising pigs for slaughter.
 - Others do not see the value in a membership. Some noted they get all the information they need from these sources for free and do not need the benefit of their marketing or advocacy efforts, as they don't sell their pork commercially.
- When asked how they would like to receive information from government about caring for their pigs, respondents most often mention email (39% of farmers and 29% of non-farmers), direct conversations with CFIA representatives (29% of farmers and 24% of non-farmers), or a dedicated website (29% of farmers and 36% of non-farmers).
 - Almost a third (29%) of farmers also noted that they would appreciate traditional newsletters. Several participants in the qualitative mentioned that they prefer paper communication as well.

Research firm

Earnscliffe Strategy Group Inc. (Earnscliffe)

Contract number: 39903-210590/001/CY

Contract award date: December 4, 2020

I hereby certify as a Representative of Earnscliffe Strategy Group that the final deliverables fully comply with the Government of Canada political neutrality requirements outlined in the Communications Policy of the Government of Canada and Procedures for Planning and Contracting Public Opinion Research. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, standings with the electorate or ratings of the performance of a political party or its leaders.

Signed:

Date: March 26, 2021



Doug Anderson
Principal, Earnscliffe

Introduction

Earnscliffe Strategy Group (Earnscliffe) is pleased to present this report to the Canadian Food Inspection Agency (CFIA) on the findings of the research with small-scale pork producers and pig owners to help inform future communications on African swine fever (ASF).

ASF poses a significant risk to the health of the Canadian swine herd, pork industry and the Canadian economy. This viral disease, while it only poses a threat to pigs, is highly contagious and can spread rapidly through both direct and indirect contact with infected pigs or pig products, and farm equipment. In an effort to mitigate the risks of ASF in Canada, the CFIA National Emergency Operations Centre for ASF examined risk pathways for how the disease could possibly enter Canada. The centre identified farmers with insufficient on-farm biosecurity practices and those that may possibly feed pork or pork products to pigs as a possible entry point.

To reduce the risk of ASF in Canada, the Canadian Food Inspection Agency (CFIA) intends to communicate with small-scale pork producers and hobby farmers to inform them of the risk of ASF and to protect Canada's pigs by encouraging stronger on-farm biosecurity practices. The CFIA required research to inform its efforts to strengthen biosecurity practices and safeguard the Canadian pork industry. The research will be used to help inform future communications with small-scale pork producers and pig owners on ASF and other similar issues.

The specific research objectives of this study were to:

- Gain a better understanding of small-scale farmers' level of awareness of ASF and what measures are in place on their farms to mitigate the risk of ASF;
- Discover what resources may be needed and barriers for sound biosecurity practices;
- Uncover how they stay informed on animal health issues (such as ASF) that could impact their farms and what sources of information they rely on (for example, associations, newsletters, publications, forums, etc.); and,
- Gather feedback on how to best communicate with them on ASF and other potential foreign animal diseases and animal health issues.

To meet these objectives, Earnscliffe conducted a 2 part research program. The research program began with a dual-mode survey of 56 small-scale pork producers who do not belong to a pork producer association and 299 pig owners who do not have a registered farm business and do not belong to a pork producer association conducted in collaboration with our quantitative sub-contractor, Leger. Small-scale pork producers were surveyed by telephone from Leger's virtual call-centre using their state-of-the-art Computer Aided Telephone Interviewing (CATI) system. Leger drew the sample from the Dun & Bradstreet list of registered farm businesses. Pig owners without a registered farm business were surveyed online using Leger's proprietary panel. The telephone interviews were conducted between January 29 and March 2, 2021 and the average interview length was 25 minutes. The online interviews were conducted between February 8 and March 8, 2021 and the average interview length was 9 minutes. Due to the lack of information about the size and profile of the universes sampled, the data was not weighted.

The second phase was qualitative and involved a series of 20 interviews with small-scale pork producers who do not belong to national or provincial pork producer associations. 15 of the interviews were conducted in English and 5 were conducted in French. 13 of the interviews were conducted by phone and 7 were conducted via Zoom. The interviews were approximately 30 minutes in length. Participants were recruited using the Dun & Bradstreet

list of registered farm businesses. The interviews took place between February 16 to March 4, 2021. Participants received an honorarium of \$175 as a thank-you for their time.

It is important to note that qualitative research is not designed to help a group reach a consensus or to make decisions, but rather to elicit the full range of ideas, attitudes, experiences and opinions of a selected sample of participants on a defined topic. Because of the small numbers involved, the participants cannot be expected to be thoroughly representative in a statistical sense of the larger population from which they are drawn and findings cannot reliably be generalized beyond their number.

The detailed findings from this research are presented in subsequent sections of this report. Appended to this report are the focus group and survey methodology reports, interview guide, screener, survey instrument, and data tables (presented under a separate cover).

Detailed findings

The following report is divided into 6 sections, presenting quantitative and qualitative findings. The first explains respondents' experience raising pigs. The second details their knowledge of pig diseases, including ASF. The third and fourth sections focus on knowledge of biosecurity measures and veterinary care, respectively. The fifth section outlines how pig owners search for information about raising pigs and their preferred methods of communication. The final section briefly outlines responses to 2 ad concepts tested during the qualitative interviews.

The quantitative research surveyed 2 different types of pig owners – those with registered farm operations who own pigs (referred to as farmers throughout this report), and those who are not registered farm operations but do own pigs (referred to as non-farmers). The 2 profiles vary in a number of ways, including their experience level and the number of pigs they keep. For example, almost half (43%) of farmers have more than 20 years of experience raising pigs. More than two-thirds (69%) of non-farmers have less than 5 years of experience. Farmers are also much more likely to have more than 100 pigs (38%) while more than half (52%) of the non-farmers have just 1 pig. As a result, examining the aggregate of all interviews blurs the important distinctions between these 2 segments and with the sample being unweighted, it is more appropriate to keep the 2 separated. In the tables included in this report, we present the findings for farmers and non-farmers separately. Statistically significant differences between the 2 groups are denoted by an asterisk (*) beside the percentage that is significantly greater.

Experience raising pigs

More than a third (38%) of farmers say they keep more than 100 pigs. 1 in 5 (20%) keep between 11 and 100. Half of non-farmers (52%) have only 1 pig. A quarter (24%) have 2 or 3. Half of those with more than 20 years experience have more than 100 pigs, a significantly greater proportion than those with less experience.

Farmers tend to have more experience caring for pigs than non-farmers. The plurality (43%) of farmers have 20+ years experience caring for pigs compared to just 2% of non-farmers. More than two-thirds (69%) of non-farmers have 5 years or less experience, compared to 31% of farmers.

Farmers predominantly keep pigs to sell them (48%) or as food (46%). More than half of non-farmers also keep pigs for food (57%) but significantly fewer sell them to generate income (13%). Non-farmers are more likely to raise pigs as a hobby (30%) compared to farmers (9%).

The plurality (43%) of non-farmers rate their knowledge of caring for pigs as beginner. A third (35%) say they are intermediate. Farmers tend to rate their level of experience higher, with more than half (57%) saying they are either advanced or expert.

Half of farmers (48%) and non-farmers (49%) acquire new pigs at auctions. Among farmers, around 1 in 5 acquire pigs online (21%) or board pigs owned by someone else (18%). More than 1 in 5 non-farmers (22%) acquire pigs at a physical market.

Exhibit A1: Q6 - In a typical year, how many pigs on average do you keep (or plan to keep) on your property? Please include any pigs that you own, board, or otherwise keep on your property. Do not include wild pigs that you have seen on your property.

Number of pigs	Farmers n=56	Non-Farmers n=299
1	4%	52%*
2-3	16%	24%
4-5	16%	9%
6-10	7%	4%
11-100	20%	11%
100+	38%*	1%

Exhibit A2: Q7 - How many years have you kept or cared for pigs?

Number of years of experience	Farmers n=56	Non-Farmers n=299
Less than 1 year	13%	30%*
1 to 5 years	18%	39%*
6 to 10 years	9%	13%
11-20 years	18%*	6%
20+ years	43%*	2%
Don't know/Prefer not to say	-	10%

Exhibit A3: Q8 – Why do you keep pigs?

Reasons for keeping pigs	Farmers n=56	Non-Farmers n=299
Food for myself, family or friends	46%	57%
Hobby	9%	30%*
To sell them/generate income	48%*	13%
Pet	7%	15%*
To use for trading or bartering for products from other farmers	5%	10%
Boarding someone else's pigs	9%	4%
Other	5%	-
Don't know/Prefer not to say	-	5%

Exhibit A4: Q9 - How would you rate your knowledge when it comes to caring for pigs?

Number of years of experience	Farmers n=56	Non-Farmers n=299
Beginner	16%	43%*
Intermediate	27%	35%
Advanced	41%*	13%
Expert	16%*	3%
Don't know/Prefer not to say	-	6%

Exhibit A5: Q10 – How do you acquire new pigs?

Where pigs are bought	Farmers n=56	Non-Farmers n=299
Auction	48%	49%
Physical market	9%	22%*
Online market	21%	11%
Buy directly from another pig owner/farmer	7%	13%

I breed new pigs from the ones I own	7%	13%
I board pigs owned by someone else	18%	8%
Other	9%*	-
Don't know/Prefer not to say	2%	10%*

Knowledge of and concern about pig diseases

More than half of farmers (57%) are not concerned about their pigs contracting a virus or disease. Less than 1 in 5 (16%) are somewhat concerned and a quarter (25%) are concerned. A third of non-farmers (32%) are concerned about their pigs contracting a disease, while another third (35%) are somewhat concerned. A quarter (28%) are not concerned. Across the country, concern is highest in Manitoba/Saskatchewan (42%) particularly when compared to Atlantic Canada (21%).

Asked to evaluate their concern about various sources of infection, farmers said they are most concerned about their pigs becoming infected by visitors to their property (63%), followed by contact with borrowed vehicles or equipment, developing an illness with no known transmission (38%) and pigs eating food that carries a virus or disease (33%).

Non-farmers are most concerned about their pigs eating food that carries a virus or disease (42%) or their pigs developing an illness on their own (40%). About a third are concerned about visitors to their property spreading disease (32%) and pigs getting a disease from borrowed vehicles or equipment (31%).

Qualitative insights: concern about pig diseases

While all the subjects interviewed tend to prioritize the wellbeing of their pigs, much like the results of the quantitative research, their level of concern about their pigs contracting any sort of disease was mixed. Participants who were not concerned about pig diseases felt as though they had taken steps to mitigate disease. For a few, this meant getting their pigs vaccinated. Others noted their cleaning practices, that their pigs do not come into contact with others, or that they give them lots of space to graze outside.

Those who owned more than a few pigs were generally more concerned than those who only had a few, but also more likely to list a series of specific biosecurity measures that they have in place to prevent the spread of illness. These measures included quarantining new pigs, vaccinations, changing into clean clothes before dealing with the pigs and washing any transportation vehicles.

Exhibit B1: Q15 – How concerned are you that your pigs could contract a virus or will develop a disease that could harm them or cause death? Use a scale of 1-7 where 1 is not at all concerned and 7 is very concerned.

Concern about pigs contracting a virus/disease	Farmers n=56	Non-Farmers n=299
Concerned (6,7)	25%	32%
Somewhat concerned (4,5)	16%	35%*
Not concerned (1,2,3)	57%*	28%
Don't know/Prefer not to say	2%	5%

Exhibit B2: Q16 – Pigs could become infected by different means. Which sources of infection are you most concerned about? Select all that apply.

Sources of infection	Farmers n=56	Non-Farmers n=299
Your pigs eating food that carries viruses and diseases	33%	42%
Developing an illness or disease on their own (no known transmission)	38%	40%
Visitors to your property carrying viruses or disease from other farms	63%*	32%
Getting a virus by coming into contact with equipment or vehicles borrowed from another farm	50%	31%
Wild pigs/boars that are infected with a virus that come into contact with your pigs	25%	21%
Other, please specify	8%	-
I am not concerned about my pigs getting infected	-	4%

Two-thirds (66%) of farmers have heard about pig diseases in the past year. Among those who recall hearing something about pig diseases, half (51%) of farmers mention ASF. Other mentions include porcine diarrhea (16%), swine flu (11%) and respiratory illness (8%).

Less than a third (30%) of non-farmers have heard something about pig diseases in the past year. Among that group, just 4% mention ASF. Almost 1 in 5 (17%) say they recall hearing of swine flu. More than a third (37%), when pressed, cannot identify what they have heard.

More than half (61%) of farmers say they have heard of ASF. They most frequently recall hearing that it is highly contagious (24%), can cause death to pigs (26%) and that it is dangerous in general (9%). Less than a third (30%) of non-farmers recall hearing about ASF. Among those who recall hearing of it, about a third (35%) cannot say what they heard specifically or do not offer an answer. About 1 in 5 (19%) have heard it is highly contagious, while fewer recall hearing that it can cause death in pigs (12%), that it is dangerous (13%) and that it can cause health problems for humans (8%).

Awareness of ASF is higher in Manitoba and Saskatchewan (58%) than in other regions, particularly compared to Atlantic Canada (29%), Quebec (28%) and Ontario (31%). Those who are very concerned about pig diseases are more likely to recall ASF (47%) compared to those who are somewhat concerned (30%) or not concerned (33%).

Qualitative insights: awareness of ASF

Almost all were aware of sources of infection that could affect their pigs, and a few even named ASF unaided. When asked specifically about it, roughly half had heard of ASF, but most struggled to describe the disease in detail. Those who recalled ASF were under the impression that it had not spread to Canada and was an issue abroad, particularly in China and Europe. Sources of learning about ASF varied widely. A few heard about it from a pork producer association, while others had come across information about it in the news (CBC, Journal de Montreal). 1 mentioned having heard of it from another pig owner on Facebook.

Exhibit B3: Q11 - Over the past 12 months have you seen, read or heard anything about pig diseases?

Recall hearing about pig diseases	Farmers n=56	Non-Farmers n=299
Yes	66%*	30%
No	34%	63%*

Don't know/Prefer not to say	-	7%
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Exhibit B4: Q12 – [If have heard about pig diseases] What specifically have you seen, read or heard?

Topics related to pig diseases	Farmers n=37	Non-Farmers n=90
African swine fever (ASF)	51%*	4%
Swine flu / Pig flu (unspecified)	11%	17%
Pig viruses/diseases (unspecified)	11%	9%
Porcine epidemic diarrhea	16%	4%
Caring / Treating pigs properly	-	3%
Respiratory illness (PRS)	8%	-
Foot and Mouth disease	0%	2%
Other	11%	27%*
Don't know/Prefer not to say	14%	37%*

Exhibit B5: Q13 – In the last 12 months have you seen, read or heard anything about African swine fever (ASF)?

Recall ASF	Farmers n=56	Non-Farmers n=299
Yes	61%*	30%
No	36%	60%*
I don't know	4%	10%

Exhibit B6: Q14 – [If have heard about ASF] What specifically have you heard about ASF?

Topics related to ASF	Farmers n=34	Non-Farmers n=91
Highly contagious/transmittable	24%	19%
Can cause death to pigs	26%	12%
Be aware / dangerous	9%	13%
Health problems/death to humans	0%	8%
Pig flu (unspecified)	9%	2%
Causes fever	0%	3%
Other (specify)	15%	21%
Don't remember	18%	35%*

Overall, respondents are not convinced that ASF poses a high risk to their pigs. Just 4% of farmers and 14% of non-farmers feel it poses a risk. A quarter of farmers feel ASF poses no risk at all, and 45% feel it is a low risk. 13% of non-farmers feel ASF poses no risk and a third (32%) feel it poses a low risk. Of note, those with 11 to 100 pigs are more likely than those with 10 pigs or less, and those with more than 100 pigs, to view ASF as a risk. For example, more than a third (37%) of those with 11 to 100 pigs view ASF as a high risk to their pigs, compared to just 8% of those with 1 pig, and 13% of those with 100+ pigs.

While they do not think ASF poses a high risk to their pigs, half (50%) of farmers do think that it is likely that ASF will be found in Canada. More than a third (36%) think it is unlikely. More than a third (37%) of non-farmers think it is likely ASF will reach Canada, while 45% think it is unlikely. Concern about the impact of ASF, should it arrive in Canada, is mixed. Half (50%) of farmers do not anticipate large negative effects on their pig-related activities if ASF were to spread to Canada, while slightly fewer (45%) anticipate large or very large impacts. Half (49%) of non-farmers also do not seem to think that the arrival of ASF in Canada would negatively impact their pig related activities. A third (36%) anticipate large or very large impacts. Respondents with 11 to 100 and more than 100 pigs

are the most likely to anticipate very negative impacts (26% each). In comparison, just 8% of those with 1 pig and 10% of those with 2 or 3 pigs anticipate very negative impacts.

Farmers seem a bit better prepared to handle ASF than non-farmers. Again, when considering their position should ASF reach Canada, half (50%) of farmers agree that they know all the best on-farm practices to prevent ASF from spreading to their pigs. A third (34%) of non-farmers agree.

Though half do not expect large impacts on their operations, two-thirds (64%) of farmers are aware that, should ASF spread to Canada, control zones and movement restrictions may be required. Half are aware that suspension of exports may be required (50%) and that healthy animals may need to be culled (48%). Half of non-farmers (53%) are aware of the possibility of suspension of pig exports, while slightly fewer (45%) are aware of the potential imposition of control zones. Just less than a third are aware that healthy animals might need to be culled (31%).

The vast majority of farmers (86%) would contact their veterinarian if their pigs showed symptoms of disease. About half of non-farmers (48%) would contact a vet. Non-farmers are more likely to contact local government (25%) and the CFIA (22%) compared to farmers. About half of farmers (59%) and non-farmers (51%) claim that they are aware that they must report to the CFIA if they suspect that their pig is infected with ASF.

Almost half (46%) of farmers are not confident in government regulators' ability to contain ASF if it reaches Canada. Less than a third (30%) are somewhat confident and 20% are confident. Confidence is a bit higher among non-farmers. The plurality, 44%, are somewhat confident, while 29% are confident and 18% are not confident. Of note, those who are very concerned about pig diseases are more confident in government regulators' ability to control the spread of ASF than those who are not concerned (42% versus 19%).

Qualitative insights: concern about ASF

Level of concern about ASF varied among the interviewees. Those who were not worried cited several reasons for their lack of concern. First, some did not know enough about ASF to know whether or not they should be concerned, but indicated they would be doing more research about it. Aside from lack of knowledge, 1 of the most commonly cited reasons was their faith in their own procedures to prevent disease (for example, isolating their pigs from other animals). Many also believed that ASF is not in Canada and assumed that the regulations in place in Canada, which they viewed as stricter than in other countries, would keep the ASF from reaching this country (for example, ensuring a safe feed supply). As 1 participant articulated:

“...there's always a risk. I think the risk is small of African swine fever, the way I understand it could come in on feed ingredients from wherever around the world. So, if farmers don't do a good job of sourcing their product and if CFIA doesn't do a good job of inspection of product coming in from elsewhere, then it could come to feed, and then it could come to my pigs. So there is there is there is a possibility I'm not I'm not saying it's a high possibility, quite low. But if the system somewhere breaks down, then we have we have anyone could be exposed to anyone, any anyone to be exposed to it. You know what I mean? So it has to be a systems approach.”

One, who had heard that ASF can be spread by wild pigs, explained that they had never seen wild pigs in their area, and for that reason were not concerned.

For smaller operations, raising pigs is not integral to their livelihood, so even if their pigs were to become ill, it would not impact them financially, which made them less concerned.

In contrast, those who were concerned about ASF noted the devastating impact it would have on the industry and, for the larger producers, their own business. 1 participant explained, “It would ruin our agriculture production in Canada or the US or, you know, depends on where it all comes from, or where all it shows up, but it would be really hard on our agriculture calendar for us, wherever.” 1 or 2 also explained that they would be personally upset if they lost their pigs because they have become attached to them.

Exhibit B7: Q17 – How much of a risk do you think African swine fever currently poses to your pig(s)?

Risk ASF poses	Farmers n=56	Non-Farmers n=299
No risk at all	25%	13%
Low risk	45%	32%
Moderate risk	18%	27%
High risk	2%	9%*
Very high risk	2%	5%
Don’t know/Prefer not to say	9%	13%

Exhibit B8: Q18 – To the best of your knowledge, what is the likelihood that African swine fever will be found in Canada?

Likelihood of ASF in Canada	Farmers n=56	Non-Farmers n=299
Very unlikely	13%	10%
Unlikely	23%	35%
Likely	43%*	27%
Very likely	7%	10%
Don’t know/Prefer not to say	14%	18%

Exhibit B9: Q19 – If African swine fever were to ever spread to Canada, which of the following precautions are you currently aware of that could be implemented?

ASF Precautions	Farmers n=56	Non-Farmers n=299
Suspension of pig exports, including pork, pork products or live pigs	50%	53%
Imposition of control zones and movement restrictions	64%*	45%
A culling of healthy animals	48%*	31%
Other, please specify	4%	-
Don’t know	16%	15%

Exhibit B10: Q20 – If African swine fever were to ever spread to Canada, how much do you think it would affect your pig-related activities (for example, acquiring, owning, selling, etc.)?

Effect of ASF on pig-related activities	Farmers n=56	Non-Farmers n=299
No negative effect on my pig-related activities – I will continue with business as usual	20%	18%
Minor negative effect on my pig-related activities – I will need to make small adjustments in how I control and care for my pigs	30%	31%
Large negative effect on my pig-related activities – I will need to make large adjustments in how I control and care for my pigs	27%	25%

Very large negative effect on my pig-related activities – I will likely not be able to own pigs anymore	18%	11%
Don't know/Prefer not to say	5%	15%*

Exhibit B11: Q21 – Please rate your level of agreement with the following statement: I know all the best on-farm practices to prevent African swine fever from spreading to my pigs

Effect of ASF on pig-related activities	Farmers n=56	Non-Farmers n=299
Strongly disagree	11%	8%
Disagree	14%	14%
Neither agree nor disagree	18%	35%*
Agree	32%	28%
Strongly Agree	18%*	6%
Don't know/Prefer not to say	7%	10%

Exhibit B12: Q22 – If your pigs were to show symptoms of disease or illness, who would you contact?

Contact if pigs show signs of illness	Farmers n=56	Non-Farmers n=299
A veterinarian	86%*	48%
Local government (local health authorities)	9%	25%*
Provincial government (Provincial health authorities)	14%	23%
Federal Government/Canadian Food Inspection Agency	7%	22%*
Other pig farmers in the area	13%	20%
Pork associations	14%	15%
Don't know/Prefer not to say	4%	10%*

Exhibit B13: Q23 – Are you aware that if you suspect your pig is infected with African swine fever you must report it to the Canadian Food Inspection Agency, as ASF is a reportable disease under the Health of Animals Act?

Awareness of ASF as a reportable disease	Farmers n=56	Non-Farmers n=299
Yes	59%	51%
Non	38%	39%
Prefer not to say	4%	10%*

Exhibit B14: Q24 – If African swine fever were to ever spread to Canada, how confident are you in government regulators' ability to control the spread so that it is contained quickly? Use a scale of 1-7 where 1 is not at all confident and 7 is very confident

Confidence in government regulators to contain ASF	Farmers n=56	Non-Farmers n=299
Confident (6,7)	20%	29%
Somewhat confident (4,5)	30%	44%*
Not confident (1,2,3)	46%*	18%
Don't know/Prefer not to say	4%	8%

Biosecurity measures

Almost half (46%) of farmers keep their pigs indoors 100% of the time. Just 9% of non-farmers always keep their pigs indoors, while half claim that their pigs spend less than 50% of their time indoors. About 1 in 5 farmers say that their pigs spend all their time outdoors. That percentage is smaller among non-farmers (11%).

Exhibit C1: Q25 – % Indoor - Approximately, what percentage of time do your pigs spend inside and outside?

% of time spent indoors	Farmers n=56	Non-Farmers n=299
0	21%	11%
1-25	16%	14%
26-50	14%	26%*
51-75	2%	15%*
76-99	0%	11%
100	46%*	9%
Don't know	0%	15%

Exhibit C2: Q25 – % Outdoor - Approximately, what percentage of time do your pigs spend inside and outside?

% of time spent outdoors	Farmers n=56	Non-Farmers n=299
0	46%*	9%
1-25	0%	11%
26-50	14%	30%*
51-75	2%	13%*
76-99	16%	11%
100	21%	11%
Don't know	0%	15%

About half of both farmers (50%) and non-farmers (56%) keep pigs in a fenced off area to roam, while about a third of each (32% of farmers and 36% of non-farmers) report using some sort of small structure. More than a third of those with a farm keep them indoors in pens (39%), more than double the percentage of non-farmers who keep them grouped in pens (16%). Those with more than 100 pigs are by far the most likely to use indoor pens (74%). Those with 100 pigs or less are significantly more likely than those with more than 100 pigs to use a fenced-off outdoor area for their pigs to roam. For example, more than a third (69%) of those with 2 or 3 pigs keep their pigs in a fenced-off outdoor area. Those who say they are very familiar with biosecurity standards are more likely to keep their pigs indoors and grouped in pens (44%) compared to those who are somewhat familiar (18%) and not at all familiar (13%).

Exhibit C3: Q26 – Where do you keep your pigs?

Places pigs are kept	Farmers n=56	Non-Farmers n=299
Fenced off area to roam	50%	56%
A small structure (including small barn)	32%	36%
Indoor - grouped in pens	39%*	16%
Indoor - individual stalls/pens	4%	13%*
Indoor - in my house as a pet	-	8%
Unfenced area to roam	-	5%
Other	-	1%
Don't know/Prefer not to say	-	8%

Farmers seem more likely than non-farmers to limit the contact their pigs have with other pigs, animals and humans. For example, 13% of non-farmers versus 4% of farmers say their pigs come into contact with pigs they do not own. One fifth (21%) of farmers say they let visitors interact with their pigs, compared to 34% of non-farmers. Finally, almost a quarter (23%) of non-farmers say that people who interact with their pigs interact with pigs on other properties, compared to 4% of farmers.

Of note, those who are very concerned about pig diseases are more likely to let their pigs interact or come in contact indirectly with other animals. For example, 25% of those who are very and 26% of those who are somewhat concerned about pig diseases say that people who interact with their pigs interact with pigs on other properties, compared to 13% among those who are not concerned. Those who say they are very familiar with biosecurity standards are also more likely to say that people who interact with their pigs also interact with pigs on other properties – 32% versus 18% among those not familiar – and that their pigs interact with other pigs (21% versus 8%).

Most have not seen evidence of wild pigs on their property. Only 7% of farmers and 12% of non-farmers say they have.

Exhibit C4: Q27 – Do your pigs ever come into contact with other pigs that you do not own or keep, such as pigs on other farms?

Pigs in contact with others	Farmers n=56	Non-Farmers n=299
Yes	4%	13%*
No	96%*	78%
Prefer not to say	-	9%

Exhibit C5: Q28 – [If board pigs] Do you keep the pigs you board separate from other pigs on your property?

Keeping boarded pigs separate	Farmers n=5	Non-Farmers n=13
Yes	0%	31%
No	60%	23%
I do not keep any pigs besides the ones that I board for others	40%	46%
Don't know/Prefer not to say	-	-

Exhibit C6: Q29 – Do you allow visitors to your property to interact with your pigs?

Allowing visitors to interact with pigs	Farmers n=56	Non-Farmers n=299
Yes	21%	34%*
No	77%*	57%
Prefer not to say	2%	9%*

Exhibit C7: Q30 – Do you or any other people who interact with pigs on your property, such as family or workers also interact with pigs on other properties regularly?

Interaction with pigs on other properties	Farmers n=56	Non-Farmers n=299
Yes	4%	23%*
No	96%*	66%
I do not know	-	10%

Exhibit C8: Q31 – Have you seen any wild pigs or evidence of wild pigs on your property? Evidence could include droppings, footprints, etc.

Evidence of wild pigs	Farmers n=56	Non-Farmers n=299
Yes	7%	12%
No	93%*	80%
I do not know	-	9%

More than three-quarters (79%) of farmers implement measures to reduce the risk of disease. More than half (60%) of non-farmers say they do the same. Those who have heard of ASF are more likely to implement measures (75%) than those who have not (57%). Perhaps logically, the more familiar respondents are with biosecurity measures, the more likely they are to implement biosecurity measures (86% among those very familiar, 70% among those somewhat familiar and 52% among those not familiar).

When it comes to the type of measures respondents have in place, more than three-quarters of farmers say they seek advice from a veterinarian if their pig appears ill (86%), avoid sharing equipment (80%), provide physical barriers between their pigs and any potential wildlife (77%) and only acquire pigs from a reputable source (75%). These practices are less widespread among non-farmers, though more than half (58%) say they wash their hands before/after dealing with their pigs, almost half (48%) provide physical barriers, and seek advice from a veterinarian (46%).

The most common barrier to implementing more disease prevention measures is a lack of knowledge, both for farmers (30%) and non-farmers (26%). About 1 in 5 non-farmers also do not feel they have enough time to implement new measures (23%) or feel it is too difficult (20%).

Perception of biosecurity challenges faced seems to vary by the number of pigs kept. For example, those with more than 100 pigs are much less likely to say that implementing measures is too difficult for them (4%) than those with 1 (16%) 2 to 3 (23%) or 11 to 100 (21%) pigs.

Qualitative insights: existing biosecurity measures

The 1-on-1 interviews uncovered a broad spectrum of biosecurity measures that respondents undertake. While the measures taken were varied, everyone seemed to do something that they felt would help ensure their pigs remained healthy.

Many mentioned vaccinating their pigs and viewed this as an important biosecurity measure. Many participants also noted that they are particular about the kind of feed they use, though the types of feed participants felt were suitable varied. Some purchase feed from a dedicated supplier. A few feed their pigs food scraps.

A few made reference to cleaning protocols, which emerged as top measures respondents in the quantitative research claim to have in place. Participants in the qualitative research said that they wash their hands before interacting with their pigs and wear a fresh set of clothes when they interact with their pigs. 1 mentioned a shower station for individuals to use before entering the pen. Avoiding sharing equipment was not explicitly mentioned, but a few noted the risk of transportation vehicles that may have held other pigs and the need to sanitize these vehicles. A few also explained that they limit who interacts with their pigs and 1 described a mandatory quarantine period for new pigs on the farm.

Asked if they thought there was anything else they could be doing to prevent the spread of disease among their pigs, about half agreed there were additional measures they could take. Some of these additional measures included using only 1 feed source, building a transfer station or holding area to make transportation safer, and learning more from their veterinarian. The barriers to undertaking these measures revolved around cost, labour and time. 1 participant, who uses multiple feed sources currently, elaborated on the financial commitment of switching feed supplies:

Participant: I think I can be buying all their food directly from 1 source, I think that would probably be the safest bet. When you're, there's no variable change on their feet. [For] 7 weeks, they're eating a lot of corn. So we've thrown in a lot of leafy greens, it depends on what you know, the community around has really well what I'm buying is what, you know, they don't have to offer for instance, if I was, you know, limited to 1 feed only, I think that would be in and of itself slightly safer.

Interviewer: Okay. And why don't you do that now?

Participant: It's an expensive endeavor, it's a lot cheaper to do what I what I do now. I personally can't taste the difference. When it comes to that. I know a lot of people can look at the old corn fed beef, and you know, or, you know, organic free range chickens. Like I can't taste corn fed cows, corn fed pigs, and, you know, lettuce fed pigs, like, the meat for me ends up the same so I don't really, I don't really see an urgency behind it.

Those who did not feel there was anything else they could be doing to prevent the spread of disease argued that they are already doing everything they can or simply did not see the need for additional measures.

Exhibit C9: Q32 – Do you implement measures to reduce the risk of your pigs developing a disease?

Implement measures to reduce spread of disease	Farmers n=56	Non-Farmers n=299
Yes	79%*	60%
No	20%	23%
I do not know	2%	17%*

Exhibit C10: Q33 – [If implement measures] Which of the following measures do you use to reduce the risk of disease in your pigs?

Implement measures to reduce spread of disease	Farmers n=44	Non-Farmers n=179
I wash my hands either before or after I interact with my pigs	73%*	58%
I provide physical barriers such as fences and gates to prevent my pigs from coming into contact with wildlife	77%*	48%
I seek advice from my vet as soon as signs of disease or illness are observed in my pigs	86%*	46%
I avoid sharing equipment with other pig owners or farmers	80%*	41%
I only acquire pigs from reputable suppliers/sources	75%*	39%
I wash my clothes or my equipment either before or after interacting with my pigs	57%	42%
I control how visitors interact with my pigs, including washing their hands or notifying me of the visit ahead of time	61%*	37%
I implement controls for rodents or other pests that could spread disease	68%*	30%

I have dedicated clothes or equipment that is only used for interacting with my pigs	66%*	28%
I isolate new pigs for 14 days before introducing them to any other pigs I have on my property	48%*	22%
I put up signage to inform people to not feed my pigs	43%*	22%
I do not interact with my pigs for a period of time after I interact with pigs on other properties	45%*	12%
Other	14%	-
I don't undertake any specific measures	-	-
Don't know/Prefer not to say	-	1%

Exhibit C16: Q39 – What are some barriers that stop you from doing more to prevent your pigs from getting diseases?

Barriers	Farmers n=56	Non-Farmers n=299
I do not know enough about what measures to take to prevent diseases	30%	26%
I do not have the time to do anything more	9%	23%*
It is too difficult to implement any more measure	5%	20%*
It is too expensive to implement any more measures	11%	18%
Other, please specify	2%	0%
I do not face any barriers	39%	20%
Prefer not to say	7%	7%

Most farmers say that their pigs' main source of food is either pre-mixed feed from a supplier (54%) or pig feed they make themselves using plant-based ingredients (41%). Pre-mixed pig feed from a supplier (41%) is most popular among non-farmers, followed by homemade plant-based pig feed (27%) and food scraps (17%).

When assessing everything they have fed their pigs in the past year, two-thirds (66%) of farmers say they have fed them purchased pig feed. Almost half (46%) have fed them homemade feed. A quarter (25%) have given them food scraps meant for human consumption (25%). 1 in 5 have fed them vegetable or fruit scraps from a kitchen or restaurant.

Less than half (44%) of non-farmers have fed their pigs purchased feed from a supplier, while a third (31%) have fed them fruit or vegetable scraps from a kitchen. 1 in 5 have fed them homemade feed (21%) or food scraps initially meant for human consumption (19%).

More than half (55%) of farmers are aware of the risks posed by food scraps while 44% of non-farmers are aware.

The vast majority of farm operators (82%) use well water for their pigs. The majority of non-farmers use a municipal water supply (54%).

Qualitative insights: pig feed

As noted above, participants viewed the type of feed they give their pigs as very important, but their understanding of what constituted the “best” feed varied. Some, but not all, did purchase from a supplier. However, a few do feed their pigs scraps. 1 participant, when asked how concerned they were about their pigs contracting a disease,

actually cited the fact that they use scraps as a factor that eased their concerns, stating, “Um, overall not too really [concerned] because I use but very, very small and reliable feeding sources. We do a lot of like our scraps and like the neighborhood scraps, like our opposing farms, and he decides we'll take all their food scraps and stuff like that and use that.” In a similar vein, a few mentioned that part of their rationale for acquiring pigs was to make use of food scraps, either from their farm or neighbouring farms.

Exhibit C11: Q34 – What is the main source of food for your pigs?

Main source of food	Farmers n=56	Non-Farmers n=299
Pig feed – pre-mix from a feed supplier	54%	41%
Pig feed – made by you or someone on your farm using plant-based feed ingredients	41%*	27%
Food scraps/leftover from human food	4%	17%
Leftover feed for other animals	-	5%
Other	2%	1%
Don't know/Prefer not to say	-	9%

Exhibit C12: Q35 – In the last year, have you fed your pigs any of the following?

Pig feed	Farmers n=56	Non-Farmers n=299
Pig feed purchased from a reputable store or supplier	66%*	44%
Fruit or vegetable scraps/left over fruit or vegetables from a kitchen or restaurant or similar source	21%	31%
Pig feed I made myself	46%*	21%
Other food scraps/left over food originally meant for human consumption (for example, kitchen, restaurant, or similar source)	25%	19%
Feed purchased from other farmer or another person who keeps pigs or other animals	2%	16%*
Leftover feed for other animals on your farm	9%	10%
Other, please specify:	11%	0%
Don't know/Prefer not to say	2%	12%*

Exhibit C13: Q36 – Are you aware of any risks to your pigs if you feed them food scraps that are left over after others have already come into contact with it (for example, kitchen or restaurant waste/leftovers)?

Aware of risk of food scraps	Farmers n=56	Non-Farmers n=299
Yes	55%	44%
No	43%	47%
Prefer not to say	2%	8%*

Exhibit C14: Q37 – Which of the following do you use as a water source for your pigs?

Water source	Farmers n=56	Non-Farmers n=299
Municipal water supply	16%	54%*
Well water	82%*	23%
Surface water (for example, ponds, creeks or reservoirs)	9%	17%
Collected rainwater (not including puddles or reservoirs)	5%	18%*

Other, please specify:	0%	0%
Don't know/Prefer not to say	0%	8%

About a third (34%) of farmers say they are familiar with national biosecurity standards, while the plurality (43%) are not familiar. Fewer (15%) non-farmers are familiar. Of note, those who believe ASF presents a high risk to their pigs are more likely to claim to be familiar with the biosecurity standards (34%) than those who feel it poses a low risk (15%). Those with more than 100 pigs are more likely to be familiar with biosecurity standards (61%) than all other pig owners with fewer pigs. For example, just 9% of those with 1 pig say they are familiar.

Qualitative insights: knowledge of biosecurity measures and standards

Most felt they knew enough about measures they could take to stop the spread of disease to and among their pigs. As noted earlier, they seemed confident in their existing practices. At the same time, most also said they were unfamiliar with biosecurity standards that relate to pigs. Some admitted they could probably find out more if they wanted to, but did not feel it was something they should seriously look into unless they acquired more pigs or made a living from raising them. A few indicated they should learn more about the spread of disease in general.

The few who were familiar with national biosecurity standards mentioned the importance of cleanliness when caring for pigs (for example, shower stations, change of clothes, etc.), vaccinations and quarantining new pigs. Those who were not aware of the standards either seemed completely unaware that such standards existed or assumed the standards do not apply to them. Many of the respondents who disagreed that the national biosecurity standards applied to them figured that since they were already taking measures to prevent the spread of disease, there was nothing additional they needed to be concerned about. Others believed their operations were too small for national biosecurity standards to apply to them or felt that since they were not raising the pigs to sell the meat to the public, the standards might not apply to them.

Although participants did not seem familiar with the national biosecurity standards and some were unsure if they applied to their particular situation, they were not opposed to learning more. Some would be particularly interested if the information comes from a government or scientific source, as 1 participant noted:

“I'm assuming if these standards are set by the government, and they're cleared by scientists, they're probably a good foundation to start with. And, you know, I'm not an expert. Like I said, I would definitely listen to people that were more knowledgeable than me in terms of security and safety and biosecurity and I want to learn from them.”

Exhibit C15: Q38 – How familiar are you with the national biosecurity standards? Use a scale of 1-7 where 1 is not at all familiar and 7 is very familiar.

Familiarity with biosecurity standards	Farmers n=56	Non-Farmers n=299
Familiar (6,7)	34%*	15%
Somewhat familiar (4,5)	23%	37%*
Not familiar (1,2,3)	43%	40%
Don't know/Prefer not to say	0%	8%

Veterinary care

Less than half of both farmers (39%) and non-farmers (41%) have sought veterinary care for their pigs in the last year. Among farmers who do seek care, 50% do so regularly, every 6 months, while the other half only do so when something is wrong. Among those non-farmers who seek care for their pigs, almost all do so either every 6 months (43%) or once a year (46%).

Of note, farmers who have 100+ pigs are more likely to have sought out a veterinarian (65%) than those with just 1 (35%), 4 or 5 (31%) and 11 to 100 (37%) pigs.

Farmers who do not seek care say they just do not feel the need to (91%). More than half (58%) of non-farmers feel the same way, though some note other reasons such as their pigs not needing veterinary care because they are not raised for food (15%), not being able to afford a veterinarian (14%), and not being able to find a veterinarian (12%).

If a farmer's pig were to die, about half (46%) say they would bury it in the ground while more than a quarter (29%) would use a specialized waste collection service. One-fifth (20%) would work with a veterinarian to find out why it died. Answers vary a bit more among non-farmers. A quarter (24%) would work with a veterinarian to find out why it died, 18% would bury it in the ground, 15% would use a specialized waste collection service, and 12% would donate it to science/research.

Qualitative insights: veterinary care

Contrasting with the survey results, most of those interviewed in the qualitative phase had sought veterinary care for their pig(s) at some point, but the frequency with which participants interact with their veterinarian varied. Several noted that they had their pigs immunized by a veterinarian. Others claimed that they get their pigs checked up regularly (every few months or annually). Virtually all of the participants who had sought out veterinarian care for their pigs viewed this as an important part of pig ownership, particularly if the pigs were being raised for human consumption. Those who had not sought care claimed in some cases that the cost was more than the value of the pigs. Others said they simply had not seen the need since, to their eye, their pigs had always been healthy.

Exhibit D1: Q40 – In the last year, have you sought veterinary care for your pigs?

Sought out veterinary care	Farmers n=56	Non-Farmers n=299
Yes	39%	41%
No	59%	49%
Prefer not to say	2%	10%*

Exhibit D2: Q41 – [If seek veterinary care] Which of the following best describes how often your pigs receive veterinary care?

Frequency of veterinary care	Farmers n=22	Non-Farmers n=122
Regularly - At least once every 6 months	50%	43%
Regularly - At least once a year	-	46%
Only when there is something wrong with them	50%*	10%
Don't know/Prefer not to say	-	1%

Other	-	-
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Exhibit D3: Q42 – [If do not seek veterinary care] Why do you not get regular veterinary care for your pigs?

Reasons for not getting veterinary care	Farmers n=33	Non-Farmers n=146
I do not feel the need to contact a veterinarian	91%*	58%
My pigs are not meant as a food source, so they do not need to be checked unless they are obviously sick	9%	15%
I cannot afford a veterinarian	-	14%
I cannot easily find a veterinarian or veterinary care	-	12%
I do not trust veterinarians	-	5%
Other	6%	1%
Don't know/Prefer not to say	-	10%

Exhibit D4: Q43 – If 1 of your pigs were to die or needed to be euthanized which of the following steps would you be most likely to take to dispose of it?

Steps if a pig were to die	Farmers n=56	Non-Farmers n=299
Work with a veterinarian to find out why it died	20%	24%
Bury it in the ground	46%*	18%
Use a waste collection service specializing in livestock	29%*	15%
Donate it to science or research	-	12%
Bring it to the local dump/garbage disposal location	-	8%
Sell it to anyone who wants it	-	6%
Burn it	2%	1%
Other	-	-
I do not know what I would do	4%	8%
Prefer not to say	-	7%

Sources of information

Almost all search for information (86% of farmers, 88% of non-farmers). For farmers, their veterinarian (59%), word of mouth from other pig farmers (54%) and flyers from feed suppliers (34%) are the top 3 sources of information on caring for pigs. Provincial government resources (27%), specific websites (23%) and provincial pork boards follow (20%). Among non-farmers, the top sources also include their veterinarian (35%), and word of mouth (24%), along with specific websites (27%). About a quarter (24%) rely on word of mouth from other pig farmers, while 1 in 5 rely on provincial government sources (20%).

Those respondents living in rural areas (41%) are more likely to gather information by word of mouth from other pig owners compared to those in urban areas (20%). The rural residents are also more likely get information from their veterinarian (47%) compared to those in urban areas (34%).

The less experienced pig owners tend to rely more on social media groups for information than those with 11 to 20 years of experience. A quarter (27%) of pig owners with 6 to 10 years of experience get information from social media, compared to 4% among those with 11 to 20 pigs.

Fewer farmers (18%) and non-farmers (13%) rely on social media industry publications compared to the sources outlined above, but among respondents with 4 or 5 (29%) and 6 to 10 (38%) pigs, significantly more rely on these kinds of publications.

When it comes to the sources that respondents trust the most, veterinarians are the top ranked among farmers (58%) and non-farmers (28%). Word of mouth from other pig farmers follows (12% among farmers and 13% among non-farmers).

Qualitative insights: sources of information

All participants said they have done research into caring for pigs. Notably, there was no single source that emerged as the most commonly consulted. As the quantitative findings suggest, veterinarians are a very important source of information (though they are by no means the only source). As noted earlier, most participants had interacted with a veterinarian at some point in caring for their pigs. They trust their information and advice above almost all other sources. Even some who had not contacted a veterinarian said they would feel comfortable doing so if they noticed an issue with their pigs.

Another common way in which participants find information about their pigs is through various types of unofficial communication channels with other farmers or their feed supplier. Many participants noted that they had received information about raising pigs from other farmers in their community, the farmer they bought their pigs from or, in 1 case, the farm animal sanctuary from which they had acquired their pigs. Sometimes, this communication happens in person. For example, 1 participant mentioned learning useful information while chatting with his feed supplier, while another said the farmer who sold him the pigs was a neighbour, who had given him some useful tips at the outset. However, several indicated that most of their communication with other farmers happens online. They are part of WhatsApp/text chains with other local farmers or Facebook groups and Reddit threads for people with small farm operations. A few follow blogs or websites that relate to small-scale or organic farming.

The participants really valued the experience of other farmers, as 1 noted, “And I also think people who have direct experience are credible because I’m pretty much in the same boat as a lot of these farmers learning as I go along.” They felt that other farmers raising just a few pigs were trustworthy and valued their point of view because of their shared experiences and goals. They would not hesitate to share their own experience with other farmers.

Some participants named a few additional online sources of information. A few used YouTube or Google Images to find examples or tutorial videos (for example, how to build a paddock). When it comes to government sources, a few also noted they seek out information from provincial government websites. Notably, provincial sources were cited more frequently than federal resources. In fact, almost none had contacted the CFIA or visited the CFIA’s website.

As noted above, some participants indicated that they gather information from social media. When prompted, those who use it acknowledge that they feel it generally less trustworthy than other sources (for example, other farmers they know, veterinarians, government sources) when it comes to certain information. For example, 1 participant explained that they would not trust information on social media about vaccines without verifying it with their veterinarian, but would take advice on building a paddock. Another noted that when gathering information from social media, it’s important to evaluate that information against your own experience, stating “...I guess that’s where I say you got to use your common sense and your knowledge already. [You] have to think about whether that’s even worthwhile thinking or reading or taking it as a fact. You know, like, I mean, anyone can write anything what they want, right?”.

Few participants reported getting information from industry associations, and none have attended any sort of trade show or conference. The participants who raise pigs for consumption would trust information from industry associations, but said that they do not see the value in belonging to one. They can access their information for free if they want and since they only own a few pigs, they do not rely on associations’ marketing and advocacy work. Those who were raising pigs for purposes other than consumption were opposed to the mission of such industry associations and said that since they had very different objectives, they would not consider joining.

Exhibit E1: Q44 – Which of the following sources do you use to find information on caring for pig(s)?

Information sources	Farmers n=56	Non-Farmers n=299
Your veterinarian	59%*	35%
Word of mouth from other pig farmers	54%*	24%
Specific websites (for example, National Hog Farmer, The Pig Site)	23%	27%
Provincial Government	27%	20%
Provincial Pork Boards (for example, Alberta Pork, SaskPork, Manitoba Pork, Ontario Pork)	20%	18%
Online discussion boards and forums	18%	17%
Federal Government	16%	15%
Industry Associations (for example, Canadian Pork Council)	18%	14%
Social media groups	18%	13%
Industry publications on social media	23%	12%
Flyers and other takeaways where I purchase farm supplies	34%*	9%
Other	11%	-
I do not search for information from any sources	9%	5%
Don't know/Prefer not to say	5%	7%

Exhibit E2: Q45 – [If seek out information] Which of those sources do you trust the most?

Most trusted information sources	Farmers n=49	Non-Farmers n=264
Federal Government	4%	6%
Provincial Government	10%	7%
Your veterinarian	53%*	28%
Provincial Pork Boards (for example, Alberta Pork, SaskPork, Manitoba Pork, Ontario Pork)	2%	11%*
Industry Associations (for example, Canadian Pork Council)	2%	7%*
Industry publications on social media	-	5%
Social media groups	-	2%
Online discussion boards and forums	-	5%
Flyers and other takeaways where I purchase farm supplies	-	4%
Word of mouth from other pig farmers	12%	13%
Specific websites (for example, National Hog Farmer, The Pig Site)	2%	12%*
Other, please specify:	8%	-
I do not search for information from any sources	-	-
Don't know/Prefer not to say	6%	-

Half of farmers (51%) say they spend less than 1 hour a month searching for information about caring for their pigs. A quarter (23%) of non-farmers spend less than 1 hour. The plurality spend between 1 and 5 hours (42%).

More experienced pig owners are more likely to say they spend less than an hour a week looking for information (56% among those with 20 years or more) than those with 1-5 years (23%), 6 to 10 years (7%) and 11 to 20 years (27%).

Those who feel ASF poses a high risk to their pigs seem to spend more time searching for information than those who do not feel it poses a risk. Almost 1 in 5 (17%) among those who believe ASF is a big risk spend more than 11 hours researching a month, while just 3% of those who feel it is a small risk say the same.

Qualitative insights: time spent looking for information

The qualitative results seem to support the quantitative finding that as farmers gain experience, they spend less time actively searching for information about caring for pigs. Often, participants claimed to have done more research initially upon acquiring their pigs, and now actively look for information as issues arise, or consume it more passively through the news or interacting with other farmers. Some noted having grown up on a farm that had pigs and learned the basics of caring for pigs through that experience, and consequently do not spend much time now looking up additional information.

Exhibit E3: Q46 – [If seek out information] Approximately how many hours a month do you spend researching about procedures for caring for pigs from all sources combined?

Time spent	Farmers n=49	Non-Farmers n=264
Less than 1 hour	51%*	23%
1 to 5 hours	29%	42%
6 to 10 hours	14%	25%
11+ hours	6%	5%
Don't know/Prefer not to say	-	4%

Farmers generally agree that they can easily find all the information they need to ensure their pigs are safe from diseases (82% strongly agree/agree). Non-farmers (49% strongly agree/agree) are less certain.

Exhibit E4: Q47 – Please rate your level of agreement with the following statement: I am able to find all of the information I need to know about necessary precautions to ensure my pigs are safe from diseases.

Agreement level	Farmers n=56	Non-Farmers n=299
Strongly disagree	2%	5%
Disagree	4%	5%
Neither agree nor disagree	13%	33%*
Agree	64%*	35%
Strongly Agree	18%	14%
Don't know/Prefer not to say	-	8%

Farmers are less familiar with the role of the CFIA in preventing the spread of ASF (48% not familiar) than non-farmers (21%).

Exhibit E5: Q48 – How familiar would you say you are with the role of the Canadian Food Inspection Agency (CFIA) in preventing the spread of African swine fever in Canada? Use a scale of 1-7 where 1 is not at all familiar and 7 is very familiar.

Familiarity of CFIA role in preventing ASF	Farmers n=56	Non-Farmers n=299
Familiar (6,7)	14%	23%
Somewhat familiar (4,5)	36%	48%
Not familiar (1-3)	48%*	21%
Don't know/Prefer not to say	2%	7%

When it comes to contacting respondents, there are many channels through which they could be reached. Farmers appreciate email newsletters (39%), paper newsletters (29%), direct conversations with the CFIA (29%), dedicated websites (29%) and a telephone information line (27%). Non-farmers are interested in a dedicated website (36%) and would also appreciate email newsletters (29%) and a direct conversation (24%).

Qualitative insights: communicating with pig owners/farmers

Participants were not overly eager for more information on caring for their pigs, but would be open to receiving it. They said that the best ways to reach them would be through email and direct mail. However, based on the connection many participants reported having with their veterinarian, veterinarians' offices may also be an effective way to target this group.

Exhibit E6: Q49 – How would you prefer to receive regulatory information regarding your pigs?

Communication channels	Farmers n=56	Non-Farmers n=299
Dedicated website	29%	36%
Email newsletter	39%	29%
Direct conversation with a regulatory official/Canadian Food Inspection Agency (CFIA) representative	29%	24%
Telephone number/1-800 number with information	27%*	14%
Traditional paper newsletter	29%*	12%
Through direct social media messaging	11%	13%
Conference or convention	14%	11%
Other	4%	-
Don't know/Prefer not to say	4%	14%*

Advertisement preferences

During the qualitative phase, we asked participants who were able to do their interview over Zoom to review 2 advertisements used by the CFIA to raise awareness about ASF among small-scale pork producers. The advertisements can be found in the appendix of this report.

Participants unanimously selected the image of the farmer, little girl and piglets as their preferred execution. Several said that it reminded them of their farm, or reflected their values (for example, family-run operation, providing pigs with lots of outdoor space to move, etc.). 1 farmer stated, "You know, that's, that's what our farm looks like. That's where we raise your pigs."

The second ad gave some the impression that the piglet was being raised at a large pig producing farm with overcrowded conditions. This was inconsistent with how participants described their approach to pig raising.

Conclusions

Awareness of ASF is higher among farmers than non-farmers, but the qualitative research suggests that most do not have a detailed understanding of what it is and what the consequences of it spreading in Canada would be. Well less than half of farmers and non-farmers are very concerned about ASF and do not view it as a big risk to their pigs. Lack of concern can likely be attributed to low levels of detailed understanding, the belief that it is only a problem overseas, and would be well-contained by the authorities here if it arrived. Some are also less concerned because even if their pigs were to become infected with ASF, pig raising is not their livelihood and an outbreak would not impact them financially. Finally, confidence in their own practices may also contribute to the lack of concern about ASF in Canada.

Almost all farmers and non-farmers report taking steps to prevent disease among their pigs. Farmers seem to take more steps overall than non-farmers. The qualitative research supports the finding that most seem to be doing something to prevent disease, but highlights that the measures being taken are not consistent across all producers. They range from strict sanitizing practices to monitoring the feed they give their pigs (though understanding of what the “best” feed is to prevent illness varies).

The lack of detailed knowledge of ASF and the discrepancy in biosecurity measures suggests that the CFIA’s focus on reaching small-scale producers and pig owners is warranted. In order to effectively reach these individuals, the CFIA may need to consider many different communication strategies and channels. Small-scale pig producers and pig owners seem to rely on several sources of information, and view some as more credible than others, particularly on topics such as vaccination.

The research reinforces that the communication strategy that the CFIA pursues should be proactive. Producers spend only a few hours a month looking at information about caring for their pigs and their research currently does not include visiting the CFIA website of their own accord. The CFIA likely will need to draw farmers to the website or other CFIA sources by reaching them through the news, social media sites for small-scale producers, or direct mail. An effective strategy would also include communication of the CFIA’s message via other influential sources.

Veterinarians appear to be one of the most widely used and trusted sources of information. A few explained that they interacted with their veterinarian to get their pigs vaccinated, which could present an opportunity for veterinarians to provide some education about ASF and biosecurity measures. Outreach to veterinarians to ensure they have the information to pass on could be an important part of the communication strategy.

While a vital source of information to some, more than half do not regularly seek veterinary care. This underlines the importance of a multi-pronged communications strategy. Given the high proportion of farmers who rely on word of mouth from their peers for information, it would be worthwhile to identify influencers among this group. These individuals could be feed suppliers, farmers who sell pigs to others to raise, or farm animal rescues.

Appendix A: Survey methodology report

Survey methodology

Earnscliffe Strategy Group's overall approach for this study was to conduct a dual mode survey of a total of 355 small-scale pig producers (56) and pig owners without a registered farm business (299). It was conducted in collaboration with our quantitative sub-contractor, Leger. The telephone interviews were conducted between January 29 and March 2, 2021 and the average interview length was 25 minutes. The online interviews were conducted between February 8 and March 8, 2021 and the average interview length was 9 minutes.

Questionnaire design

The questionnaire for this study was designed by the CFIA and reviewed by Earnscliffe to ensure it would meet the objectives of the research. It was then provided for fielding to Leger. The survey was offered to respondents in both English and French and completed based on their preferences.

Sample design and selection

Leger drew the sample of small-scale pork producers who are not part of any national or provincial pork producer associations from the Dun & Bradstreet list, which was pre-screened for NAICS codes identifying farm operations.

The sample of pig owners without a farm business and who do not belong to any national or provincial pork producer associations was drawn from Leger's proprietary online panel. Panel respondents were screened for big ownership, and to identify whether they or their family members have a farm business or belong to a national or provincial pork producer association.

Information on the size and composition of this target audience was extremely limited. As a result, we made certain assumptions in order to develop a quantitative research approach that was both viable and valuable. By using 2 sources of information – the most recent Census of Agriculture and membership estimates of provincial pork producer organizations – it appeared that approximately 36% of farm operations in Canada have pigs. A review of pork producer association membership tallies suggested that perhaps more than half of these belong to either a federal or provincial organization. Making inferences based upon these 2 points, and assuming that most farm operations that have pigs but have opted not to join a federal or provincial pork association, we estimated that approximately 15% of farm operations in Canada would qualify as the intended target respondents for this survey.

With the size of list of agricultural businesses in Canada, the estimated incidence rate and the estimated response rate, it was further estimated that the maximum number of telephone interviews that could reasonably be undertaken would be approximately 120. That number assumed that we would exhaust the list with multiple attempts at every non-responding number. With the list being a finite universe that would be exhausted, any deviation in estimate of either incidence or response rate would directly result in the number of completes possible.

After developing a sampling plan for farmers, we noted that using the list of agricultural business operations would necessarily exclude people who owned a small number of pigs and would not be found on lists of agricultural business operations. As a result, the Leger panel was surveyed to find the incidence of pig-owners who do not operate as an agricultural business and that incidence turned out to be roughly 2%. In order to capture this segment, an online sample was gathered from Leger's panel. We aimed to collect 200 responses online.

As noted above, reaching 120 interviews by phone would have exhausted the entire sample list of Canadian farm operations. As interviewing progressed, it became apparent that actual incidence was much lower. Consequently, rather than continuing to fully exhaust the list of producers, we shifted additional completes to the online portion of the survey.

Given the lack of information about the size and composition of both samples, we did not make any estimates or set any quotas for a minimum number of respondents within a certain demographic subset or characteristic.

Data collection

The telephone survey was conducted in English and French from January 29 to March 2, 2021. The online survey was conducted in English and French from February 8 and March 8, 2021. The survey was undertaken by Leger's online opt-in panel and virtual call-centre and state of the art Computer Aided Telephone Interviewing (CATI) system.

In total, 299 interviews were conducted online and 56 were conducted by phone. As noted earlier, we had originally planned for 120 interviews by phone and 200 online, but shifted more completes to online as we discovered that the incidence rate of farmers who fit the profile of individuals we wished to reach on the D&B list was lower than we had anticipated.

Targets/weighting

Due to a lack of information about universe from which we drew the sample, the data was not weighted.

Reporting

Results with an asterisk (*) in this report indicate that the difference between the demographic groups analysed are significantly higher than results found in the other table column. In the text of the report, unless otherwise noted, differences highlighted are statistically significant at the 95% confidence level. The statistical test used to determine the significance of the results was the Z-test.

In the appended tables, statistically significant results are indicated using uppercase letters. If a percentage is accompanied by an uppercase letter, that means it is significantly higher than the result in the column associated with the uppercase letter.

Quality controls

Leger conducted a soft-launch pre-test of the survey both online and by phone, and Earnscliffe reviewed the data to ensure that all skip patterns were working and that all respondents were completing the survey in an appropriate amount of time.

Leger's data collection quality control process as it relates to telephone interviewing is concretely based on the following elements:

- Assigning every project a project leader who is ultimately responsible for the quality of the final product, thereby strengthening the sense of internal responsibility;
- Ensuring that the client's objectives precisely correlate with the final questionnaire, strictly ensuring that all targeted dimensions are unequivocally included in the guide;

- Individually examining the formulation of every question beforehand to ensure simplicity of expression, clear syntax and a precise notion of the field covered;
- Looking for contamination effects beforehand, that is ensuring that the location of a question in the questionnaire does not have an undue effect on the following answers (this is generally done by providing information indirectly to the participants, thereby rendering the sampling unrepresentative);
- A strict comparison of the computerised version of the questionnaire with the reference questionnaire approved by the client;
- Checking the programmed jumps in the computerised system before the pre-test;
- Holding a pre-test to ensure the questions are easily understood, to check the concepts, and to look for any possible ambiguities or logical jumps in the questions, etc. The pre-test is preferably held in the presence of the client (audio monitoring) and interviewers are debriefed afterwards so all dimensions can be explored;
- Using the best interviewers, from our Elite network, for the pre-test, since their thousands of hours of field experience enable them to quickly discern any questions that are badly written, ambiguous, unclear or too general. No one is better suited to detect anomalies at this stage where they can still be easily corrected;
- In-depth training of interviewers so they understand the context of every study and the meaning of every question;
- Insistence on open or semi-open questions, in order to specify the type of answer expected and to avoid vague and general answers as much as possible;
- Heavy monitoring by the supervisors to facilitate the detection of any problematic questions. This involves being attentive to the interviewers’ thoughts and concerns and encouraging them to voice them, even after the pre-test;
- Constant audio monitoring of the survey, along with simultaneous monitoring of the information entered into the computer. This allows the supervisor to control the quality of the interview and the correct correlation between the information supplied and the codes entered;
- Using software that does not allow input errors or unexpected jumps, etc. The logical validation is therefore carried out beforehand and not after the fact;
- Constant rigour throughout the process, but particularly at the beginning insofar as the comprehensibility of the questions is concerned. Even if the pre-test has already taken place, the complexity and length of the questionnaires means that some questions might have to be modified to ensure they are more easily understood (without modifying the sense). These modifications are always carried out in complete agreement with the client;
- Open questions are coded according to an initial sampling of answers in the file and by the creation of codes that are submitted to the client for approval.
- The interviewers’ performance is monitored on a daily basis using the Command Center software which enables corrections to be carried out quickly.

Results

Final dispositions - online

A total of 71,990 individuals entered the online survey, of which 299 qualified as eligible and completed the survey.

Total Entered Survey	71990
Completed	302
Not Qualified/Screen out	70522
Over quota	0

Suspend/Drop-off	1166
Unresolved (U)	194485
Email invitation bounce-backs	522
Email invitations unanswered	193963
In-scope - Non-responding (IS)	1166
Non-response from eligible respondents	N/A
Respondent refusals	N/A
Language problem	N/A
Selected respondent not available	N/A
Qualified respondent break-off	1166
In-scope - Responding units (R)	70824
Completed surveys disqualified – quota filled	0
Completed surveys disqualified – other reasons	70525
Completed surveys	299
Response Rate = R/(U+IS+R)	26.58%

Final dispositions - telephone

	Total
Total Numbers Attempted	20213
Invalid	1046
NIS, fax/modem, business/non-res.	3977
Unresolved (U)	8750
Busy	69
No answer, answering machine	8681
In-scope - Non-responding (IS)	4870
Household refusal	3804
Respondent refusal	
Language problem	37
Illness, incapable	193
Selected respondent not available	657
Qualified respondent break-off	179
In-scope - Responding units (R)	1570
Language disqualify	1514
No one 18+	
Other disqualify	
Completed interviews	56

Response Rate = $R/(U+IS+R)$

10.33%

Nonresponse

Respondents for the online survey were selected from among those who have volunteered to participate in online surveys by joining an online opt-in panel. The notion of non-response is more complex than for random probability studies that begin with a sample universe that can, at least theoretically, include the entire population being studied. In such cases, non-response can occur at a number of points before being invited to participate in this particular survey, let alone in deciding to answer any particular question within the survey.

Margin of error

Respondents for the online survey were selected from among those who have volunteered to participate/registered to participate in online surveys. Because the online sample is based on those who initially self-selected for participation in the panel, no estimates of sampling error can be calculated for the online sample. The treatment here of the non-probability sample is aligned with the Standards for the Conduct of Government of Canada Public Opinion Research for online surveys.

While we do not know the exact size of the population of pig farmers who fit the profile of this study, we can provide an estimate of the margin of error for the telephone sample. The margin of error for a sample of 56 Canadians would be 13.1%. Based on that calculation and knowing that the number of pig farmers in Canada is significantly less than the total population, the margin of error cannot be greater than 13.1%.

Survey duration

The median survey duration was 9 minutes online and 25 minutes by phone.

Appendix B: Survey instrument

Survey questionnaire

Canadian Food Inspection Agency African swine fever

Telephone survey introduction

Hello/Bonjour. My name is _____ and I am calling from Earnscliffe Strategy Group, a public opinion research company. We are conducting a survey for the Government of Canada to gain insights into understanding and views on issues important to Canadians. The survey takes about 15 minutes to complete and is voluntary and completely confidential.

Would you prefer that I continue in English or French? Préférez-vous continuer en français ou anglais?

Your participation in this survey is voluntary. Please be assured that your responses are confidential and will not be reported individually nor attributed to you personally. May I continue?

Yes

No

And, just to confirm, have I reached you on a landline phone or a cell phone?

Landline

Cell phone

Don't know/Refused

For your safety, are you currently driving?

Yes – SCHEDULE CALLBACK

No

Don't know/Refused

*THOSE WHO ARE NOT ELIGIBLE: Thank you for your willingness to take part in this survey, but you do not meet the eligibility requirements of this study

ALL WHO ARE ELIGIBLE: Thank you, let's begin the survey.

Email invitation

LA VERSION FRANÇAISE SUIT

Welcome and thank you for your interest in this study. Earnscliffe Strategy Group, in collaboration with Leger Marketing, has been hired to administer an online survey on behalf of the Government of Canada. The purpose of the study is to gain insights into understanding and views on issues important to Canadians.

This online survey will take about 15 minutes to complete. Your participation in the study is voluntary and completely confidential. All your answers will remain anonymous and will be combined with responses from all other respondents. As a token of our appreciation for your participation, you will receive [insert reward]. If you have any questions about the survey or if you encounter any difficulties, please email [INSERT EMAIL CONTACT].

To begin, click on the link below.

[URL]

Online landing page

Welcome and thank you for your interest in this study. Earnscliffe Strategy Group, in collaboration with Leger, has been hired to administer an online survey on behalf of the Government of Canada. The purpose of the study is to gain insights into understanding and views on issues important to Canadians.

Your responses to this survey will be kept entirely confidential and any information you provide will be administered in accordance with the Privacy Act and other applicable privacy laws. Do you wish to continue?

Yes

No [TERMINATE]

1. In what year were you born?

[INSERT YEAR. IF YOUNGER THAN 18 YEARS, THANK and TERMINATE]

2. [TELEPHONE ONLY] Do you keep (or plan to keep) any pigs on your property? Please include any pigs that you own, board, or otherwise keep on your property. Do not include wild pigs that you have seen on your property.

Yes	1
No [Thank and terminate]	2
[DO NOT READ] I don't know [Thank and terminate]	9

3. [ONLINE ONLY] Please indicate if you or someone in your household owns:

a) Any type of pig as a pet [If yes, thank and terminate]

b) Any type of pig for consumption/farming purposes

Yes	1
No [Thank and terminate]	2
Don't know/Prefer not to say	9

4. [ONLINE ONLY] Do you or does someone in your household operate a farming or agricultural production business of any kind?

Yes [Thank and terminate]	1
No	2

Don't know/Prefer not to say [Thank and terminate]	9
5. Do you or does someone in your household belong to a provincial or national pork producer or hog/pig farmer association?	
Yes [Thank and terminate]	1
No	2
Don't know/Prefer not to say [Thank and terminate]	9
6. In a typical year, how many pigs on average do you keep (or plan to keep) on your property? Please include any pigs that you own, board, or otherwise keep on your property. Do not include wild pigs that you have seen on your property.	
Open end record number (take highest number if range is given)	1
[DO NOT READ] Prefer not to say [thank and terminate]	9
7. How many years have you kept or cared for pigs?	
Less than 1 year	1
1 to 5 years	2
6 to 10 years	3
11-20 years	4
20+ years	5
[DO NOT READ] Don't know/Prefer not to say	9
8. Why do you keep pigs? (Check all that apply)	
Food for myself, family or friends	1
Hobby	2
To use for trading or bartering for products from other farmers	3
Pet	4
To sell them/generate income	5
Boarding someone else's pigs	6
Others, please specify_____	7
[DO NOT READ] Don't know/prefer not to say	9
9. You indicated you have kept pigs for [Insert answer from Q5] How would you rate your knowledge when it comes to caring for pigs?	
Beginner	1
Intermediate	2
Advanced	3
Expert	4
[DO NOT READ] Don't know/Prefer not to say	9

10. How do you acquire new pigs? (Select all that apply).

Auction	1
Physical market	2
Online market	3
Buy directly from another pig owner/farmer	4
I breed new pigs from the ones I own	5
I board pigs owned by someone else	6
Other, please specify:	7
[DO NOT READ] Don't know/Prefer not to say	9

11. Over the past 12 months have you seen, read or heard anything about pig diseases?

Yes	1
No [Skip to Q11]	2
[DO NOT READ] Don't Know/Prefer not to say [Skip to Q11]	9

IF YES TO Q11 ASK Q12

12. What specifically have you seen, read or heard?

[OPEN]

[DO NOT READ] Don't remember

If Q12 = ASF, code as yes below ask Q14

13. In the last 12 months have you seen, read or heard anything about African swine fever (ASF)

Yes	1
No [Skip to Q15]	2
[DO NOT READ] Don't know/prefer not to say [Skip to Q15]	9

14. What specifically have you heard about ASF?

[OPEN]	1
[DO NOT READ] Don't remember	9

15. How concerned are you that your pigs could contract a virus or will develop a disease that could harm them or cause death? Use a scale of 1-7 where 1 is not at all concerned and 7 is very concerned.

Not at all concerned	1
	2
	3

- | | |
|--|---|
| | 4 |
| | 5 |
| | 6 |
| Very concerned | 7 |
| [DO NOT READ] Don't know/Prefer not to say | 9 |
- [If Q15 answer = 1-3, skip to Q17]
16. Pigs could become infected by different means. Which sources of infection are you most concerned about? Select all that apply. [RANDOMIZE]
- | | |
|--|---|
| Wild pigs/boars that are infected with a virus that come into contact with your pigs | 1 |
| Your pigs eating food that carries viruses and diseases | 2 |
| Visitors to your property carrying viruses or disease from other farms | 3 |
| Getting a virus by coming into contact with equipment or vehicles borrowed from another farm | 4 |
| Developing an illness or disease on their own (no known transmission) | 5 |
| Other, please specify_____ | 6 |
| I am not concerned about my pigs getting infected [SINGLE SELECT] | 7 |
| [DO NOT READ] Don't know/Prefer not to say [SINGLE SELECT] | 9 |
17. How much of a risk do you think African swine fever currently poses to your pig(s)?
- | | |
|--|---|
| No risk at all | 1 |
| Low risk | 2 |
| Moderate risk | 3 |
| High risk | 4 |
| Very high risk | 5 |
| [DO NOT READ] Don't know/Prefer not to say | 9 |
18. To the best of your knowledge, what is the likelihood that African swine fever will be found in Canada?
- | | |
|--|---|
| Very unlikely | 1 |
| Unlikely | 2 |
| Likely | 3 |
| Very likely | 4 |
| [DO NOT READ] Don't know/Prefer not to say | 9 |
19. If African swine fever were to ever spread to Canada, which of the following precautions are you currently aware of that could be implemented? (Select all that apply) [ROTATE]
- | | |
|---|---|
| Imposition of control zones and movement restrictions | 1 |
| A culling of healthy animals | 2 |
| Suspension of pig exports, including pork, pork products or live pigs | 3 |
| Other, please specify_____ | 4 |
| [DO NOT READ] Don't know [SINGLE SELECT] | 9 |

20. If African swine fever were to ever spread to Canada, how much do you think it would affect your pig-related activities (for example, acquiring, owning, selling, etc.)?

No negative effect on my pig-related activities – I will continue with business as usual	1
Minor negative effect on my pig-related activities – I will need to make small adjustments in how I control and care for my pigs	2
Large negative effect on my pig-related activities – I will need to make large adjustments in how I control and care for my pigs	3
Very large negative effect on my pig-related activities – I will likely not be able to own pigs anymore	4
[DO NOT READ] Don't know/Prefer not to say	9

21. Please rate your level of agreement with the following statement:

I know all the best on-farm practices to prevent African swine fever from spreading to my pigs

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly Agree	5
[DO NOT READ] Don't know/Prefer not to say	9

22. If your pigs were to show symptoms of disease or illness, who would you contact? Select all that apply. [RANDOMIZE]

A veterinarian	1
Other pig farmers in the area	2
Pork associations	3
Federal government/Canadian Food Inspection Agency	4
Provincial government (Provincial health authorities)	5
Local government (local health authorities)	6
[DO NOT READ] Don't know/Prefer not to say [SINGLE SELECT]	9

23. Are you aware that if you suspect your pig is infected with African swine fever you must report it to the Canadian Food Inspection Agency, as ASF is a reportable disease under the Health of Animals Act?

Yes	1
No	2
[DO NOT READ] Prefer not to say	9

24. If African swine fever were to ever spread to Canada, how confident are you in government regulators' ability to control the spread so that it is contained quickly? Use a scale of 1-7 where 1 is not at all confident and 7 is very confident

Not at all confident	1
	2
	3
	4
	5
	6
Very confident	7
[DO NOT READ] Don't know/Prefer not to say	9

25. Approximately, what percentage of time do your pigs spend inside and outside?

___% Indoor	1
___% Outdoor	2
[DO NOT READ] Don't know/prefer not to say	9

26. Where do you keep your pig(s)? (Select all that apply).

Fenced off area to roam	1
Unfenced area to roam	2
A small structure (including small barn)	3
Indoor - grouped in pens	4
Indoor - individual stalls/pens	5
Indoor - in my house as a pet	6
Other, please specify:	7
[DO NOT READ] Don't know/prefer not to say [SINGLE SELECT]	9

27. Do your pigs ever come into contact with other pigs that you do not own or keep, such as pigs on other farms?

Yes	1
No	2
[DO NOT READ] Don't know/Prefer not to say	9

28. [If Q8 = Boarding someone else's pigs] Do you keep the pigs you board separate from other pigs on your property?

Yes	1
No	2
I do not keep any pigs besides the ones that I board for others	3
[DO NOT READ] Don't know/Prefer not to say	9

29. Do you allow visitors to your property to interact with your pigs?

Yes	1
No	2
[DO NOT READ] Don't know/Prefer not to say	9

30. Do you or any other people who interact with pigs on your property, such as family or workers also interact with pigs on other properties regularly?

Yes	1
No	2
[DO NOT READ] Don't know/Prefer not to say	9

31. Have you seen any wild pigs or evidence of wild pigs on your property? Evidence could include droppings, footprints, etc.

Yes	1
No	2
[DO NOT READ] Don't know/Prefer not to say	9

32. Do you implement measures to reduce the risk of your pigs developing a disease?

Yes	1
No [Skip to Q34]	2
[DO NOT READ] Don't know/Prefer not to say [Skip to Q34]	9

33. [If Q32 = "yes"] Which of the following measures do you use to reduce the risk of disease in your pigs? (Select all that apply) [RANDOMIZE]

I provide physical barriers such as fences and gates to prevent my pigs from coming into contact with wildlife	1
I put up signage to inform people to not feed my pigs	2
I avoid sharing equipment with other pig owners or farmers	3
I implement controls for rodents or other pests that could spread disease	4
I wash my hands either before or after I interact with my pigs	5
I wash my clothes or my equipment either before or after interacting with my pigs	6
I have dedicated clothes or equipment that is only used for interacting with my pigs	7
I control how visitors interact with my pigs, including washing their hands or notifying me of the visit ahead of time	8
I seek advice from my vet as soon as signs of disease or illness are observed in my pigs	9
I only acquire pigs from reputable suppliers/sources	10
I do not interact with my pigs for a period of time after I interact with pigs on other properties	11
I isolate new pigs for 14 days before introducing them to any other pigs I have on my property	12
Other, please specify_____	13

I don't undertake any specific measures [SINGLE SELECT]	98
[DO NOT READ] Don't know/prefer not to say [SINGLE SELECT]	99

34. What is the main source of food for your pigs? [RANDOMIZE]

Pig feed – made by you or someone on your farm using plant-based feed ingredients	1
Pig feed – pre-mix from a feed supplier	2
Food scraps/leftover from human food	3
Leftover feed for other animals	4
Other: _____	5
[DO NOT READ] Don't know/Prefer not to say	9

35. In the last year, have you fed your pigs any of the following? (Select all that apply). [RANDOMIZE]

Pig feed purchased from a reputable store or supplier	1
Pig feed I made myself	2
Feed purchased from other farmer or another person who keeps pigs or other animals	3
Leftover feed for other animals on your farm	4
Fruit or vegetable scraps/left over fruit or vegetables from a kitchen or restaurant or similar source	5
Other food scraps/left over food originally meant for human consumption (for example, kitchen, restaurant, or similar source)	6
Other, please specify:	7
[DO NOT READ] Don't know/Prefer not to say [SINGLE SELECT]	9

36. Are you aware of any risks to your pigs if you feed them food scraps that are left over after others have already come into contact with it (for example, kitchen or restaurant waste/leftovers)

Yes	1
No	2
[DO NOT READ] Prefer not to say	9

37. Which of the following do you use as a water source for your pigs? (Select all that apply).

Surface water (for example, ponds, creeks or reservoirs)	1
Municipal water supply	2
Collected rainwater (not including puddles or reservoirs)	3
Well water	4
Other, please specify:	5
[DO NOT READ] Don't know/Prefer not to say [SINGLE SELECT]	9

Section Objective: Discover the perceived barriers to sound biosecurity practices.

38. How familiar are you with the national biosecurity standards? Use a scale of 1-7 where 1 is not at all familiar and 7 is very familiar.

Not at all familiar	1
	2
	3
	4
	5
	6
Very familiar	7
[DO NOT READ] Don't know/Prefer not to say	9

39. What are some barriers that stop you from doing more to prevent your pigs from getting diseases? Select all that apply.

It is too expensive to implement any more measures	1
It is too difficult to implement any more measure	2
I do not have the time to do anything more	3
I do not know enough about what measures to take to prevent diseases	4
Other, please specify_____	5
[DO NOT READ] I do not face any barriers [SINGLE SELECT]	6
[DO NOT READ] Prefer not to say [SINGLE SELECT]	9

40. In the last year, have you sought veterinary care for your pigs?

Yes	1
No [Skip Q41]	2
[DO NOT READ] Don't know/Prefer not to say	9

41. [If Q40 = "yes"] Which of the following best describes how often your pigs receive veterinary care?

Regularly - At least once every 6 months	1
Regularly - At least once a year	2
Only when there is something wrong with them	3
Other, please specify_____	4
[DO NOT READ] Don't know/Prefer not to say	9

42. [If Q40 = "no"] Why do you not get regular veterinary care for your pigs? Select all that apply.

I cannot easily find a veterinarian or veterinary care	1
I do not feel the need to contact a veterinarian	2
My pigs are not meant as a food source, so they do not need to be checked unless they are obviously sick	3
I do not trust veterinarians	4
I cannot afford a veterinarian	5
Other, please specify_____	6
[DO NOT READ] Don't know/Prefer not to say	9

43. If one of your pigs were to die or needed to be euthanized which of the following steps would you be most likely to take to dispose of it? SINGLE SELECT [RANDOMIZE]

Sell it to anyone who wants it	1
Bury it in the ground	2
Donate it to science or research	3
Use a waste collection service specializing in livestock	4
Work with a veterinarian to find out why it died	5
Bring it to the local dump/garbage disposal location	6
Other, please specify:	7
I do not know what I would do	8
[DO NOT READ] Prefer not to say	9

44. Which of the following sources do you use to find information on caring for pig(s)? (Select all that apply) [RANDOMIZE]

Federal Government	1
Provincial Government	2
Your veterinarian	3
Provincial Pork Boards (for example, Alberta Pork, SaskPork, Manitoba Pork, Ontario Pork)	4
Industry Associations (for example, Canadian Pork Council)	5
Industry publications on social media	6
Social media groups	7
Online discussion boards and forums	8
Flyers and other takeaways where I purchase farm supplies	9
Word of mouth from other pig farmers	10
Specific websites (for example, National Hog Farmer, The Pig Site)	11
Other, please specify:	97
I do not search for information from any sources [SINGLE SELECT]	98
[DO NOT READ] Don't know/prefer not to say [SINGLE SELECT]	99

45. Which of those sources do you trust the most?

- (Carry forward previous answers, select only one option)

46. [If Q44 is not “I do not search for information from any sources” or “don’t know/prefer not to say”]
Approximately how many hours a month do you spend researching about procedures for caring for pigs from all sources combined?

Less than 1 hour	1
1 to 5 hours	2
6 to 10 hours	3
11+ hours	4

[DO NOT READ] Don't know/Prefer not to say 9

47. Please rate your level of agreement with the following statement:

I am able to find all of the information I need to know about necessary precautions to ensure my pigs are safe from diseases.

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly Agree	5
[DO NOT READ] Don't know/prefer not to say	9

48. How familiar would you say you are with the role of the Canadian Food Inspection Agency (CFIA) in preventing the spread of African swine fever in Canada? Use a scale of 1-7 where 1 is not at all familiar and 7 is very familiar.

Not at all familiar	1
	2
	3
	4
	5
	6
Very familiar	7
[DO NOT READ] Don't know/Prefer not to say	9

49. How would you prefer to receive regulatory information regarding your pigs? [SELECT ALL THAT APPLY]

Direct conversation with a regulatory official/Canadian Food Inspection Agency (CFIA) representative	1
Email newsletter	2
Traditional paper newsletter	3
Dedicated website	4
Through direct social media messaging	5
Conference or convention	6
Telephone number/1-800 number with information	7
Other, please specify _____	8
[DO NOT READ] Don't know/prefer not to say [SINGLE SELECT]	9

The last few questions are strictly for statistical purposes. All of your answers are completely confidential.

50. Please indicate your gender.

Male	1
Female	2

Gender diverse	3
[DO NOT READ] Prefer not to answer	9

51. Which of the following provinces or territories do you live in?

Newfoundland and Labrador	1
Nova Scotia	2
Prince Edward Island	3
New Brunswick	4
Quebec	5
Ontario	6
Manitoba	7
Saskatchewan	8
Alberta	9
British Columbia	10
Yukon	11
Nunavut	12
Northwest Territories	13
[DO NOT READ] Prefer not to say	99

52. What is the highest level of formal education that you have completed?

Grade 8 or less	1
Some high school	2
High school diploma or equivalent	3
Registered apprenticeship or other trades certificate or diploma	4
College, CEGEP or other non-university certificate or diploma	5
University certificate or diploma below bachelor's level	6
Bachelor's degree	7
Post graduate degree above bachelor's level	8
[DO NOT READ] Don't know/Prefer not to answer	99

53. Are you an Indigenous person, that is, First Nations (North American Indian), Métis or Inuk (Inuit)?

Yes [SKIP TO Q55]	1
No	2
[DO NOT READ] Don't know/Prefer not to answer	9

54. [IF NOT INDIGENOUS] Are you...? [SELECT UP TO 3]

White	1
South Asian (for example, East Indian, Pakistani, Sri Lankan, etc.)	2
Chinese	3

Black	4
Filipino	5
Latin American	6
Arab	7
Southeast Asian (for example, Vietnamese, Cambodian, Malaysian, Laotian, etc.)	8
West Asian (for example, Iranian, Afghan, etc.)	9
Korean	10
Japanese	11
Other [SPECIFY]	98
[DO NOT READ] Don't know/Prefer not to answer	99

55. What is the language that you speak most often at home?

English	1
French	2
Other	8
[DO NOT READ] Don't know/Prefer not to say	9

56. Which of the following categories best describes your total **household** income? That is, the total income of all persons in your household combined, before taxes?

Under \$20,000	1
\$20,000 to just under \$40,000	2
\$40,000 to just under \$60,000	3
\$60,000 to just under \$80,000	4
\$80,000 to just under \$100,000	5
\$100,000 to just under \$150,000	6
\$150,000 and above	7
[DO NOT READ] Don't know/Prefer not to answer	9

57. Would you describe the community you live in as...

Urban	1
Suburban	2
Rural	3
Remote	4
[DO NOT READ] Don't know/Prefer not to say	9

58. What are the first 3 characters of your postal code?

[RECORD]
[DO NOT READ] Don't know/Prefer not to say

We may conduct follow-up qualitative research about the topics covered in this survey.

This would take the form of a phone interview with a research professional, between 30 and 40 minutes in duration. Participants would receive an honorarium as a thank you for their time.

Participating in the next phase of research is completely voluntary. If you are interested, you will be required to provide your first name, last name, a contact telephone number and email to be screened for the interview. Please note that this information will not be used for any analysis of your responses and will only be used if you are selected to be among those invited to participate in a subsequent qualitative phase of research.

59. Would you be interested in participating?

Yes

No

60. [IF YES] Thank you for your interest. Please provide the following contact information

[FIRST NAME]

[LAST NAME]

[PHONE NUMBER]

[EMAIL]

[PRE-TEST ONLY ADD QUESTIONS A THRU J]

- A. Did you find any aspect of this survey difficult to understand? Y/N
- B. [IF A=YES] Please describe what you found difficult to understand.
- C. Did you find the way of the any of the questions in this survey were asked made it difficult for you to provide your answer? Y/N
- D. [IF C=YES] Please describe the problem with how the question was asked.
- E. Did you experience any difficulties with the language? Y/N
- F. [IF E=YES] Please describe what difficulties you had with the language.
- G. Did you find any terms confusing? Y/N
- H. [IF G=YES] Please describe what terms you found confusing.
- I. Did you encounter any other issues during the course of this survey that you would like us to be aware of? Y/N
- J. [IF I=YES] What are they?

This concludes the survey. Thank you for your participation!

Appendix C: Interview methodology report

Methodology

The qualitative phase included a series of 20 qualitative interviews with small-scale pork producers who do not belong to any national or provincial pork producer associations. 5 interviews were conducted in French and 15 were conducted in English. 7 were conducted online via Zoom, while the remaining 13 were conducted by phone. The interviews were approximately 30 minutes in length. The interviews were conducted between February 16 to March 4, 2021. Participants were given an honorarium of \$175 as a thank-you for their time.

Recruitment

Participants were recruited using a screening questionnaire (included in Appendix E).

The target audiences were small-scale pork producers who do not belong to a national or provincial pork producer association. The screener contained a series of standard screening questions to ensure participants qualified based on the animals they own and to ensure they did not belong to an association. The screener also included a question to determine how many pigs the participants owns. An effort was made to recruit participants with just a few (1 to 5) pigs.

Our recruitment partner, Decision Point, relied on the Dun & Bradstreet list, pre-screened for farm business NAICS codes, to recruit participants.

Moderation

2 interviewers were used to conduct the interviews. Each interviewer takes notes and summarizes their interviews. Together, they discuss the findings on an ongoing basis in order to allow for probing of areas that require further investigation in subsequent interviews and before the final results are reported.

A note about interpreting qualitative research results

It is important to note that qualitative research is a form of scientific, social, policy, and public opinion research. Focus group research is not designed to help a group reach a consensus or to make decisions, but rather to elicit the full range of ideas, attitudes, experiences and opinions of a selected sample of participants on a defined topic. Because of the small numbers involved the participants cannot be expected to be thoroughly representative in a statistical sense of the larger population from which they are drawn and findings cannot reliably be generalized beyond their number.

Appendix D: Discussion guide

Objectives:

- Gain a better understanding of the level of awareness of African swine fever among small-scale farmers and of the measures in place on their farms to mitigate the risk of ASF
- Discover what resources may be needed to put in place biosecurity practices
- Discover the perceived barriers to sound biosecurity practices
- Uncover how small-scale farmers stay informed on animal health issues (such as African swine fever) that could impact their farms and what sources of information they rely on
- Gather feedback on how to best communicate with small-scale farmers on African swine fever as well as other potential foreign animal diseases and animal health issues

Name:

Date/Time:

Conference Login (if applicable):

Interview conducted by:

Thank you for agreeing to take part in this research project on behalf of the Canadian Food Inspection Agency (CFIA). The research will be used to help the CFIA better understand your views, information consumption and activities relating to the few pigs you have.

As a reminder:

- There are no right or wrong answers, so please speak as openly and frankly about opinions.
- Results are confidential. Your name is anonymous and your views, as well as those of others participating in the research, are compiled into a report that will provide feedback to the CFIA.
- We will be recording the interview for reporting purposes as it is difficult to take notes and lead the discussion at the same time. With your approval, we would also like to share the recordings with the CFIA so they can hear your views firsthand.
 - Do you approve of us recording the interview?
- The interview will last approximately 30 to 40 minutes.

We really appreciate you taking the time to talk with us today and share your experiences. Your views and opinions are extremely important.

Pig ownership and operational profile

I would like to begin by asking a few questions about your experience keeping and caring for pigs.

- When we reached out to invite you to participate in this research, you indicated that you keep pigs on your property. How many do you have currently and for how many years have you been keeping or caring for pigs?
 - Can you describe where you keep them and what routines you have in tending to them?
 - Excluding pets, do you keep other animals on your property? Are your facilities or practices different for those other animals?
- Why do you keep pigs? How do you market them (or maybe you don't)?

- [PROMPT AS NEEDED] Do you keep them: as a food source, as a hobby, to trade/sell, as a pet, etc.
- Do you consider yourself a pig farmer? Why do you say that?
- How would you rate your knowledge when it comes to keeping and caring for pigs? Would you say you are a beginner, intermediate, advanced or expert?
 - Why do you rate your knowledge that way?
 - Do you feel you need to learn more?

Awareness and knowledge of pig diseases

- Generally speaking, how concerned are you about your pigs contracting any sort of virus or disease? Why do you say that?
- Are you aware of potential sources of infection that could affect your pigs?
 - What are they? Do some concern you more than others? Why?
- Have you heard, read or seen anything in the last 12 months about any pig diseases?
 - What was it? How did you hear about it?
 - How did you feel about what you heard? Did it cause you to take any action?
 - [IF ASF NOT MENTIONED] What have you heard about it? How did you hear about it?
 - [IF ASF NOT MENTIONED] Has it affected your operations, processes, facilities or behaviour in anyway? If so, how?
- [IF ASF NOT MENTIONED] Have you heard, read or seen anything in the last 12 months about African swine fever?
 - What was it? How did you hear about it?
 - How did you feel about what you heard? Did it cause you to take any action?
 - Do you feel African swine fever poses a risk to your pigs?
 - How concerned are you about ASF? Why do you say that?
- How concerned are you about African swine fever? Why do you say that?
 - Do you feel African swine fever poses a risk to your pigs?

Barriers to biosecurity measures

- Is there anything you do specifically to prevent the spread of disease to or among your pigs?
 - What are the measures you take to prevent the spread of disease? Are they something you've always done to protect your pigs, or started more recently?
 - How do you seek out information about measures to prevent disease?
 - How important do you feel these measures are?
 - [IF DO NOT HAVE MEASURES IN PLACE] Is there a reason why you do not have any of these sorts of measures in place? What is it?
- Do you feel you know enough about measures to prevent disease in order to protect your pigs from it? Why or Why not?
- Are you familiar with the national biosecurity standards that relate to pigs/the hog sector?
 - [IF YES] Which standards are you aware of? Where did you hear of them? Can you explain them? How do they affect you/your pigs?

- [IF NO] Is there a reason why you're not familiar with them? Have you tried to find out about them before? Where would you go to find information about these standards?
- Do you feel these national biosecurity standards relate to you and your pigs?
- Do you feel there are any other measures you could be taking to prevent your pigs from getting diseases?
 - [IF YES] What are they? Why haven't you put them in place yet?
 - [IF NO] Do you think the measures you have in place are sufficient? Why?
- Is there anything that stops you from taking measures to prevent your pigs from getting diseases?
 - [PROMPT AS NEEDED FOR ANYTHING RELATED TO COST, TIME, ETC.]
- How often do you seek out veterinary care for your pigs?
- [IF SEEK OUT CARE] For what reasons do you usually contact your vet or seek veterinary care for your pigs?
- [IF DO NOT SEEK CARE] Why do you not seek out veterinary care for your pigs?
- How important is it to you to get regularly veterinary care for your pigs? Why do you say that?

Communication and information sources

- Do you seek out information on caring for pigs? Why or why not?
 - How much time do you spend looking for this information? Is it something you do regularly, or just on occasion?
 - If you found the information, was it easy or hard to understand? If hard, please elaborate why?
- Which sources do you use to find information on caring for pigs?
 - Are there any sources you feel are more trustworthy than others? Why/why not?
 - Do you attend any townhalls or conferences on caring for pigs?
 - Do you use social media to look for information? Do you find social media a trustworthy source? Are you afraid of social media's ability to amplify potentially "fake news"?
 - When you find out information, are you likely to share that with other pig farmers? How sure would you have to be of the information before sharing with someone else?
 - What would you consider an "official source" for information on caring for pigs? For example: Government? Experienced farmers? Others?
 - Do you wish there was more information available? If yes, on which topics in particular?
 - What about industry associations, you don't belong to one, any thoughts about them?
- When do you search for information on caring for pigs?
 - Does your information search or your sources change as you became more experienced? How?
 - Are there sources that you used previously that you no longer use? Why or why not?
 - When looking for information on caring for pigs, do you ever consider if the information is telling you about a best practice or something that is legally mandatory?
 - Have you ever reached out to the Canadian Food Inspection Agency for information? If yes, how did you feel reaching out to them? If no, would you feel comfortable reaching out them?
- Have you ever visited the Canadian Food Inspection Agency's website for information on caring for pigs? If yes, what information were you looking for?
 - Did you find the information you needed?

- Do you feel you need to receive information about regulations regarding your pigs? If the Government of Canada feels it is important to get you information about regulations relating to your pigs, how would you prefer to receive that information?
- Are you a member of a national or provincial association for pig farming? If yes, are those groups good sources of information?
- Why or why not?

Image review

I am now going to show you some photos that are being used as online advertisements that link to information about African swine fever. Which of the following pictures do you like for online advertising for informing pig farmers of the dangers and precautions for African swine fever? Would you be more willing to click on one over the other? Why or why not?

Image A



Description for photo - Image A

A photo used for an online advertisement that says "Close the gate on African swine fever. Get the checklist."

Image B



Description for photo - Image B

A photo used for an online advertisement that says "Close the gate on African swine fever. Get the checklist."

Conclusion

This wraps up all of the formal questions I had for you today.

- Before we conclude, do you have any final thoughts and/or advice you would like to pass along?

We really appreciate you taking the time to speak with us today. Your input will be very helpful to help the CFIA as they aim to gather information about how producers think about and manage biosecurity.

Appendix E: Screener

In-depth interview summary

- 20 1-on-1 interviews
- Producers who own pigs and are not part of provincial or national pork/pig farmer associations
- Aim for good mix of provinces and territories in Canada
- Minimum 5 in French
- 30-40 minutes
- \$175 incentive

Hello/Bonjour, my name is _____. I am calling on behalf of the Earnscliffe Strategy Group, a national public opinion research firm. Would you prefer to continue in English or French? / Prêférez-vous continuer en anglais ou en franais?

From time to time, we solicit opinions by talking with people. We are preparing to conduct a series of 1 on 1 interviews on behalf of the Government of Canada, more specifically the Canadian Food Inspection Agency (CFIA), and I would like to speak with you about your understanding and views on biosecurity. Please note this is not a sales call, this important research will help the Government understand producers' views on biosecurity. May I continue?

Yes CONTINUE

No ASK TO BE DIRECTED TO THE CORRECT PERSON. REPEAT FROM BEGINNING IF TRANSFERRED.

We are reaching out today to ask you to participate in a discussion to share your views biosecurity. Participation is voluntary. We are interested in hearing your opinions; no attempt will be made to sell you anything or change your point of view. The format is a 1 on 1 interview, lasting between 30 to 40 minutes, with a research professional. All opinions expressed will remain anonymous and views will be grouped together to ensure no particular individual can be identified. Participants will receive an honorarium of \$175 for their participation. But before we invite you to attend, we need to ask you a few questions to ensure that we get a good mix and variety of people. May I ask you a few questions?

INTERVIEWER NOTE: If a participant asks for information on this research project they can be told: Earnscliffe Strategy Group is located at 46 Elgin Street, Suite 400, Ottawa, ON K1P 5K6.

If a participant asks for information on the Government of Canada sponsor, they can be told: Canadian Food Inspection Agency, located at 1400 Merivale Rd, Ottawa, ON K1A 0Y9.

Yes CONTINUE

No THANK AND TERMINATE

READ TO ALL: "This call may be monitored or recorded for quality control and evaluation purposes."

ADDITIONAL CLARIFICATION IF NEEDED:

- To ensure that I (the interviewer) am reading the questions correctly and collecting your answers accurately;
- To assess my (the interviewer) work for performance evaluation;

- To ensure that the questionnaire is accurate/correct (for example, evaluation of CATI programming and methodology – we’re asking the right questions to meet our clients’ research requirements – kind of like pre-testing)
- If the call is recorded, it is only for the purposes of playback to the interviewer for a performance evaluation immediately after the interview is conducted or it can be used by the Project Manager/client to evaluate the questionnaire if they are unavailable at the time of the interview – all audio recordings are destroyed after the evaluation.

S1. Do you keep (or plan to keep) any pigs on your property? Please include any pigs that you own, board, or otherwise keep on your property. Do not include wild pigs that you have seen on your property.

Yes	1	
No	2	[THANK and TERMINATE]
Don’t know/Prefer not to say	9	[THANK and TERMINATE]

S2. Do you or does someone in your household belong to a provincial or national pork producer or hog/pig farmer association?

Yes	1	[THANK and TERMINATE]
No	2	
Don’t know/Prefer not to say	9	[THANK and TERMINATE]

S3. In a typical year, how many pigs on average do you keep (or plan to keep) on your property? Please include any pigs that you own, board, or otherwise keep on your property. Do not include wild pigs that you have seen on your property.

[OPEN END RECORD NUMBER]

S4. How many years have you kept or cared for pigs?

Less than 1 year	1
1 to 5 years	2
6 to 10 years	3
11-20 years	4
20+ years	5
Don’t know/Prefer not to say	9

S5. In which province or territory do you live? [ENSURE GOOD MIX OF REGIONS]

Newfoundland and Labrador	1
Nova Scotia	2
Prince Edward Island	3
New Brunswick	4
Quebec	5

Ontario	6
Manitoba	7
Saskatchewan	8
Alberta	9
British Columbia	10
Nunavut	11
Northwest Territories	12
Yukon	13

S6. Please indicate your gender. Do you identify as:

Male	1
Female	2
Gender diverse	3
Prefer not to say	9

S9. Could you please tell me which of the following age categories you fall in to? Are you...

18-34 years	1
35-54 years	2
55-74 years	3
75+ years	4
Prefer not to answer	99

S10. Are you an Indigenous person, that is, First Nations (North American Indian), Métis or Inuk (Inuit)?

Yes	1
No	2
Don't know/Prefer not to say	9

S11. [IF NOT INDIGENOUS] Are you...? [SELECT UP TO 3]

White	1
South Asian (for example, East Indian, Pakistani, Sri Lankan, etc.)	2
Chinese	3
Black	4
Filipino	5
Latin American	6
Arab	7
Southeast Asian (for example, Vietnamese, Cambodian, Malaysian, Laotian, etc.)	8
West Asian (for example, Iranian, Afghan, etc.)	9
Korean	10
Japanese	11
Other	98
Don't know/Prefer not to answer	99

S12. Participants in research interviews and discussion groups are asked to voice their opinions and thoughts. How comfortable are you in voicing your opinions in front of others? Are you... (READ LIST)

Very comfortable	1	CONTINUE
Somewhat comfortable	2	CONTINUE
Not very comfortable	3	THANK AND TERMINATE
Not at all comfortable	4	THANK AND TERMINATE
DK/NR	9	THANK AND TERMINATE

INVITATION:

S13. The in-depth interviews will take place via telephone call. It will last approximately 30 to 40 minutes. The interview will be led by a research professional. Interviewees would receive an honorarium of \$175 for their time. Would you be available to participate in the interview on **DATE @ TIME?**

Yes	1	
No	2	THANK and TERMINATE

Privacy questions

Now I have a few questions that relate to privacy, your personal information and the research process. We will need your consent on a few issues that enable us to conduct our research. As I run through these questions, please feel free to ask me any questions you would like clarified.

P1) First, we will be providing the interviewer with a list of respondents' first names and profiles (screener responses) so that they can ensure they are speaking to the right person. Do we have your permission to do this? I assure you it will be kept strictly anonymous.

Yes	1	GO TO P2
No	2	GO TO P1A

P1A) We need to provide the interviewer with the names and background of the people participating in an interview because only the individuals invited are allowed and the interviewer must have this information for verification purposes. Please be assured that this information will be kept strictly anonymous.

Now that I've explained this, do I have your permission to provide your name and profile with the interviewer?

Yes	1	GO TO P2
No	2	THANK and TERMINATE

P2) An audio recording of the interview may be produced for research purposes. It will be used only by the research professional to assist in preparing a report on the research findings and will be destroyed once the report is completed.

Do you agree to be audio recorded for research purposes only?

Yes	1	THANK and GO TO P3
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No 2 GO TO P2A

P2A) It is necessary for the research process for us to audio record the session as the researcher needs this material to complete the report.

Now that I've explained this, do I have your permission for audio recording?

Yes 1 THANK and GO TO P3
No 2 THANK and TERMINATE

P3) Employees from the CFIA and/or the Government of Canada may listen to the interviews (via recording).

Do you agree to allow Government of Canada employees to listen to the recording?

Yes 1 THANK and GO TO INVITATION
No 2 GO TO P3A

P3a) It is standard qualitative procedure to invite clients, in this case, Government of Canada employees, to observe the research or listen to interviews after they have occurred. They will do so only to hear your opinions firsthand although they may take their own notes and confer with the interviewer on occasion.

Do you agree to allow Government of Canada employees to listen to the recording?

Yes 1 THANK and GO TO INVITATION
No 2 THANK and TERMINATE

Wonderful, you qualify to participate in 1 of our interviews. As I mentioned earlier, the interview will take place **[Day, Month, Date] @ [TIME]** for up to 40 minutes.

TELEPHONE IN-DEPTH INTERVIEWS February 11-March 4, 2021

Schedule for 1 hour intervals Honorarium: \$175

As we are only inviting a small number of people, your participation is very important to us. If for some reason you are unable to make this appointment, please call us so that we can reschedule. You can reach us at **[INSERT PHONE NUMBER]** at our office. Please ask for **[NAME]**. Someone will call you in the days leading up to the interview to remind you.

So that we can call you to remind you about the interview or contact you should there be any changes, can you please confirm your name and contact information for me?

First name
Last name
Email
Daytime phone number
Evening phone number

Thank you very much for your participation!

If the respondent refuses to give his/her first or last name or phone number please assure them that this information will be kept strictly anonymous in accordance with the privacy law and that it is used strictly to contact them to confirm their attendance and to inform them of any changes to the discussion group. If they still refuse THANK and TERMINATE.