Assessment and Modification of the PADRAP as a Tool to Assess On-Farm Biosecurity Across Canada

Final Report

Reporting Period; April 15, 2010 to February 21, 2012

Ontario Swine Health Advisory Board

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Province/Area of Focus: National Focus

CSHB Pillar: Biosecurity and best Management Practices

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Executive Summary

This project was developed to assess and customize the Production Animal Disease Risk Assessment Program (PADRAP) biosecurity survey tool, administered by the American Association of Swine Veterinarians (AASV), to meet the needs of the Canadian swine herd. The PADRAP allows individual farms or systems to assess their current biosecurity practices and benchmark against production systems across North America. This project relates directly to the CSHB mandate to "provide leadership and coordination in support of the management of the health of the Canadian swine herd" under the Biosecurity and Best Management Practices pillar by providing a standardized, customized tool which can be used to assess and monitor on-farm biosecurity and risks with plans for on-going improvements.

Key tasks included in the scope of this project are:

1. Development of an interprovincial work group led by the Ontario Swine Health Advisory Board (OSHAB).

2. Investigation into data confidentiality and any potential trade barrier issues associated with use of the PADRAP.

3. Review of the PADRAP terminology, developing recommendations to modify the survey to account for regional production differences and develop a Canadian version of the survey for breeding herds including assessment of the questions to ensure the key position statements included in the Canadian National Biosecurity Standards are addressed.

4. Development of a biosecurity farm plan template based on the PADRAP survey results which will highlight key areas for improvement relating to the advancement of the National Biosecurity Standards.

6. Translation of the Canadian PADRAP and associated reports into French and inclusion on-line.

7. Assessment of the utility of the Canadian PADRAP tool on-farm.

8. Training to educate Canadian veterinarians on the new system.

9. Communication to producers and industry on the tool.

This project was developed with a proposed one year scope of work (April 2010 to April 2011) and a budget of $132,440.00, project delays have extended the project completion date to February 24, 2012 with no extension of the budget required. All tasks are now complete with the exception of the translation of the final report, pending approval from the CSHB and a final communication piece to be provided in both English and French. These tasks have been accounted for within the constraints of the budget. Legal review has been completed as outlined previously. The recommendations from this review were provided to the American Association of Swine Veterinarians (AASV) in the form of a letter requesting modifications to the confidentiality agreements associated with the PADRAP. This request was not agreed upon by the AASV due to concerns around liability from AASV's perspective (see recommendations and letter submitted to AASV in Appendix 1).

A research agreement was developed with Iowa State University (ISU) and approved by the Canadian Swine Health Board (CSHB). An outline of the scope of work based on the recommendations of the workgroup was provided by ISU – this outline highlights the principle changes which have been made to the PADRAP reporting format and has been submitted with this report. The principle reporting differences in the new version are the addition of three summary pages at the beginning of the report that include a demographics page with the risk quadrant graph and principle risks highlighted, a national biosecurity standards report card page and a simulation page as illustrated in the attachment. These modifications were designed to improve ease of use and the interactivity of the tool.

This project also included review of the PADRAP survey by the interprovincial team with recommendations for modifications forwarded to Dr. Holtkamp and additional questions developed to satisfy aspects of the National Biosecurity Standards (NBS) that were not covered by the original PADRAP survey (see recommended modifications and additions in Appendix 2). The modified "Canadian" survey is posted on the PADRAP website for ease of access and has been included with this submission. An appendix to the PADRAP training manual has been developed to address the new features available in the Canadian version and is also available on the PADRAP site (this manual addition is included here in Appendix 6). However, the recommended changes to the "regular" PADRAP questions have not yet been reviewed and modified by the AASV PADRAP team – this review is scheduled for 2012. As well, PADRAP has implemented a new operational system (SQL server) which improves data export capabilities – this feature was not within the scope of this work, but will improve the usefulness of this tool, particularly for area analysis.

On-farm trials were conducted in Ontario, Quebec and Western Canada, led by the interprovincial lead from each area. A total of 21 on farm assessments were conducted with 7 done in each area (Ontario, Quebec and Western Canada). This review asked for comments from both the veterinarian who conducted the PARDAP survey and the producer and was very useful both to assess the usefulness of the modifications and to resolve any remaining technical issues associated with these changes. General consensus suggests that the changes made throughout the scope of this project improved the value of the tool and generated results that were easier to understand and utilize for the producers and veterinarians. Results are summarized below with full results from each region provided in Appendix 5.

1. Project Partners and Collaborators

In order to initiate the project, Ontario and interprovincial workgroups were established. The Ontario workgroup was composed of OSHAB members and was tasked to develop materials and guide the project. The OSHAB workgroup includes:

- Kevin Vilaca, DVM – project lead
- Doug MacDougald, DVM
- Martin Misener, DVM
- Brent Robinson, producer – Vista Villa Genetics
- Cheryl Lehmann, technical support – Southwest Ontario Veterinary Services
- Lori Moser – OSHAB
- Jane Carpenter, DVM – OSHAB
- Derald Holtkamp, DVM - Iowa State University, PADRAP Administrator, will act as the principle partner to develop the modifications to the PADRAP survey online.

Dr Kevin Vilaca has also been invited to act as a full member on the American Association of Swine Veterinarians (AASV) questionnaire review team.

Members of the interprovincial team have committed to review and assess materials developed and this team includes:

- Madonna Benjamin, DVM
  Principal Veterinarian, Veterinary Science Consulting Inc.
  Millarville, Alberta
- Egan Brockhoff, DVM
  Prairie Swine Health Services and University of Calgary,
  Faculty of Veterinary Medicine, Department of Production Animal Health
  Red Deer, Alberta

- Lilly Urizar, DVM
  Centre de développement du porc du Québec inc. (CDPQ)
  Sainte-Foy, Quebec

As well, OSHAB has provided information about the scope of work included in this project to Quebec and Alberta during the course of pre-arranged PADRAP training sessions in these provinces through Dr. Derald Holtkamp (Iowa State University, PADRAP administrator) and the interprovincial team members from the respective provinces.

2. Legal Review

Legal council regarding trade implications of utilizing the AASV PADRAP program has been sought. After consultation with Ontario Pork, the firm OSHAB selected for this review was:

Borden Ladner Gervais LLP
World Exchange Plaza
1100-100 Queen Street
Ottawa ON K1P 1J9

Jack Hughes, Gerry Stobo and Greg Tereposky composed the legal team providing advice. By way of background, Jack acted as principle contact for this review, Gerry is the former General Counsel to the Canadian International Trade Tribunal and was the lead counsel advising Ontario Pork and Greg is the head of the Regional International Trade Group of Borden Ladner Gervais and is currently representing the Government of Mexico in connection with the WTO Country of Origin Labeling (COOL) dispute.

Their assessment of the potential trade related issues concerning sanitary and phytosanitary (SPS) measures is summarized here and the complete review has been submitted as a supplementary document (Appendix 1). OSHAB followed the recommendations of Borden Ladner Gervais and sent a request to the AASV that the recommended addition to the confidentiality agreement be included as excerpted from the draft report:

> Notwithstanding the foregoing, OPIC may wish to ask that Clause 2 of the PADRAP confidentiality agreement be revised to include the following language: "The PADRAP data will be used solely for the purpose of scientific and public policy research, and not for any administrative, proprietary, or law enforcement purposes nor for the purposes of introducing or maintaining any form of trade measures." [emphasis added]

The letter submitted to the AASV has been included in Appendix 1. However, communications from Dr. Tom Burkgren, AASV President indicate the AASV is unwilling to make the requested modifications to the PADRAP confidentiality agreements. This decision was based on the concern that AASV might be incurring liability by implementing the wording changes requested. Dr. Burkgren indicated that AASV may be willing to negotiate to modify the wording and this result and recommendation has been forwarded to the CSHB.

3. PADRAP Terminology and Question Review

This project included review of the PADRAP survey by the interprovincial team with recommendations for modifications to PADRAP survey questions tabulated into one document (see Appendix 3) and forwarded to Dr. Holtkamp and additional questions developed to satisfy aspects of the National Biosecurity Standards (review and additional questions are outlined in Appendix 2). However, the changes to the "regular" PADRAP questions have not yet been reviewed and modified by the AASV PADRAP team – schedule for those changes is early 2012. As well, PADRAP has implemented a new operational system (SQL server) which improves data export capabilities – this feature was not within the scope of this work, but will improve the usefulness of this tool, particularly for area analysis.

4. Structural Modification and Additions to the Canadian PADRAP

Recommendations to modify the PADRAP report to improve user friendliness and include tools to increase interactivity were developed by the OSHAB workgroup and vetted with the interprovincial workgroup (see preliminary recommendations in Appendix 4 and final work plan in the attached ISU outline). These included development of a front summary page, a report card format for the National Biosecurity categories and a simulation tool which would allow veterinarians to highlight a few actions based on the results of the assessment and on their knowledge of the producer and production system and illustrate the impact of making modifications in those areas. Development of the NBS report card required categorizing of the PADRAP survey questions under the NBS categories and development of questions to satisfy any gaps identified. The outline of this work can be seen in Appendix 2.

5. Translation of the Canadian PADRAP and associated reports into French and inclusion on-line.

This task has been accomplished with assistance from Lilly Urizar, DVM , Centre de développement du porc du Québec Inc. (CDPQ) Complete functionality of French materials on the PADRAP site is expected by March 31, 2012.

6. Assessment of the utility of the Canadian PADRAP tool on-farm.

On-farm trials were conducted in Ontario, Quebec and Western Canada, coordinated by the interprovincial lead from each area. A total of 21 on farm assessments were conducted with 7 done in each area (Ontario, Quebec and Western Canada). Farms trialed represented a diverse representation of breeding herds with herd size ranging from 150 sows to over 3,000 sows and including farrow to wean to farrow to finish facilities. This review asked for comments from both the veterinarian who conducted the PARDAP survey and the producer and was instrumental to assess the usefulness of the modifications and to resolve any remaining technical issues associated with these changes. General consensus suggests that the changes made throughout the scope of this project improved the value of the tool and generated results that were easier to understand and utilize for the producers and veterinarians. The simulation tool was highlighted as an excellent addition. The national biosecurity report card was also identified as a valuable tool which was easy to interpret and highly relatable to the National Biosecurity training currently being delivered in the area assessed. The mapping tool showed merit, but there were some technical glitches during the assessment period that needed to be resolved and so could not be fully assessed. Most veterinarians indicated that this is a detailed tool that may not be appropriate for use with all producers, but that it does have value for clients who already have good biosecurity protocols, but want to review or improve, for genetics suppliers and multipliers and for producers involved in PRRS Area Regional Control and Elimination programs. Some veterinarians

indicated that they will use this tool for all of their clients. Participants also identified that the questions included in the original survey require updating. Recommendations for further improvements included:

- Scoring calculation problems, some responses located at the wrong place, no scoring re NBS questions (this has been resolved).
- The tool should have a tab at the end to create a work plan, schedules or deadlines (like a calendar) for the things to improve in the site.
- Put “alerts” or “pop-ups” to major risks (to make it even more visual).
- In the simulation tool: demonstrate how the overall score changes with the new responses.
- Consideration of non-applicable answers in the overall score.
- Allow the input of GPS co-ordinates for improved mapping abilities.
- When printing documents, frequently the font is rather small and makes legibility difficult.
- Consider regular review/improvements.

Full results from each region are provided in Appendix 5.

7. Training to educate Canadian veterinarians on the new system.

The Go-To-Meeting program has been used extensively throughout the course of this project – to discuss progress and also to provide training to the interprovincial team leaders. This resulted in delivery of the project within budget constraints even with the significant time extension. The interprovincial leads have been trained in the use of the Canadian version of PADRAP and so may act as resources to assist veterinarians in their area. Dr. Holtkamp has offered to provide Go-To-Meeting training sessions as requested. An appendix for the PADRAP training manual has been developed to assist user understand and utilize the new features and can be seen in Appendix 6 of this report.

8. Communication to producers and industry on the tool.

Information has been provided to the industry through meetings such as CSHB Forums, OSHAB Big Bug Day and OPIC/OSHAB Annual General meetings. Regional leads have been trained on the use of this tool and producers from each area have been involved in the assessment process. This final report will be made available in both French and English and a summary article will be developed highlighting the key features of the tool – to be made available in both French and English.

Activities/Methodology

PADRAP Project Milestones Status				
Milestones	**Start Date**	**End Date**	**Deliverables**	**Status**
Milestones/reporting periods	**M/D/Y**	**M/D/Y**		
Milestone 1: Interim report 1 June 30, 2010	4/15/10	6/30/10	Development of an interprovincial work group with representation from Western Canada, Ontario and QC Assessment of current confidentiality procedures and documents, details on process for legal review.	Complete
Milestone 2: Interim report 2 Sep 30, 2010	7/01/10	9/30/10	Final recommendations on any changes needed to confidentiality agreements. Recommendations on changes to the PADRAP survey re terminology, questions and reporting. Development of recommendations/options for the on-farm biosecurity plan template.	Complete
Milestone 3: Interim report 3 Dec 30, 2010	10/01/10	12/30/10 Revised 11/30/11	Modifications to PADRAP implemented on line, tested by work group. Communicate to Ontario industry on the development of this program	Complete.
Milestone 4: Final report April 30, 2011	1/01/11	4/30/11 Revised 02/21/12	Completion of the PADRAP training sessions. Reporting on the farm trials. Final version of the Canadian version of PADRAP on-line in English and French.	Complete, French materials currently under development.

PADRAP Budget Summary

This project has been delivered within the constraints of the budget. Some reallocation of budget categories was done to accommodate the extended timeline of the project. Lower than anticipated travel and facility costs offset the extra project management costs incurred.

A detailed expenses summary has been submitted with this report.

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September 21, 2010

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Ms. Lori Moser
Managing Director
Ontario Pork Industry Council
P.O. Box 98
Stratford, Ontario
N5A 6S8

Dear Ms. Moser,

PADRAP Analysis
Our File: 340706/000001

We were asked to provide the Ontario Pork Industry Council ("OPIC") with an advisory opinion with respect to the potential impact of the Production Animal Disease Risk Assessment Program ("PADRAP") from a trade law perspective. Our preliminary views were contained in an opinion letter dated June 3, 2010. The purpose of this letter is to update our analysis based on subsequent developments.

As we noted in our original opinion, the PADRAP program is an initiative to help hog producers and veterinarians manage disease risk faced by the North American swine industry. It offers a set of risk assessment questionnaires, databases and reports for measuring and benchmarking disease risks. While the program can accommodate risk assessments for other swine diseases, it's primary focus is PRRS.

PRRS is a pandemic disease which causes reproductive failure in breeding stock and respiratory tract illness in young pigs. Originally recognized in North America in the mid to late 1980s, PRRS has spread rapidly throughout the world causing significant economic hardship for pork producers. Some estimates suggest that the annual impact of PRRS in the United States alone is approximately $600 million.

The stated purpose of the PADRAP program is to help evaluate current biosecurity protocols, help develop new protocols and track the improvement of biosecurity over time in an effort to justify the expenditure of resources on measures to improve biosecurity. In addition, the data and reports generated by the program can form part of the due diligence process in commercial operations.

As OPIC considered the relative benefits and risks associated with the PADRAP program, one of the immediate concerns identified was whether information provided to PADRAP could be used to justify some form of trade measure which would have the

effect of restricting the exporting of Ontario hogs to the United States. For the reasons that follow, we believe that these concerns are not totally unfounded.

The type of trade measures at issue are commonly referred to as "sanitary and phytosanitary" measures ("SPS"), and include any measure applied by a government to protect animal life or health within the territory of the government arising from the entry, establishment or spread of diseases. International trade rules governing SPS measures require that the measures be based on an appropriate risk assessment.

In our opinion, the PADRAP data – and reports created from that data – could constitute the type of information that could, in certain circumstances, be used (in concert with other information) to justify an SPS measure which could be a barrier to trade. While this does not mean that the PADRAP data would necessarily be used for that purpose, it does mean that it is conceivable that it could be used for such a purpose.

The PADRAP confidentiality agreement which we reviewed includes language that should prevent researchers from disclosing the raw data collected to support an SPS measure. In particular, the agreement states that the data obtained cannot be used "for any administrative...or law enforcement purpose" In our view, this language would likely be broad enough to prevent the use of the raw data to justify an SPS measure.

Moreover, the PADRAP confidentiality agreement also contains provisions which expressly restrict the use of the data "solely for the research purposes described in the application." As a result, unless the research purpose described in the relevant application is to establish or justify an SPS measure, the confidentiality agreement would appear to prevent the use of PADRAP data for such purposes.

Notwithstanding the foregoing, our initial recommendation was that OPIC ask that Clause 2 of the PADRAP confidentiality agreement be revised to include the following language: "The PADRAP data will be used solely for the purpose of scientific and public policy research, and not for any administrative, proprietary, or law enforcement purposes nor for the purposes of introducing or maintaining any form of trade measures."

That said, however, we noted that even if this proposed revision was accepted, there would still be a gap in the coverage afforded by the confidentiality agreement. The PADRAP confidentiality agreement contemplated that the results of the research (as opposed to the raw data) could be made public. As a result, there is a risk that any such report could be used to justify the creation of maintenance of an SPS measure.

Consequently, even if the raw data were protected from disclosure, we could not dismiss the possibility that an SPS trade measure could be created or maintained as a direct result of the PADRAP program. Our opinion noted that there was nothing that could be done to totally eliminate this risk, as it arose from the public disclosure and dissemination of research analysis which is, to some extent, the very purpose for which the program exists.

We ultimately concluded that the degree of risk, and whether that risk outweighs the potential benefits, was something that OPIC would have to determine for itself. We could

only confirm that government officials and/or private sector competitors would likely examine all available evidence before seeking to impose a trade measure. In the case of hogs, we noted this could potentially include publicly available PADRAP reports.

That said, however, we also noted the mere fact that the PADRAP program could create publicly available information that could, in part, justify an SPS measure did not mean that the program would actually increase the risk of a trade measure. To the extent that the program could also identify potential solutions and reasonable benchmarks, we argued that the program might create the factual basis needed to avoid SPS measures.

Moreover, we explained that even if the confidentiality agreement were strengthened as we had proposed, or if OPIC declined to participate in the program altogether, there was no guarantee that those actions would, in and of themselves, prevent the imposition of SPS measures based on other types of information that are currently available in the public domain.

Since our original opinion letter, it is our understanding that OPIC has written to the American Association of Swine Veterinarians ("AASV") both advising them of our initial opinion and asking them to modify their confidentiality agreement. At the time of writing, it is not known whether the relevant officials with the AASV have responded or agreed to make the proposed changes.

Should you have any further questions, please do not hesitate to contact us at your convenience.

Yours very truly,
Borden Ladner Gervais LLP

Dr. Tom Burkgren
AASV President
Cc: Dr. Derald Holtkamp August 12, 2010

Dear Dr. Burkgren,

As outlined by Derald Holtkamp, the Ontario Swine Health Advisory Board (OSHAB) is leading a project entitled "Assessment and modification of the PADRAP as a tool to assess on-farm biosecurity across Canada", funded through the Canadian Swine Health Board. We have been working with Derald through the development and initial stages of this project and greatly appreciate the support he has provided.

One of our tasks in this project was to consider any trade issues that could potentially be associated with the storage and management of data relating to biosecurity practices and disease risks collected from Canadian farms but stored in the United States. To accomplish this task, we engaged legal council through Borden Ladner Gervais LLP – a legal firm from Ottawa, Ontario with significant experience in assessing and negotiating trade issues. They have assessed the confidentiality agreements in place for the PADRAP program and have drawn the following conclusions:

- the PADRAP program has legitimate and desirable goals
- the PADRAP data and reports created from that data could constitute the type of information that could, in certain circumstances, be used (in concert with other information) to justify a sanitary and phytosanitary (SPS) measure which could be a trade barrier
- to the extent that the program can identify potential solutions and reasonable benchmarks, the program could also be used to create the factual basis for a mutually acceptable solution that avoids SPS measures
- the PADRAP confidentiality agreement provided includes language that should prevent researchers from disclosing raw data collected to support an SPS measure
- the PADRAP confidentiality agreement also contains provisions which expressly restrict the use of the data "solely for the research purposes described in the application"
- the confidentiality agreement could be strengthened by the inclusion of a specific request that the data not be used for the purposes of introducing or maintaining any form of trade measures
- even if this revision is accepted, publication of data and results from research programs still creates some risk that the information generated could be used to justify an SPS measure and in fact, any information available in the public domain can create this risk, as such, the mere fact that the PADRAP program could create publically available information that could, in part, justify an SPS measure does not mean that the program will actually increase the risk of a trade measure.

Based on these conclusions, we would like to request that AASV include the following revision to clause 2 of the PADRAP confidentiality agreement:

“The PADRAP data will be used solely for the purpose of scientific and public policy research, and not for any administrative, proprietary, or law enforcement purposes nor for the purposes of introducing or maintaining any form of trade measures.”

We appreciate your consideration of this request and look forward to working with you and Dr. Holtkamp further on the development of this project.

Sincerely,

Lori Moser
OSHAB Managing Director

Appendix 2 – Recommended PADRAP Survey Questions Modifications and Additions

NBS Category	Questions to be analyzed
Direct Routes of Contamination	
Domestic live pigs	External risks questions 1-17
Domestic semen and embryos	18-48
Foreign live pigs, semen or embryos This would apply to a VERY small percentage of farms. At the very least "not applicable" would have to be a possible response to the question proposed. (have to add it due to the structure of the CSHB standards)	Add question under external risks/semen category such as: Procedures are in place to meet legal requirements for importation of foreign live pigs, semen or embryos. a. No live pigs, semen or embryos and imported from a foreign country b. Yes proper procedures are in place and reviewed by a veterinarian c. No proper procedures are not in place d. Not applicable
Indirect Routes of Contamination	
Incoming animal transport	Non-genetic - questions 61-68 Genetics - 69-77
Outgoing animal transport	Market animals and culls – question - 49-60
Dead stock	81-86 Could add CAZ and RAZ terminology
People and vehicles	79, 80 (vehicles), 89-91 (entry), 92-93-97(employee workload, training and documentation) 102 (access to site)
Meat Products (for human consumption) from foreign countries	Need to add a question – perhaps under employees and visitors such as: Procedures are in place to ensure no dry-cured or fresh (raw) meat products are allowed with the RAZ (or barn facilities) a. Yes b. No
Aersols	100, 101 (ventilation), - need to add air filtration questions
Pests, birds and insects – could add these questions from the long survey format Derald 52. Presence of birds inside buildings Often present in buildings Occasionally present inside buildings Barriers are sufficient to restrict entry of birds into buildings 53. Insecticides are used on the interior of buildings No Yes 54. Insect traps are used on the interior of buildings No Yes 55. Rodent baits are used on the interior of buildings No Yes 56. Rodent traps are used on the interior of buildings No	103 (insects) Add rodent and avian controls under biovector section

Yes	
Domestic animals – again in the standards and actually, this might be a risk, I've seen pets carrying around dead baby pigs - question could be something like Procedures are in place to keep non-pig domestic animals such as pets and other livestock out of the pig barn. a. yes b. no	Add domestic animals (pets) question under biovector section Domestic animals are not generally viewed as a major (or even minor) risk factor for PRRS virus (maybe they should be)
Wildlife – this is included in the standards, but we could also say it is covered under rodent control as I think that would be the most common "wildlife" to enter a barn. What do you think Derald? Procedures are in place to keep wildlife such as feral pigs and cloven hoofed animals like deer out of the pig barn. a. yes b. no	Add wildlife question under biovector question
Fomites	98
Feed and bedding This standard states "Procedures are in place to limit the risk of contamination by pathogens through feed and bedding manufacture (on-farm or commercially), delivery and storage" so I think flow if feed trucks speaks to that, we could also add: Feed supplies are purchase from a reliable source that has HACCP protocols. a. yes b. no c. internal source (or something like that)	78 (feed) 78 asks about feed trucks – is that feed? Would 78 better fit under people?
Water	Add 2 questions under the facilities category re water meets accepted guidelines for swine consumption (or perhaps the chlorination question from the long survey) and not from a surface water source
Pharmaceuticals	18 and 19 (needle use) Add question under entry of supplies re entry and storage of pharmaceuticals (or modify question 98 slightly to include)
Solid and liquid manure	87 and 88
Waste other than manure Question could be Storage and disposal of household and barn garbageis managed to prevent access by pests and predators a. yes b. no	Add question under manure section re household and barn waste management
On Farm Health Management	
Health status, disease management and monitoring	Internal risks re PRRS status questions 7 to 17 Demographics re PRRS status questions 17 to 24
Swine immunization strategies	Internal risks questions 20 to 31
Overall NBS Compliance Score	

Additional questions for Canadian Survey

25. Cleaning, washing, disinfecting and drying of facilities between batches

a. Scraped only

b. Scraped, washed and disinfected

c. Scraped, washed, disinfected and dried

d. Scraped, washed, disinfected and dried with a set downtime between fills

26. Procedures are in place to meet legal requirements for importation of foreign live pigs, semen or embryos.

c. Yes, proper procedures are not in place

b. Yes, proper procedures are in place and reviewed by a veterinarian

a. No live pigs, semen or embryos and imported from a foreign country

27. Procedures are in place to verify that imported pigs, semen or embryos are free of endemic diseases (such as PRRS virus)

a. No

b. Yes

d. Not Applicable (Select if pigs, semen and embryos are never imported)

28. Access ways (driveways) to the site are clearly defined (i.e. with gates or signs)

a. No

b. Yes

29. Entry of pork meat products by employees, visitors, service and delivery personnel

a. No restrictions on entry of pork meat products

b. Not allowed to enter uncooked fresh pork products, but can enter cooked fresh or processed pork

c. Not allowed to enter uncooked or cooked fresh pork products, but can enter processed pork

d. No pork meat products allowed

30. Presence of domestic animals (pets) inside buildings

a. Often present inside buildings

b. Occasionally present inside buildings

c. Barriers are sufficient to restrict entry of pets into buildings

31. Facilities, fences and equipment are properly maintained to keep wildlife out

a. No

b. Yes

32. Chlorination of water

a. Not done

b. Done in response to problems only

c. Done on a regular basis

d. Done continuously

33. Water source
a. Surface water
b. Shallow well
c. Deep well
d. Rural/Municipal water

34. Location of pick up site for waste (other than manure) disposed of off-site (Change answers)
a. At this site inside of gates (within the controlled access zone or CAZ)
b. At this site, outside of the gates (outside of the CAZ)
c. At a dedicated off site location
d. Not applicable (select if waste is disposed of on-site.

35. Frequency with which waste (other than manure) is picked up for off-site
a. Daily
b. Pickup every 2-6 days
c. Pickup every 7-13 days
d. Pickup every 14-20 days
e. Less frequently than every 20 days
f. Not applicable (select if waste is disposed of on-site and never stored prior to disposal)

36. Type of storage for waste (other than manure) awaiting pickup or disposal
a. Open container
b. Covered container or shed
c. Covered container or shed with perimeter fence
d. Not applicable (select if waste is disposed of on-site and never stored prior to disposal

37. Management of trucks that pick up waste (other than manure) for off-site disposal
a. Truck managed by third party
b. Truck managed by production system
c. Not applicable (select if waste is disposed of on-site.

38. Vaccines and pharmaceuticals are managed in accordance with CQA guidelines
a. No
b. Yes

Appendix 3 – PADRAP Survey Review

PADRAP
Production Animal Disease Risk Assessment Program

[Instructions: Air Spaces = Room]

_____
Enter "N/A" if gilt isolation is not located at this site

Gilt Development Questions

11. Number of Air Spaces for Gilt Development
[Instructions: Air Spaces = Room]

_____
Enter "N/A" if gilt development is not located at this site

12. Number of Animals in Gilt Development

_____
Enter "N/A" if gilt development is not located at this site

Grow-Finish Questions

13. Number of Animals in Grow-Finish

_____
Enter "N/A" if grow-finish is not located at this site

14. Number of Air Spaces for Grow-Finish
[Instructions: Air Spaces = Room]

_____
Enter "N/A" if grow-finish is not located at this site

Boar Stud Questions

15. Number of Air Spaces for Boar Stud
[Instructions: Air Spaces = Room]

_____
Enter "N/A" if the boar stud is not located at this site

16. Number of Animals in Boar Stud

_____
Enter "N/A" if the boar stud is not located at this site

Demographic -> PRRS Status & History -> PRRS Current Status

17. Current PRRSv infection status
a. Positive
b. Negative
c. Naive
d. Unknown

NOT APPLICABLE if population at site has been negative or naïve to PRRSv for at least 5 years.

POSITIVE if one or more animals currently housed at site have been exposed to and infected with PRRSv at some time in their life.

NEGATIVE if ALL animals currently housed at site are sero-negative, have never been infected with PRRSv, but may have had prior contact with other animals that were exposed to PRRSv and/or originate from a source population that has had known exposure to PRRSv

NAIVE if all animals currently housed at site are sero-negative, have never had any known direct exposure to PRRSv, nor originate from a source population that has ever had any known exposure to PRRSv

Consider evolving PRRS status definitions to standardize terminology

Comment [lem4]: Egan - Colonies all have boars on site for natural mating. Most do not quarantine prior to entry. The entry of these boars is one of the largest disease risk issues we face on colonies and should be addressed in these questions.

Comment [lem5]: Egan - Not all boars are from the same source. A good question may be how many boar sources? How many times per year to you bring in boars?

18. Current PRRSv stability status
    a. Not Applicable
    b. Stable
    c. Unstable
    d. Unknown

NOT APPLICABLE if population at site is naive to PRRSv.

STABLE if there is evidence of PRRSv circulating within the population at this site, as evidenced by one or more of the following: 1) PI- or PCR-piglets at or prior to weaning, 2) PI- or PCR-sera or fluids from all tested animals housed at this site, and/or 3) no ELISA sero-conversion (i.e. downstream site cannot rule out horizontal/lateral virus transmission within the nursery site and/or from a source other than the upstream source site).

UNSTABLE if PRRSv is circulating within the population at this site, as evidenced by one or more of the following: 1) PI+ or PCR+ piglets at or prior to weaning, 2) PI+ or PCR+ sera or tissues from any animals housed at this site (cannot rule out horizontal/lateral virus transmission within the nursery site and/or from a source other than the upstream source site).

Demographic -> PRRS Status & History -> PRRS History

19. Severity of most recent clinical PRRS episode
    a. Not Applicable
    b. Subclinical
    c. Mild
    d. Moderate
    e. Severe
    f. Unknown

NOT APPLICABLE if population at site has been negative or naive to PRRSv for at least 5 years.

0-SUBCLINICAL if diagnostic testing indicated active PRRSv infection per performance consequences from PRRSv infection.

1-MILD if diagnostic testing indicated active PRRSv infection with evidence of mild clinical and/or performance consequences from PRRSv infection.

2-MODERATE if diagnostic testing indicated active PRRSv infection with evidence of moderate clinical and/or performance consequences from PRRSv infection.

3-SEVERE if diagnostic testing indicated active PRRSv infection with evidence of severe clinical and/or performance consequences from PRRSv infection.

20. PRRSv Infection status prior to most recent clinical PRRS episode
    a. Not Applicable
    b. Positive
    c. Negative
    d. Naive
    e. Unknown

POSITIVE if one or more animals currently housed at site have been exposed to and infected with PRRSv at some time in their life.

NEGATIVE if All animals currently housed at site are sero-negative, have never been infected with PRRSv, (may have had prior contact with other animals that were exposed to PRRSv and/or originate from a source population that has had known exposure to PRRSv.

NAIVE if all animals currently housed at site are sero-negative, have never had any known direct exposure to PRRSv, and originate from a source population that has never had any known exposure to PRRSv.

21. Stability status prior to most recent clinical PRRS episode
    a. Not Applicable
    b. Stable
    c. Unstable
    d. Unknown

NOT APPLICABLE if population at site is naive to PRRSv.

STABLE if there is no evidence of PRRSv circulating within this population at this site, as evidenced by one or more of the following: 1) VI- or PCR- piglets at or prior to weaning, 2) VI- or PCR- sera or tissues from all tested animals housed at this site and/or 3) no ELISA sero-conversion in a downstream site (carcass - rule out horizontal/lateral virus transmission within the nursery site and/or from a source other than this upstream source site).

UNSTABLE if PRRSv is circulating within the population at this site, as evidenced by one o more of the following: 1) VI- -> PCR+ piglets at or prior to weaning, 2) VI- or PCR+ sera or tissues from any animals housed at this site (carcass - rule out horizontal/lateral virus transmission within the nursery site and/or from a source other than this upstream source site).

22. Number of Clinical PRRSv episodes between 3 and 5 years ago

_____

A "clinical PRRS episode" in the breeding herd is defined by:

1) A change in one or more reproductive performance measures where the change exceeds that which would be expected with "normal" variation. Consider changes for the following reproductive performance measures:
- *increase in 4 to 11 day abortions*
- *increase in term dead (stillborns) or chill born) per litter farrowed*
- *increase in pre-wean mortality*
- *increase in sow deaths*

2) Diagnostic confirmation of PRRSv involvement

23. Number of Clinical PRRSv episodes within last 3 years

_____

A "clinical PRRS episode" in the breeding herd is defined by

1) A change in one or more reproductive performance measures where the change exceeds that which would be expected with "normal" variation. Consider changes for the following reproductive performance measures:
- *increase in 45 to 112 day abortions*
- *increase in born dead (mummies or stillborns) per litter farrowed*
- *increase in preweaning mortality*
- *increase in sow deaths*

2) Diagnostic confirmation of PRRSv involvement

24. Number of months since most recent clinical PRRSv episode

_____

[Instructions:If the site has never had a clinical PRRSv episode, enter "N/A".]

PADRAP
Production Animal Disease Risk Assessment Program

Internal Risks

Internal Risks -> Circulation Risks -> Herd and Site Characteristics -> Characteristics of the herd

1. Size of breeding herd (number of breeding age animals)
   [Instructions:Enter INVENTORIED breeding females]
   _____

Is it the same question that of #3 (demographics)? Can we remove one of them?

2. Parity segregation
   a. All gilt farm
   b. Mixed parity
   c. All parity 1+ farm

3. Average parity of the breeding herd
   [Instructions:Enter average of all INVENTORIED breeding females]
   _____

4. Type of breeding herd (commercial vs. genetic)
   a. Commercial
   b. Genetic multiplier
   c. Genetic nucleus

Is it the same question that of #4 (demographics)? Can we remove one of them or combine questions?

Internal Risks -> Circulation Risks -> Herd and Site Characteristics -> Characteristics of the site

5. Stages of production at site
   a. Farrow to finish
   b. Farrow to feeder
   c. Farrow to wean

6. Gestation housing
   a. All pen gestation
   b. Combination pen and individually housed gestation during less than 2 weeks of each mating cycle
   c. Combination pen and individually housed gestation during more than two weeks of each mating cycle
   d. All individually housed gestation

Internal Risks -> Circulation Risks -> PRRSV Status -> Current and historical PRRSV status of the site

7. Current PRRSV status of animal population at this site
   a. Positive active, that is positive by ELISA and producing infected weaned pigs, not clinically stable
   b. Positive, stable that is positive by ELISA but producing non-infected weaned pigs

Add Positive, stable that is positive by ELISA but piglets become negative by 4 weeks post weaning due to depletion of maternal antibodies

   c. Negative but not naive - herd still contains previously exposed animals
   d. Naive - entire herd never exposed to PRRS virus

Is it the same that of question #17(demographics)? Can we remove one of them?

8. Number of PRRS clinical breaks at this site in last 6 months (define clinical break –respiratory or reproductive disease based on some clinical signs – abortions etc)
   [Instructions:Enter number of breaks]
   _____

Comment [lem6]: Egan - Many small farms only get one vet visit per year. Does this increase risk as all of these are unkowns?

9. Number of PRRS clinical breaks at this site during period between 6 months to 1 year ago
   [Instructions:Enter number of breaks]
   _____

10. Number of PRRS clinical breaks at this site during period between 1 and 3 years ago
[Instructions:Enter number of breaks]
_____

11. Number of PRRS clinical breaks at this site during period between 3 and 5 years ago
[Instructions:Enter number of breaks]
_____

12. Time since most recent PRRSV clinical break in this population of animals
a. Less than 3 months ago
b. 3 - 12 months
c. 12 to 24 months ago
d. > 24 months
e. Never

These questions are almost the same as those about PRRS episodes. Is there a difference between an episode and a break? Could we remove some of these questions if they're duplicated?

13. First complete depop-repop completed at this site within last five years
a. Became positive by ELISA or PCR in less than 6 months following repop
b. Became positive by ELISA or PCR 1 to 2 years following repop
c. Became positive by ELISA or PCR 2 to 5 years following repop
d. Remains negative or naive
e. Not Applicable (Select if site has not been completely depopulated and repopulated in last 5 years)

14. Second complete depop-repop completed at this site within last five years
a. Became positive by ELISA or PCR in less than 6 months following repop
b. Became positive by ELISA or PCR 1 to 2 years following repop
c. Became positive by ELISA or PCR 2 to 5 years following repop
d. Remains negative or naive
e. Not Applicable (Select if site has not been completely depopulated and repopulated twice in last 5 years)

15. Third complete depop-repop completed at this site within last five years
a. Became positive by ELISA or PCR in less than 6 months following repop
b. Became positive by ELISA or PCR 1 to 2 years following repop
c. Became positive by ELISA or PCR 2 to 5 years following repop
d. Remains negative or naive
e. Not Applicable (Select if site has not been completely depopulated and repopulated three times in last 5 years)

16. Historical natural or controlled exposure of current animal population at this site to field strain of PRRSV
In Western Canada, many PRRS positive herds are vaccine induced – is this controlled exposure.
a. No
b. Yes

17. Current number of different PRRSV field strains isolated at this site in the last 12 months where a different strain is defined as having >3% difference in ORF5 region
a. Unknown, sequencing of isolates from this site has never been done
b. Three or more different strains
c. Two different strains
d. One strain
e. None (farm is negative-naive)

Internal Risks -> Circulation Risks -> Management -> Management practices
18. Frequency with which needles are changed when used on breeding animals

a. Same needle used on an average of 16 or more animals
b. Same needle used on an average of 6 to 15 animals
c. Same needle used on an average of 2 to 5 animals
d. Separate needle for each individual animal
e. Use needle-less syringe

19. Frequency with which needles are changed when used on pigs
a. Change needle only when bent or broken
b. One needle per farrowing room
c. One needle per farrowing crate (I.e., litter of pigs)
d. Separate needle for each individual piglet
e. Use needle-less syringe

Internal Risks -> Immune Management -> Managed Exposure -> Natural exposure by contact or feedback of breeding females and replacement animals

This section needs consideration for closed herds – considering a clear answer and ranking based on lower risk of closed herds

20. Breeding animal replacements are exposed to PRRSV infected live breeding animals or pigs prior to entry
a. Yes
b. No

Comment [lem7]: Egan - Prior to entry is important but what about how long after exposure before they enter the herd?

21. Breeding animal replacements are exposed to tissue or fecal material from PRRSV infected sources via feedback prior to entry
a. Yes
b. No

22. Time (days) between last natural exposure of replacements to live animals or feedback and entry into breeding herd
[Instructions:Enter days (Enter 0 if entered directely into herd)]
_____
Enter "N/A" if replacements are not exposed to PRRSv positive live animals or feedback prior to entry into the breeding herd

as mature gilts

23. Breeding animals are intentionally exposed at this site to PRRSV infected live pigs from grow-finish
a. Yes
b. No

Comment [lem8]: Egan - Are they tested. Do we know our sentinels are positive.

24. Breeding animals are exposed at this site to PRRSV infected tissue or fecal material via feedback
a. Yes
b. No

Internal Risks -> Immune Management -> Managed Exposure -> Controlled exposure by blood or serum injection of breeding females and replacement animals

This section needs consideration for closed herds – considering a clear answer and ranking based on lower risk of closed herds

25. Replacements are exposed to serum from PRRSV infected pigs or sows via injection prior to entry
a. Yes
b. No

26. Time (days) between initial exposure to injected serum and entry of replacements into breeding herd

[Instructions:Enter days (Enter 0 if entered directly into herd)]

_____

Enter "N/A" if replacements are not exposed to PRRSv positive injected serum prior to entry into the breeding herd

27. Time (days) between last exposure to injected serum and entry of replacements into breeding herd
[Instructions:Enter days (Etner 0 if entered directly into herd)]

_____

Enter "N/A" if replacements are not exposed to PRRSv positive injected serum prior to entry into the breeding herd

28. Breeding animals are exposed at this site to serum from PRRSV infected pigs or sows via injection on a regular basis (e.g. every 3 or 4 months)
a. Exposed on a group by group basis post-farrow or pre-breed
b. Exposed on a group by group basis pre-farrow
c. Exposed periodically on a whole-herd basis less than 4 times per year
d. Exposed periodically on a whole-herd basis 4 or more times per year
e. No

29. Breeding animals have been exposed at this site to serum from PRRSV infected pigs or sows via injection of the whole herd only during or immediately following a PRRS break
a. Yes
b. No

Internal Risks -> Immune Management -> Managed Exposure -> Modified live PRRSV vaccine use in the breeding herd

30. Commercial modified live PRRSV vaccine used on breeding females at this site
a. Not used at this site
b. Vaccinated on a group by group basis post-farrow or pre-breed
c. Vaccinated on a group by group basis pre-farrow
d. Vaccinated periodically on a whole-herd basis less than 4 times per year
e. Vaccinated periodically on a whole-herd basis 4 or more times per year

Could they include the use of an autogenous vaccine?

31. Commercial modified live PRRSV vaccine used on boars at this site
a. Not used at this site
b. Vaccinated in stages (e.g., 20% per week for five weeks)
c. Vaccinated on a periodic whole-herd basis less than 4 times per year
d. Vaccinated on a periodic whole-herd basis 4 or more times per year

PADRAP
Production Animal Disease Risk Assessment Program

External Risks

External Risks -> Pig Related -> Live Animals -> Entry of breeding female and boar replacements into the breeding herd

How does the program score closed herds for the questions in this section?

1. Number of breeding herd sources from which replacements have been obtained in last two years
[Instructions:Number of source sites (Enter 0 if herd is closed to outside introduction of females)]
_____

Comment [lem9]: Egan - Colonies purchase boars too. So this needs to be in this equation. There is an inference that this is gilts only.

2. Source of replacement animals
   a. Some or all purchased from other production systems/genetic suppliers
   b. Some or all from other sites outside the pig flow but within the same production system, none from outside the production system
   c. Some or all from other sites within the same pig flow as this site (e.g., downstream nursery or grow / finish / developer), none from outside the same pig flow
   d. Closed herd at this site (replacements are born at site, moved to another site and later returned as replacements)
   e. Closed site (replacements are born and raised at site and never moved from site

3. PRRS virus status of breeding herd(s) from which replacements are sourced
   a. One or more sources positive active that is positive by ELISA and producing PRRSv infected weaned pigs
   b. One or more sources with unknown status, none positive active
   c. One or more sources positive stable - that is positive by ELISA but producing non-infected weaned pigs, none positive active or unknown status
   d. All site(s) currently negative
   e. All site(s) currently naive

Closed herd considerations

4. PRRS virus status, prior to isolation / acclimation or entry into breeding herd, of nurseries and finishers from which replacements are sourced
   a. One or more sources positive by ELISA or PCR
   b. One or more sources with unknown status, none positive
   c. All site(s) currently negative
   d. All site(s) currently naive

Closed herd considerations

5. PRRSV status of breeding female replacements in isolation / acclimation
   a. Negative or naive at entry but field virus positive from natural exposure at exit
   b. Field virus positive from natural exposure at entry
   c. Negative or naive at entry & negative or naive at exit
   d. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or if not isolated or acclimated prior to entry))

How is this weighted?

6. Response when group of replacement animals in isolation / acclimation becomes positive by PCR or ELISA to PRRS virus from natural field virus exposure
   a. Introduced into breeding herd on regular schedule
   b. Introduced into breeding herd after holding period of less than 30 days
   c. Introduced into breeding herd after 30 to 90 day holding period
   d. Introduced into breeding herd after holding period of more than 90 days
   e. Replacements are marketed and not used for breeding purposes

f. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or if not isolated or acclimated prior to entry))

7. Isolation / acclimation period (days)
[Instructions:Days immediately prior to introduction into breeding herd (Enter 0 if entered directly into breeding herd)]

_____

What is the requirement of distance to be considered as an isolation location? Could one separate isolation and acclimation since a lot of farms have an acclimation without an isolation period?

8. Replacement animal acclimation flow

Comment [lem10]: Egan - What if they are just dropped into the herds.

a. Continuous Flow
b. All in / All out by room
c. All in / All out by barn
d. All in / All out by site
f. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or if not acclimated prior to entry)

9. Replacement animal isolation flow
a. Continuous Flow
b. All in / All out by room
c. All in / All out by barn
d. All in / All out by site
e. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or if not isolated prior to entry)

10. Location of replacement animal acclimation housing relative to this site
a. On-site in same air space as sow herd
b. On-site in different air space as sow herd
c. Off-site (different site from the sow herd)
d. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or if not acclimated prior to entry)

11. Location of replacement animal isolation housing relative to this site
a. On-site in same air space as sow herd
b. On-site in different air space as sow herd
c. Off-site (different site from the sow herd)
d. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or if not isolated prior to entry)

12. Timing of breeding animal replacement seroconversion to PRRS virus prior to entry into the breeding herd
a. Seroconversion occurs in acclimation / isolation
b. Seroconversion occurs mid to late finishing (more than 100 lbs or 45 kg)
c. Seroconversion occurs early finishing (50 to 100 lbs or 23 to 45 kg)
d. Seroconversion occurs before 10 weeks of age (less than 50 lbs or 23 kg)
e. Replacements are negative upon entry into the breeding herd

13. Serum testing of replacement animals for PRRS virus or antibodies by PCR or ELISA upon entry into acclimation / isolation site(s)
a. No routine testing done
b. A sample subset of incoming animals are tested upon entry
c. All incoming animals are bled and tested upon entry
d. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or if not isolated or acclimated prior to entry)

14. Serum testing of replacement animals for PRRS virus or antibodies by PCR or ELISA upon exit from acclimation / isolation site(s)
    a. No routine testing done
    b. A sample subset of outgoing animals are tested prior to entry into breeding herd
    c. All outgoing animals are bled and tested prior to entry into breeding herd
    d. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or if not isolated or acclimated prior to entry)

15. Typical PRRSV status of breeding animal replacements upon entry into the breeding herd (% positive by ELISA)
    a. Not tested or unknown
    b. More than 80%
    c. 20% to 80%
    d. Less than 20%
    e. Negative (0%)

16. Frequency of replacement deliveries to this breeding herd site (days between deliveries)
    [Instructions:Enter days between deliveries]
    _____
    Enter "N/A" if closed site (replacements are born and raised at site and never moved from site)

17. Number of upstream sow farm replacement source sites (those that produce replacements for this site) that have completed any PRRS Risk Assessment
    a. None
    b. Some
    c. All
    d. Not Applicable (Select if closed site (replacements are born and raised at site and never moved from site) or closed herd at this site (replacements are born at site, moved to another site and later returned as replacements)

I think that the score is also important and could *be considered. Have they done an assessment AND have they obtained a high risk (for example: a score >25) or a low risk (score<24)*

External Risks -> Pig Related -> Animal Components -> Entry of semen into the breeding herd

Need air filtration question for boar studs

Procedures are in place to meet any legal requirements for importation of foreign live animals, semen or embryos
    a. Yes
    b. No

18. Source of AI semen
    a. Some or all sourced from other site(s) that are not part of same production system
    b. Some or all sourced from other sites(s) that are part of same production system, none sourced from other sites not part of same production system
    c. All semen collected from boars at this site
    d. Not Applicable (Select if 100% natural insemination)

19. Number of sites from which semen is sourced in last two years
    [Instructions:Enter number of sites]
    _____
    Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site

20. PRRSV status of site(s) from which semen is sourced

a. One or more site(s) positive active - that is positive by ELISA and evidence of active shedding of virus
b. One or more site(s) of unknown status
c. One or more site(s) positive stable - that is positive by ELISA but no evidence of active shedding of virus
d. All site(s) currently negative
e. All site(s) currently naive
f. Not Applicable (Select if 100% natural insemination OR is all semen is collected from boars at this site)

21. Most recent PRRS clinical break at site(s) from which semen is sourced
a. Unknown
b. Less than 12 months
c. 12-24 months
d. more than 24 months
e. Never
f. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site)

22. Number of PRRS clinical breaks at site(s) from which semen is sourced in last 6 months
[Instructions:Enter number of breaks, "N/A", or "Unknown"]
_____
Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site

23. Number of PRRS clinical breaks at site(s) from which semen is sourced during period between 6 months to 1 year ago
[Instructions:Enter number of breaks, "N/A", or "Unknown"]
_____
Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site

24. Number of PRRS clinical breaks at site(s) from which semen is sourced during period between 1 and 3 years ago
[Instructions:Enter number of breaks, "N/A", or "Unknown"]
_____
Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site

25. Number of PRRS clinical breaks at site(s) from which semen is sourced during period between 3 and 5 years ago
_____
Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site

26. Estimated number of different PRRS virus field strains present at site(s) from which semen is sourced - different strain is defined as having >3% difference in ORF5 region
[Instructions:Enter number of breaks, "N/A", or "Unknown"]
_____
Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site

27. Historical status of animals populations at site(s) from which semen is sourced
a. Exposed to both field strains of PRRS virus and modified live PRRS vaccine
b. Unknown
c. Exposed to field strain of PRRS virus only, no known modified live vaccine exposure
d. Exposed to modified live vaccine only, no known field virus exposure
e. Exposed to neither field strains of PRRS virus or modified live vaccine
f. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site)

28. Number of complete depop-repop projects completed in last 5 years at site(s) from which semen is sourced
[Instructions:Enter number of projects, "N/A", or "Unknown"]
_____
Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site

29. Number of complete depop-repop projects completed at site(s) from which semen is sourced in last 5 years that have subsequently had field strain of PRRS virus reintroduced
[Instructions:Enter number of projects, "N/A" (if no repop-depop done), or "Unknown"]
_____
Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site

30. Frequency of semen PCR testing for PRRS virus
a. No semen testing or unknown
b. Approximately quarterly or less frequently
c. Approximately monthly
d. Approximately weekly
e. Every collection tested
f. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site)

If the boar stud is doing PCR or serum (not semen) – does answering no semen testing result in a high risk assignment for questions 30 to 32?

I think we should remove this question or give it a lower weighing when the site does serum testing.

31. Sampling method of semen PCR testing for PRRS virus
a. Unknown
b. Pooled samples tested
c. Individual samples tested
d. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR if semen PCR is not done)

32. Timing of semen use relative to acquisition of semen PCR test results
a. Always used prior to obtaining PCR test results
b. Sometimes used prior to obtaining PCR test results
c. Never used prior to obtaining PCR test results
d. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR if semen PCR is not done)

33. Serum testing of boars for antibodies to PRRSV by ELISA
a. Never or unknown
b. Approximately yearly or less frequently
c. Approximately quarterly
d. Approximately monthly or more frequently
e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site)

34. Frequency of serum PCR testing of boars for PRRS virus
a. No serum testing or unknown
b. Approximately quarterly or less frequently
c. Approximately monthly
d. Approximately weekly
e. Every collection tested
f. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR if serum PCR testing is not done)

35. Sampling method of serum PCR testing of boars for PRRS virus
a. Unknown
b. Pooled samples tested
c. Individual samples tested
d. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR if serum PCR testing is not done)

36. Timing of semen use relative to acquisition of serum PCR test results
    a. Always used prior to obtaining PCR test results
    b. Sometimes used prior to obtaining PCR test results
    c. Never used prior to obtaining PCR test results
    d. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR if serum PCR testing is not done)

37. Proximity of site(s) from which semen is sourced to other swine farm sites within a one mile radius
    a. All site(s) from which semen is sourced have other swine farms located within a 1 mile (1.6 km) radius
    b. Unknown
    c. One or more, but not all site(s) from which semen is sourced have other swine farms located within a 1 mile (1.6 km) radius
    d. No site(s) from which semen is sourced have other swine farms located within a 1 mile (1.6 km) radius
    e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site)

Comment [lem11]: Egan - How about boar nucleus that supplies boars?

38. Number of other swine farms sites within one mile radius of site(s) from which semen is sourced
    [Instructions:Enter number of other swine farm sites within 1 mile (1.6 km), "N/A", or "Unknown"]

    _____
    (Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site)

39. PRRSV status of other swine farm sites within one mile radius of site(s) from which semen is sourced
    a. All other swine farm sites within one mile (1.6 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    b. Unknown
    c. One or more other swine farm sites within one mile (1.6 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    d. None of the other swine farm sites within one mile (1.6 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR no other swine farms within 1 mile radius)

Comment [lem12]: Egan - Again, boar stud proximity to PRRS positive farms.

40. Control of other swine farm sites within a one mile radius of site(s) from which semen is sourced
    a. None of the other swine farm sites within one mile (1.6 km) radius of site(s) from which semen is sourced share common management with this site or site(s) from which semen is sourced
    b. Unknown
    c. One or more other swine farm sites within one mile (1.6 km) radius of site(s) from which semen is sourced share comm on management with this site or site(s) from which semen is sourced
    d. All of the other swine farm sites within one mile (1.6 km) radius of site(s) from which semen is sourced share common management with this site or site(s) from which semen is sourced
    e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR no other swine farms within 1 mile radius)

41. Proximity of site(s) from which semen is sourced to other swine farms within a 1 to 3 mile radius
    a. All site(s) from which semen is sourced have other swine farms located within a 1 to 3 mile (1.6 to 4.8 km) radius
    b. Unknown
    c. One or more, but not all site(s) from which semen is sourced have other swine farms located within a 1 to 3 mile (1.6 to 4.8 km) radius
    d. No site(s) from which semen is sourced have other swine farms located within a 1 to 3 mile (1.6 to 4.8 km) radius
    e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site)

42. Number of other swine farms sites within a 1 to 3 mile radius of site(s) from which semen is sourced
    [Instructions:Enter number of swine farms sites 1-3 miles (1.6 to 4.8 km), "N/A", or "Unknown"]

_____
(Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site)

43. PRRSV status of other swine farm sites within 1 to 3 mile radius of site(s) from which semen is sourced
    a. All other swine farm sites within 1 to 3 mile (1.6 to 4.8 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    b. Unknown
    c. One or more other swine farm sites within 1 to 3 mile (1.6 to 4.8 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    d. None of the other swine farm sites within 1 to 3 mile (1.6 to 4.8 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR no other swine farms within 1 to 3 mile radius)

44. Control of other swine farm sites within a 1 to 3 mile radius of site(s) from which semen is sourced
    a. None of the other swine farm sites within 1 to 3 mile (1.6 to 4.8 km) radius of site(s) from which semen is sourced share common management with this site or site(s) from which semen is sourced
    b. Unknown
    c. One or more other swine farm sites within 1 to 3 mile (1.6 to 4.8 km) radius of site(s) from which semen is sourced share common management with this site or site(s) from which semen is sourced
    d. All of the other swine farm sites within 1 to 3 mile (1.6 to 4.8 km) radius of site(s) from which semen is sourced share common management with this site or site(s) from which semen is sourced
    e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR no other swine farms within 1 to 3 mile radius)

45. Proximity of site(s) from which semen is sourced to other swine farms within a 3 to 5 mile radius
    a. All site(s) from which semen is sourced have other swine farms located within a 3 to 5 mile (4.8 to 8.0 km) radius
    b. Unknown
    c. One or more, but not all site(s) from which semen is sourced have other swine farms located within a 3 to 5 mile (4.8 to 8.0 km) radius
    d. No site(s) from which semen is sourced have other swine farms located within a 3 to 5 mile (4.8 to 8.0 km) radius
    e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site)

46. Number of other swine farms sites within a 3 to 5 mile radius of site(s) from which semen is sourced
    [Instructions:Enter number of other swine farms within 3 to 5 mile (4.8 to 8.0 km) radius, "N/A", or "Unknown"]

    _____
    (Enter "N/A" if 100% natural insemination OR if all semen is collected from boars at this site)

47. PRRSV status of other swine farm sites within 3 to 5 mile radius of site(s) from which semen is sourced
    a. All other swine farm sites within 3 to 5 mile (4.8 to 8.0 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    b. Unknown
    c. One or more other swine farm sites within 3 to 5 mile (4.8 to 8.0 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    d. None of the other swine farm sites within 3 to 5 mile (4.8 to 8.0 km) radius of site(s) from which semen is sourced are PRRSV positive currently or within last 5 years
    e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR no other swine farms within 3 to 5 mile radius)

48. Control of other swine farm sites within a 3 to 5 mile radius of site(s) from which semen is sourced

a. None of the other swine farm sites within 3 to 5 mile (4.8 to 8.0 km) radius of site(s) from which semen is sourced share common management with this site or site(s) from which semen is sourced
b. Unknown
c. One or more other swine farm sites within 3 to 5 mile (4.8 to 8.0 km) radius of site(s) from which semen is sourced share common management with this site or site(s) from which semen is sourced
d. All of the other swine farm sites within 3 to 5 mile (4.8 to 8.0 km) radius of site(s) from which semen is sourced share common management with this site or site(s) from which semen is sourced
e. Not Applicable (Select if 100% natural insemination OR if all semen is collected from boars at this site OR no other swine farms within 3 to 5 mile radius)

External Risks -> Non-pig Related -> Operations -> Transportation of live animals
A. Vehicles used to transport animals to market or collection points

For breed-to-wean and breed-to-feeder sites, questions in this section
- Related to "transport of animals to market or collection points" should be answered for cull animals
- Related to "transport of animals to and from other sites within the production system" should be answered for wean pigs and feeder pigs even if pigs are sold to another production system or delivered to members of a cooperative

For genetic sites, questions in this section
- Related to "transport of animals to market or collection points" should be answered for cull animals
- Related to "transport of non-genetic animals to and from other sites within the production system" should be answered for barrows and non-select gilts

a. I think that the instructions aren't clear enough. It took me a while to understand them.
b. Section B: They could add instructions to know what to do in the case of a farm which doesn't transport weaned piglets because there are no non-applicable responses in the section. When this occurred, they told me I had to answer section A with the finishing pigs information and section B with the cull animals information.

49. Flow restrictions on vehicles used to transport animals to market or collection points
a. No restrictions, the same vehicle may haul PRRSV positive and negative or naive animals
b. The same vehicle can haul PRRSV positive and negative or naive animals but a minimum downtime is required before visits to negative or naive sites following last visit to positive site
c. The same vehicle never hauls both PRRSV positive and negative or naive animals
d. Truck(s) are dedicated to this site and do not haul animals from other sites

50. Route restrictions on vehicles used to transport animals to market or collection points
a. No special route selection practices
b. Transport routes are outlined proactively to avoid roads with swine and swine-related sites along the route

51. Transit restrictions on vehicles used to transport animals to market or collection points
a. Transport vehicles are allowed to stop en route
b. Transport vehicles are allowed to stop en route only at designated times and locations
c. Transport vehicles are never allowed to stop en route

52. Use restrictions on vehicles used to transport animals to markets or collection points
    a. Vehicles used to transport animals to markets may transport genetic animals or non-genetic animals to other sites within the production system
    b. Vehicles used to transport animals to markets are not used to transport genetic animals or non-genetic animals to other sites within the production system

Should we include other types of animals or just pigs? If the same truck transports cattle and pigs, should we consider it or just focus on PRRS and pigs?

53. Washing frequency of vehicles used to transport animals to market or collection points
    a. Never, rarely or unknown
    b. At least once per 20 loads
    c. At least once per 10 loads
    d. Between every load

54. Pre-rinse with water to flush away loose organic material prior to wash of vehicles used to transport animals to market or collection points
    a. Yes, recycled water used
    b. Unknown
    c. No, pre-rinse not done
    d. Yes, fresh water used

55. Disinfectant use on vehicles used to transport animals to market or collection points
    a. No disinfectant used or unknown
    b. Phenol-based compound (BioPhene, Environ, Tek-Trol, Laro, Lysol) or aldehydes (DC&R, Cidex, Formaldegen) used
    c. Quaternary ammonium (Roccal, Germex, Zephiran, Hi-Lethol, BioSentry) used
    d. Hypochlorite (Clorox, Halazone, Chloramine-T) or peroxygen (Virkon) used
    e. Iodine (Wescodyne, Premise, Iofec, Iosdyn, Losan), or quaternary ammonium combinations (Synergize, Aseptol) used

We must add Canadian disinfectants.

56. Drying time following wash of vehicles used to transport animals to market or collection points
    a. No requirements
    b. Vehicles allowed to dry completely before next load
    c. Assisted drying technology is used to dry washed vehicles

57. Restrictions on movement of drivers of vehicles used to transport animals to market or collection points
    a. No restrictions
    b. Not allowed to enter buildings
    c. Not allowed to cross a perimeter fence or some other defined limit
    d. Not allowed to leave cab of vehicle

Could insert CAZ and RAZ terminology here

58. Cleaning of cab between sites for vehicles used to transport animals to market or collection points
    a. No requirements
    b. Swept but not washed between sites
    c. Washed between sites

I think washing the cab between sites is too difficult. Can we just place "Washed" once a day?

59. Disinfection of cab between sites for vehicles used to transport animals to market or collection points
   a. No disinfectant used or unknown
   b. Phenol-based compound (BioPhene, Environ, Tek-Trol, Laro, Lysol) or aldehydes (DC&R, Cidex, Formaldegen) used
   c. Quaternary ammonium (Roccal, Germex, Zephiran, Hi-Lethol, BioSentry) used
   d. Hypochlorite (Clorox, Halazone, Chloramine-T) or peroxygen (Virkon) used
   e. Iodine (Wescodyne, Premise, Iofec, Iosdyn, Losan), or quaternary ammonium combinations (Synergize, Aseptol) used

Canadian disinfectants should be added.

60. Boot and clothing restrictions between sites on drivers of vehicles used to transport animals to market or collection points
   a. No requirements
   b. Required to change clothing but not boots between sites
   c. Required to change boots but not clothing between sites
   d. Required to change clothing and boots between sites

The transporters usually don't have many pair of boots. Although, they can place a plastic bag over their boots or have one pair in the truck and another one for the outdoors. Could we "open" a little the response #c while giving more options?

B. Vehicles used to transport non-genetic animals to and from other sites within the production system

For breed-to-wean and breed-to-feeder sites, questions in this section
- Related to "transport of animals to market or collection points" should be answered for cull animals
- Related to "transport of animals to and from other sites within the production system" should be answered for wean pigs and feeder pigs even if pigs are sold to another production system or delivered to members of a cooperative

For genetic sites, questions in this section
- Related to "transport of animals to market or collection points" should be answered for cull animals
- Related to "transport of non-genetic animals to and from other sites within the production system" should be answered for barrows and non-select gilts

In Western Canada
Managers sign off on trailer cleanliness on arrival at the farm site
Or
Wash audit of trailer presented to the manager prior to loading

61. Flow restrictions on vehicles used to transport non-genetic animals to and from other sites within the production system
   a. No restrictions, the same vehicle may haul PRRSV positive and negative or naive animals

b. The same vehicle can haul PRRSV positive and negative or naive animals but a minimum downtime is required before visits to negative or naive sites following last visit to positive site
c. The same vehicle never hauls both PRRSV positive and negative or naive animals
d. Truck(s) are dedicated to this site and do not haul animals from other sites

62. Route restrictions on vehicles used to transport non-genetic animals to and from other sites within the production system
a. No special route selection practices
b. Transport routes are outlined proactively to avoid roads with swine and swine-related sites along the route

63. Transit restrictions on vehicles used to transport non-genetic animals to and from other sites within the production system
a. Transport vehicles are allowed to stop en route
b. Transport vehicles are allowed to stop en route only at designated times and locations
c. Transport vehicles are never allowed to stop en route

64. Use restrictions on vehicles used to transport non-genetic animals to and from other sites within the production system
a. Vehicles used to transport non-genetic animals to and from other sites within the production system may transport genetic animals or animals to market or collection points
b. Vehicles used to transport non-genetic animals to and from other sites within the production system are not used to transport genetic animals or animals to market or collection points

65. Washing frequency of vehicles used to transport non-genetic animals to and from other sites within the production system
a. Never, rarely or unknown
b. At least once per 20 loads
c. At least once per 10 loads
d. Between every load
e. Not Applicable (Select if vehicle used to transport animals is dedicated to this site)

66. Pre-rinse with water to flush away loose organic material prior to wash of vehicles used to transport non-genetic animals to and from other sites within the production system
a. Yes, recycled water used
b. Unknown
c. No, pre-rinse not done
d. Yes, fresh water used
e. Not Applicable (Select if vehicle used to transport animals is dedicated to this site)

67. Disinfectant use on vehicles used to transport non-genetic animals to and from other sites within the production system
a. No disinfectant used or unknown
b. Phenol-based compound (BioPhene, Environ, Tek-Trol, Laro, Lysol) or aldehydes (DC&R, Cidex, Formaldegen) used
c. Quaternary ammonium (Roccal, Germex, Zephiran, Hi-Lethol, BioSentry) used
d. Hypochlorite (Clorox, Halazone, Chloramine-T) or peroxygen (Virkon) used
e. Iodine (Wescodyne, Premise, Iofec, Iosdyn, Losan), or quaternary ammonium combinations (Synergize, Aseptol) used
f. Not Applicable (Select if vehicle used to transport animals is dedicated to this site)

68. Drying time following wash of vehicles used to transport non-genetic animals to and from other sites within the production system
a. No requirements
b. Vehicles allowed to dry completely before next load

c. Assisted drying technology is used to dry washed vehicles
d. Not Applicable (Select if vehicle used to transport animals is dedicated to this site)

C. Vehicles used to transport genetic animals

For breed-to-wean and breed-to-feeder sites, questions in this section
- Related to "transport of animals to market or collection points" should be answered for cull animals
- Related to "transport of animals to and from other sites within the production system" should be answered for wean pigs and feeder pigs even if pigs are sold to another production system or delivered to members of a cooperative

For genetic sites, questions in this section
- Related to "transport of animals to market or collection points" should be answered for cull animals
- Related to "transport of non-genetic animals to and from other sites within the production system" should be answered for barrows and non-select gilts

69. Flow restrictions on vehicles used to transport genetic animals
    a. No restrictions, the same vehicle may haul PRRSV positive and negative or naive animals
    b. The same vehicle can haul PRRSV positive and negative or naive animals but a minimum downtime is required before visits to negative or naive sites following last visit to positive site
    c. The same vehicle never hauls both PRRSV positive and negative or naive animals
    d. Truck(s) are dedicated to this site and do not haul animals from other sites

70. Route restrictions on vehicles used to transport genetic animals
    a. No special route selection practices
    b. Transport routes are outlined proactively to avoid roads with swine and swine-related sites along the route

71. Transit restrictions on vehicles used to transport genetic animals
    a. Transport vehicles are allowed to stop en route
    b. Transport vehicles are allowed to stop en route only at designated times and locations
    c. Transport vehicles are never allowed to stop en route

72. Use restrictions on vehicles used to transport genetic animals
    a. Vehicles used to transport genetic animals to and from other sites within the production system may transport non-genetic animals or animals to market or collection points
    b. Vehicles used to transport genetic animals to and from other sites within the production system are not used to transport non-genetic animals or animals to market or collection points

73. Washing frequency of vehicles used to transport genetic animals
    a. Never, rarely or unknown
    b. At least once per 20 loads
    c. At least once per 10 loads
    d. Between every load
    e. Not Applicable (Select if vehicle used to transport animals is dedicated to this site)

74. Pre-rinse with water to flush away loose organic material prior to wash of vehicles used to transport genetic animals

a. Yes, recycled water used
b. Unknown
c. No, pre-rinse not done
d. Yes, fresh water used
e. Not Applicable (Select if vehicle used to transport animals is dedicated to this site)

75. Disinfectant use on vehicles used to transport genetic animals
   a. No disinfectant used or unknown
   b. Phenol-based compound (BioPhene, Environ, Tek-Trol, Laro, Lysol) or aldehydes (DC&R, Cidex, Formaldegen) used
   c. Quaternary ammonium (Roccal, Germex, Zephiran, Hi-Lethol, BioSentry) used
   d. Hypochlorite (Clorox, Halazone, Chloramine-T) or peroxygen (Virkon) used
   e. Iodine (Wescodyne, Premise, Iofec, Iosdyn, Losan), or quaternary ammonium combinations (Synergize, Aseptol) used
   f. Not Applicable (Select if vehicle used to transport animals is dedicated to this site)

76. Drying time following wash of vehicles used to transport genetic animals
   a. No requirements
   b. Vehicles allowed to dry completely before next load
   c. Assisted drying technology is used to dry washed vehicles
   d. Not Applicable (Select if vehicle used to transport animals is dedicated to this site)

77. Type of load out area
   a. Load out area attached to buildings, no restrictions on truck driver access
   b. Load out area attached to buildings, physical barriers restrict truck driver access to "dirty" areas (terminology could include access to dirty (out of RAZ) or clean area (within RAZ)
   c. Unattached animal transfer station located away from the swine buildings

CAZ = controlled access zone –farm gate RAZ = restricted access zone – barn access or Danish entry

External Risks -> Non-pig Related -> Operations -> Transportation of feed

78. Flow of feed trucks
   a. No restrictions, the same truck may deliver feed to PRRSV positive and negative or naive sites
   b. The same truck can deliver feed to PRRSV positive and negative or naive sites but a minimum downtime is required before deliveries to negative or naive sites following last delivery to positive site
   c. The same truck never delivers feed to PRRSV positive and negative or naive sites or truck is dedicated to this site

External Risks -> Non-pig Related -> Operations -> Employee and service vehicles

79. Flow of service vehicles
   a. No restrictions, the same service vehicle may visit PRRSV positive and negative or naive sites
   b. The same service vehicle can visit PRRSV positive and negative or naive sites but a minimum downtime is required before visits to negative or naive sites following last visit to positive site
   c. The same service vehicle never visits PRRSV positive and negative or naive sites

80. Flow of on-site employee vehicles
   a. No restrictions
   b. Allowed to visit other pig farm sites but must be washed before return to this farm site
   c. Allowed to visit other pig farm sites but must be washed and dried before return to this farm site
   d. Allowed to visit other pig farm sites but must be washed, dried and disinfected before return to this farm site
   e. Not allowed to visit other pig farm sites

Log book considerations?

We should ask if the restriction is in the CAZ or RAZ.

External Risks -> Non-pig Related -> Operations -> Disposal of dead animals

81. Dead animals disposed of on-site (e.g. buried, composted or incinerated)
    a. No
    b. Yes

82. Dead animals moved using equipment dedicated to this site to an off-site location for pick up
    a. No
    b. Yes
    c. Not Applicable (Select if dead animals are disposed of on-site)

We could add a response for: "Dead animals moved outside of the CAZ".

83. Dead animals are stored in enclosed box awaiting pickup or disposal
    a. No
    b. Yes
    c. Not Applicable (Select if dead animals are disposed of on-site and never stored prior to disposal)

84. Dead animals are stored in refrigerated box awaiting pickup or disposal
    a. No
    b. Yes
    c. Not Applicable (Select if dead animals are disposed of on-site and never stored prior to disposal)

85. Management of trucks that pick up dead animals for off-site disposal
    a. Trucks managed by third party
    b. Trucks managed by production system
    c. Not Applicable (Select if dead animals are disposed of on-site)

86. Location of pick up site for dead animals disposed of off-site
    a. At this site
    b. At a dedicated site more than a half mile (0.8 km) from this site
    c. Not Applicable (Select if dead animals are disposed of on-site)

We could add a response for: "Dead animals moved outside of the CAZ".

Suggestion: Separate the manure disposal into a new category (the actual category is: Operations/dead animals)

87. Management of manure disposal
    a. Outsourced to third party that provides service non-exclusively to production system
    b. Outsourced to third party that provides service exclusively to production system
    c. Managed by production system

88. Washing of manure removal equipment
    a. No requirements
    b. Washed and flushed between sites
    c. Manure removal equipment is dedicated to this site

External Risks -> Non-pig Related -> Operations -> Employees and visitors

89. Sanitation procedure for employees and visitors entering site
    a. Unrestricted entry
    b. Boot wash / disinfection prior to entry
    c. Coverall and boot change, hands are washed prior to entry
    d. Shower in and clothes changed prior to entry

Log book considerations?
CAZ and RAZ questions?

Comment [lem13]: Egan - Colonies move between Colonies lots. Can we address this?

Comment [lem14]: Egan - Colony members very often enter barns without having a boot barrier. There is boot overlap.

Create a new question considering separate visitors.

90. Design of entry to site
    a. Direct access, no defined "dirty" and "clean" areas
    b. Physical barriers separate the outside ("Dirty") and internal ("clean") areas

91. Employee restrictions on visits to other swine production facilities
    a. No restrictions
    b. Visits to other swine farms are restricted
    c. Not Applicable (Select if a single owner-operator that has no employees)

92. Procedures are in place to assure no fresh foreign or domestic meat products for human consumption are allowed on the premises.
    a. Yes
    b. No

92. Average annual employee turnover
    [Instructions:Enter percentage as a decimal value. For example, 49% would be entered as 0.49]
    _____

93. Written biosecurity protocols
    a. Written protocols and communications to on-site employees are never provided in all language(s) spoken as first language by employees
    b. Written protocols and communications to on-site employees are sometimes provided in all language(s) spoken as first language by employees
    c. Written protocols and communications to on-site employees are always provided in all language(s) spoken as first language by employees
    d. Not Applicable (Select if a single owner-operator that has no employees)

Separate the facts of having written protocols and foreign employees.

94. Breeding females per on-site employee
    [Instructions:Enter number of INVENTORIED breeding females, count only full-time equivalents that work in the breeding herd (i.e. exclude nurseries and finishers if at same site)]
    _____

95. New employees receive formal training on biosecurity procedures
    a. No
    b. Yes

96. All employees periodically receive formal retraining on biosecurity procedures
    a. No
    b. Yes

97. Employee compliance with biosecurity procedures is periodically audited
    a. No
    b. Yes

A question about records should be added. It could be the logbook for visitors.

External Risks -> Non-pig Related -> Operations -> Entry of supplies

98. Procedures for introducing tools and supplies
    a. Direct introduction into the farm (no disinfection, no quarantine)
    b. Disinfection prior to introduction into the farm, but no quarantine
    c. Quarantine for 24 hours or more, but no disinfection

Comment [lem15]: Egan - Feed sales and sales people visit colonies the most. How do we address this as they move from barn to barn. They never fill in a log book. OR they meet in the feed mill which is kept beside the barn. They may not enter the barn but there is boot contamination. Feed salespersons moving between colonies are a huge potential vector.

d. Disinfection prior to introduction into the farm, and quarantine for 24 hours or more

99.Procedures are in place to ensure vaccines and pharmaceuticals are selected, used and stored appropriately.
a. Yes
b. No

External Risks -> Non-pig Related -> Operations -> Facilities

99. Facility type

Comment [lem16]: Egan - As above we have blends of hoop and confinement

a. Outdoor production
b. Hoop structures
c. Partial Confinement
d. Total confinement

It's almost the same question that of #2 (demographics). Can we remove one of them?

100. Ventilation in breeding/gestation
a. Natural ventilation
b. Combination mechanical & natural
c. Mechanical ventilation - conventional fans & inlets
d. Mechanical ventilation - tunnel

Air filtration for breeding/gestation units question?

101. Ventilation in farrowing
a. Natural ventilation
b. Combination mechanical & natural
c. Mechanical ventilation - conventional fans & inlets
d. Mechanical ventilation - tunnel

102. Restrictions on employee access to site
a. Not restricted
b. Access to site (by key, combination or pass code) is restricted after-hours only
c. Access to site (by key, combination or pass code) is restricted at all times

103.Procedures are in place to prevent contamination of water and that drinking water meets accepted guidelines for swine consumption.
a. Yes
b. No

Procedures are in place to minimize contamination of pigs from water sourced from surface water
a. yes
b. no
c. na (well water source)

External Risks -> Non-pig Related -> Operations -> Biovectors

103. Insect screens are used to restrict entry of insects into buildings
a. No
b. Yes

104.Procedures are in place to keep pig herds segregated from any domestic animals including avian species.
a. Yes
b. No

105.Procedures are in place to effectively prevent contact with wildlife.
a. Yes
b. No

External Risks -> Non-pig Related -> Location / Proximity -> Density of pig farms in the area

104. Pig density (swine sites) within 1 mile radius of this site
[Instructions:Enter number of sites within 1 mile (1.6 km) radius]
_____

105. Pig density (swine sites) in a 1 to 3 mile radius of this site
[Instructions:Enter number of sites in a 1 to 3 mile (1.6 to 4.8 km) radius]
_____

106. Pig density (swine sites) in a 3 to 5 mile radius of this site
[Instructions:Enter number of sites in a 3 to 5 mile (4.8 to 8.0 km) radius]
_____

External Risks -> Non-pig Related -> Location / Proximity -> Neighboring pig farms

107. Distance (miles) to nearest swine farm
[Instructions:Enter miles (1 km = 0.6 miles) or Unknown]
_____

108. Finishing pigs housed at nearest swine farm
a. Yes
b. No

109. Nursery pigs housed at nearest swine farm
a. Yes
b. No

110. Breeding females and suckling piglets housed at nearest swine farm
a. Yes
b. No

111. Replacement breeding animals housed at nearest swine farm
a. Yes
b. No

112. Boar stud housed at nearest swine farm
a. Yes
b. No

113. Distance (miles) to nearest PRRSV positive swine farm
[Instructions:Enter miles (1 km = 0.6 miles) or "Unknown"]
_____

114. Status of nearest neighboring PRRS positive pig farm
a. Unknown
b. PRRSV positive, acute active clinical break within last 3 months
c. PRRSV positive, post-acute active (clinical break more than 3 months but less than 6 months ago)
d. PRRSV positive but currently stable (no evidence of virus circulation)

115. Finishing pigs housed at nearest PRRSV positive swine farm
a. Yes
b. Unknown
c. No

116. Nursery pigs housed at nearest PRRSV positive swine farm

a. Yes
b. Unknown
c. No

117. Breeding females and suckling piglets housed at nearest PRRSV positive swine farm
a. Yes
b. Unknown
c. No

118. Replacement breeding animals housed at nearest PRRSV positive swine farm
a. Yes
b. Unknown
c. No

119. Boar stud housed at nearest PRRSV positive swine farm
a. Yes
b. Unknown
c. No

External Risks -> Non-pig Related -> Location / Proximity -> Distance to pork industry infrastructure

120. Distance (miles) to a major public road with intensive animal transportation
[Instructions:Enter miles (1 km = 0.6 miles) or "Unknown"]
_____

121. Nearest public road carries significant traffic related to nearest vehicle wash
a. Yes
b. No

122. Distance (miles) to nearest swine market, slaughter plant or collection point
[Instructions:Enter miles (1 km = 0.6 miles)]
_____

123. Nearest public road carries significant traffic related to nearest market, slaughter plant or collection point
a. Yes
b. No

External Risks -> Non-pig Related -> Location / Proximity -> Topography and forestation of surrounding area

124. Topography at the site
a. Flat
b. Gentle rolling hills
c. Steep hills
d. Mountains
e. Mountains and rolling hills (AB geography)

Appendix 4 - Reporting Modification Recommendations

The workgroup considered options that they believe will improve the usability of the PADRAP report on farm to create a valuable and interactive tool. Report recommendations include:

- Page 1
  - farm information
  - Premise ID number (in Ontario)
  - GPS picture of the farm site with an ability to click and magnify to allow demarcation of zones such as CAZ and RAZ, areas for improvement etc
  - PADRAP score
  - Risk quadrant graph

- Page 2
  - User report card
  - Top areas for improvement ordered by priority (or highest impact) and categorized by National Biosecurity Standards categories with an ability for the veterinarian to select a top 3 to 5 topics for further investigation and recommended changes
  - This will require engagement and participation from the veterinarian to customize the recommendations to suite the priorities and resources of that particular farm

- Page 3
  - Simulation page – if these selected changes were made – recalculated score
  - See concept below

- Appendix 1
  - Full PADRAP report graphs and tables

Example Page 3

Recommendation 1	Score Before	Score After
Title/Topic		

Recommendation 2	Score Before	Score After
Title/Topic		

Recommendation 3	Score Before	Score After
Title/Topic		

	Appendix 5 : RESULTS OF THE CANADIAN PADRAP REVIEW								
QC responses									
	VETERINARIANS QUESTIONS								
Producer	Demographic information	Have you used the PADRAP survey before	Did you find the new reporting style easier to understand	What section(s) of the report gave the most value to you	What section(s) give the most value to producers	Did you think the new format supports the NBS training program	Was it a useful tool to identify areas for improvement	Will you offer this tool to producers you service	Comments
1 and 2 (RB)	Farrow-finisher on the same site; 150-170 sows; two independent producers	Yes, in some farms in 2008 and 2009	Yes, tabs facilitate the comprehension of results. We can consult the final score of the section or in details if we want to go further in the analysis of results.	Because the two sites were closed herds and in-herd replacement sites, and disposal of dead animals is done on-site, the most useful section in the survey is " External risks, and live animals movement and transport".	In the farms that I evaluated, the sections which gave the most value to producers were: Risk profile summary; Individual risk factors; Risk Pareto chart. The benchmark section with all sites in American data base isn't too	Yes, very much. PADRAP gives a report which provides a lot of quantitative information related to external and internal biosecurity risks	Fore sure. In fact, I think it's the biggest strength of the tool: identify the biosecurity lacks in a production system or site. Based on the results, we can easily identify the points to correct or improve. Excellent tool, to convince the manager or	I will probably offer this tool to my clients who already have a good biosecurity protocol, but want to review or improve it. Very good tool for multipliers and pure bred breeding. Those who doesn't have a good biosecurity protocol have gotten things	Yes, I notice that in some sections the responses are incorrectly managed by the program - the response isn't placed correctly in the right place: Size of breeding herd, Number of breaks, Number of PRRS strains, PRRS vaccine, Number of animal replacement sources, PRSS status, Number of breaks in semen source, No filtration question for AIC, site density, and manure equipment. This problem on the scoring has to be corrected fast because it causes a bad impact for producers when they analyze the reports. - The tool should create a working plan for the farm at

					useful in farms where I evaluated the tool.		demonstrate the importance of investment in biosecurity.	to do before answering an elaborated questionnaire like this one.	the end. The working plan is a must to ensure things improve.
3 and 4 (MSH)	Farrow-weaner; 450 and 1100 sows; independent producers	Yes, once	Yes, really easier and very useful. NBS card adds value because you can make changes (simulation) and see the impact.	Pareto chart and NBS report.	Pareto chart and NBS report	Yes	Yes, really useful	Yes, a part of them: ARC&E and genetics	The elements which can impact directly the producers, like neighbors, can be put in a separate place.
5 and 6 (DT)	Farrow-Finisher and farrow-weaner; 300 and 500 sows; independent producers	No	Didn't see the old one	Pareto chart; Risk profile summary and NBS report card	Simulation tool; Risk profile summary and NBS report card.	Yes because ti gives a weighting on factors, but it's too much detailed	Yes, because it is visual and it identifies priorities and weak points. The length and the fact that it's too much detailed is a disadvantage.	To my ARC&E clients and the ones with a high sanitary status with a good biosecurity level	I have to use it more to get to know it better, but it's versatile and visual. Major risks, the ones that should absolutely be implemented, should be tagged with an alert. Reports aren't a problem, it's rather the fact that it's too much detailed.
7 (MB)	Farrowing; 1400 sows; semen collected from boars at	Yes	Yes	Pareto chart, simulation tool	Pareto chart and simulation + risk quadrant	Yes	Yes	Specific clients, clients involved in specific	This tool needs to be better understood by producers, and has to be easily adapted to regional realities.

	the site; isolation site, independent producer.							projects or ARC&E clients.	
8 (LU)	Sow sites; 150-1400 sows; independent producers	Yes	Yes, easier to use, to export to pdf or Excel, and more user friendly.	Pareto chart and simulation tool	Risk quadrant, google map image, Pareto chart, Simulation tool	Even though it's longer to complete, it totally complements NBS training program.	Yes	Yes, the ones interested in improving their biosecurity, but mostly the ones interested in reducing PRRS risk in their sites	Include a tab with a plan and schedules or deadlines (like a calendar) for the things to improve and changes to make in the site. -Put a score on the NBS questions -Adapt the survey to a Canadian reality (filtration, etc.). - In the simulation tool: demonstrate how the overall score changes with the new responses.

Western Canada Responses									
ID Producer	Site	Have you used Padrap before	Did you find the new reporting style easier to understand	What sections of the report gave the most value to vets	Sections of the new reporting format give the most value to producers	Did you think the new format supports NBS training	Was it useful to ID areas of improvement	Will you offer this tool to producers you service	Comments
CLF	1200 Sow, Farrow to 22 kg	Yes. On sow farm and all down flow sites.	Yes, much more simple to review reports. Map isn't correct. Report card is very good.	Report card	Simulations are very interesting.	Yes	Yes. Very useful.	Will use new version on down flow sites.	Tool is still very long but new reports interesting. Still some confusing questions on trucking and airspace.
RBF	1350 Sow, Farrow to 22 kg	Yes. All sites in flow.	Reporting style was easier to understand and very useful. Worry that if I answer some questions wrong it messes up my report. Some questions confusing.	Report card is very cool. Simulation was interesting. Risk quadrant always interesting. Farm Details Map not correct.	Simulations were very interesting. Like to use the means to compare sites I fill.	Yes	Yes	Yes. All sites in flow.	Takes a long time. Some questions in original unclear.
PTR	1800 Sow, Farrow to Wean	Yes. All sites.	Very useful. Great improvement.	NBS Report card excellent.	Staff enjoyed the simulation	Yes	Yes	Yes. All sites.	Map is wrong. Staff like the visuals when reports are returned to them

				Tabs very useful. Map is wrong though.	tool. Like comparing to other sites.				
ALX	300 Sow F to F Colony	Yes	Reports were easier to understand	NBS Report card was good to look at.	NBS Report card.	Yes	Yes	N/A	Because we use boars it is not always clear how to enter them. Gilts enter breeding herd directly with no quarantine; Not sure how this fits into questions. Very long.
AB121 DP1-S AB123 PS1-S AB123 PS2-S	Farrow to Wean, independent farms, part of one management system	yes	Yes, easy to use	external and internal risk quadrant	NBS Report card.	Yes	Yes, we saw opportunities for improvement with each survey.	Yes, all sites every 2 years	Will implement recommendations.

Ontario Responses									
ID Producer	Site	Have you used Padrap before	Did you find the new reporting style easier to understand	What sections of the report gave the most value to vets	Sections of the new reporting format give the most value to producers	Did you think the new format supports NBS training	Was it useful to ID areas of improvement	Will you offer this tool to producers you service	Comments
1 to 7	under 200 sows to over 3000 sows, farrow to feeder and farrow to wean	yes	Easier to understand, easier to present to clients	simulation (allowed assessment of "what if" scenarios and enabled vets to show producers the impact of changes) and Risk Pareto charts	Simulation and Risk Pareto charts	yes, but too detailed for some producers	Yes, a number of the producers indicated that they identified areas to improve and they intend to implement improvements	Will offer to a specific client base with advanced biosecurity, value for genetic companies	

PADRAP Training Manual – Appendix A

Canadian National Biosecurity Standards (NBS)

Canadian NBS accessibility

- ***"Primary VeterinarianCA"*** = AASV Veterinarians that have completed the training AND have a Canadian address OR have been assigned by PADRAP Administrators as a Canadian user
  - Access to PADRAP online and Canadian additions via username and password
  - May set up Canadian and non-Canadian *production systems, sites, surveys and users*
  - May take surveys and view benchmarking and NBS reports
  - Ability to create Canadian and non-Canadian users

- Who can complete Canadian surveys and who has access to the NBS reporting capabilities?
  - A veterinarian assigned the role of *Primary VeterinarianCA* by administrators when he/she is registered in PADRAP (any veterinarian with a Canada address will be designated as *Primary VeterinarianCA* by PADRAP administrators)
    OR
  - If the veterinarian is assigned as a *Primary VeterinarianCA* for at least one Canadian production system (this could be a veterinarian with a non-Canadian address that is manually assigned a *Primary VeterinarianCA* role by PADRAP administrators or another person that is a *Primary VeterinarianCA* for a production system in Canada

- Where are the additional NBS questions located in the PADRAP survey?
  - The first 24 questions in the Demographics section of the Breeding Herd survey are the original questions present for all PADRAP users. When a Canadian survey is created, questions 25 through 36 will appear in the Demographics section under an NBS sub-section. These are the additional questions pertaining to the NBS categories.

Original PADRAP Demographic questions

22. Number of Clinical PRRSv episodes between 3 and 5 years ago

A "clinical PRRS episode" in the breeding herd is defined by

1. *A change in one or more reproduction performance measures where the change exceeds that which would be expected with "normal" variation. Consider changes for the following reproductive performance measures:*

   -increase in 45 to 112 day abortions
   -increase in born dead (mummies or stillborns) per litter farrowed
   -increase in preweanmortality
   -increase in sow deaths

2. *Diagnostic confirmation of PRRSv involvement*

23. Number of Clinical PRRSv episodes within last 3 years

A "clinical PRRS episode" in the breeding herd is defined by

1. *A change in one or more reproduction performance measures where the change exceeds that which would be expected with "normal" variation. Consider changes for the following reproductive performance measures:*

   increase in 45 to 112 day abortions
   increase in born dead (mummies or stillborns) per litter farrowed
   increase in preweanmortality
   increase in sow deaths
   Diagnostic confirmation of PRRSv involvement

24. Number of months since most recent clinical PRRSv episode

If the site has never had a clinical PRRSv episode, enter "N/A"."

Additional NBS questions are 25 through 36

NBS 0.0%

25. Procedures are in place to meet legal requirements for importation of foreign live pigs, semen or embryos.

- ☐ No live pigs, semen or embryos are imported from a foreign country
- ☐ Yes, proper procedures are in place and reviewed by a veterinarian
- ☐ No, proper procedures are not in place

26. Entry of pork meat products by employees, visitors, service and delivery personnel

- ☐ No restrictions on entry of pork meat products
- ☐ Not allowed to enter uncooked fresh pork products, but can enter cooked fresh or processed pork
- ☐ Not allowed to enter uncooked or cooked fresh pork products, but can enter processed pork
- ☐ No pork meat products allowed

27. Presence of domestic animals (pets) inside buildings

- ☐ Often present inside buildings
- ☐ Occasionally present inside buildings
- ☐ Barriers are sufficient to restrict entry of pets into buildings

28. Presence of feral pigs near this site

- ☐ Frequently (at least once per month) observed near the site
- ☐ Occasionally (every 1 to 6 months) observed
- ☐ Rarely (less than once every 6 months to a year)
- ☐ There are no feral pigs near this site

29. Chlorination of water

- ☐ Not done
- ☐ Done in response to problems only
- ☐ Done on a regular basis
- ☐ Done continuously

30. Acidification of water

- ☐ Not done
- ☐ Done in response to problems only
- ☐ Done on a regular basis
- ☐ Done continuously

31. Water source

- ☐ Surface water
- ☐ Shallow well
- ☐ Deep well
- ☐ Rural/Municipal water

32. Waste (other than manure) disposed of on-site?

- ☐ Yes
- ☐ No

33. Location of pick up site for waste (other than manure) disposed of off-site

- ☐ At this site or less than one-half mile (0.8 km) away
- ☐ At a dedicated site between one half mile (0.8 km) and a mile (1.6 km) from this site
- ☐ At a dedicated site more than one mile (1.6 km) from this site
- ☐ Not applicable (select if waste is disposed of on-site)

34. Frequency with which waste (other than manure) is picked up for off-site disposal

- ☐ Daily
- ☐ Pickup every 2-5 days
- ☐ Pickup every 7-13 days
- ☐ Pickup every 14-20 days
- ☐ Less frequently than every 20 days
- ☐ Not applicable (select if waste is disposed of on-site and never stored prior to disposal)

35. Type of storage for waste (other than manure) awaiting pickup or disposal

- ☐ Open container
- ☐ Covered container or shed
- ☐ Covered container or shed with perimeter fence
- ☐ Not applicable (select if waste is disposed of on-site and never stored prior to disposal

36. Management of trucks that pick up waste (other than manure) for off-site disposal

- ☐ Truck managed by third party
- ☐ Truck managed by production system
- ☐ Not applicable (select if waste is disposed of on-site)

2

Revised 12/12/2011

- When will the additional NBS questions be visible?
  - In a survey created for a site that belongs to a production system with a Canadian address
  - Conversely, if a survey has been created for a site that belongs to a production system outside Canada, the additional NBS questions will not be visible (even if the user has the role of *Primary VeterinarianCA)*
  - If the production system/site is in Canada but you do NOT want the additional NBS questions to appear in the survey and do NOT want to run NBS reports **please call/email PADRAP administrators** so the settings can be adjusted

- When will the NBS Report Card for a site be available?
  - When a survey is 100% complete for a site that belongs to a production system with a Canadian address
  - On the contrary, even if the user has been designated as a *Primary VeterinarianCA* when he/she registered or for another production system, and the NBS Report Card link is visible on the left menu, if a survey was completed for a site with an address outside Canada it will not show up in the drop down list used to run NBS reports

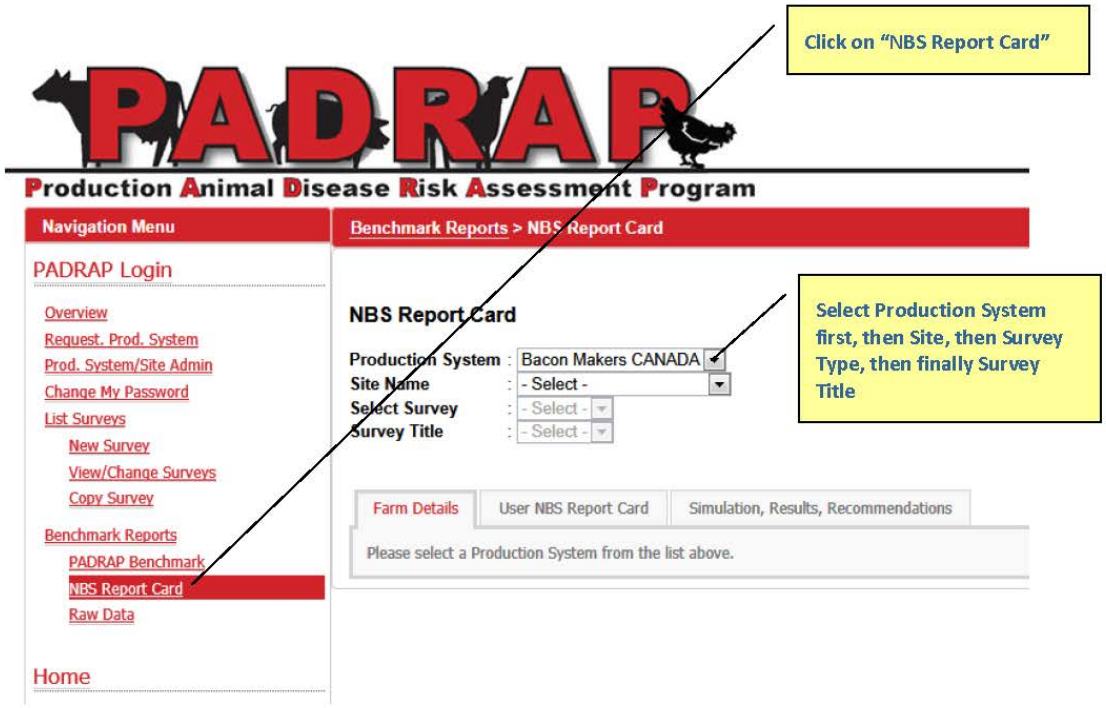
	Canadian Production system	Non-Canadian Production system
Primary VeterinarianCA	•NBS questions show up •User sees NBS Report Card link in left menu •Surveys 100% complete are visible for NBS Report Card reports	•NBS questions do not show up •User sees NBS Report Card link in left menu •Completed surveys are not visible for NBS Report Card reports
Primary Veterinarian	•NBS questions show up •User sees NBS Report Card link in left menu •Surveys 100% complete are visible for NBS Report Card reports	•No access to NBS questions and reports •User may see NBS Report Card link in left menu if he/she is a *Primary VeterinarianCA* for a different production system with a Canadian address

Completing surveys with NBS questions for Canadian sites

- Production Systems, Sites, and Surveys should be set up following the steps in the PADRAP Training Manual
- Questions 25 through 36 in the Demographics section are specific to Canada and will appear for any survey for a site in Canada

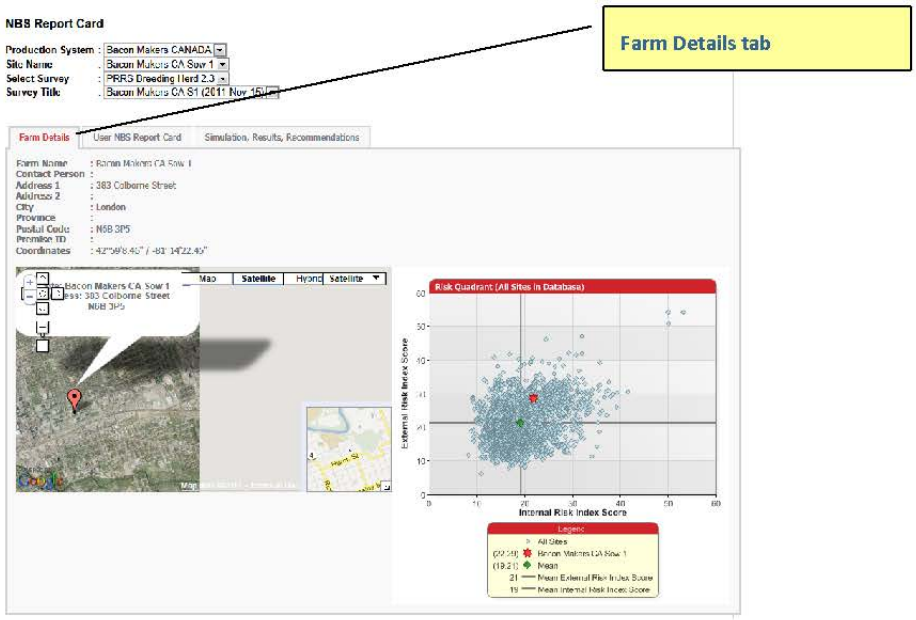
Accessing The NBS Report Card

1. Click on "NBS Report Card" on the left menu
2. From the drop down menus, select the Production System, Site, and Survey to analyze



3. **There are 3 tabs – Farm Details, User NBS Report Card, and Simulation, Results, Recommendations**

   a. **Farm Details** – shows general information for the site such as address and GPS coordinates, site location on Google maps, a Risk Quadrant report and Risk Profile summary.



Risk Profile Summary

Category/Question	Score	Rank
Overall	27.42	83.23%
Internal Risks	21.58	71.36%
Circulation Risks	25.21	74.89%
Herd and Site Characteristics	33.1	79.89%
Characteristics of the herd	43.13	86.73%
Characteristics of the site	13.05	39.99%
PRRSV Status	23.67	82.38%
Current and historical PRRSV status of the site	23.67	82.38%
Management	10	13.44%
Management practices	10	13.44%
Immune Management	14.22	67.83%
Managed Exposure	14.22	67.83%
Natural exposure by contact or feedback of breeding females and replacement animals	4.6	0.18%
Controlled exposure by blood or serum injection of breeding females and replacement animals	5.6	80.59%
Modified live PRRSV vaccine use at this site	46.4	100.00%
External Risks	28.87	84.18%
Pig Related	43.35	93.26%
Live Animals	35.59	68.24%
Entry of breeding females and boar replacements into the breeding herd	35.59	68.24%
Animal Components	49.55	98.54%
Entry of semen into the breeding herd	49.55	98.54%
Non pig Related	21.92	69.74%
Operations	21.79	80.10%
Transportation of live animals	24.96	82.77%
A. Vehicles used to transport animals to market or collection points	18.19	58.46%
B. Vehicles used to transport non-genetic animals to and from other sites within the production system	28.03	91.31%
C. Vehicles used to transport genetic animals	31.26	88.30%
Transportation of feed	10	29.54%
Employee and service vehicles	28.2	98.97%
Disposal of dead animals	18.21	71.86%
Employees and visitors	19.27	81.88%
Entry of supplies	10	31.82%
Facilities	18.63	98.38%
Biovectors	2.2	0.31%
Location / Proximity	22.25	27.83%
Density of pig farms in the area	4.8	15.71%
Neighboring pig farms	26.82	37.71%
Distance to pork industry infrastructure	14.45	46.77%
Topography and breakdown of surrounding area	46.4	100.00%

b. **User NBS Report Card** – an overview of the site's scores for each of the NBS categories and ranks each as either "ACCEPTABLE" or "OPPORTUNITY TO IMPROVE"

i. categories and subcategories can be expanded and collapsed by clicking on the + or – respectively

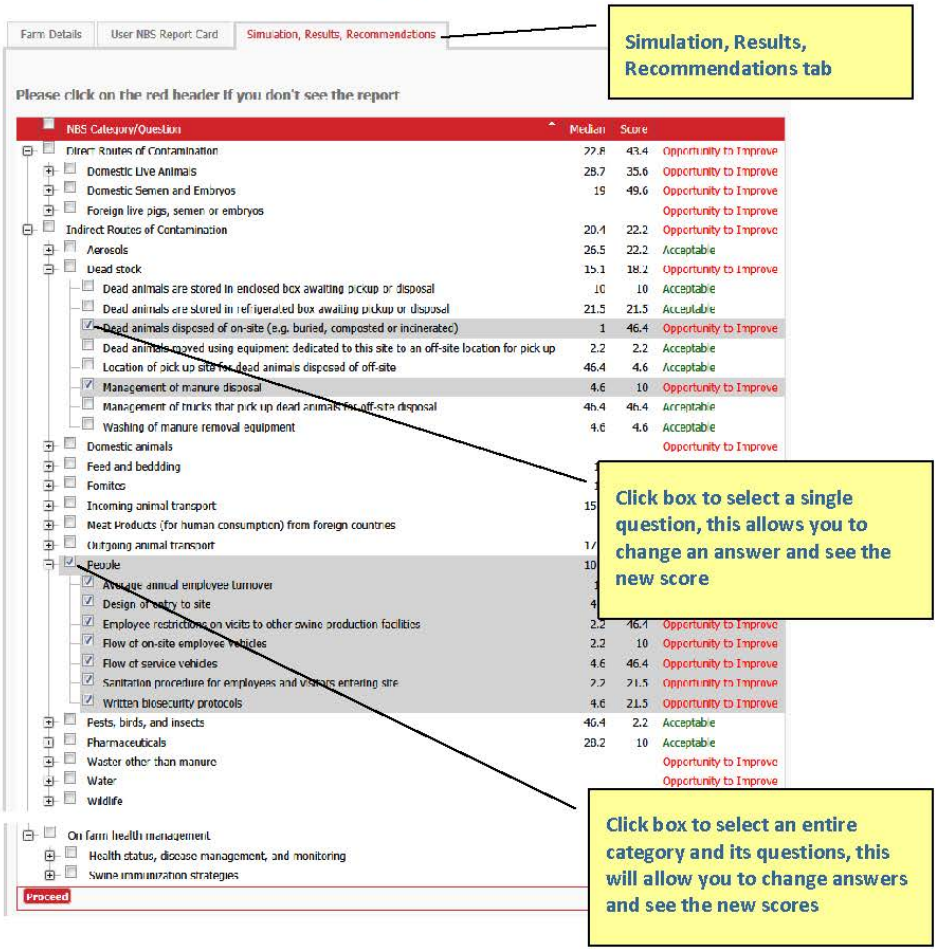
NBS Category/Question	Median	Score	
Direct Routes of Contamination	22.8	43.4	Opportunity to Improve
Domestic Live Animals	28.7	35.6	Opportunity to Improve
Domestic Semen and Embryos	19	49.6	Opportunity to Improve
Foreign live pigs, semen or embryos			Opportunity to Improve
Procedures are in place to meet legal requirements for importation of foreign live pigs, semen or embryos.			Opportunity to Improve
Indirect Routes of Contamination	20.4	22.2	Opportunity to Improve
Incoming animal transport	15.3	29.7	Opportunity to Improve
Outgoing animal transport	17.2	18.2	Opportunity to Improve
Dead stock	15.1	18.2	Opportunity to Improve
People	10.4	25.1	Opportunity to Improve
Aerosols	26.5	22.2	Acceptable
Pests, birds, and insects	46.4	2.2	Acceptable
Fomites	10	10	Acceptable
Feed and beddding	10	10	Acceptable
Pharmaceuticals	28.2	10	Acceptable
Meat Products (for human consumption) from foreign countries			Opportunity to Improve
Entry of pork meat products by employees, visitors, service and delivery personnel			Opportunity to Improve
Domestic animals			Opportunity to Improve
Wildlife			Opportunity to Improve
Water			Opportunity to Improve
Waster other than manure			Opportunity to Improve
On farm health management	12.2	19.4	Opportunity to Improve
Health status, disease management, and monitoring	9.3	23.7	Opportunity to Improve
Swine immunization strategies	13.6	14.2	Opportunity to Improve

c. **Simulation, Results, Recommendations tab** – gives veterinarian the chance to show client what would happen by improving score(s) in a category or categories and has a place for notes and recommendations

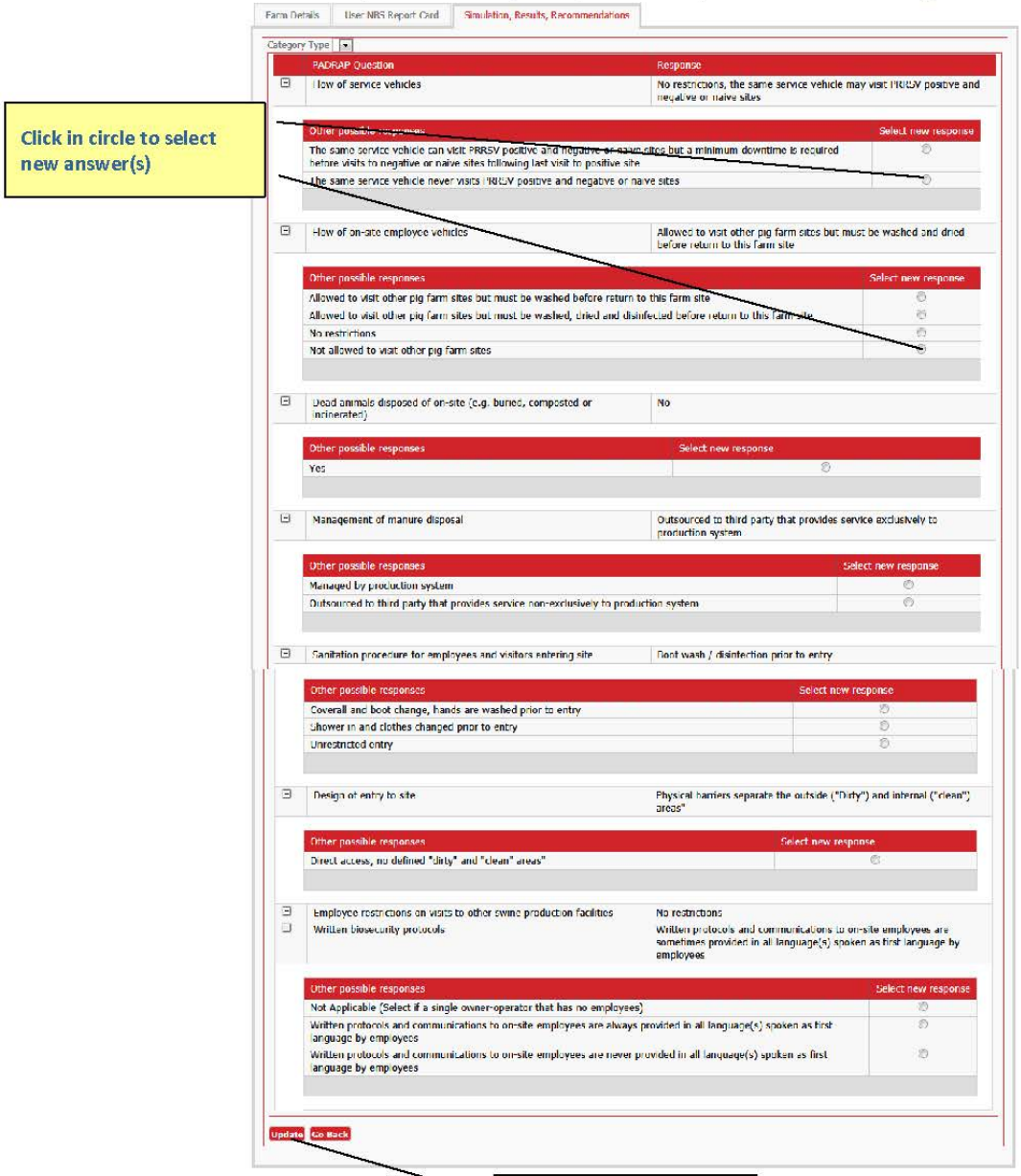
   i. **The NBS categories and subcategories are shown and can be expanded/collapsed by clicking +/-**

   ii. **After expanding all the way down to a question, that question can be selected by clicking in the box, or an entire category and it's questions can be selected by clicking the category box**

   iii. **Scroll to the bottom of the page and click "Proceed"**



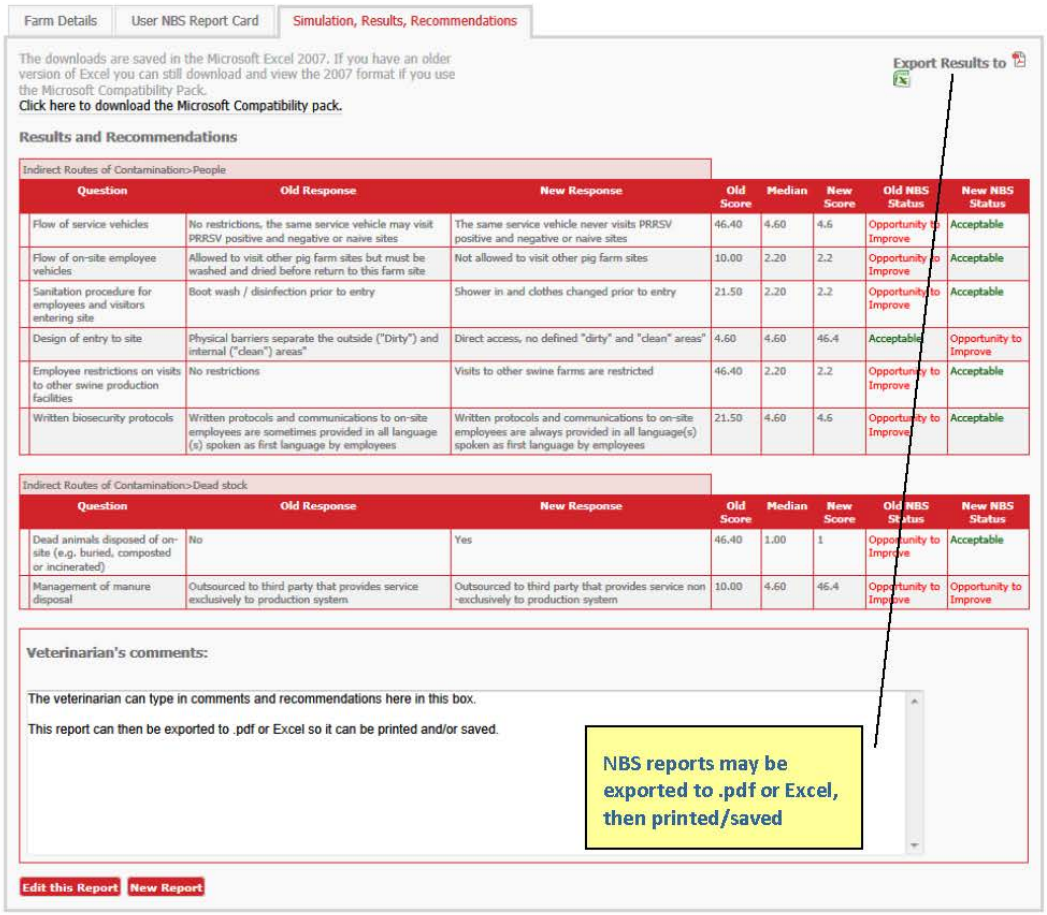
iv. Next the selected question(s) will appear with the response(s) that was(were) given as well as the other possible responses. Click circle(s) below "Select new response" then click "Update" in lower left corner. You do not have to select a new response and can just skip over ones you don't want to change.



Click in circle to select new answer(s)

Click "Update" after done selecting new answers

v. Now you can see the question, old response, new response, old score, median, new score, old NBS category it fell in, new NBS category it falls in



vi. Veterinarian can type in comments or recommendations in the box

vii. These reports are NOT currently auto-saved by PADRAP (like the regular PADRAP reports) but the NBS Reports can be exported to both Excel and to .pdf then printed and/or saved.

viii. Click "New Report" to run reports for another site, "Edit this Report" to go back to the beginning of the Simulation, Results, Recommendations tab or "Logout" if your work is complete