

Appendix 1: Biosecurity Survey

Start of Block: Informed Consent

Q1

Informed Consent Form

You are being invited to participate in a research study. This information letter is to help you decide if you want to be involved in the project. This research study is being conducted by Juliet Germann (Master's student) under the supervision of Dr. Kelsey Spence (Assistant Professor), and Dr. Terri O'Sullivan (Associate Professor), Ontario Veterinary College at the University of Guelph. If you have any questions or concerns about the research, please feel free to contact the Principal Investigator, Dr. Kelsey Spence (kspenc04@uoguelph.ca).

Study Purpose

The goals of this research are to 1) understand the attitudes of Ontario horse owners towards biosecurity, and 2) determine which biosecurity measures Ontario horse owners are implementing in their day-to-day operations. This research can benefit the health of horses in Ontario and reduce the spread and impact of infectious diseases. We hope that your participation in the study may help to:

1. Improve how biosecurity information is communicated to horse owners
2. Improve the implementation of biosecurity within horse facilities
3. Improve the health and welfare of Ontario horses
4. Minimize the economic and emotional impact that equine disease can have on horse owners and businesses

Study Design

You are being invited to take part in this study because you are 18 years or older, live in Ontario, and own and/or lease horses. If you agree to take part in this study, you will be asked to complete a questionnaire that will ask about you, your horse, your horse facility, current biosecurity practices, and your understanding of disease risk. The questionnaire will take approximately 25 minutes. At the end of the questionnaire, you will be directed to a separate survey where you will have the option of providing your name and email address if you would like to participate in the prize draw.

Use and protection of personal data

This survey is anonymous, and your answers are not identifiable. Identifiable information collected in the prize draw survey will remain confidential and we will minimize any risks of breach of confidentiality. Your answers will only be used in the context of this study and will not be commercialized, and data will be stored only on the researchers' encrypted laptop computers and on the University of Guelph's cloud storage. No identifying information will be included in any presentation or publication resulting from this research. Your name and email will only be

used for study contact purposes and will only be stored on the researchers' encrypted laptop computers. Once the study is completed, your name and email will be permanently destroyed. Anonymous data will be stored indefinitely by the Principal Investigator.

Risks of Participating

There is minimal risk to participating in this study. Some of the risks have been included above but include a privacy risk if you choose to provide your name and email in the separate survey. Please note that confidentiality cannot be guaranteed while data are in transit over the internet.

Benefits of Participating

While there may not be any direct benefits to you, the results from the study may benefit the wider Ontario horse industry. We aim to improve the welfare of horses and reduce the impact of disease. Your answers will give a better insight into our understanding of how prepared the Ontario horse industry is for an equine disease outbreak.

Incentive for Participation

In recognition of your time and contribution to this research project, you can choose to be entered into a prize draw for a **\$250 Amazon gift card**. Your email will be assigned an identification number which will be placed in a random number generator. The winner will be contacted via email. They will be contacted 3 times within 3-day increments before a new winner is chosen. Your approximate odds are 1 in 495 (this is subject to change as it is dependent on the total number of participants).

Your participation in this study is completely voluntary. If at any point during your involvement in the research study you decide you would no longer like to participate, you are free to close the questionnaire without submitting your results. Please note that since this questionnaire is anonymous, you will not be able to withdraw your answers after the questionnaire is submitted. You do not waive any legal rights by agreeing to take part in this study. This project has been reviewed by the Research Ethics Board for compliance with federal guidelines for research involving human participants.

If you have questions regarding your rights and welfare as a research participant in this study (REB#22-03-034), please contact: Manager, Research Ethics; University of Guelph; reb@uoguelph.ca; (519)824-4120 (ext. 56606).

Please print or store a copy of this information for your records.

Q2 I have read the Informed Consent form provided and have had an opportunity to have my questions about the project answered.

By clicking the 'I agree' button, you are consenting to take part in this study.

I agree (1)

I do not agree (2)

Skip To: End of Survey If Q2 != I agree

End of Block: Informed Consent

Start of Block: Introduction Video

Q3 Thank you for participating! A quick video from Juliet:

End of Block: Introduction Video

Start of Block: Enrollment Questions

Q4 Are you aged 18 years or older?

Yes (1)

No (2)

Skip To: End of Survey If Q4 = No

Q5 Do you reside in Ontario?

Yes (1)

No (2)

Skip To: End of Survey If Q5 = No

End of Block: Enrollment Questions

Start of Block: About Your Horse

Q6 To start off easy, tell us a little bit about your horse. We want to know how many horses you have, what kinds of activities you do with them, and their vaccination status.

Q7 Do you own a horse?

- Yes (1)
 - No (2)
-

Display This Question:

If Q7 = Yes

Q8 How many?

- 1 (1)
 - 2 (2)
 - 3 (3)
 - 4 (4)
 - >5 (5)
-

Q9 Do you lease a horse?

- Yes (1)
 - No (2)
-

Display This Question:

If Q9 = Yes

Q10 How many?

1 (1)

2 (2)

3 (3)

4 (4)

>5 (5)

Page Break

Q11 Which best describes your main activities you do with your horse(s)? (Select all that apply)

- Hacking/ leisure riding (1)
 - Companion (no riding) (2)
 - Lessons (3)
 - Show jumping (4)
 - Dressage (5)
 - Eventing (6)
 - Breeding (7)
 - Racing (8)
 - Retired (9)
 - Other, please specify: (10)
-

Q12 How long have you owned/been involved with horses?

- <1 year (1)
 - 1-5 years (2)
 - 6-10 years (3)
 - >10 years (4)
-

Q13 On average, how often is/are your horse(s) temporarily transported off the home property either using a trailer or on foot? (e.g., for competitions, lessons, trails rides, etc.)

- Never (1)
 - Less than 5 times a year (2)
 - Between 5 and 10 times a year (3)
 - Between 11 and 15 times a year (4)
 - More than 15 times a year (5)
 - Other, please specify: (6)
-

Q14 Do you *currently* compete in any activities with your horse(s)? (e.g., dressage, jumping, etc.)

- Yes (1)
 - No (2)
-

Display This Question:

If Q14 = Yes

Q15 At which level do you compete? (Select all that apply)

- EC (Equestrian Canada) Sanctioned Bronze (1)
- EC Sanctioned Silver (2)
- EC Sanctioned Gold (3)
- EC Sanctioned Platinum (4)
- Unsanctioned (5)

Page Break

Q16 Do you know the vaccine status of your horse(s)? (what vaccines have been administered to your horse)

- Yes (1)
- No (2)
- Only partially (3)

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q17 Which of the following diseases do you vaccinate your horse against? (If you have multiple horses, please answer this questions for the horse you ride more frequently)

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q18 Rabies

- Yes (1)
- No (2)
- Unsure (3)

Display This Question:

If Q18 = Yes

Q19 How frequently?

- Every 6 months (1)
 - Once a year (2)
 - Once every 2 years (3)
 - Other, please specify: (4)
-

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q20 EEE/WEE (Eastern Equine Encephalitis/Western Equine Encephalitis)

- Yes (1)
- No (2)
- Unsure (3)

Display This Question:

If Q20 = Yes

Q21 How frequently?

- Every 6 months (1)
 - Once a year (2)
 - Once every 2 years (3)
 - Other, please specify: (4)
-

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q22 Tetanus

Yes (1)

No (2)

Unsure (3)

Display This Question:

If Q22 = Yes

Q23 How frequently?

Every 6 months (1)

Once a year (2)

Once every 2 years (3)

Other, please specify: (4)

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q24 West Nile Virus

Yes (1)

No (2)

Unsure (3)

Display This Question:

If Q24 = Yes

Q25 How frequently?

- Every 6 months (1)
 - Once a year (2)
 - Once every 2 years (3)
 - Other, please specify: (4)
-

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q26 EHV-1&4 (Equine Herpes Virus 1 and 4)

- Yes (1)
 - No (2)
 - Unsure (3)
-

Display This Question:

If Q26 = Yes

Q27 How frequently?

- Every 6 months (1)
 - Once a year (2)
 - Once every 2 years (3)
 - Other, please specify: (4)
-

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q28 Strangles

Yes (1)

No (2)

Unsure (3)

Display This Question:

If Q28 = Yes

Q29 How frequently?

Every 6 months (1)

Once a year (2)

Once every 2 years (3)

Other, please specify: (4)

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q30 Equine Influenza

Yes (1)

No (2)

Unsure (3)

Display This Question:

If Q30 = Yes

Q31 How frequently?

- Every 6 months (1)
 - Once a year (2)
 - Once every 2 years (3)
 - Other, please specify: (4)
-

Display This Question:

If Q16 = Yes

Or Q16 = Only partially

Q32 If your horse is vaccinated against something not listed, please name the vaccine and frequency

End of Block: About Your Horse

Start of Block: About You

Q33 Now, tell us a little bit about yourself. This information will help our understanding of horse owner demographics in Ontario.

Q34 What is your gender?

- Male (1)
 - Female (2)
 - Non-binary / third gender (3)
 - My gender is not listed (4)
 - Prefer not to say (5)
-

Q35 Please select your age category

- 18-24 (1)
 - 25-34 (2)
 - 35-44 (3)
 - 45-54 (4)
 - 55-64 (5)
 - 65+ (6)
 - Prefer not to say (7)
-

Q36 During an average week, how many hours do you work?

- <5 (1)
 - 5-9 (2)
 - 10-19 (3)
 - 20-29 (4)
 - 30-39 (5)
 - 40-50 (6)
 - >50 (7)
-

Q37 Please select your highest education level *completed*

- Secondary school (1)
 - Post-secondary school (2)
 - Didn't graduate from secondary school (3)
 - Other, please specify: (4)
-

Display This Question:

If Q37 = Post-secondary school

Q38 Please indicate the levels of schooling you have *completed*

- Professional degree (DVM, MD, etc.) (1)
 - Bachelor's degree (2)
 - Master's degree (3)
 - Doctoral degree (4)
 - College certificate (5)
 - College diploma (6)
 - College advanced diploma (7)
 - Other, please specify: (8)
-

End of Block: About You

Start of Block: Personality Test

Q39 Personality and perception of risk plays a big role in how people view biosecurity. In this section, we want to get to know a little more about your personality. On a scale from 1 (strongly disagree) to 5 (strongly agree), how well would you say the following statements describe your personality?



Q40 I see myself as someone who...

	Disagree strongly (1)	Disagree a little (2)	Neither agree nor disagree (3)	Agree a little (4)	Agree strongly (5)
...is reserved (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...is generally trusting (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...tends to be lazy (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...is relaxed, handles stress well (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...has few artistic interests (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...is outgoing, sociable (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...tends to find fault with others (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...does a thorough job (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...gets nervous easily (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...has an active imagination (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...is considerate and kind to almost everyone (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Personality Test

Start of Block: About Your Facility

Q41 Next, we are going to ask you about your facility, including the type of facility your horse(s) are stabled at, management practices, and daily routine.

Display This Question:

If Q8 = 2

Or Q8 = 3

Or Q8 = 4

Or Q8 = >5

Or Q10 = 2

Or Q10 = 3

Or Q10 = 4

Or Q10 = >5

Q42 Are your horses stabled at the same facility?

Yes (1)

No (2)

Display This Question:

If Q42 = No

Q43 As you go through with the following questions, answer for the horse facility that you frequent the *most*.

Q44 What town/city is your facility located in?

Q45 Please select the facility types that best describes the facility where your horse(s) are stabled at (select all that apply)

- Boarding facility (1)
 - Lesson barn (2)
 - Co-op facility (3)
 - Owned private property (4)
 - Farm (livestock) (5)
 - Competition stables (6)
 - Breeding farm (7)
 - Other, please specify: (8)
-

Display This Question:

If Q45 = Boarding facility

Q46 Which of the following factors do you feel is *most* important in deciding where to board your horse(s)? (Select all that apply)

- Location (1)
 - Cost (2)
 - Type of riding at the facility (3)
 - Friends/ family members at the facility (4)
 - Type of community (i.e., close knit facility) (5)
 - Convenience (6)
 - Other, please specify: (7)
-

Q47 Have you ever purposefully changed to a different boarding facility? (This can be recently or in the past)

- Yes (1)
- No (2)
- Not Applicable (3)

Display This Question:

If Q47 = Yes

Q48 Please describe why:

Q49 Do you own/manage the facility where your horse(s) are currently stabled?

- Yes (1)
- No (2)

Display This Question:

If Q49 = Yes

Q50 Do you have employees to help with barn duties?

- Yes (1)
- No (2)
- Sometimes (3)

Display This Question:

If Q49 = No

Q51 Who manages your facility?

- Barn manager (1)
 - Barn owner (2)
 - Both (3)
 - Other, please specify: (4)
-

Q52 Who usually looks after your horse(s) on a day-to-day basis? (Select all that apply)

- Barn employees (full-time) (1)
 - Barn employees (part-time) and you (part-time) (2)
 - You personally (full-time) (3)
 - Friend/family member (full-time) (4)
 - Friend/family member (part-time) and you (part-time) (5)
 - Another owner (6)
 - Other, please specify: (7)
-

End of Block: About Your Facility

Start of Block: Experience, Knowledge, and Understanding of Risk

Q53 In this section, we want to know more about your understanding of risk and experiences with certain equine diseases.

Q54 The following are a list of infectious diseases that horses are susceptible to. Please indicate how familiar you are with each disease (Select all that apply)

	Heard about it (1)	Experienced it myself (2)	Know someone who experienced it (3)	Never hear about it before (4)
Strangles (Streptococcus equi) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Influenza (EIV) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus (EHV-1 and EHV-4) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus Myeloencephalopathy (EHM) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
West Nile Virus (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eastern Equine Encephalitis (EEE) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Western Equine Encephalitis (WEE) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Protozoal Myeloencephalitis (EPM) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leptospirosis (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lyme Disease (B. burgdorferi) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rabies (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q55 Considering your horse's *current* health, please rank on a scale of 1 to 5 how severe you think each of the following diseases would be for your horse if they contracted it. (With 1 representing no clinical signs and 5 representing extremely severe clinical signs)

	No clinical signs (my horse will behave normally) (1)	Mild (normal behavior will be less frequent than expected) (2)	Moderate (less enthusiastic, less interested, less interactive) (3)	Severe (will show more rigorous signs of restlessness) (4)	Extremely Severe (Frequent signs of extreme agitation/ extremely uncomfortable) (5)	Unsure (6)
Strangles (Streptococcus equi) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Influenza (EIV) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus (EHV-1 and EHV-4) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus Myeloencephalopathy (EHM) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
West Nile Virus (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eastern Equine Encephalitis (EEE) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Western Equine Encephalitis (WEE) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Protozoal Myeloencephalitis (EPM) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leptospirosis (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lyme Disease (B. burgdorferi) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rabies (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q56 If an equine disease outbreak were to occur in your area, how would you hear about it?
(Select all that apply)

- From my vet (1)
 - On social media (e.g., Facebook community pages) (2)
 - Word of mouth from other horse owners (3)
 - News outlets (4)
 - Regularly checking online disease communication networks (e.g., EDCC) (5)
 - Barn manager/owner (7)
 - Other, please specify: (6)
-

Page Break

Q57 You will be presented with a series of short fictional scenarios in which you will rate your horse's risk of infection for each disease on a scale of 1 to 5 (With 1 meaning no risk to your horse and 5 meaning extremely risky to your horse, 6 meaning unsure):

Q58 You have just arrived at an EC Gold level Hunter-Jumper competition. It is a busy event with lots of competitors and horses walking around the showgrounds. You have been assigned to a stable aisle shared with your home stablemates and your horse will stay for 4 days. You brought your own showing supplies (e.g., water hose, tack). You put your horse into the stall and your horse immediately touches noses with the horses in adjacent aisles/stalls that are from

another home stable. Considering your horses *current* health, please rate your horse's risk of infection:

	No Risk (1)	Slightly Risky (2)	Somewhat Risky (3)	Very Risky (4)	Extremely Risky (5)	Unsure (6)
Strangles (Streptococcus equi) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Influenza (EIV) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus (EHV-1 and EHV-4) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus Myeloencephalopathy (EHM) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
West Nile Virus (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eastern Equine Encephalitis (EEE) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Western Equine Encephalitis (WEE) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Protozoal Myeloencephalitis (EPM) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leptospirosis (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lyme Disease (B. burgdorferi) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rabies (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q59 Your horse is at home grazing in a field with no other horses in the same field. However, you have noticed some wildlife (possums, raccoons) on the property over the past few weeks. It is spring, the mosquitos are bad, and it has been quite rainy with lots of mud and standing water in your horse's field. Considering your horses current health, please rate your horse's risk of infection:

	No Risk (1)	Slightly Risky (2)	Somewhat Risky (3)	Very Risky (4)	Extremely Risky (5)	Unsure (6)
Strangles (Streptococcus equi) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Influenza (EIV) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus (EHV-1 and EHV-4) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus Myeloencephalopathy (EHM) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
West Nile Virus (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eastern Equine Encephalitis (EEE) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Western Equine Encephalitis (WEE) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Protozoal Myeloencephalitis (EPM) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leptospirosis (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lyme Disease (B. burgdorferi) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rabies (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q60 Your horse is boarded at a barn with 10 other horses. Your horse doesn't compete but some of the other horses compete regularly during the summertime. Recently one of the horses boarded in the stall next to yours just came back from a bronze-level competition where they shipped-in to compete (e.g., they did not stable overnight at the competition). Considering your horse's current health, please rate your horse's risk of infection:

	No Risk (1)	Slightly Risky (2)	Somewhat Risky (3)	Very Risky (4)	Extremely Risky (5)	Unsure (6)
Strangles (Streptococcus equi) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Influenza (EIV) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus (EHV-1 and EHV-4) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Herpesvirus Myeloencephalopathy (EHM) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
West Nile Virus (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eastern Equine Encephalitis (EEE) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Western Equine Encephalitis (WEE) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Protozoal Myeloencephalitis (EPM) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leptospirosis (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lyme Disease (B. burgdorferi) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rabies (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q61 Are there any other diseases not listed above that you consider your horse at high risk of infection on a daily basis?

Yes (1)

No (2)

Display This Question:

If Q61 = Yes

Q62 Which disease(s)?

Page Break

End of Block: Experience, Knowledge, and Understanding of Risk

Start of Block: Biosecurity Implementation

Q63 In this section, you will be asked about biosecurity and what disease prevention measures are implemented at your facility.

Q64 Please list 5 words that you associate with the term “biosecurity”. (For example, I would associate the following words with the term “dog”: playful, cuddly, excited, soft, funny.)

- 1 (1) _____
 - 2 (2) _____
 - 3 (3) _____
 - 4 (4) _____
 - 5 (5) _____
-

Page Break

Q65 When you discuss disease prevention at equine facilities, which term do you most commonly use?

- Biosecurity (1)
 - Infection control (2)
 - Both (3)
 - It's not discussed at all (4)
 - Other, please specify: (5)
-

Q66 If/when you have questions about disease prevention at your horse facility, which sources do you go to? (Select all that apply)

- Educational sites (1)
 - Blogs (2)
 - Social media (3)
 - Vet (4)
 - Other horse owners (5)
 - Barn manager / owner (8)
 - I don't have any questions (7)
 - Other, please specify: (6)
-

Page Break

Q67 For each of the following statements, indicate how strongly you disagree or agree that these factors *discourage* you from undertaking biosecurity on a scale of 1 to 5 (1 represents strongly disagreeing and 5 represents strongly agreeing).

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither Agree Nor Disagree (3)	Somewhat Agree (4)	Strongly Agree (5)
It is too expensive (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a lack of equipment (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a lack of appropriate facilities (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't have the time to undertake more biosecurity measures (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find biosecurity guidelines difficult to follow and understand (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't know where to start when it comes to undertaking biosecurity (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find that certain biosecurity guidelines are unnecessary for my horse and/or my premise (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find that all
biosecurity
guidelines
are
unnecessary
for my horse
and/or my
premise (8)

I do not
believe
biosecurity
helps with
disease
prevention
(9)

If other horse
owners put
little to no
effort into
undertaking
biosecurity,
there is little
point in me
doing so (10)

If I let other
horse owners
know that my
horse is sick,
they will have
a negative
impression of
me (11)

If I carry out
biosecurity
measures,
other horse
owners will
think I am
overly
cautious (12)

Q68 For each of the following statements, indicate how strongly you disagree or agree that these factors *encourage* you to undertake biosecurity (1 represents strongly disagreeing and 5 represents strongly agreeing).

	Strongly Disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I feel that I have a moral obligation to protect other horses from potential diseases my horse may be carrying (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I have a moral obligation to protect my horse from potential diseases other horses may be carrying (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would rather take proactive approach to biosecurity rather than a reactive one (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biosecurity practices can be inexpensive (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biosecurity practices can be easy to do (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I consider biosecurity to be a priority regardless of cost (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I consider
biosecurity to
be a priority
regardless of
space (7)

Page Break

Q69 Is there a biosecurity plan at your facility? (If you have more than one horse, answer for the facility you frequent the most)

- Yes (1)
- No (2)
- Unsure (3)

Display This Question:
If Q69 = Yes

Q70 For each of the following biosecurity measures listed, please select which ones are required at your facility, which ones are recommended at your facility, which ones you see used on a regular basis, and which ones are not performed even though it is recommended.

Display This Question:
If Q69 = Yes

Q71 Quarantine Measures

	This is required (1)	This is recommended (2)	I see this used on a regular basis (3)	Not performed even though it is recommended (4)
Quarantine sick horses (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quarantine incoming horses (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quarantine horses that were temporarily transported off property (e.g., for competition) (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Display This Question:

If Q69 = Yes

Q72 Vaccinations

	This is required (1)	This is recommended (2)	I see this used on a regular basis (3)	Not performed even though it is recommended (4)
Core vaccines (Rabies, Tetanus, WNV, EEE/WEE) (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risk-based vaccines (Strangles, EI, EHV-1&4) (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Display This Question:

If Q69 = Yes

Q73 Sharing and Traffic Measures

	This is required (1)	This is recommended (2)	I see this used on a regular basis (3)	Not performed even though it is recommended (4)
Handwashing or disinfecting hands (hand sanitizer) between touching horses (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boot washing when coming into the barn (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limit non- essential traffic on the farm (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not share tack and equipment (at home) (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not share feed and water (at home) (5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not let horses touch noses (7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not let visitors touch the horses (8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean and disinfect equipment prior to and after use (9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Display This Question:

If Q69 = Yes

Q74 Competition Event Measures

	This is required (1)	This is recommended (2)	I see this used on a regular basis (3)	Not performed even though it is recommended (4)
Not share tack and equipment (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not share feed and water (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not let horses touch noses (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Page Break

Display This Question:

If Q69 = Yes

Q75 Are there any other biosecurity measures not listed previously that are required, recommended, and/or regularly used at your facility?

Yes (1)

No (2)

Display This Question:

If Q75 = Yes

Q76 Please specify which measure(s) and whether it is required, recommended, and/or regularly used:

Page Break

Q77 Are there any biosecurity measures you implement on your own that are not required by the facility?

Yes (1)

No (2)

Display This Question:

If Q77 = Yes

Q78 Please select which measures (Select all that apply)

- Quarantine sick horses (1)
 - Quarantine incoming horses (2)
 - Quarantine horses that were temporarily transported off property (e.g., for competition) (3)
 - Core vaccine (Rabies, Tetanus, West Nile Virus, EEE/WEE) (4)
 - Risk-based vaccines (Strangles, Equine Influenza, EHV-1&4) (5)
 - Hand washing between touching horses (6)
 - Boot washing when coming into the barn (7)
 - Changing clothes when going in between barns (8)
 - Limit non-essential traffic on the farm (9)
 - Not share tack and equipment (at home) (10)
 - Not share feed and water (at events) (11)
 - Not share feed and water (at home) (12)
 - Not let horses touch noses (13)
 - Not let visitors touch the horses (14)
 - Clean and disinfect equipment prior to and after use (15)
 - Other, please specify: (16)
-

Q79 Please rank the biosecurity practices you consider effective against equine pathogen spread for everyday practices by selecting one of the three categories for each measure: Effective, Somewhat Effective, Not Effective (answer this question as if you had unlimited money, time, and resources)

	Effective (my horse is protected against diseases when I do this) (1)	Somewhat Effective (it's better than nothing when I do this) (2)	Not Effective (my horse is not at all protected against diseases when I do this) (3)
Quarantine sick horses (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quarantine incoming horses (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quarantine horses that were temporarily transported off property (e.g., for competition) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hand washing between touching horses (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boot washing when coming into the barn (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changing clothes when going between barns (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not sharing tack and equipment with other horses (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not letting visitors touch the horses (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not letting the horses' noses touch (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clean and disinfect equipment prior to and after use (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q80 In reality, you may not have all the time, money, and resources in the world to focus on biosecurity. If these were limited, would you change the order of effectiveness of the above biosecurity measures?

Yes (1)

No (2)

Display This Question:

If Q80 = Yes

Q81 Please re-rank the biosecurity practices you consider useful for everyday practice accounting for cost, time, and space by selecting one of the three categories for each measure:

Effective, Somewhat Effective, Not Effective (answer this question accounting for cost, time, and space)

	Effective (my horse is protected against diseases when I do this) (1)	Somewhat Effective (it's better than nothing when I do this) (2)	Not Effective (my horse is not at all protected against diseases when I do this) (3)
Quarantine sick horses (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quarantine incoming horses (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quarantine horses that were temporarily transported off property (e.g., for competition) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hand washing between touching horses (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boot washing when coming into the barn (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changing clothes when going between barns (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not sharing tack and equipment with other horses (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not letting visitors touch the horses (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not letting horses' noses touch (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clean and disinfect equipment prior to and after use (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q82 Please rank the vaccinations you consider the most important for protection against equine contagious diseases (spread horse-to-horse) considering the type of activities you do with your horse(s). (If you have more than one horse, answer for the horse that leaves the facility the most)

	Important (It's important that my horse is up-to-date on this vaccine) (1)	Somewhat Important (It's okay if my horse isn't always up-to-date on this vaccine) (2)	Not Important (My horse is never/rarely administered this vaccine) (3)
Rabies (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tetanus (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
West Nile Virus (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EEE/WEE (Eastern Equine Encephalitis / Western Equine Encephalitis) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strangles (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equine Influenza (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EHV-1 & 4 (Equine Herpesvirus 1 & 4) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q83 Please elaborate why you ranked the vaccines this way:

Page Break

Q84 Does your facility have any of the following features?:

Q85 Handwashing station

Yes (1)

No (2)

Unsure (3)

Q86 Boot washing station

Yes (1)

No (2)

Unsure (3)

Q87 Visitor Log

Yes (1)

No (2)

Unsure (3)

Q88 Isolated storage for feed

Yes (1)

No (2)

Unsure (3)

Q89 Isolated storage for bedding

Yes (1)

No (2)

Unsure (3)

Page Break

Q90 Do you have a quarantine area *at* your facility?

- Yes (1)
- No (2)

Display This Question:

If Q90 = No

Q91 Does your facility use a quarantine area *off-site* from your facility?

- Yes (1)
- No (2)

Display This Question:

If Q90 = Yes

Q92 Does your facility have a quarantine barn or quarantine paddock?

- Quarantine barn (1)
- Quarantine paddock (2)
- Both (3)
- Neither (4)

Display This Question:

If Q92 = Neither

Q93 What type of quarantine area does your facility have?

Display This Question:

If Q91 = Yes

Or Q92 = Quarantine barn

Or Q92 = Quarantine paddock

Or Q92 = Neither

Q94 Under what circumstances is the quarantine area used and how frequently?

Display This Question:

If Q91 = Yes

Or Q92 = Quarantine barn

Or Q92 = Quarantine paddock

Or Q92 = Neither

Q95 In the event of an outbreak (e.g., if a horse was diagnosed with Equine Influenza at your facility)

- Every time (1)
 - Only for severe cases (2)
 - Rarely used (3)
 - Only for horses with suspected illness (4)
 - Only when requested by the owner (5)
 - Only when requested by the vet (6)
 - Never (7)
 - Other, please specify: (8)
-

Display This Question:

If Q91 = Yes

Or Q92 = Quarantine barn

Or Q92 = Quarantine paddock

Or Q92 = Neither

Q96 When a horse is coming from another barn

- Every time (1)
 - Only for severe cases (2)
 - Rarely used (3)
 - Only for horses with suspected illness (4)
 - Only when requested by the owner (5)
 - Only when requested by the vet (6)
 - Never (7)
 - Other, please specify: (8)
-

Display This Question:

If Q91 = Yes

Or Q92 = Quarantine barn

Or Q92 = Quarantine paddock

Or Q92 = Neither

Q97 When a horse is temporarily transported off property (e.g., for competition)

- Every time (1)
 - Only for severe cases (2)
 - Rarely used (3)
 - Only for horses with suspected illness (4)
 - Only when requested by the owner (5)
 - Only when requested by the vet (6)
 - Never (7)
 - Other, please specify: (8)
-

Display This Question:

If Q91 = Yes

Or Q92 = Quarantine barn

Or Q92 = Quarantine paddock

Or Q92 = Neither

Q98 Are there any other circumstances not listed above that you would use your quarantine area under?

- Yes (1)
- No (2)

Display This Question:

If Q98 = Yes

Q99 Please specify when the quarantine area is used and how frequently:

Display This Question:

If Q90 = No

And Q91 = No

Q100 In the event of a disease outbreak, would it be possible to set up a temporary isolation area?

- Yes (1)
- No (2)
- Unsure (3)

Display This Question:

If Q100 = No

Q101 Please indicate why (select all that apply):

- Not enough space (1)
 - Not enough equipment available (2)
 - Not sure how to set up isolation facilities (3)
 - Manager will not give permission (4)
 - Owner will not give permission (5)
 - Other, please specify: (6)
-

Display This Question:

If Q100 = No

Or Q100 = Unsure

Q102 Please describe what would be done in the event of an outbreak:

Display This Question:

If Q92 = Both

Q103 Under what circumstances is the *quarantine barn* used and how frequently?

Display This Question:

If Q92 = Both

Q104 In the event of an outbreak (e.g., if a horse was diagnosed with Equine Influenza at your facility)

- Every time (1)
 - Only for severe cases (2)
 - Rarely used (3)
 - Only for horses with suspected illness (4)
 - Only when requested by the owner (5)
 - Only when requested by the vet (6)
 - Never (7)
 - Other (8) _____
-

Display This Question:

If Q92 = Both

Q105 When a horse is coming from another barn

- Every time (1)
- Only for severe cases (2)
- Rarely used (3)
- Only for horses with suspected illness (4)
- Only when requested by the owner (5)
- Only when requested by the vet (6)
- Never (7)
- Other (8) _____

Display This Question:

If Q92 = Both

Q106 When a horse is temporarily transported off property (e.g., for competition)

- Every time (1)
- Only for severe cases (2)
- Rarely used (3)
- Only for horses with suspected illness (4)
- Only when requested by the owner (5)
- Only when requested by the vet (6)
- Never (7)
- Other (8) _____

Display This Question:

If Q92 = Both

Q107 Are there any other circumstances not listed above that you would use your quarantine barn under?

Yes (1)

No (2)

Display This Question:

If Q107 = Yes

Q108 Please specify when the quarantine barn is used and how frequently:

Display This Question:

If Q92 = Both

Q109 Under what circumstances is the *quarantine paddock* used and how frequently?

Display This Question:

If Q92 = Both

Q110 In the event of an outbreak (e.g., if a horse was diagnosed with Equine Influenza at your facility)

- Every time (1)
- Only for severe cases (2)
- Rarely used (3)
- Only for horses with suspected illness (4)
- Only when requested by the owner (5)
- Only when requested by the vet (6)
- Never (7)
- Other (8) _____

Display This Question:

If Q92 = Both

Q111 When a horse is coming from another barn

- Every time (1)
- Only for severe cases (2)
- Rarely used (3)
- Only for horses with suspected illness (4)
- Only when requested by the owner (5)
- Only when requested by the vet (6)
- Never (7)
- Other (8) _____

Display This Question:

If Q92 = Both

Q112 When a horse is temporarily transported off property (e.g., for competition)

- Every time (1)
- Only for severe cases (2)
- Rarely used (3)
- Only for horses with suspected illness (4)
- Only when requested by the owner (5)
- Only when requested by the vet (6)
- Never (7)
- Other (8) _____

Display This Question:

If Q92 = Both

Q113 Are there any other circumstances not listed above that you would use your quarantine paddock under?

- Yes (1)
- No (2)

Display This Question:

If Q113 = Yes

Q114 Please specify when the quarantine paddock is used and how frequently:

End of Block: Biosecurity Implementation

Start of Block: Name and Email Collection

Q115 You have completed the questionnaire! Thank you so much for participating! If you would like to enter the raffle to win a **\$250 Amazon Card**, please select this down below. Please also indicate down below if you'd like to see the results of the study. If you select YES to either of these questions, you will be redirected to another survey where you will be asked for your name and email address. If you select NO to both of these questions, the survey will end.

Q116 Do you want to be entered into the prize draw?

Yes (1)

No (2)

Q117 Do you want to see the results from this study, once available?

Yes (1)

No (2)

End of Block: Name and Email Collection
