



Animal and Plant Health Inspection Service

Veterinary Services

Equine 2015 VMO Questionnaire

January 26, 2021



National Animal Health Monitoring System

2150 Centre Ave Bldg B Fort Collins, CO 80526

Form Approved OMB Number 0579-0269 EXP. DATE XX/20XX

INTRODUCTION

Beginning time _____

Section A—Inventory

The next several questions relate to equids that are considered “residents” of this operation. A resident equid is one that has spent, or is expected to spend, more time at this operation than at any other operation throughout the year. In other words, this operation may be considered the animal’s “home base.” Resident equids will be referred to throughout this questionnaire.

1. How many of the following equids, including foals, are considered residents of this operation as of today (whether or not they are present on the operation today)?
 - a. Donkeys or burros..... _____
 - b. Mules..... _____
 - c. Ponies..... _____
 - d. Miniature horses..... _____
 - e. Horses (excluding miniature horses)..... _____
 - f. Other resident equids (specify: _____)..... _____
 - g. Total [Add questions 1a–1f.]..... _____

[If question 1g = 0, SKIP to Office Use Only section.]

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**NAHMS-333
Aug 2014**

2. As of today, how many resident equids are:
 - a. Less than 6 months..... _____
 - b. 6 months through 1 year (23 months)..... _____
 - c. 2 to 3 years..... _____
 - d. 4 to 5 years..... _____
 - e. 6 to 10 years..... _____
 - f. 11 to 15 years..... _____
 - g. 16 to 20 years..... _____
 - h. 21 years or older..... _____
 - i. Total [should equal question 1g]..... _____

[If questions 2c through 2h = 0, SKIP to section B.]

3. As of today, how many resident equids 2 years of age or older are:
 - a. Broodmares..... _____
 - b. Stallions..... _____
4. How many nonresident equids were on this operation for longer than 30 days during the previous 12 months? [Enter 0 if none.]..... _____

Section B—Vaccination Practices

1. Were any resident equids vaccinated in the previous 12 months?..... ₁ Yes ₃ No

[If question 1 = No, SKIP to question 8.]

2. Were any resident equids **1 year of age or less** vaccinated in the previous 12 months?..... ₁ Yes ₃ No ₄ NA (no resident equids ≤1 yr)

[If question 2 = No or NA, SKIP to question 4.]

3. How many of the resident equids **1 year of age or less** were vaccinated for the following diseases in the previous 12 months?

	All	Some	None	Don't know
a. Flu (influenza).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b. Strangles (<i>Strep equi</i>).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c. Herpesvirus (also called EHV or rhino).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d. Rabies.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e. West Nile virus.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f. Eastern and Western encephalitis (sleeping sickness) [EEE and WEE].....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
g. Tetanus.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
h. Equine viral arteritis (EVA).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
i. Venezuelan equine encephalitis (VEE).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
j. <i>Clostridium perfringens</i> (C&D).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
k. Potomac horse fever (PHF).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
l. Rotavirus.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

- m. Anthrax..... ₁ ₂ ₃ ₄
- n. Lyme disease..... ₁ ₂ ₃ ₄
- o. Botulism..... ₁ ₂ ₃ ₄
- p. Snake venom..... ₁ ₂ ₃ ₄
- q. Other (specify: _____)..... ₁ ₂ ₃ ₄

4. Were any **resident broodmares** vaccinated in the previous 12 months?..... ₁ Yes ₃ No ₄ NA (no resident broodmares)

[If question 4 = No or NA, SKIP to question 6.]

5. How many of the **resident broodmares** were vaccinated for the following diseases in the past 12 months?

- | | All | Some | None | Don't know |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| a. Flu (influenza)..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| b. Strangles (<i>Strep equi</i>)..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| c. Herpesvirus (also called EHV or rhino)..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| d. Rabies..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| e. West Nile virus..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| f. Eastern and Western encephalitis (sleeping sickness) [EEE and WEE]..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| g. Tetanus..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| h. Equine viral arteritis (EVA)..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| i. Venezuelan equine encephalitis (VEE)..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| j. <i>Clostridium perfringens</i> (C&D)..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| k. Potomac horse fever (PHF)..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| l. Rotavirus..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| m. Anthrax..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| n. Lyme disease..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| o. Botulism..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| p. Snake venom..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| q. Other (specify: _____)..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |

6. Were any resident equids **over 1 year of age** (excluding resident broodmares) vaccinated in the previous 12 months?

₁ Yes ₃ No ₄ NA (no resident equids, excluding broodmares, >1 year)

[If question 6 = No or NA, SKIP to question 8.]

7. How many of the resident equids **over 1 year of age** (excluding resident broodmares) were vaccinated for the following diseases in the past 12 months?

	All	Some	None	Don't know
a. Flu (influenza).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b. Strangles (<i>Strep equi</i>).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c. Herpesvirus (also called EHV or rhino).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d. Rabies.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e. West Nile virus.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f. Eastern and Western encephalitis (sleeping sickness) [EEE and WEE].....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
g. Tetanus.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
h. Equine viral arteritis (EVA).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
i. Venezuelan equine encephalitis (VEE).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
j. <i>Clostridium perfringens</i> (C&D).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
k. Potomac horse fever (PHF).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
l. Rotavirus.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
m. Anthrax.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
n. Lyme disease.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
o. Botulism.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
p. Snake venom.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
q. Other (specify: _____).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Note to data collector: Cross check answers to question 8 (vaccines administered) against those for same vaccines (a through p) in questions 3, 5, and 7.

8. We would like to understand why people **do not** use specific equine vaccines. For the vaccines listed below, indicate whether the vaccine was administered to any resident equid on the operation during the previous 12 months. If **not** administered, give the primary reason for not administering the vaccine.

Reason codes for question 8	
1 = Concern of adverse reaction to vaccine	5 = Financial constraints on equine expenditures
2 = Vaccine considered ineffective	6 = Did not get around to it
3 = Little risk of disease exposure	7 = Unaware this vaccine was available
4 = Not recommended by veterinarian	8 = Other reason (specify: _____)

	Administered?	Code
a. Flu (influenza).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	_____
b. Strangles (<i>Strep equi</i>).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	_____
c. Herpesvirus (also called EHV or rhino).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	_____
d. Rabies.....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	_____
e. West Nile virus.....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	_____
f. Eastern and Western encephalitis (sleeping sickness) [EEE & WEE].....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	_____
g. Tetanus.....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	_____
h. Equine viral arteritis (EVA).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	_____

9. If question 8c = Yes (herpesvirus), for those animals vaccinated against EHV/rhino, how often in the previous 12 months did you vaccinate the

following resident equids?

- a. Age 1 year or less _____ # times/yr
- b. Broodmares..... _____ # times/yr ₁ NA
- c. Equids over 1 year (excluding resident broodmares)..... _____ # times/yr ₁ NA

10. Which EHV vaccine product(s) was used? (See attached sheet for code(s).)
[Enter all product codes that apply for each category.]

- a. Age 1 year or less..... _____
- b. Broodmares..... _____
- c. Equids over 1 year (excluding resident broodmares)..... _____

Section C—Internal Parasite Control and Management

1. In the previous 12 months, were **any** resident equids dewormed at least once?..... ₁ Yes ₃ No

[If question 1 = No, SKIP to question 6.]

2. In the previous 12 months, were any **resident** equids dewormed for the following reasons?
- a. General prevention measure..... ₁ Yes ₃ No
 - b. Equids had previous colic problem..... ₁ Yes ₃ No
 - c. Worms were seen..... ₁ Yes ₃ No
 - d. Equids were thin or doing poorly..... ₁ Yes ₃ No
 - e. Rubbing tail..... ₁ Yes ₃ No
 - f. Fecal test results indicated a need..... ₁ Yes ₃ No
 - g. Other (specify: _____)..... ₁ Yes ₃ No

3. Of the reasons for deworming in the previous question, what was the **primary** reason for deworming **resident** equids in the previous 12 months? *[Check one only.]*

- ₁ General prevention measure
- ₂ Equids had previous colic problem
- ₃ Worms were seen
- ₄ Equids were thin or doing poorly
- ₅ Rubbing tail
- ₆ Fecal test results indicated a need
- ₇ Other

Codes for question 4
1 = Dewormer product rotation (e.g., ivermectin then pyrantel)
2 = Fecal egg count, treat according to results
3 = Regular use of same dewormer
4 = Daily deworming
5 = Equids are not dewormed (skip "# times" column)
6 = NA (do not have the category of equid)

4. What deworming program is currently in use for the following equids? *[Enter all codes that apply.]*

	Code	# times majority of equids dewormed in previous 12 months
a. Less than 6 months old	_____	_____
b. 6 months through 1 year old (23 months)	_____	_____
c. Broodmares	_____	_____
d. Stallions	_____	_____
e. All other equids 2 to 3 years old	_____	_____
f. All other equids 4 years or older	_____	_____

5. What types of deworming products were used in the previous 12 months and what was the maximum number of times they were used? *[For products used, circle the maximum number of times administered to any equid.]*

		Maximum number of times administered to any equid in the last 12 months
a. Ivermectin.....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
b. Ivermectin/praziquantel (e.g., Equimax, Zimecterin Gold).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
c. Moxidectin (e.g., Quest).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
d. Moxidectin/praziquantel (e.g., Quest +) . .		1 2 3 4 5 6+
e. Fendendazole (e.g., Panacur, Panacur, Safe-Guard).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
f. Power Pack or Safeguard Powerdose (e.g., Fendendazole double dose given 5 days in a row; count a 5-day course of treatment as one time.).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
g. Oxibendazole (e.g., Anthelcide EQ).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
h. Piperazine.....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
i. Pyrantel pamoate (e.g., Strongid paste, Exodus).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
j. Pyrantel tartrate (e.g., Strongid C 2X daily dewormer).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
k. Levamisol.....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+
l. Other (specify: _____).....	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	1 2 3 4 5 6+

6. In the previous 5 years, have you ever had a fecal egg count performed on feces from resident equids?..... ₁ Yes ₃ No ₄ Don't know

[If question 6 = No or DK, SKIP to question 8.]

Codes for question 7
1 = More often than annually
2 = Annually
3 = Less often than annually
4 = Not done
5 = NA (do not have this category of equid)

7. For the following category of equids, how often do you typically have fecal egg counts done? *[Count pre- and post-fecal egg count for fecal egg reduction test as one time.]*

	Code
a. Less than 6 months old.....	_____
b. 6 months through 1 year old (23 months).....	_____
c. Broodmares.....	_____
d. Stallions.....	_____
e. All other equids 2 to 3 years old.....	_____
f. All other equids 4 years or older.....	_____

8. In the previous 5 years, did you consult your veterinarian about a parasite control strategy tailored specifically for your farm/operation?..... ₁ Yes ₃ No

[If question 8 = No, SKIP to question 10.]

9. Did your veterinarian recommend:
- | | |
|--|--|
| a. Fecal testing predeworming?..... | <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No |
| b. Fecal testing postdeworming?..... | <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No |
| c. Frequent removal of manure from pasture/grazing area?..... | <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No |
| d. Rotating pastures?..... | <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No |
| e. Combination deworming (using two or more dewormers at once?)..... | <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No |
| f. Other? (specify: _____)..... | <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No |

10. How concerned are you about drug resistance in equine internal parasites? *[Check one only.]*

- ₁ Never heard of it
₂ Not concerned
₃ Slightly concerned
₄ Moderately concerned
₅ Very concerned

11. Have you ever had your equids examined for drug-resistant parasites using fecal egg count reduction test (also called FECRT, egg reappearance test, or other test)?..... ₁ Yes ₃ No

12. Have you ever had a documented case of drug-resistant equine internal parasites on your farm?..... ₁ Yes ₃ No
 If Yes, which drugs? [See list of anthelmintic/dewormer codes.]..... _____
13. Have you ever changed your deworming plan based on drug-resistant parasites?..... ₁ Yes ₃ No
 If Yes, why?
- a. Known problem..... ₁ Yes ₃ No
 b. Concern about potential problem..... ₁ Yes ₃ No

Section D—Tick Control and Management

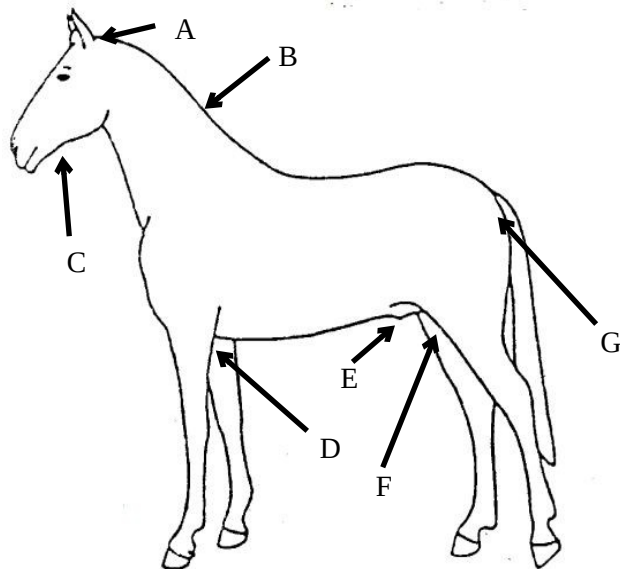
1. Do you check your equids for ticks?..... ₁ Yes ₃ No

[If question 1 = No, SKIP to question 11.]

2. How often do you or others check your equids for ticks? [Check one only.]
- ₁ Daily
 - ₂ After a specific activity (e.g., trail riding)
 - ₃ Several times a week
 - ₄ No specific routine
 - ₅ Never
3. What method do you use to check for ticks? [Check all that apply.]
- Routine grooming
 - Palpate in mane
 - Palpate in tail head and under tail
 - Visual inspection
 - Other (specify: _____)
4. In the previous 12 months, have you observed ticks on any of your equids?... ₁ Yes ₃ No

[If question 4 = No, SKIP to question 11.]

5. In what location(s) on your equids did you identify ticks? [Check all that apply.]



- Ears (A)
- Crest/mane (B)
- Jaw line (C)
- Elbow/girth area (D)
- Sheath or udder (E)
- Between upper thighs (F)
- Tail and under tail (G)
- Other (specify: _____)

6. Where is the most common location you find ticks on your equids?
 [Enter letter from question 5 horse diagram.]..... _____ letter

7. After which activities do you most often observe equids with ticks?
 [Check one only.]

- ₁ On pasture
- ₂ Trail riding
- ₃ Cross-country competitions
- ₄ Other (specify: _____)

8. Were the ticks you observed on your equids in the previous 12 months identified by type (species of tick)?..... ₁ Yes ₃ No ₄ Don't know

[If question 8 = No or Don't know, SKIP to question 11.]

9. Who definitively identified the type or species of tick in question 8?

[Check one only.]

- ₁ Owner
- ₂ Stable manager
- ₃ Extension agent
- ₄ Veterinarian
- ₅ Diagnostic laboratory
- ₆ Other (specify: _____)

Codes for question 10
1 = American dog tick (<i>Dermacentor variabilis</i>)
2 = Winter tick (<i>Dermacentor albipictus</i>)
3 = Lone Star tick (<i>Amblyomma americanum</i>)
4 = Brown dog tick (<i>Rhipicephalus sanguineus</i>)
5 = Deer tick (also called black-legged tick) [<i>Ixodes scapularis</i>]
6 = Spinose ear tick (<i>Otobius megnini</i>)
7 = Rocky Mountain wood tick (<i>Dermacentor andersoni</i>)
8 = Western black-legged tick (<i>Ixodes pacificus</i>)
9 = Gulf Coast tick (<i>Amblyomma maculatum</i>)
10 = Other (specify)

10. What type of ticks were found on equids? [Enter code(s) for all types identified.] _____ code(s)

11. In the previous 12 months, have any equids on this operation had the following tick-borne disease(s) and, if Yes, how was the disease diagnosed?

Diagnosis by:

			Laboratory confirmation		Veterinarian
a. Lyme disease.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
b. Anaplasmosis.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
c. Equine piroplasmiasis (EP).....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
d. Tick paralysis.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
e. Other (specify: _____).....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No

12. In the previous 5 years, approximately how often have you observed ticks on your equids during the following time periods?

	Never	Monthly	Weekly	Daily
a. December–February.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b. March–May.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c. June–August.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d. September–November.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

[If questions 12a–12d ALL = 1, SKIP to question 14.]

13. What was the typical level of tick infestation for the following

time periods over the previous 5 years:

Level of infestation (ticks/equid)

	None	Low (1–4)	Medium (5–20)	High (>20)
--	-------------	----------------------	--------------------------	--------------------------

- | | | | | |
|-----------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| a. December–February?..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| b. March–May?..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| c. June–August?..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| d. September–November?..... | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |

14. Do you treat your equids in order to control ticks?..... ₁ Yes ₃ No
 If Yes, enter codes for products used: _____ (code(s))

[If question 14 = No, SKIP to question 16.]

15. How often do you treat equids to control ticks? [Check one only.]

- ₁ Daily (regardless of location or activity)
- ₂ When on pasture
- ₃ When trail ridden
- ₄ When you see ticks
- ₅ Other (specify: _____)

16. Which of these habitats has your equid(s) spent time in over the previous 12 months?

- | | | |
|---|---|--|
| a. Developed (residential, commercial, or areas with a high percentage of constructed materials)..... | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| b. Shrubland (shrubland, mixed shrubs/grasses/young trees, areas with vegetation less than 20 ft high)..... | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| c. Forested (deciduous, evergreen, mixed areas with tree coverage)..... | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| d. Grasslands (majority of coverage related to upland grasses, might be used for grazing, not intensively managed)..... | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| e. Wetlands (areas where the area is periodically saturated or covered with water)..... | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| f. Cultivated (pastures, agricultural crops, areas that are intensively managed)..... | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| g. Recreational areas (urban parks, trails)..... | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |

17. Do you use landscape modifications (e.g., weed control, pasture mowing, vegetation-free zones) to reduce the tick populations on your operation?..... ₁ Yes ₃ No

18. Do you prevent equids from grazing in forested/wooded areas by fencing these areas?..... ₁ Yes ₃ No ₄ NA (no forested/wooded areas)

19. Where do you obtain your information on ticks and tick control on equids? [Rank your top three with the numbers 1, 2, and 3.]
- a. Veterinarian..... _____
 - b. Diagnostic laboratory..... _____
 - c. Books..... _____
 - d. Internet..... _____
 - e. Equine magazines..... _____
 - f. Feed store..... _____
 - g. Veterinary product store..... _____
 - h. Extension agent..... _____
 - i. Scientific peer-reviewed literature..... _____
 - j. Other owners/trainer, etc..... _____
 - k. Other (specify: _____)..... _____

Section E—Lameness Occurrence and Management

A lameness problem is defined as an abnormality in gait such that the equid cannot be used for its intended purpose or can only be used with intervention (e.g., medication, corrective shoeing, rest). Horses that receive intervention to prevent lameness would not be included.

1. How many resident equids have a lameness problem today?..... _____ #
2. In the table below, enter the number of resident equids that had any lameness problem during the previous 12 months even if they died or are no longer on the premises. For this table, use the age of the animal **today**. [Count each equid only one time even if it had more than one episode of lameness during the past 12 months and even if the equid was affected by more than one cause of lameness.]

	Age (years)					
	<2	2-5	6-10	11-15	16-20	21+
a. Number of resident equids with lameness in the last 12 months						

- b. Total number of resident equids that have been lame in the previous 12 months (sum of 2a)
_____ #

[If question 2b = 0, SKIP to question 14 column 1 only.]

3. In the table below, enter the number of resident equids in each age group affected at any time during the previous 12 months by the conditions listed. For equids with more than one type of problem, count each problem separately, but do not count a recurrence of the same problem in the same individual more than once per equid. The same condition affecting more than one leg/foot should be counted only one time per animal. For this section, use the age of the animal **today**.

	Age (years)					
	<2	2-5	6-10	11-15	16-20	21+
Foot conditions						
Sole bruise or abscess						
Laminitis						
Coffin joint problem						
Navicular problem or disease						
Other foot problem (specify: _____)						
Limb conditions						
Wound or laceration causing lameness						
Tendon, ligament, muscle (injury or contracture)						
Bone injury (fracture, splint, bucked shins)						
Angular limb deformity (crooked legs)						
Other limb problem (specify: _____)						
Joint problems						
Developmental joint problem (OC, OCD)						
Sudden joint injury (strain, sprain)						
Joint infection						
Chronic joint problem (arthritis)						
Other joint problem (specify: _____)						
Other conditions						
Back pain or soreness						
Unknown problem						
Other known problem (specify: _____)						

4. During the previous 12 months, how many resident equids intended for the .. following purposes were lame?
- a. Pleasure..... # _____ #
 - b. Show or competition..... # _____ #
 - c. Breeding..... # _____ #
 - d. Racing..... # _____ #
 - e. Farm or ranch work..... # _____ #
 - f. Lesson or school horse..... # _____ #
 - g. Other (specify: _____)..... # _____ #
 - h. Total [should equal question 2b]..... # _____ #
5. During the previous 12 months, how many resident equids of the following genders were lame?
- a. Intact male (stallion or colt)..... # _____ #

- b. Castrated male..... #
- c. Female, nonpregnant..... #
- d. Female, pregnant..... #
- e. Female, spayed..... #
- f. Total [should equal question 2b]..... #
6. During the previous 12 months, how many resident equids of the following breeds were lame?
- a. Appaloosa..... #
- b. Arabian..... #
- c. Draft breed..... #
- d. Morgan..... #
- e. Mustang..... #
- f. Paint horse..... #
- g. Saddlebred..... #
- h. Standardbred..... #
- i. Tennessee walking horse..... #
- j. Thoroughbred..... #
- k. Quarter horse..... #
- l. Warmblood breed..... #
- m. Mule..... #
- n. Donkey or burro..... #
- o. Miniature horse..... #
- p. Other registered breed (specify: _____)..... #
- q. Other nonregistered breed (specify: _____)..... #
- r. Total [should equal question 2b]..... #
7. During the previous 12 months, how many of the **lame** equids had the following outcomes?
- a. Recovered or sound and remained sound..... #
- b. Recovered but same problem later recurred..... #
- c. Recovered but were affected by a different problem..... #
- d. Improved but still had lameness..... #
- e. No improvement or worse..... #
- f. Sold or given away due to lameness..... #
- g. Died or euthanized due to lameness..... #
- h. Other (specify: _____)..... #
- i. Total [should equal question 2b]..... #

8. During the previous 12 months, how many of the **lame** equids had a lameness problem that lasted:
- a. Less than 1 week?..... #
 - b. 1 week up to 1 month?..... #
 - c. 1 month up to 6 months?..... #
 - d. 6 months up to 12 months?..... #
 - e. 12 months or more?..... #
 - f. Total [should equal question 2b]..... #
9. During the previous 12 months, how many of the **lame** equids accumulated the following times of lost use when the equid **could not be used at all** because of lameness?
- a. Less than 1 week?..... #
 - b. 1 week up to 1 month?..... #
 - c. 1 month up to 6 months?..... #
 - d. 6 months up to 12 months?..... #
 - e. 12 months or more?..... #
 - f. Total [should equal question 2b]..... #
10. During the previous 12 months, for how many **lame** equids did the use of the equid permanently change to each of the following as a result of lameness?
- a. No change of use..... #
 - b. Pleasure riding..... #
 - c. Different type of show or competition (not betting)..... #
 - d. Breeding..... #
 - e. Racing..... #
 - f. Farm or ranch work..... #
 - g. Companion animal..... #
 - h. Retired from all use and turned out or kept as a pet..... #
 - i. Other use (specify: _____)..... #
 - j. Total [should equal question 2b]..... #
11. During the previous 12 months, for how many **lame** equids was a veterinarian consulted?..... #
12. During the previous 12 months, what was the total cost for:
- a. Medical and surgical care or services for lameness (includes veterinary services, treatments from other types of practitioners, and prescription or over-the-counter medications and supplements)?..... \$ _____
 - b. Corrective hoof trimming or shoeing for lameness?..... \$ _____
 - c. Special tack and riding equipment (protective boots, bandages, leg wraps)?..... \$ _____
 - d. Other lameness related? (specify: _____)..... \$ _____

13. Who was the primary provider of hoof care for the treatment of a lameness problem?

- a. Farrier..... _____ #
- b. Hoof trimmer or barefoot trimmer..... _____ #
- c. Owner or employee..... _____ #
- d. Veterinarian..... _____ #
- e. Other (specify: _____)..... _____ #
- f. No hoof care provided for lameness problem..... _____ #

14. During the previous 12 months, how many resident equids received the following therapies to prevent or treat lameness? *[Equids may be counted more than once.]*

	Prevention	Treatment
a. Complete rest.....	_____ #	_____ #
b. Controlled or restricted exercise.....	_____ #	_____ #
c. Routine hoof trimming without shoes.....	_____ #	_____ #
d. Routine hoof trimming with routine shoeing.....	_____ #	_____ #
e. Corrective hoof trimming without shoes.....	_____ #	_____ #
f. Corrective shoeing.....	_____ #	_____ #
g. Ice, cold hosing, cold or heat therapy.....	_____ #	_____ #
h. Nonsteroidal, anti-inflammatory medications (phenylbutazone [bute], flunixin meglumine [Banamine®], Surpass®, etc.).....	_____ #	_____ #
i. Corticosteroid anti-inflammatory medications.....	_____ #	_____ #
j. Other injectable medications (PSGAG, HA).....	_____ #	_____ #
k. Nutritional supplements or nutraceuticals.....	_____ #	_____ #
l. Site-specific injections (joints, tendon sheaths, bursae, etc.).....	_____ #	_____ #
m. Chiropractic.....	_____ #	_____ #
n. Acupuncture.....	_____ #	_____ #
o. Laser treatments.....	_____ #	_____ #
p. Therapeutic ultrasound.....	_____ #	_____ #
q. Shockwave therapy.....	_____ #	_____ #
r. Massage.....	_____ #	_____ #
s. Other alternative medicine (specify: _____)	_____ #	_____ #
t. Other treatments (specify: _____)	_____ #	_____ #

Section F—Equine Health Care Expenses

The purpose of this section is to capture the cost of selected aspects of equine care (e.g., veterinary care, hoof/feet care, feeding costs, and insect control). Refer to the tear-off worksheet at the end of the questionnaire. Use this worksheet to summarize expenses for question 1 and questions 6 through 9.

1. What percentage of the forage fed to resident equids on this operation in the previous 12 months was:

a. Purchased hay (including pelleted or cubed hay).....	_____ %
b. Operation-grown and produced hay.....	_____ %
c. Pasture.....	_____ %
Total.....	100%

[If question 1c = 0, SKIP to question 3.]

2. How many acres of pasture were used for grazing of resident equids in the previous 12 months?..... _____ acres
 - a. For how many months were resident equids grazing pasture?..... _____ mo
 - b. On average, how many equids grazed on pasture?..... _____ #
3. Did you feed grain/concentrate/energy source (beyond hay or pasture forage; excluding a vitamin/mineral or joint supplement) during the previous 12 months?..... ₁ Yes ₃ No

[If question 3 = No, SKIP to question 6.]

4. What percentage of the grain/concentrate/energy source fed to equids during the previous 12 months (excluding vitamin/mineral or joint supplements) was from the following sources:

a. Purchased in bags (retail source)?.....	_____ %
b. Bulk delivery from retail source?.....	_____ %
c. Bulk delivery from nonretail source?.....	_____ %
d. Home grown?.....	_____ %
e. Other? (specify: _____).....	_____ %
Total.....	100%
5. If question 4a >0, what was the average cost per bag?..... \$ _____
6. How much hay did you feed equids in the previous 12 months? _____ tons OR _____ bales
If bales, what was the average weight (in pounds) per bale?..... _____ lb
7. What was the average cost of hay purchased for equids in the previous 12 months? *[If none purchased, enter 0.]*..... \$ _____ /ton OR \$ _____ /bale
8. What did you spend on grain/concentrate/energy source/ pelleted feeds (excluding pelleted hay) in the previous 12 months? *[If no grain concentrate was fed, enter 0.]*..... \$ _____

9. How much did you spend in the previous 12 months for the following equine health care items/services?

- a. Veterinary services and veterinary products (e.g., vaccines, dewormers and other drugs, vitamin/mineral nutritional supplements, joint supplements) and dental care..... \$ _____
- b. Hoof care and shoeing..... \$ _____
- c. Insect control (including sprays, roll-on, fly mask, feeding/feed-through fly control product, fly sheet, parasitic fly predators, mosquito dunks, barn insect spray system, bug zapper, spot-on treatments)..... \$ _____

Section G—Office Use Only

1. Enter interview response code:
 - ₁ Out of business
 - ₂ Refusal
 - ₃ Complete
 - ₄ Partial refusal
 - ₅ Inaccessible
 - ₆ Out of scope
 - ₇ No resident equids on July 1

2. Enumerator note: If item 1 = 2 or 4, check the box below that best explains the reason for refusal.
 - ₁ Does not want to commit time
 - ₂ Does not have necessary records available
 - ₃ Has participated in too many surveys
 - ₄ A bad time of year (time-consuming horse activities, second job, etc.)
 - ₅ Believes that this survey hurts the operator more than it helps
 - ₆ No reason given, or other miscellaneous reasons

3. Did respondent use any of the following to answer **health** questions?

a. Records.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
b. Memory.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
c. Checked with veterinarian.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No

4. Did respondent use/do any of the following to answer **economic** questions:

a. Records.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
b. Memory.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
c. Checked with accountant.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
d. Checked with veterinarian.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
e. Checked with hay/feed supplier.....	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No

Supplemental Worksheet for Section F – Equine Health Care Expenses

The purpose of this worksheet is to provide guidance on which information should be used to calculate responses for Section F – Equine Health Care Expenses of the survey, focused on the cost of selected aspects of equine care (e.g., veterinary care, hoof/feet care, feeding costs, and insect control). This information may be available in your checkbook, bank and credit card statements, supporting tax documents, paid invoices and bills, and other financial and health records. *[Question numbers refer to questions in Section F.]*

6. How much hay did you feed equids in the previous 12 months? _____ tons OR _____ bales
 If bales, what was the average weight (in pounds) per bale?..... _____ lb
7. What was the average cost for hay purchased for equids in the previous 12 months?
[Cross out the months not included in the previous 12 months.]

	# of tons purchased	Cost per ton	# of bales purchased	Average weight per bale	Cost per bale
September 2014		\$			\$
October 2014		\$			\$
November 2014		\$			\$
December 2014		\$			\$
January 2015		\$			\$
February 2015		\$			\$
March 2015		\$			\$
April 2015		\$			\$
May 2015		\$			\$
June 2015		\$			\$
July 2015		\$			\$
August 2015		\$			\$
September 2015		\$			\$
October 2015		\$			\$
November 2015		\$			\$
December 2015		\$			\$
Total		=\$			=\$

8. How much did you spend on grain/concentrate/energy source in the previous 12 months?

	# of bags purchased		Cost per bag		
<i>Ex:</i> Senior feed	20	X	\$15	=	\$300
Oats		X	\$	=	\$
Regular sweet feed		X	\$	=	\$
Senior feed		X	\$	=	\$
High performance feed		X	\$	=	\$
Other pelleted feed		X	\$	=	\$
Other		X	\$	=	\$
Total				=	\$

9a. How much did you spend in the previous 12 months on veterinary services and veterinary products and dental care?

Veterinary products	# of equids that received product		# of times equids received product		Cost per product		
<i>Ex: Dewormers</i>	10	X	4	X	\$10	=	\$400
Vaccines		X		X	\$	=	\$
Dewormers		X		X	\$	=	\$
Other drugs		X		X	\$	=	\$
Vitamin/mineral nutritional supplements		X		X	\$	=	\$
Joint supplements		X		X	\$	=	\$
Advanced dental treatment		X		X	\$	=	\$
Other		X		X	\$	=	\$
Veterinary services	# of equids that received service		# of visits		Cost per product		
Physical exam		X		X	\$	=	\$
EIA testing		X		X	\$	=	\$
Emergency call		X		X	\$	=	\$
Farm call		X		X	\$	=	\$
Routine floating		X		X	\$	=	\$
Tooth extraction		X		X	\$	=	\$
Other		X		X	\$	=	\$
Total						=	\$

9b. How much did you spend in the previous 12 months on hoof care and shoeing?

	# of equids that received service/product		# of times equids received service/product		Cost per service		
<i>Ex: Routine trimmings</i>	10	X	8	X	\$30	=	\$2,400
Routine trimmings		X		X	\$	=	\$
Basic shoes on 2 hooves		X		X	\$	=	\$
Basic shoes on 4 hooves		X		X	\$	=	\$
Corrective shoes on 2 hooves		X		X	\$	=	\$
Corrective shoes on 4 hooves		X		X	\$	=	\$
Hoof protectors/boots		X		X	\$	=	\$
Other		X		X	\$	=	\$
Total						=	\$

9c. What did you spend in the previous 12 months on insect and tick control?

	# of product containers purchased		# of times product was purchased		Cost per container		
<i>Ex: Fly masks</i>	10	X	1	X	\$15	=	\$150
Fly masks		X		X	\$	=	\$
Fly sheet		X		X	\$	=	\$
Sprays		X		X	\$	=	\$
Mosquito dunks		X		X	\$	=	\$
Roll-on		X		X	\$	=	\$
Spot-on treatments		X		X	\$	=	\$
Feeding/feed-through fly control product		X		X	\$	=	\$
Parasitic fly predators		X		X	\$	=	\$
Barn insect spray system		X		X	\$	=	\$
Bug zapper		X		X	\$	=	\$
Other		X		X	\$	=	\$
Total						=	\$