



Animal and Plant Health Inspection Service

Veterinary Services

# Bison 2014 Study

National Animal Health Monitoring System

2150 Centre Ave., Bldg. B, MS 2E7 Fort Collins, CO 80526

Form Approved OMB Number 0579-xxxx Approval expires:

Your participation in this survey will provide valuable information about management practices of the bison industry. Participation is voluntary and confidential, and the information you provide will not be reported on an individual level. The information will be summarized and reported on a regional and national basis only. We estimate that this survey will take approximately 30 minutes to complete. **To ensure your privacy, please do not put your name or other identification on this form.**

Today's date: \_\_\_/\_\_\_/\_\_\_

## Section 1. Inventory

For the purposes of this study, an "operation" is defined as a group of ranches or farmed bison under common ownership and managed on one or more locations. For example, an operation might consist of a bison cow-calf operation at one location with a bison feedlot or grazing pastures at a separate location.

- 1. From June 1, 2013, through May 31, 2014, were any ranches or farmed bison on this operation, regardless of ownership?  Yes

[If question 1 = No, SKIP to section 9, p xx.]

- 2. From June 1, 2013, through May 31, 2014, did this operation have ranches or farmed bison at more than one location?  Yes

- 3. On June 1, 2014, what was the inventory of bison on this operation?

Bison	Number bison more than 3 years old	Number bison 1 to 3 years old	Number bison calves (less than 1 year old)	Total
Females				
Males				
<b>Total</b>				

- 4. Of the total bison on the operation on June 1, 2014 (number contained in the double-bordered box above), how many were known to be bison-cattle hybrids? \_\_\_\_\_ #

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NAHMS-320 August 2014

date

5. From June 1, 2013, through May 31, 2014, how many bison were permanently introduced onto this operation from the following sources? *[Enter zero if no bison were introduced.]*

Source	Number bison 1 year and older	Number bison calves (less than 1 year old)
Private sale		
Trade		
Auction/sale barn		
Dealer		
Other (specify: _____ )		
<b>Total</b>		

6. From June 1, 2013, through May 31, 2014, were any bison permanently removed from the operation?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 6 = No, SKIP to question 10.]**

7. From June 1, 2013, through May 31, 2014, how many bison permanently left the operation or were removed from the operation (including culls) by the following methods?

Method of removal	Number bison 1 year and older	Number bison calves (less than 1 year)
Private sale—onsite hunting		
Private sale—for meat or other products		
Private sale—for breeding stock		
Traded or given away		
Direct to feedlot		
Direct to slaughter/packer		
Sold at auction/sale barn		
Sold to dealers		
Lost or stolen		
Other (specify: _____ )		
<b>Total</b>		

8. If any animals were sold direct to slaughter from June 1, 2013, through May 31, 2014, what was the average age and weight of the bison when they were sent to slaughter?.....  
Age (months) \_\_\_\_\_ AND \_\_\_\_\_  
 Weight (lb)

9. From June 1, 2013, through May 31, 2014, did you use mobile units to slaughter any bison on the operation?..... <sub>1</sub> Yes <sub>3</sub> No

10. From June 1, 2013, through May 31, 2014, did any bison on this operation die from natural causes or were any euthanized (exclude hunter killed or slaughtered animals)? ..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 10 = No, SKIP to section 2.]**

8. From June 1, 2013, through May 31, 2014, how many bison died from natural causes?

Cause of death	Number bison more than 3 years old	Number bison 1 o 3 years old	Number bison calves (less than 1 year old)
a. <i>Mycoplasma bovis</i> (confirmed)			
b. Other respiratory illness/pneumonia			
c. Digestive illness			
d. Neurologic disorder			
e. Handling related			
f. Predation			
g. Trauma (not related to predation or handling)			
h. Lightning/weather related			
i. Other (specify: _____)			
j. Unknown			
<b>Total</b>			

## Section 2. Operation Management

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1. From June 1, 2013, through May 31, 2014, was this operation involved in the following segments of the bison industry?

- a. Commercial cow-calf producer (produced offspring intended for meat market)..... <sub>1</sub> Yes <sub>3</sub> No
- b. Seedstock producer (produced offspring intended for breeding purposes)..... <sub>1</sub> Yes <sub>3</sub> No
- c. Feedlot ..... <sub>1</sub> Yes <sub>3</sub> No
- d. Backgrounder/stocker (prepared young bison for a feedlot) ..... <sub>1</sub> Yes <sub>3</sub> No
- e. Game ranch/hunting..... <sub>1</sub> Yes <sub>3</sub> No
- f. Preparation/sale of byproducts (e.g., hides, skulls, horns, hair, etc.) ..... <sub>1</sub> Yes <sub>3</sub> No
- g. Conservation..... <sub>1</sub> Yes <sub>3</sub> No
- h. Hobby/pasture pet..... <sub>1</sub> Yes <sub>3</sub> No
- i. Tourism..... <sub>1</sub> Yes <sub>3</sub> No
- j. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No

2. If you selected Yes for more than one option in question 1, which segment of the industry do you consider to be this operation's primary activity?

[Enter one letter, a through j.]..... \_\_\_\_\_

3. Does this operation use specific practices to target the following marketing channels for its bison or products?
- a. Genetics-based program..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Conventional..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Natural..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Grass-fed..... <sub>1</sub> Yes <sub>3</sub> No
  - e. Certified organic calf production (operation certified by USDA) ..... <sub>1</sub> Yes <sub>3</sub> No
  - f. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
4. How many years have ranched bison been raised at this location? ..... \_\_\_\_\_ years
5. Which of the following best describes plans for the bison herd on this operation over the next year? *[Check one only.]*
- <sub>1</sub> Increase herd size by more than 10 percent
  - <sub>2</sub> Maintain same herd size (within 10 percent)
  - <sub>3</sub> Decrease herd size by more than 10 percent
  - <sub>4</sub> Get out of the business
6. From June 1, 2013, through May 31, 2014, were the following records maintained (computer or handwritten) for this operation?
- a. Purchases and sales ..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Breeding ..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Health ..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Pasture/natural resource conditions..... <sub>1</sub> Yes <sub>3</sub> No
  - e. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
7. What percentage of this operation's June 1, 2014, bison inventory (p 1) had some type of **individual** animal identification? (0% to 100%)..... \_\_\_\_\_ %

**[If question 7 = zero, SKIP to section 9.]**

8. From June 1, 2013, through May 31, 2014, what percentage of this operation's bison were individually identified by the following methods? (0% to 100%)
- a. Plastic ear tag..... \_\_\_\_\_ %
  - b. Brucellosis vaccination ear tag (Bang's tag) ..... \_\_\_\_\_ %
  - c. Other metal ear tag ..... \_\_\_\_\_ %
  - d. Electronic ear tag..... \_\_\_\_\_ %
  - e. Electronic implant/microchip..... \_\_\_\_\_ %
  - f. Tattoo/freeze brand ..... \_\_\_\_\_ %
  - g. Other (specify: \_\_\_\_\_)..... \_\_\_\_\_ %

9. From June 1, 2013, through May 31, 2014, did this operation use the following types of fencing to confine bison; if Yes, what was the approximate height of each type?

- |                                |  | <b>If Yes, approx.<br/>height (feet)</b> |
|--------------------------------|--|--|
| a. Barbed wire.....            | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No | _____                                    |
| b. High-tensile wire.....      | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No | _____                                    |
| c. Woven wire.....             | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No | _____                                    |
| d. Electric .....              | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No | _____                                    |
| e. Steel pipe .....            | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No | _____                                    |
| f. Wood .....                  | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No | _____                                    |
| g. Other (specify: _____)..... | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No | _____                                    |

10. From June 1, 2013, through May 31, 2014, were any ranches bison confined in double fencing?..... <sub>1</sub> Yes <sub>3</sub> No

11. Does this operation have facilities for handling/processing ranches bison?..... <sub>1</sub> Yes <sub>3</sub> No  
 If Yes, were these facilities designed specifically for handling bison?..... <sub>1</sub> Yes <sub>3</sub> No

12. From June 1, 2013, through May 31, 2014, did this operation round up any of its bison?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 12 = No, SKIP to section 3.]**

13. For the last time this operation rounded up any bison, were they rounded up for the following reasons?
- |                                  |  |
|----------------------------------|--|
| a. Vaccination.....              | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |
| b. Weaning.....                  | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |
| c. Separation for slaughter..... | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |
| d. Deworming.....                | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |
| e. Veterinary need.....          | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |
| f. Pregnancy checking.....       | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |
| g. Movement/transport.....       | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |
| h. Disease testing.....          | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |
| i. Other (specify _____).....    | <input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No |

14. How many people assisted with roundup (all or part of it)? ..... \_\_\_\_\_ # people

15. How many hours did it take to round up the animals and accomplish the reason(s) for the roundup?..... \_\_\_\_\_ # hours

### Section 3. Biosecurity

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1. From June 1, 2013, through May 31, 2014, were any ranched bison belonging to a different operation located within 1 mile of the bison on this operation?..... <sub>1</sub> Yes <sub>3</sub> No <sub>4</sub> Don't know

**[If question 1 = No or Don't know, SKIP to question 3.]**

2. Did these other ranched bison have fence-line contact with any bison belonging to this operation? ..... <sub>1</sub> Yes <sub>3</sub> No
3. From June 1, 2013, through May 31, 2014, were any new bison brought on to this operation (temporarily or permanently), or did any bison leave the operation and return (such as taken to pasture on land not belonging to the operation, bred off-site, etc.)?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 3 = No, SKIP to question 10.]**

4. From June 1, 2013, through May 31, 2014, were male or female bison temporarily **brought in** from other herds for breeding purposes?
- a. Male bison..... <sub>1</sub> Yes <sub>3</sub> No
- b. Female bison..... <sub>1</sub> Yes <sub>3</sub> No
5. From June 1, 2013, through May 31, 2014, were male or female bison from this operation **sent** to other herds for breeding purposes and subsequently returned?
- a. Male bison..... <sub>1</sub> Yes <sub>3</sub> No <sub>4</sub> No male bison on site
- b. Female bison..... <sub>1</sub> Yes <sub>3</sub> No <sub>4</sub> No female bison on site
6. From June 1, 2013, through May 31, 2014, were any bison from this operation **sent** off the operation for grazing and returned?..... <sub>1</sub> Yes <sub>3</sub> No

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

7. Were bison sent off the operation for grazing typically commingled on pasture with:
- a. Ranched bison from other operations?..... <sub>1</sub> Always <sub>2</sub> Sometimes <sub>3</sub> Never
- b. Cattle from other operations?..... <sub>1</sub> Always <sub>2</sub> Sometimes <sub>3</sub> Never
8. From June 1, 2013, through May 31, 2014, how often were **new** or **temporary** additions or returning bison isolated (no physical contact or shared confinements) before being (re)introduced into this operation's herd?..... <sub>1</sub> Always <sub>2</sub> Sometimes <sub>3</sub> Never

**[If question 8 = Never, SKIP to question 10.]**

9. How many days were new additions or returning bison typically isolated on this operation? \_\_\_\_\_ days

10. From June 1, 2013, through May 31, 2014, were the following farmed animals also raised on this operation; if Yes, could they have direct contact with the bison?

Farmed animal	On operation	If Yes, contact with bison?
Beef cattle	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Dairy cattle	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Sheep	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Goats	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Horses, donkeys, etc.	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Swine	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Poultry	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Deer, elk, or other cervids	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Other (specify: _____ )	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No

11. From June 1, 2013, through May 31, 2014, were the following wild animals ever seen on this operation or near the fence line?

Wild animal	On operation	Near fence line
Sheep (e.g., bighorn)	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Goats (e.g., mountain)	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Deer, elk, or other cervids	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Feral swine or wild boars	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No
Other (specify: _____ )	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No

12. From June 1, 2013, through May 31, 2014, did this operation share trucks and/or trailers used to transport bison with other livestock operations (including bison, cattle, sheep and goat operations)?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 12 = No, SKIP to question 15.]**

13. Were shared trucks/trailers cleaned prior to use? ..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 13 = No, SKIP to question 15.]**

14. Which of the following best describes the procedures for cleaning shared trucks/trailers?  
[Check one only.]

- <sub>1</sub> Wash equipment with water or steam only
- <sub>2</sub> Chemically disinfect only
- <sub>3</sub> Wash equipment and chemically disinfect
- <sub>4</sub> Other (specify: \_\_\_\_\_)

15. From June 1, 2013, through May 31, 2014, did this operation share any equipment, other than trucks and trailers (e.g., tractors, chutes, feeding equipment, manure spreaders), with other livestock operations (including bison, cattle, sheep and goat operations)? <sub>1</sub> Yes <sub>3</sub> No

**[If question 15 = No, SKIP to question 18.]**

16. Was shared equipment cleaned prior to use? ..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 16 = No, SKIP to question 18.]**

17. Which of the following best describes the procedures for cleaning shared equipment?

*[Check one only.]*

- <sub>1</sub> Wash equipment with water or steam only
- <sub>2</sub> Chemically disinfect only
- <sub>3</sub> Wash equipment and chemically disinfect
- <sub>4</sub> Other (specify: \_\_\_\_\_)

18. How many times did the following types of people visit your operation from June 1, 2013, through May 31, 2014? If more than zero, enter the number of visits that involved direct contact with the operation's bison.

Type of visitor	Approximate # visits per year	If at least one visit, number of visits involving direct contact with bison
a. Private or government veterinarian or animal health worker		
b. Nutritionist or feed company consultant		
c. Customer (e.g., private individual) purchasing hides, skulls, meat, or other bison products		
d. Bison trader, buyer, or dealer		
e. Renderer		
f. Other visitors (including other producers, neighbors, friends, school field trip visitors, etc.)		

**Section 4. Reproduction**

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1. From June 1, 2013, through May 31, 2014, were any bison bred while on this operation?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 1 = No, SKIP to question 12.]**

2. Were the following practices used during the most recent breeding season for bison bred on this operation?

- a. Single male placed with multiple females ..... <sub>1</sub> Yes <sub>3</sub> No
- b. Single male placed with single female ..... <sub>1</sub> Yes <sub>3</sub> No
- c. Multiple males placed with multiple females..... <sub>1</sub> Yes <sub>3</sub> No
- d. Artificial insemination..... <sub>1</sub> Yes <sub>3</sub> No
- e. Embryo transfer..... <sub>1</sub> Yes <sub>3</sub> No



3. Were the following reproductive techniques used for the most recent breeding season?
- a. Body condition scoring ..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Palpation for pregnancy..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Ultrasound ..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Semen evaluation ..... <sub>1</sub> Yes <sub>3</sub> No
  - e. Scrotal palpation, evaluation, and measurement ..... <sub>1</sub> Yes <sub>3</sub> No
  - f. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No

**Questions 4 through 10 ask about bison breeding females (cows and heifers) that were continuously on this operation from June 1, 2013, through May 31, 2014, and calves that were born from these females bred during the 2013 breeding season.**

Breeding females

4. How many breeding females were present during this entire time period?  
*[If none, enter zero.]*..... \_\_\_\_\_ #
5. Of breeding females on site for the entire time (question 4), how many were bred (exposed to bulls, had artificial insemination) during the 2013 breeding season?  
*[If zero, skip to question 11.]*..... \_\_\_\_\_ #
6. How many gave birth to full-term calves (whether alive or dead)?..... \_\_\_\_\_ #

Calves born in 2014 to females bred during the 2013 breeding season (question #5)

7. How many total full-term calves were born (whether alive or dead)?..... \_\_\_\_\_ #
8. How many total full-term calves were born alive?..... \_\_\_\_\_ #
9. How many of the calves born alive (question 8) survived until weaning?..... \_\_\_\_\_ #
10. The number of calves born dead is (*subtract question 8 from question 7*)..... \_\_\_\_\_ #

11. During the most recent calving season, were bison heifers and cows on this operation monitored for birthing problems during calving?..... <sub>1</sub> Yes <sub>3</sub> No

12. From June 1, 2013, through May 31, 2014, were bison calves on this operation handled for the following reasons? If Yes, at what age and approximate weight of the calves?

	Yes/No	If yes, avg age (months)	and	Avg wgt (lb)
a. Weaning	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No			
b. Vaccination/deworming	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No			
c. Identification (e.g., ear tag, microchip, tattoo)	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No			
d. Transportation (e.g., move to pasture, feedlot, etc.)	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No			
e. Other (specify _____)	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No			

13. Which of the following best describes the operation's process for selecting new breeding bison?

*[Check one only.]*

- <sub>1</sub> Random selection (e.g., choosing every third group at handling time)
- <sub>2</sub> Size/conformation
- <sub>3</sub> Genetic analysis
- <sub>4</sub> Behavior/manageability
- <sub>5</sub> Other (specify: \_\_\_\_\_)

## Section 5. Grazing, Pasture Management, and Feeding

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1. From June 1, 2013, through May 31, 2014, what was the average stocking rate of bison on pasture for this operation?..... \_\_\_\_\_ animals/acre
2. What grazing system does this operation use?
  - <sub>1</sub> Rotational
  - <sub>2</sub> Continuous
  - <sub>3</sub> Combination
  - <sub>4</sub> Other
3. How many months per year are this operation's bison on range/pasture?..... \_\_\_\_\_ months/yr
4. From June 1, 2013, through May 31, 2014, were this operation's bison provided the following while on **range/pasture**?
  - a. Hay/roughage supplements..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Mineral supplements..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Vitamin supplements..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Energy/concentrates supplements..... <sub>1</sub> Yes <sub>3</sub> No
5. From June 1, 2013, through May 31, 2014, how were this operation's bison grouped while on range/pasture?
  - a. Cows/calves, yearlings, and bulls kept in separate groups..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Bison kept in family groups..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Bison of different origins grouped..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Bison grouped by age..... <sub>1</sub> Yes <sub>3</sub> No
  - e. Other (describe: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No

## Section 6. Diseases, Parasites, and Health Management

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1. From June 1, 2013, through May 31, 2014, were the following fly control methods used on this bison operation?
  - a. Environmental fly control (sprays, foggers, strips, zappers)..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Topical products (dust bags, dips, sprays, backrubs)..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Treated ear tags..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Biological control (such as predator wasps)..... <sub>1</sub> Yes <sub>3</sub> No
  - e. Oral products (such as feed-throughs)..... <sub>1</sub> Yes <sub>3</sub> No
  - f. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
2. From June 1, 2013, through May 31, 2014, were any of this operation's bison dewormed?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 2 = No, SKIP to question 6.]**

3. How many times were the majority of bison dewormed during the year?..... \_\_\_\_\_ times

4. Were any of the following dewormers used during the year?
- a. Conventional dewormers (e.g. Ivermectin, Safeguard<sup>®</sup>, Doramectin)..... <sub>1</sub> Yes <sub>3</sub> No
- b. Natural or alternative dewormers (e.g., botanicals, herbs, cayenne pepper)..... <sub>1</sub> Yes <sub>3</sub> No
- If Yes, specify: \_\_\_\_\_
- c. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
5. Were dewormers administered by the following methods during the year?
- a. Directly into the mouth (e.g., drench, bolus, paste) ..... <sub>1</sub> Yes <sub>3</sub> No
- b. Feed or water additive ..... <sub>1</sub> Yes <sub>3</sub> No
- c. Mineral additive ..... <sub>1</sub> Yes <sub>3</sub> No
- d. Pour-on ..... <sub>1</sub> Yes <sub>3</sub> No
- e. Injectable ..... <sub>1</sub> Yes <sub>3</sub> No
6. From June 1, 2013, through May 31, 2014, did this operation do the following activities as part of a parasite control program?
- a. Perform laboratory (fecal) testing for intestinal parasites..... <sub>1</sub> Yes <sub>3</sub> No
- b. Rotate dewormer type ..... <sub>1</sub> Yes <sub>3</sub> No
- c. Give a combination of two or more dewormer drugs at once..... <sub>1</sub> Yes <sub>3</sub> No
- d. Use a different dose of dewormer in bison than the labeled dose recommended for cattle..... <sub>1</sub> Yes <sub>3</sub> No
- e. Rotate pastures..... <sub>1</sub> Yes <sub>3</sub> No
- f. Reduce stocking density ..... <sub>1</sub> Yes <sub>3</sub> No
- g. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
7. How familiar are you with the following diseases in bison? [Check one box per row.]

Disease	Never heard of it	Slightly familiar	Moderately familiar	Very familiar
a. Bovine tuberculosis (TB)	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
b. Brucellosis	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
c. Bovine viral diarrhea (BVD)	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
d. Malignant catarrhal fever.(MCF)	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
e. Clostridial diseases	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
f. <i>Mycoplasma bovis</i>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>

8. From June 1, 2013 through May 31, 2014, did this operation vaccinate any bison against the following diseases or pathogens?
- a. Anthrax..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Brucellosis..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Bovine respiratory syncytial virus (BRSV)..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Bovine viral diarrhea virus (BVDV)..... <sub>1</sub> Yes <sub>3</sub> No
  - e. *Clostridium* species (tetanus, blackleg, malignant edema, redwater, enteritis)..... <sub>1</sub> Yes <sub>3</sub> No
  - f. *Haemophilus somnus*..... <sub>1</sub> Yes <sub>3</sub> No
  - g. Infectious bovine rhinotracheitis (IBR)..... <sub>1</sub> Yes <sub>3</sub> No
  - h. Leptospirosis..... <sub>1</sub> Yes <sub>3</sub> No
  - i. *Mycoplasma bovis*..... <sub>1</sub> Yes <sub>3</sub> No
  - j. Parainfluenza 3 virus (PI3)..... <sub>1</sub> Yes <sub>3</sub> No
  - k. *Pasteurella* (shipping fever pneumonia)..... <sub>1</sub> Yes <sub>3</sub> No
  - l. Rotavirus/coronavirus..... <sub>1</sub> Yes <sub>3</sub> No
  - m. Other disease (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
9. From June 1, 2013, through May 31, 2014, did a veterinarian visit this operation concerning its bison?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 9 = No, SKIP to question 11.]**

10. Did the veterinarian visit the bison operation for the following reasons?
- a. Medical treatment of bison, for illness or injury..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Consultation, such as nutrition or reproduction advice..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Vaccination..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Health certificate issuance..... <sub>1</sub> Yes <sub>3</sub> No
  - e. Artificial insemination..... <sub>1</sub> Yes <sub>3</sub> No
  - f. Brucellosis testing..... <sub>1</sub> Yes <sub>3</sub> No
  - g. Tuberculosis testing..... <sub>1</sub> Yes <sub>3</sub> No
  - h. Other disease testing/sample collection..... <sub>1</sub> Yes <sub>3</sub> No
  - i. Tranquilization/handling..... <sub>1</sub> Yes <sub>3</sub> No
  - j. Postmortem/necropsy..... <sub>1</sub> Yes <sub>3</sub> No
  - k. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No

11. From June 1, 2013 through May 31, 2014, were the following conditions present (suspected or confirmed) in any bison on this operation; if Yes, how many bison were affected with that condition?

Condition	Presence (suspected or confirmed)	Bison affected (head)
a. Pneumonia/respiratory	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
b. Abortion/reproductive disorder	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
c. Arthritis/lameness	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
d. Internal parasites	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
e. External parasites	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
f. Off feed/weight Loss	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
g. Diarrhea	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
h. Oral erosions	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
i. Eye lesions	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
j. Toxin exposure	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	
k. Other (specify: _____)	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No	

12. Within the past 5 years, did this operation experience one or more periods of abnormally high death loss in its bison herd (e.g., three times the operation's typical death loss or higher)?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 12 = No, SKIP to question 16.]**

13. For the most recent period of abnormally high death loss, were bison that died observed to be reluctant to move, showing signs of arthritis, or emaciated before they died?..... <sub>1</sub> Yes <sub>3</sub> No

14. For the most recent period of abnormally high death loss, did the operation receive confirmed diagnoses from a veterinarian or diagnostic laboratory for the following?

- a. *Mycoplasma bovis*..... <sub>1</sub> Yes <sub>3</sub> No
- b. Malignant catarrhal fever..... <sub>1</sub> Yes <sub>3</sub> No
- c. Parasitism..... <sub>1</sub> Yes <sub>3</sub> No

15. For the most recent period of abnormally high death loss, did the following conditions occur shortly before or during the period of death loss?

Condition	Occurred before or during death loss
a. Weather extreme (hot/cold)	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
b. High parasite load	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
c. Poor pasture conditions	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
d. Change of pasture	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
e. Mixing of bison groups/introductions of new animals	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
f. Rut/fighting	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
g. Calving	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
h. Weaning	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
i. Handling	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
j. Transportation	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know
k. Other (specify: _____)	<input type="checkbox"/> <sub>1</sub> Yes <input type="checkbox"/> <sub>3</sub> No <input type="checkbox"/> <sub>4</sub> Don't know

16. From June 1, 2013, through May 31, 2014, were necropsies performed on any of this operation's bison?..... <sub>1</sub> Yes <sub>3</sub> No

17. Who performed the majority of necropsies? [Check one only.]

- <sub>1</sub> Owner/manager/staff
- <sub>2</sub> Private veterinarian
- <sub>3</sub> Federal or State veterinarian
- <sub>4</sub> Other (specify: \_\_\_\_\_)

18. From June 1, 2013, through May 31, 2014, how did this operation dispose of dead bison?

- <sub>1</sub> Incinerated
- <sub>2</sub> Onsite burial
- <sub>3</sub> Sent to landfill
- <sub>4</sub> Rendered
- <sub>5</sub> No disposal method (left to nature/scavengers)

### Section 7. Disease Testing Practices

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1. Is this operation's bison herd a Tuberculosis (TB) Accredited Herd or in the process of becoming accredited?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 1 = Yes, SKIP to question 3.]**

2. Is this operation's herd **NOT** TB Accredited for the following reasons?
- a. TB tests not reliable..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Too expensive to test..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Not enough time to test..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Too difficult to handle bison..... <sub>1</sub> Yes <sub>3</sub> No
  - e. Not recommended by veterinarian..... <sub>1</sub> Yes <sub>3</sub> No
  - f. TB is not a concern to my operation..... <sub>1</sub> Yes <sub>3</sub> No
  - g. Other? (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
3. Has this operation ever had any of its bison tested for TB? ..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 3 = No, SKIP to question 7.]**

4. When was the most recent TB test for any of this operation's bison? *[Check one only.]*
- <sub>1</sub> Less than 1 year ago
  - <sub>2</sub> 1 to 2 years ago
  - <sub>3</sub> 2 to 3 years ago
  - <sub>4</sub> 3 to 5 years ago
  - <sub>5</sub> More than 5 years ago
5. During the most recent TB test, did this operation test its: *[Check one only.]*
- <sub>1</sub> Entire herd?
  - <sub>2</sub> Bison less than 1 year old only?
  - <sub>3</sub> Bison 1 year and older only?
  - <sub>4</sub> Specific bison only? (specify: \_\_\_\_\_)
6. When this operation's bison were last tested for TB, were they tested for the following purposes:
- a. Herd accreditation?..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Movement requirement?..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Show or exhibition requirement?..... <sub>1</sub> Yes <sub>3</sub> No
  - d. State requirement?..... <sub>1</sub> Yes <sub>3</sub> No
  - e. Veterinarian (nonregulatory, private practitioner) recommendation?..... <sub>1</sub> Yes <sub>3</sub> No
  - f. Sale requirement?..... <sub>1</sub> Yes <sub>3</sub> No
  - g. Other? (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
7. Has this operation ever had any of its bison tested for brucellosis?..... <sub>1</sub> Yes <sub>3</sub> No

**[If question 7 = No, SKIP to question 10.]**

8. When this operation's bison were last tested for brucellosis, were they tested for the following purposes?
- a. Herd certification for brucellosis-free herd status?..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Movement requirement?..... <sub>1</sub> Yes <sub>3</sub> No
  - c. Show or exhibition requirement?..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Testing required for sale?..... <sub>1</sub> Yes <sub>3</sub> No
  - e. State requirement?..... <sub>1</sub> Yes <sub>3</sub> No
  - f. Veterinarian (nonregulatory, private practitioner) recommendation?..... <sub>1</sub> Yes <sub>3</sub> No
  - g. Other? (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
9. Is this operation's bison herd a Brucellosis-Free herd, or in the process of becoming a Brucellosis-Free herd? ..... <sub>1</sub> Yes <sub>3</sub> No
10. How concerned are you with the following issues and challenges related to testing this operation's bison for diseases such as TB or brucellosis?  
[Check one box per row.]

Issues and challenges	Not concerned	Slightly concerned	Moderately concerned	Very concerned
a. Expense of test				
b. Bison injuries or deaths from handling				
c. Reliability of tests, such as false positive test results				
d. Amount of time to test				
e. Lack of facilities to restrain bison for testing				

11. In the last 5 years, how many of this operation's bison were injured or died as a direct result of handling for disease testing?  
[Enter zero if none were injured or died.]
- a. Were injured but survived..... \_\_\_\_\_ # head
  - b. Died..... \_\_\_\_\_ # head

### Section 8. Outreach

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1. Do you belong to the following bison or cattle associations?
- a. National Bison Association..... <sub>1</sub> Yes <sub>3</sub> No
  - b. Regional bison association (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No
  - c. State or local bison associations..... <sub>1</sub> Yes <sub>3</sub> No
  - d. Canadian Bison Association..... <sub>1</sub> Yes <sub>3</sub> No
  - e. National Cattlemen's Beef Association..... <sub>1</sub> Yes <sub>3</sub> No
  - f. Regional, State, or local cattle associations..... <sub>1</sub> Yes <sub>3</sub> No
  - g. Other (specify: \_\_\_\_\_)..... <sub>1</sub> Yes <sub>3</sub> No



2. How important to you are the following bison health information sources? *[Check one box per row.]*

Information sources	Not important	Slightly important	Moderately important	Very important
a. Bison association resources/ meetings				
b. Producer gatherings (informal)				
c. Other producers—individually				
d. Internet				
e. Magazines/newsletters				
f. University/extension				
g. Veterinarians				
h. Feed and drug salespeople				
i. Other (specify: _____ )				

**Thank you very much for completing the NAHMS Bison 2014 survey!**

One last thing: If you are willing to share information about the location of this operation's bison, it would help us learn more about geographical aspects of the bison industry. **Please remember that all information is confidential, and data will be presented only on regional and/or national levels.**

1. Please provide the location of the majority of bison owned by this operation.

County name	State	Zip code

2. If this operation also had bison in any other county, please enter those locations.

County name	State	Zip code

**SECTION 9 – CONCLUSION**

**Survey results** can be found by accessing <http://www.aphis.usda.gov/naahms/> xxxx

Would you prefer to receive paper reports via the mail? . . . . .  Yes  No

Respondent Name:	xxxx Phone:	xxxx    MM    DD    YY Date:    _ _    _ _    _ _
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Response		Respondent		Mode		Emu	Eval	Change	Office Use for POID				
1-Comp	9901	1-Op/Mgr	9902	1-Mail	9903	9998	9900	9985	9921	9989			
2-R		2-Sp		2-Tel									
3-Inac		3-Acct/Bkpr		3-Face-to-Face									
4-Office Hold		4-Partner		4-CATI									
5-R – Est		9-Oth		5-Web									
6-Inac – Est				6-e-mail									
7-Off Hold – Est				7-Fax						9907	9908	9906	9916
S/E Name													

1. How many minutes did it take you to complete this report? **Minutes**  
xxx

Thank you for your time. Return this questionnaire in the enclosed envelope.

**Office Use Only**