

## MYCOPLASMA BOVIS DISEASE IN BISON 2022 STUDY

We are attempting to understand the impacts, scope, and risk factors for *Mycoplasma bovis* disease in bison and buffalo herds in the United States. Your participation in this survey is voluntary and can be stopped at any time. Any information you provide will be kept confidential and will not be identified by premise.

By checking this box  , I acknowledge that I am at least 18 years of age and consent to the information I provide in this survey being used to understand the impacts, scope, and risk factors for *Mycoplasma bovis* disease in bison.

**Unless specifically stated otherwise, please answer for the entire operation.**

1. What is your role in completing this survey?
  - o<sub>a</sub> Bison herd owner or manager
  - o<sub>b</sub> Veterinarian for affected herd
  - o<sub>c</sub> Other allied industry professional entering information for a client
2. Total herd size: \_\_\_\_\_
3. What Year herd was established: \_\_\_\_\_
4. State where herd spends majority of time: \_\_\_\_\_
5. Approximate size of main pasture or pen: \_\_\_\_\_
6. Has this herd ever had an animal confirmed to be infected with *Mycoplasma bovis* by a veterinary diagnostic laboratory.
  - o<sub>a</sub> Yes
  - o<sub>b</sub> No (skip to 14)
  - o<sub>c</sub> No, but *Mycoplasma bovis* was suspected or diagnosed by a veterinarian based on clinical signs.
  - o<sub>d</sub> No, but *Mycoplasma bovis* was suspected due to the scope and scale of losses in the herd.
  - o<sub>e</sub> Don't know (skip to 14)
7. Date (can be approximate) when first mortalities were observed in most recent outbreak: \_\_\_\_\_
8. Over how long of a period were deaths observed in the herd? \_\_\_\_\_
9. What was the first sign of illness observed in the herd? \_\_\_\_\_
10. Have you experienced previous losses or illnesses due to *Mycoplasma bovis* in this herd?

Yes

i. If yes, please list years: \_\_\_\_\_

No

Don't know

11. During the most recent outbreak, how many of each age class of animals were lost (can be approximate):

Number of adult bulls

Number of adult cows

Number of yearlings

Number of calves

12. Average body condition of animal(s) lost (circle the best answer for the majority of animals that died):

Over conditioned

Heavier than average

Average

Poorer than average

Poor/skinny

13. Please **circle** all signs of illness observed in the herd during the outbreak:

- a. Animals found dead without signs of illness
- b. Coughing
- c. Lameness
- d. Loss of condition
- e. Nasal discharge
- f. Eye discharge
- g. Open-mouthed breathing
- h. Abortion
- i. Loss of pregnancy/unusual number of open cows
- j. Bleeding from nose, mouth, anus
- k. Diarrhea
- l. Apparent blindness
- m. Isolation from the herd
- n. Downer animals
- o. Head tilt or droopy ear on one side
- p. Don't know
- q. Other, please describe: \_\_\_\_\_

14. When was the last new animal added to the herd (approximate year or date is fine)? \_\_\_\_\_

15. Are new herd additions placed into quarantine prior to being added?

- a Yes
- b No (Skip to 17)
- c Don't know

16. If yes, how long is quarantine? \_\_\_\_\_

17. Are new herd additions tested for any diseases prior to being added?

- a Yes if yes, please list test performed: \_\_\_\_\_
- b No
- c Don't know

18. Are any other livestock kept on the premise (circle all that apply)?

- a. Domestic cow/calf operation
- b. Dairy cattle
- c. Feeder cattle
- d. Goats
- e. Sheep
- f. Horses/mules/donkeys
- g. Farmed deer/elk/cervids
- h. Other:
- i. No
- j. Don't know

19. Are the trailers used to ship animals from the affected herd also used to ship cattle or animals from other herds?

- o<sub>a</sub> Yes, cattle
- o<sub>b</sub> Yes, bison
- o<sub>c</sub> Yes, sheep/goats
- o<sub>d</sub> Yes, horses/mules/donkeys
- o<sub>e</sub> Yes, farmed deer/elk/cervids
- o<sub>f</sub> Other:
- o<sub>g</sub> No
- o<sub>h</sub> Don't know

20. If yes, are trailers cleaned in between herds?

- o<sub>a</sub> Yes, trailer is sprayed out/pressure washed in between herds
- o<sub>b</sub> Manure removal only after each use
- o<sub>c</sub> Manure removal only after more than one use
- o<sub>d</sub> No
- o<sub>e</sub> Don't know

21. If supplemental feed or minerals other than natural standing pasture forage is available, is this equipment shared with cattle operations?

- o<sub>a</sub> Yes
- o<sub>b</sub> No
- o<sub>c</sub> Don't know

22. Does the herd share waterers or water sources with cattle?

- a Yes, water tanks
- b Yes, natural pond/lake/stock dam
- c Yes, river/stream
- d No
- e Don't know

23. Does the herd share pasture with cattle?

- a Yes
- b No
- c Don't know

24. Does the herd share fence line with any other herds (circle all that apply)?

- a Domestic cow/calf operation
- b Dairy cattle
- c Feeder cattle
- d Bison
- e Horses/mules/donkeys/burros
- f Sheep/goats/llamas/alpacas
- g Farmed cervids
- h Other species: \_\_\_\_\_
- i No
- j Don't know

25. In the year prior to the first outbreak, have any animals from the herd escaped the premise and been returned to the herd?

- a Yes
- b No (skip to 27)
- c Don't know

26. If yes, please explain \_\_\_\_\_

27. In the year prior to the first outbreak, have any escaped domestic livestock been found on your premise or in the pen with the herd (i.e., escaped animals from a neighboring farm, trespass, or feral livestock)?

- a Yes
- b No (skip to 29)
- c Don't know

28. If yes, please name species, approximate date, and circumstances: \_\_\_\_\_

29. What wildlife species have been seen in the pen with the bison herd in the year prior to the outbreak?

- o<sub>a</sub> None
- o<sub>b</sub> Mule deer
- o<sub>c</sub> White-tailed deer
- o<sub>d</sub> Deer, unable to tell which species
- o<sub>e</sub> Pronghorn
- o<sub>f</sub> Elk
- o<sub>g</sub> Other
- o<sub>h</sub> Don't know

30. Water sources available to animals (circle any that apply):

- a. Automatic waterer
- b. Well or municipal water in water tank
- c. Stock dam or dugout
- d. Natural pond/lake
- e. Natural stream/river
- f. Other
- g. Don't know

31. Did you notice wildlife death losses in the area in the year prior to the first outbreak?

- o<sub>a</sub> Yes, species: \_\_\_\_\_
- o<sub>b</sub> No
- o<sub>c</sub> Don't know

32. Supplemental feed provided to the herd in the year prior to this survey or first *Mycoplasma bovis* death (circle any that apply):

- a. None
- b. Alfalfa hay
- c. Alfalfa cubes
- d. Grass hay
- e. Pelleted ration
- f. Corn
- g. Silage/haylage
- h. Distiller's grain
- i. Protein tubs/blocks
- j. Liquid supplements
- k. Trace minerals/mineral blocks
- l. Salt blocks
- m. Other: \_\_\_\_\_
- n. Don't know

33. Any change in feeding practices in the year prior to this survey or the first *Mycoplasma bovis* death?

- Yes, please explain: \_\_\_\_\_
- No
- Don't know

34. Is artificial insemination used on this herd?

- Yes, species:
- No (skip to 36)
- Don't know (skip to 36)

35. If yes, when was approximate date of the last artificial insemination procedure performed?

36. Please **circle** all of the vaccines given to the herd within the last 3 years:

- a. None
- b. 7-way/Clostridial vaccine
- c. Newport or autogenous *Mycoplasma bovis* vaccine
- d. Other commercial *Mycoplasma bovis* vaccine
- e. IBR/Infectious bovine rhinotracheitis
- f. Bovine Diarrhea Virus
- g. Bovine Respiratory Syncytial Virus/Bovishield
- h. Calf diarrhea vaccine
- i. Anthrax
- j. Leptospirosis
- k. Other:
- l. Don't know

37. Is the herd treated with any deworming or anti-parasite products or strategies?

- o<sub>a</sub> Pour-on dewormer
- o<sub>b</sub> Injectable or implant
- o<sub>c</sub> Ear tag
- o<sub>d</sub> Oral drench or feed
- o<sub>e</sub> Dewormer blocks or salt
- o<sub>f</sub> Pastures are rotated
- o<sub>g</sub> Pastures are managed with prescribed fire
- o<sub>h</sub> None
- o<sub>i</sub> Don't know

38. If you answered yes to any of the above parasite treatments, when are animals treated?

- o<sub>a</sub> All animals are treated on a regular schedule
- o<sub>b</sub> Certain age classes are treated on a regular schedule
- o<sub>c</sub> Individual animals are treated when they appear sick
- o<sub>d</sub> All animals in the herd or in an age class are treated when fecal testing indicates a high level of parasites
- o<sub>e</sub> Individual animals are treated when fecal testing indicates a high level of parasites
- o<sub>f</sub> Other:
- o<sub>g</sub> Don't know

39. What do you believe is the source of Mycoplasma bovis disease in bison?

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40. Any other comments or information you would like to share?

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