**Livestock abortion-associated zoonoses**

**Are you currently a licensed clinical veterinarian that works with livestock?** (check one) Yes No *If No, send to finished survey page.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is your age (years)? \_\_\_­­­­­­­­­\_\_\_

2. Sex: Male Female Prefer not to answer

3. What year did you graduate from veterinary school? \_\_\_\_\_\_\_\_

**Please answer the following questions based on your current veterinary practice.**

4. In what state(s) do you practice? \_\_\_\_\_\_\_\_ 4a. Which state do you primarily practice in? \_\_\_\_\_\_\_\_\_

5. What is your position in the veterinary practice? Owner/Partner Associate Relief vet Consultant Other \_\_\_\_\_\_

6. How many other veterinarians work at this practice? ­­\_\_\_\_\_\_\_

7. How many hours per week do you generally work in practice? 0-19hr/wk 20-39hr/wk 40+ hr/wk

8. During an average workweek, what percentage of time do you spend in contact with livestock? 25% 50% 75% >75%

9. How would you classify your veterinary practice: Mixed Food/ large Specialty/Referral Industry Other \_\_\_\_\_\_

10. Please indicate your practice type: Non mobile (e.g. haul in clinic) Mixed mobile/clinic Mobile only Stationed at farm

11. What species of animal do you primarily treat? *Select only 1* Beef Cattle Dairy Cattle Small Ruminant Swine Poultry Equine Companion Animal Other \_\_\_\_

12. Please indicate how the following diseases are transmitted to humans (select all that apply):

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Direct contact** | **Fomite** | **Aerosol** | **Oral (consumption of contaminated food/water)** | **Vector-borne** | **Other (w/ write in option)** | **Not sure** |
| Brucellosis |  | | | | | | |
| Q fever (*Coxiella burnetii*) |  | | | | | | |
| Salmonellosis |  | | | | | | |
| Leptospirosis |  | | | | | | |
| Campylobacteriosis |  | | | | | | |

13. In the past 12 months, how often were you contacted by clients to consult or examine livestock that had aborted?

0 1-5 times 6-15 times 16-30 times >30 times

14. In the past 12 months, did you examine any livestock or consult with a client for the following reasons? Select all that apply.

One uncomplicated abortion

Large-scale abortion event

Reproductive failure (e.g. too many open females)

More abortions than expected

Aborted fetuses that were abnormal in appearance

Weak offspring were produced

Female livestock required reproductive diagnostic work up or treatment

Provide recommendations to prevent additional abortions

15. In the past 12 months, what percentage of abortions did you submit for diagnostic work up?

0% 1–5% 6–10% 11–20% 21–30% >30%

16. In the past 12 months, what events served as a trigger to submit specimens for diagnostic work up for an abortion? Select all that apply.

Abortion storm (acute)

Increased incidence of abortions over a longer time period

Introduction of new animals

Zoonotic concern

Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. If you were to submit samples for the following diseases, which samples would you collect and submit? Select all that apply.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Blood/ serum** | **Milk** | **Placenta** | **Vaginal secretions** | **Aborted Fetus** | **Feces** | **Other (w/ write in option)** |
| Brucellosis |  | | | | | | |
| Q fever (*Coxiella burnetii*) |  | | | | | | |
| Salmonellosis |  | | | | | | |
| Leptospirosis |  | | | | | | |
| Campylobacteriosis |  | | | | | | |

18. Have you diagnosed (via laboratory confirmation) any of the following diseases in livestock in the past 5 years? Select all that apply.

Brucellosis Q fever (*Coxiella burnetii*) Salmonellosis Leptospirosis Campylobacteriosis

19. Select the reporting status for each animal disease in your primary state of practice. Select all that apply.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Nationally notifiable in animals** | **State reportable in Animals** | **Not Reportable** | **Not Sure** |  |
| *Brucella abortus* |  | | | | |
| *Brucella suis* |  | | | | |
| Q fever (*Coxiella burnetii*) |  | | | | |
| Salmonellosis |  | | | | |
| Leptospirosis |  | | | | |
| Campylobacteriosis |  | | | | |

20. Select the option that best describes your perceived occupational risk of acquiring the following zoonotic diseases in your primary work environment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **No risk** | **Slight risk** | **Moderate risk** | **High risk** |  |
| *Brucella abortus* |  | | | | |
| *Brucella suis* |  | | | | |
| Q fever (*Coxiella burnetii*) |  | | | | |
| Salmonellosis |  | | | | |
| Leptospirosis |  | | | | |
| Campylobacteriosis |  | | | | |

21. Select the option that best indicates how often you advise clients on the following topics (select one):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Never** | **Rarely** | **Sometimes** | **Frequently** | **Always** |
| Personal Protective Equipment (PPE) use while assisting during parturition |  | | | | |
| PPE use while handling aborted materials |  | | | | |
| Proper disposal of aborted tissues and contaminated materials |  | | | | |
| Personal hygiene practices following exposure to obstetric materials (e.g. hand washing) |  | | | | |
| Purchase of disease free replacement stock |  | | | | |
| Breeding to disease free animals to avoid spread to herd |  | | | | |
| Quarantine of newly purchased animals |  | | | | |
| Farm management practices to prevent disease and disease spread (i.e. general biosecurity practices) |  | | | | |
| Disinfection of contaminated equipment or facilities |  | | | | |
| Zoonotic diseases of concern, specifically brucellosis, Q fever (*C. burnetii*), salmonellosis, leptospirosis, or campylobacteriosis |  | | | | |

22. During a routine veterinary examination, which personal protective equipment (PPE) do you wear when you perform the following activities? Please select all that apply:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Gloves** | | **Rubber Boots** | **OB Sleeves** | **Protective clothing (e.g. coveralls)** | **Surgical Mask** | **Respirator**  **(e.g. N95)** | **Goggles or face shield** | **Do not wear PPE** |
| Handling a neonate |  |  | | | | | | | |
| Handling an adult animal |  |  | | | | | | | |
| Conducting a rectal exam |  |  | | | | | | | |
| Conducting a vaginal exam |  |  | | | | | | | |
| Assisting with parturition |  |  | | | | | | | |
| Performing a cesarean section |  |  | | | | | | | |
| Handling an animal with hemorrhage |  |  | | | | | | | |
| Handling birth products or aborted tissues |  |  | | | | | | | |
| Performing a necropsy on an animal or fetus |  |  | | | | | | | |

23. During a veterinary examination where a zoonotic disease is suspected, which PPE do you wear when you perform the following activities? Please select all that apply:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Gloves** | | **Rubber Boots** | **OB Sleeves** | **Protective clothing (e.g. coveralls)** | **Surgical Mask** | **Respirator**  **(e.g. N95)** | **Goggles or face shield** | **Do not wear PPE** |
| Handling a neonate |  |  | | | | | | | |
| Handling an adult animal |  |  | | | | | | | |
| Conducting a rectal exam |  |  | | | | | | | |
| Conducting a vaginal exam |  |  | | | | | | | |
| Assisting with parturition |  |  | | | | | | | |
| Performing a cesarean section |  |  | | | | | | | |
| Handling an animal with hemorrhage |  |  | | | | | | | |
| Handling birth products or aborted tissues |  |  | | | | | | | |
| Performing a necropsy on an animal or fetus |  |  | | | | | | | |

24. At any time in your career, has a medical care provider diagnosed you with acute brucellosis (non-vaccine strain), Q fever (*C. burnetii*), salmonellosis, leptospirosis, or campylobacteriosis due to suspected animal contact?: Yes No

If “yes” to 24 24a. Which disease(s) were you diagnosed with? Select all that apply.

Brucellosis Q fever (*C. burnetii*) Salmonellosis Leptospirosis Campylobacteriosis

24b. Was this disease [*disease name selected above will appear here]* confirmed by a diagnostic laboratory? Yes No Not sure *ask for each dz selected*

25. Indicate your level of awareness with the Compendium of Veterinary Standard Precautions for Zoonotic Disease Prevention in Veterinary Personnel. Not aware Slightly aware Somewhat aware Moderately aware Extremely aware

26. Which personal protective equipment (PPE) do you have access to at your practice? Select all that apply.

gloves OB sleeves rubber boots disposable shoe covers reusable protective clothing (e.g. coveralls, lab coat) disposable protective clothing (e.g. Tyvex or similar coveralls, lab gown) surgical mask respirator (e.g. N95) goggles faceshield none

27. How often is PPE readily available and accessible to you? never sometimes often always

28. Does your practice provide training on when and how to use, care for, and maintain your PPE? Yes No Unsure

29. Do you wear a respirator as part of your personal protective equipment? Yes No *if no skip to Q* 30

29a. What type of respirator do you use? Filtering Facepiece (e.g. N95 or P100) elastormetic half-mask elastomeric full-face Powered Air-Purifying Respirator (PAPR) Other \_\_\_\_\_

29b. Is there a written respirator program available at your practice? Yes No Unsure

29c. Is there an identified staff member who is responsible for the respirator program? Yes No Unsure

29d. Have you been medically cleared by your physician to wear a respirator? Yes No Unsure

29e. Have you received respiratory fit-testing to identify what model of respirator to wear? Yes No Unsure

*If yes,* 29f. Please indicate where you were last fit tested for the respirator:

Public health department Occupational health department At your practice Other

29g. Have you been trained on when to use the respirator, limitations, care and maintenance, and conducting user seal checks? Yes No Unsure

30.Indicate the level of importance the following motivators have for your decision to use PPE.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Not important** | **Of little importance** | **Moderately**  **important** | **Important** | **Very Important** |
| Concern for personal safety |  | | | | |
| Concern for spreading disease to other humans |  | | | | |
| Concern for spreading disease to other animals |  | | | | |
| Concern for liability |  | | | | |
| Adherence to workplace policy |  | | | | |
| Concern about pregnancy/ability to conceive |  | | | | |
| Please indicate other motivators to PPE use not listed above | *Write in* | | | | |

31.Indicate the level of concern you have towards each potential barrier to PPE use.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Not concerned** | **Slightly concerned** | **Moderately**  **concerned** | **Very concerned** |
| Cost of equipment |  | | | |
| Negative perceptions of others to PPE |  | | | |
| Inconvenience of taking the gear with you in the field |  | | | |
| Inconvenience of disposal or disinfection after use in the field |  | | | |
| Inconvenience of wearing PPE |  | | | |
| Belief that it is unnecessary |  | | | |
| Unsure how to use PPE properly |  | | | |
| Unsure what PPE to use for a specific situation |  | | | |
| Decreased safety due to mobility or visibility while in use |  | | | |
| Please indicate other barriers to PPE use not listed above | *Write in* | | | |

32. What resource(s) do you consult for information on zoonotic diseases? Select all that apply.

Textbooks Journal articles CE/conferences Webinars Organization website (e.g. AVMA) CDC website USDA website Colleagues Veterinary professional websites (e.g. VIN, DVM360) Veterinary school websites Other \_\_\_\_\_\_\_

33. What topics would you like to receive more continuing education opportunities?

PPE use Zoonotic diseases Regulatory reporting requirements Infection control Other \_\_\_\_\_\_\_

34. Through which resources would you like to receive educational materials? Select all that apply.

Textbooks Journal articles CE/conferences Webinars Organization website (e.g. AVMA) CDC website USDA website Colleagues Veterinary professional websites (e.g. VIN, DVM360) Veterinary school websites Other \_\_\_\_\_\_\_

Closing page message:

Thank you for taking time out of your busy schedule to complete this survey. The knowledge gained from responses like yours will help improve and enhance zoonotic disease education and prevention strategies targeted to veterinarians.

Please visit the following websites to learn more about specific zoonotic diseases and occupational health recommendations.

Brucellosis <https://www.cdc.gov/brucellosis/veterinarians/index.html>

Q fever <https://www.cdc.gov/qfever/index.html>

Salmonellosis <https://www.cdc.gov/healthypets/diseases/salmonella.html>

Leptospirosis <https://www.cdc.gov/leptospirosis/index.html>

Campylobacteriosis <https://www.cdc.gov/campylobacter/index.html>

Veterinary Safety and Health <https://www.cdc.gov/niosh/topics/veterinary/>

Respirators <https://www.cdc.gov/niosh/topics/respirators/>

Veterinary Standard Precautions <http://nasphv.org/documentsCompendiaVet.html>