

## **BVD Virus Biosecurity Risk Assessment**

### **Montana BVD-PI Herd Biosecurity Project**

1. Do you vaccinate your new crop calves for BVD virus to prevent disease using a protocol with a “BVDv Vaccination Reliability Rating” of “4” or higher (see attached reliability rating guide)? Yes / No
2. Do you vaccinate your heifers and cows for BVD to prevent reproductive losses using a protocol with a “BVDv Vaccination Reliability Rating” of “5” or higher (see attached reliability rating guide)? Yes / No
3. Was last year’s herd pregnancy rate (number diagnosed as pregnant divided by number exposed) greater than 90%? Yes / No
4. Did greater than 95% of your cows calve within a 90-day window? Yes / No
5. Each year over the past three years has your calving rate (number that deliver a live calf divided by number diagnosed as pregnant) always been above 90%? Yes / No
6. Do you regularly have tissue from all aborted fetuses you find tested for BVD virus or submit them to your veterinarian for a general post-mortem examination? Yes / No
7. Do you routinely isolate all new additions to your herd for at least 21 days before turning out them with their counterparts? Yes / No
8. Did you treat less than 10% of last year’s calf crop for respiratory or digestive disease while you owned them? Yes / No
9. To your knowledge were your pregnant cows and heifers kept from co-mingling during the early part of the breeding season (first 150-175 days of breeding) with cattle from other herds of unknown health status? Yes / No
10. Were you able to keep your pregnant cows or heifers from having fence line contact during the early part of the breeding season (first 150-175 days of breeding) with other cattle herds not tested for BVD virus? Yes / No
11. Have all your purchased replacement cattle and seed stock been tested for the BVD virus before the start of the breeding season (preferably at least 30 days prior)? Yes / No
12. Do you make sure all purchased bred heifers are tested for BVD virus and do you (or will you) test their calves for BVD virus before commingling the heifers and their calves with your home herd? Yes / No
13. Do you have a biosecurity protocol for “re-receiving” all cattle following off-site movement (for heifer or bull development, lending or leasing, cattle shows, county fairs, treatment at vet’s clinic, etc.)? Yes / No
14. Do you have a general sanitation program on your ranch, including regular cleaning of trailers, working facilities, watering devices and hospital areas *and* do you enforce a sanitation protocol for individuals, equipment and vehicles entering your operation that have recently visited other cattle operations. Yes / No
15. Do you have a thorough understanding of all the following: The routes of BVD virus transmission, the nature of BVD virus infection (i.e., transient vs. persistent) and the stage of pregnancy associated with the “creation” of BVD-PI cattle? Yes / No

**Your score: # “Yes” / 15 x 100 = \_\_\_\_\_ %.**

## Risk Assessment & Recommended Action Plan

### Review Risk Assessment Annually!!!!

**100-80% = Low Risk** – Set as a goal to answer 100% “yes” to the above questions. In consultation with a veterinarian reevaluate BVD virus biosecurity each year well in advance of the breeding season.

**60-80% = Moderate Risk** – Consult with a veterinarian or contact Montana BVD-PI Herd Biosecurity Project for assistance. Set as a goal to answer 100% “yes” to the above. And, at least 30 days before the start of the breeding season conduct a partial-herd\* BVD virus test. Consider a whole-herd\*\* test.

**0-60% = High Risk** – Consult with a veterinarian or contact Montana BVD-PI Herd Biosecurity Project for assistance. Set as a goal to answer 100% “yes” to the above. And, at least 30 days before the start of the breeding season conduct a whole-herd test.

**\*Partial-Herd Screening/Testing** - At least 30 days before breeding begins test:

- All non-pregnant breeding-age females (e.g. replacement heifers, open cows, etc.).
- All calves from dams bred prior to purchase.
- All new crop calves from two-year-old heifers.
- All non-biological pairs (both cow & calf).
- All aborted fetuses, stillbirths, deformed or defective calves.
- All calves born later than 60 days after the start of calving.
- All breeding bulls, yearling steers or other cattle you plan to expose to the breeding herd.

**\*\* Whole-Herd Screening/Testing** - At least 30 days before breeding begins test:

- All of the above.
- **PLUS** All new crop calves.

#### **Other biosecurity practices to consider in addition to the minimum above:**

- Individually identify each animal in your herd.
- Annually conduct an on-site biosecurity evaluation or risk assessment of your operation.
- Annually monitor and record weaning weights and compare them to previous year’s weights.
- Carefully monitor nutritional status of your herd – consult with a livestock nutritionist annually.
- Body-condition-score (BCS) your replacement heifers and cows at regular annual intervals and maintain records of their BCSs.
- Maintain production and health treatment records individually and for all groups or classes of cattle.
- Record the type, brand, lot number and expiration date of the vaccines you use.
- Establish and maintain a sanitation program on your operation, including regular cleaning of trailers, working facilities, watering devices and hospital areas.
- Establish and enforce an ingress/egress protocol for all individuals, equipment and vehicles.
- Carefully monitor contact of breeding cattle with other species suspected of carrying and transmitting BVD virus, including alpaca, milking goat herds, sheep and deer.
- Humanely euthanize chronically sick animals (including BVD-PI animals).
- Promptly bury dead animals or dispose of them according to local sanitation rules.

#### **For assistance or more information contact:**

**Clint Peck: 406-896-9068 or 406-671-0851 – [cpeck@montana.edu](mailto:cpeck@montana.edu)**  
**Mo Harbac: 406-994-4323 – [mharbac@montana.edu](mailto:mharbac@montana.edu)**

## RELIABILITY RATING GUIDE

### BVD vaccination of calves to prevent subsequent disease\*:

Least Reliable to Most Reliable    ∅ = Not recommended

1. ∅ Vaccination prior to four months of age with a single dose of killed virus administered to healthy calves that nursed adequate colostrum.
2. ∅ Vaccination after four months of age with a single dose of killed virus immediately before weaning, transport and commingling.
3. Vaccination prior to four months of age with a single dose of modified-live virus administered to healthy calves that nursed adequate colostrum.
4. Vaccination after four months of age with two doses of killed virus two to four weeks apart on the ranch of origin immediately before weaning, transport and commingling.
5. Vaccination after four months of age with a single dose of modified-live virus immediately before weaning, transport and commingling.
6. Vaccination after four months of age with two doses of a killed virus four weeks apart on the ranch of origin at least two weeks before weaning, transport and commingling.
7. Vaccination after four months of age with a single dose of modified live virus at least two weeks before weaning, transport and commingling.
8. Vaccination after four months of age with two doses of modified-live virus four weeks apart on the ranch of origin immediately before weaning, transport and commingling.
9. Vaccination after four months of age with two doses of modified-live virus four weeks apart on the ranch of origin at least two weeks before weaning, transport and commingling.

\*“Simple Targeted BVD Control” – M. Daniel Givens, DVM, PhD, Auburn College of Veterinary Medicine

## RELIABILITY RATING GUIDE

### BVD vaccination of heifers and cows to prevent reproductive losses\*:

Least Reliable to Most Reliable    ∅ = Not recommended

1. ∅ Vaccination of heifers and cows each year prior to breeding with a single dose of killed virus.
2. Vaccination of heifers with two doses of killed virus at least 30 days before initial breeding, without annual revaccination.
3. Vaccination of heifers with a single dose of modified-live virus at least 30 days before initial breeding, without annual revaccination.
4. Vaccination of heifers with two doses of modified-live virus at least 30 days before initial breeding, without annual revaccination.
5. Vaccination of heifers with two doses of killed virus at least 30 days before initial breeding, and annual revaccination of cows with a single dose of killed virus at branding or weaning.
6. Vaccination of heifers with two doses of killed virus at least 30 days before initial breeding, and annual revaccination of cows with a single dose of killed virus prior to breeding.
7. Vaccination of heifers with a single dose of modified-live virus at least 30 days before initial breeding, and annual revaccination of cows with a single dose of killed virus at branding or weaning.
8. Vaccination of heifers with a single dose of modified-live virus at least 30 days before initial breeding, and annual revaccination of cows with a single dose of modified-live virus at branding or weaning.
9. Vaccination of heifers with a single dose of modified-live virus at least 30 days before initial breeding, and annual revaccination of cows with a single dose of modified-live virus prior to breeding.
10. Vaccination of heifers with two doses of modified-live virus at least 30 days before initial breeding, and annual revaccination of cows with a single dose of killed virus at branding or weaning.
11. Vaccination of heifers with two doses of modified-live virus at least 30 days before initial breeding, and annual revaccination of cows with a single dose of modified-live virus at branding or weaning.
12. Vaccination of heifers with two doses of modified-live virus at least 30 days before initial breeding, and annual revaccination of cows with a single dose of modified-live virus prior to breeding.

## RELIABILITY RATING GUIDE

### BVD Vaccination of Bulls

to prevent amplification and spread of virus\*:

Least Reliable to Most Reliable    ∅ = Not recommended

1. ∅ Vaccination of bulls each year prior to breeding with a single dose of killed virus.
2. Vaccination of bulls with two doses of killed virus at least 30 days before initial breeding, without annual revaccination.
3. Vaccination of bulls with a single dose of cytopathic, modified-live virus at least 30 days before initial breeding, without annual revaccination.
4. Vaccination of bulls with two doses of cytopathic, modified-live virus at least 30 days before initial breeding, without annual revaccination.
5. Vaccination of bulls with two doses of killed virus at least 30 days before initial breeding, and annual revaccination with a single dose of killed virus prior to breeding.
6. Vaccination of bulls with two doses of cytopathic, modified-live virus at least 30 days before initial breeding, and annual revaccination with a single dose of modified-live virus prior to breeding.
7. Vaccination of bulls with a single dose of cytopathic, modified-live virus at least 30 days before initial breeding, and annual revaccination with a single dose of modified-live virus prior to breeding.

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