Practical Biosecurity and Biocontainment on the Ranch

Dale Grotelueschen, DVM, MS
Great Plains Veterinary Educational Center
Clay Center, NE
Risk considerations for designing plans to control targeted diseases in individual cattle operations

• **Risk Assessment**
  - Are animals exposed or infected now or how likely are they to become exposed in the future?
  - Do these risks need to be addressed?

• **Risk Tolerance/Risk Aversion**
  - What is my tolerance to health risks?
  - How much risk am I willing to take?
Reduced risk for disease, control or elimination of disease

**Biosecurity** – the outcome of all actions used to prevent disease agent entry into a unit of interest.

**Biocontainment** – the outcome of all actions resulting in control of a disease agent in a unit of interest.

Increase Immunity
Eliminate Agent
Prevent Transmission

Biosecurity
Biocontainment

Disease control could be improved by better addressing epidemiologic triad

- Immunity has received most attention in outbreaks and prevention plans
- Factors addressing exposure tend to be ignored
- Limited success of health programs

Host  Agent  Environment

Thomson, JU, Proceedings Am Assoc Bov Pract 308-14, 1997
Immunity
Exposure
Disease
Health Risks Associated with Introduction of New Cattle into Herds
These bulls are genetically superior and possess excellent quality characteristics. Is there a downside to purchasing one or more of these bulls?
This cow has Johne’s disease

- Chronic diarrhea
- Contagious
- Leads to Death
- Possible link to Crohn’s disease in humans
- Other cattle in herd (including calves) are carriers
Is there a downside to purchasing one or more of these bulls IF THEY ORIGINATED FROM THE SAME HERD AS THE COW?
Is there a downside to purchasing this heifer or 100 like her?

#624 BVD PI Non-Symptomatic Heifer
Offspring of a purchased replacement heifer

This is a PI BVD Calf

BUT......
This Ranch............

- Calved these replacement heifers separate from the resident herd.
- Tested calves and then dams of positive calves.
- Positives were culled before commingling with resident herd.
- Resident herd (as part of existing health program) and new arrivals were vaccinated.
This Ranch…………

- Bottom line…..BVD was not introduced into the herd even though PI animals resulted from the purchase.

- Spent about $150 on tests that potentially saved thousands over the next years.
Persistent Infection - Routes

**Acute infection** - pregnant female exposed to NCP BVDV

Persistently infected female giving birth

93%

1½-4+ months gestation

Persistently Infected calf

7%

Reproductive effect of acute BVD around time of insemination

• Heifers (75 hd) seronegative to BVD and IBR
• 3 Management Groups (randomized)
  • Controls: Controls that did not become infected during pregnancy
  • Group 1: Infected by contact with PI cow and calf 4 days after insemination
  • Group 2: Infected intranasally 9 days before insemination
• Non-qualifying heifers removed (47 hd remained)
• Intranasal exposure with 1 ml viremic blood and 1 ml viremic serum from the PI cow and calf
• Induced calving at 275 days gestation

## Reproductive effect of acute BVD around time of insemination

<table>
<thead>
<tr>
<th></th>
<th>Conception Rate 20 d after insemination</th>
<th>Pregnancy Rate 77 d after insemination</th>
<th>Calving Rate 275 d after insemination</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Controls</strong></td>
<td>79% (11 of 14)(^a)</td>
<td>79% (11 of 14)(^c)</td>
<td>71% (10 of 14)*</td>
</tr>
<tr>
<td>that did not become infected during pregnancy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group 1</strong></td>
<td>60% (9 of 15)(^b)</td>
<td>33% (5 of 15)(^c)</td>
<td>33% (5 of 15)</td>
</tr>
<tr>
<td>infected by contact with PI cow and calf 4 days after insemination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group 2</strong></td>
<td>44% (8 of 18)(^c)</td>
<td>39% (7 of 18)(^c)</td>
<td>39% (7 of 18)</td>
</tr>
<tr>
<td>infected intranasally 9 days before insemination</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* one control heifer aborted between d 77 and d 107, not associated with BVD.

\(p=0.25\) for groups compared:
a: all \(p<0.05\)
Introducing New Animals Into a Herd

Biosecurity Considerations

- Reduce risk for disease agent transfer from new arrivals to resident herd
- Reduce risk for disease agent transfer from resident herd to new arrivals
- It goes both ways.
Calf Diarrhea

- Introducing cattle during calving increases risk for scours
- Most cattle carry 1 or more scours agents
This includes grafting calves from any source
What risk is present for Trichomoniasis?

Great calves, great cows, great bull, great grass
New Herd Introductions

- These are just examples of real world health risks that result from introducing new animals into herds.
- Long list of disease agents
  - Regulated diseases (Brucella, TB, etc.)
  - Agents directly related to production losses
New Herd Introductions

• Carrier animals and herds exist for many agents, such as trichomoniasis, IBR virus, strain variations of some agents
• Identification of some is possible
• However, it is impossible (and not practical today) to identify all

• Planning for eliminating or reducing risk can be done at low cost
New Herd Introductions

Immunity Aspects

• Immunity is variable between herds as well as individual animals
  • Natural exposure
  • Vaccination programs range from excellent to nonexistent
• Immune suppression occurs from herd conditions, transportation, social interactions, etc.
  • Includes resident herd and new animals
Population Dynamics
Effect of Vaccination or Field Exposure

Number of Animals

Susceptible to Disease

Disease Challenge Level

Resistant to Disease

Relative Level of Disease Resistance
Vaccination

• Reduce risk of known exposure
• Reduce risk if exposure occurs

• Vaccination protocols to reduce risk
  • Cost:Benefit
  • Overall herd management plan/disease control plans
  • Productivity response and catastrophic risk management
New Herd Introductions
Management Considerations

• Do not commingle for at least 3 illness free weeks
• Do not commingle during calving season
  • Consider calving pregnant new arrivals separate from resident herd.
• Use vaccination to reduce risk
• Virgin bulls
New Herd Introductions
Management Considerations

- Plan for testing new arrivals (prior to or on arrival) to minimize risk - set goals - examples......
  - Test for BVD PI status (including offspring of pregnant cattle - calve separate from resident herd)
  - Bovine Leukemia
  - Johnes Disease (testing new arrivals may not be the best animals to consider)
  - Other

- Introduce only virgin bulls
- Introduce only animals from “high health” sources
  - What is a “high health” source?
Neonatal enteritis (calf scours) prevention with the Sandhills System

D. Smith, D. Grotelueschen, T. Knott, S. Ensley

Applied Biosecurity and Biocontainment
What should our goals be?

- Herd level prevention
  - Eliminate morbidity
  - Eliminate mortality
- Avoid costs
  - Treatment
  - Labor
  - Reduced production losses
- Optimized performance

Source: Dr. John Groves, Elton, MO
Effect of Calf Scours on Weaning Weight

• 19 pound weaning weight advantage to calves not treated for scours over those requiring treatment.
• Annual scour incidence range 13-64%
• Average annual scour incidence 35%, average annual death loss 1%
• Northern Agric. Res. Center, Havre, MT

Risk Factors Affecting Diarrhea Incidence

Research Results

- Introducing animals during calving season
- Calving heifers and cows in same calving area
- Feeding heifers and cows together
Risk Factors Affecting Diarrhea Incidence
Research Results

- Extended calving season
- Calving more heifers in relation to cows
- High animal density
Immunity

Passive
- Antibodies from colostrum

Active immune response

Age

Passive

Acquired
Immunity

Age in Days

Exposure

Age specificity of calf scours

- Population at-risk for scours: calves 1-3 weeks of age

Frequency histogram age of calves at death

Also at-risk for shedding scours agents

Multiplier Effect

Cows are shedders

Calves are multipliers
Later born calves are more likely to die from scours.

Proportion of the calves born each week that eventually died from neonatal diarrhea.

Key Risks and Interventions to Reduce Exposure

- **RISK:** Environmental buildup of scours agents over time in calving area
  - **INTERVENTION:** Planned move of pregnant animals prior to environment becoming high risk for exposure.

- **RISK:** Older calves shed lots of scours agents to younger calves
  - **INTERVENTION:** Age segregation of calves.
Develop a plan
BVD CONSULT:
HERD SPECIFIC BVD CONTROL FOR COW/CALF OPERATIONS

Dale Grotelueschen, DVM, MS
Great Plains Veterinary Educational Center
University of Nebraska
Clay Center, Nebraska
Bovine viral diarrhea virus (BVDV) is directly and indirectly responsible for a broad range of clinical and subclinical effects in beef and dairy operations.
Persistently infected female giving birth

**Acute infection**
pregnant female exposed to NCP BVDV


- 1½-4+ months gestation

- 93%

- 7%
BVD Cow-Calf Herd Distribution

• PIs tend to occur in clustered patterns
  • Many herds have 0% PIs
  • Some affected herds may have >10% PIs
• Likely fewer than 10% of herds nationally contain PI calves
BVD Control - Rationale

• Vaccination
  - critical role in control, eradication and risk reduction
  - does not prevent all PI
  - reduces PI risk

• Herd-level control strategies are needed to meet goals

Brock, Proc Detect & Cont BVDV Inf, p 7, 2002
BVD Prevention and Control Plan

• Not “One Size Fits All”

• Must be customized to type of cattle, management and operational constraints
  • Positive vs. negative herd status
  • High-risk vs. low-risk activities / management
  • Risk-averse vs. risk-taking individual
  • Appropriate surveillance and control varies
  • Ability to make management adjustments varies
  • Is best determined with the assistance of a veterinarian involved with the management of the ranch
Goals of BVD Control in Herds

Remember ----

It is just as important to KEEP BVD OUT of uninfected herds as it is to ELIMINATE it from infected herds.
Fundamental Components of BVD Control Plans

- **Surveillance** - BVD presence Y/N
- **Biosecurity** - Prevent BVD entry
  - Especially new herd additions, effective contacts
- **Biocontainment** - Control/eliminate
  - When needed
- **Targeted vaccination** - prevent PI calves
  - In the event exposure occurs

Is BVDV circulating within this herd?

Yes

Biocontainment

No

Biosecurity

Various strategies to remove BVDV-PI

Various Surveillance Methods

Various strategies to prevent entry of BVDV

Various strategies to remove BVDV-PI

Biocontainment

Is BVDV circulating within this herd?

- Vaccinate to minimize BVDV TI and further transmission

- Prevent BVDV effective contact between pregnant cattle and natural or purchased herd additions

- Test all cattle for virus and remove BVDV-PI
  - e.g. Skin biopsy
  - PCR or VI of blood

- Yes

- Biocontainment

Is BVDV+?

- BVDV+

- Vaccinate to reduce BVDV disease with risk of continued circulation or introduction of BVDV

- No

- Do nothing with risk of continued circulation or introduction of BVDV

Is BVDV-?

- BVDV-

- Test all new additions for BVDV-PI
  - e.g. skin biopsy
  - PCR or VI of blood

- Yes

- Biosecurity

- Prevent BVDV effective contacts from outside esp. to pregnant cattle
  - e.g. untested arrivals fence-line contact etc.

- Test all cattle for virus and remove BVDV-PI
  - e.g. Skin biopsy
  - PCR or VI of blood

- Yes

- Vaccinate to protect herd from severe BVDV disease if biosecurity is breached

- No
Everything should be as simple as possible, but no simpler.

Einstein
BVD CONSULT

COLLABORATIVE ONLINE NOVEL SCIENCE-BASED USER-FRIENDLY LEARNING TOOL
CONSULT: Collaborative Online Novel Science-based User-friendly Learning Tool

• Objectives:
  • Create an interactive, web-based BVD risk assessment tool for producers and DVMs
  • Evidence-based/Supported by literature
  • Mimic phone conversation with an expert
  • Customized recommendations incorporated into interactive format
BVD CONSULT Team

- Brad White, Kansas State University
- Bob Larson, Kansas State University
- Dale Grotelueschen, University of Nebraska
- David Smith, Mississippi State University
- Dan Givens, Auburn University
- Richard Randle, University of Nebraska
- Sherri Merrill, KSU / Allen, KS
BVD CONSULT Decision Flow

Chart A and B
BVD CONSULT

Welcome to BVD (Bovine Viral Diarrhea) CONSULT (Collaborative, Online, Novel, Science-based, User-friendly, Learning, Tool). BVD CONSULT was created for the benefit of the beef cattle industry to enhance the control of BVD in beef cow-calf herds. This project was funded in part by an educational grant from Zoetis and was produced by Brad White, DVM, MS (Kansas State University), Bob Larson, DVM, PhD (Kansas State University), David Smith, DVM, PhD (Mississippi State University), Daniel Givens, DVM, PhD (Auburn University), Dale Grotelueschen, DVM, MS (Zoetis), Richard Randle, DVM, MS (University of Nebraska-Lincoln), and Sherri Merrill, DVM (Allen, Kansas).

Develop a BVD Control Strategy for Your Herd.

(updated 4/1/13)

BVD CONSULT is designed to help beef cow-calf producers minimize the impact of BVD on their herd, or keep BVD out of their herd if it is not currently infected. Please work closely with your veterinarian to develop the best BVD control strategy for your operation.

You will be asked several questions regarding management practices on your ranch. Below each question, you will see this icon: 

Click on this icon to see more information about the management practice and why it is important for control and eradication of BVD.

If you are not currently performing each practice, but you are willing and able to start, then you should answer "Yes" to that question by clicking on the appropriate link. If you change your mind after answering a question, click on the "Go Back" link and you will be taken back to the previous question. You will have the option to save/print a report after you have answered all of the questions. This report will include how you answered each question and the response that you were given.
To start with, do you have **active** BVD in your herd?

*For a definition of active BVD and more information, click on the icon below.*

Yes, I have active BVD in my herd.

I am unsure of the BVD status of my herd. OR I do not have active BVD in my herd.

You should click "Yes, I have active BVD in my herd." if you have had an animal test positive for BVD in the past year with a test that indicates persistently infected (PI) status or viremia (e.g. antigen capture ELISA (ACE), virus isolation (VI), immunohistochemistry (IHC), or polymerase chain reaction (PCR).

If you have not had an animal test positive for BVD in the past year, please click "No, I do not have active BVD in my herd." If you are concerned that you may have BVD in your herd but have not had any animals test positive, follow as many of these recommendations as possible. This will minimize the risk of bringing BVD into your herd and allow you to determine if BVD is present through disease surveillance.
Yes, I have active BVD in my herd.

You have indicated that you have active BVD in your herd; if this is not correct, click on the "Go Back" link.

BVD may impact the health of your herd through decreased fertility, abortions, weak and deformed calves, diarrhea and decreased immunity to other diseases.

Let's work on a plan to reduce the impact and possibly eliminate BVD from your herd.

Will you institute a testing strategy that identifies all BVD persistently infected (PI) cattle and remove them from your herd?

*For more information regarding testing for PI cattle, click on the icon below.*

Yes, I will institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

No, I will not institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

Go Back
Persistently infected (PI) cattle were infected with BVD as a fetus. PI cattle shed large amounts of virus throughout their life. All calves that are born to PI heifers/cows will be PI as well. If you have BVD in your herd and choose not to test for PI cattle, controlling BVD in your herd may not be possible.

It is best to test for PI cattle prior to the breeding season when all, or most of, the cows are open. It is not necessary to test every cow in your herd in order to find all of the PI animals. A whole herd test includes testing all calves, bulls, replacement heifers, and cows that are not currently nursing a calf. If a pregnant cow tests negative for BVD, she should be kept separate from the herd until she calves and her calf tests negative as well. The dams of calves that test positive need to be tested. However, dams of calves that test negative do not need to be tested.

There are several testing options available for BVD PI status. Most tests require a skin sample which is easily supplied by an ear notch. Contact your veterinarian for details about sample collection and shipment to a laboratory. Your veterinarian will be able to work with the laboratory to select the specific testing option that best meets your needs.

Any cattle that are confirmed as BVD PI should be humanely euthanized or sold directly to slaughter. Read the Academy of Veterinary Consultants BVD position on BVD by clicking on the following link: [AVC BVD Position Statement](#).
Yes, I have active BVD in my herd.

You have indicated that you have active BVD in your herd; if this is not correct, click on the "Go Back" link.

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Let's work on a plan to reduce the impact and possibly eliminate BVD from your herd.

Will you institute a testing strategy that identifies all BVD persistently infected (PI) cattle and remove them from your herd?

For more information regarding testing for PI cattle, click on the icon below.

Yes, I will institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

No, I will not institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

Go Back
No, I will not institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

This is not a wise choice. Testing is the best control strategy. It will be difficult to eliminate BVD from your herd without testing for BVD PI status and removing the positive animals.

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Will you use an appropriate BVD vaccination strategy on heifers?

*Click on the icon below to see appropriate vaccination strategies for heifers.*

Yes, I will use an appropriate BVD vaccination strategy on heifers.

No, I will not use an appropriate BVD vaccination strategy on heifers.

Go Back
Yes, I have active BVD in my herd.

You have indicated that you have active BVD in your herd; if this is not correct, click on the "Go Back" link.

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For more information regarding testing for PI cattle, click on the icon below.

Yes, I will institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

No, I will not institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

Go Back
Yes, I will institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

You have made a wise decision. By testing and removing PI cattle you will greatly reduce the impact of BVD on your herd. Be sure to test and cull PI cattle prior to bringing any new cattle into your herd so they are not exposed to the BVD virus circulating in your herd.

If you are not sure which cattle to test and when to collect the samples, please select "Go Back" and then click on the more information icon. Contact your veterinarian to get specific information about sample collection and shipment of the samples to a laboratory.

Will you quarantine and test all new cattle coming into your breeding herd? (see 📣 for special considerations for pregnant cattle.)

For quarantine specifications and more information about testing, click on the icon below.

Yes, I will quarantine and test all new cattle coming into my breeding herd.

No, I will not quarantine and test all new cattle coming into my breeding herd.

Go Back
Yes, I will quarantine and test all new cattle coming into my breeding herd.

Quarantine and testing of herd additions is important to prevent introducing additional BVD into your herd. Quarantining herd additions for 30 days also decreases the risk of introducing other diseases into your herd.

Can you prevent fenceline and direct contact of your pregnant herd with other cattle?

Click on the icon below to find out why preventing contact of your pregnant cattle with other cattle is important.

Yes, I can prevent fenceline and direct contact of my pregnant herd with other cattle.

No, I cannot prevent fenceline and direct contact of my pregnant herd with other cattle.

Go Back
No, I cannot prevent fenceline and direct contact of my pregnant herd with other cattle.

Preventing exposure of your herd to other cattle may not be practical in many situations. If your herd has contact with other cattle, your herd will be at risk for continued exposure to BVD. The importance of eliminating contact with other cattle depends on how likely those cattle are to be infected with BVD.

You may be exposing your neighbors' herd to BVD. An aggressive test and cull strategy prior to fenceline contact will limit the risk to other herds.

Are the animals that your pregnant cattle will have contact with likely to be infected with BVD (high risk)?

Find out what type of exposure is high risk by clicking on the icon below.

Yes, the cattle that my pregnant cattle will have fenceline or direct contact with are high risk.

No, the cattle that my pregnant cattle will have fenceline or direct contact with are not high risk.

Go Back
Yes, the cattle that my pregnant cattle will have fenceline or direct contact with are high risk.

Your herd will be at risk for continued exposure to BVD. Unfortunately, this exposure may be unavoidable in some situations. Please, take a creative look at your operation to determine if any changes could be made to avoid this high risk contact. If high risk contact cannot be eliminated, appropriate vaccination of your entire herd and a high level of surveillance will be needed to successfully eliminate BVD and keep it out of your herd.

At this point it is important for you to evaluate if eliminating BVD from your herd and keeping it out is in your best interest financially. Testing for BVD is still the best control strategy if eliminating BVD from your herd is your goal, however, it may not be a sound financial decision for your operation. Your veterinarian can help you analyze the costs and benefits associated with eliminating BVD from your herd.

Will all cows calving in the same pasture calve in 90 days or less? (Can you prevent contact of newborn calves with cows that are less than 150 days of gestation?)

To find out why a short calving season is important, click on the icon below.

Yes, all cows calving in the same pasture will calve in 90 days or less.

No, all cows calving in the same calving pasture will not calve in 90 days or less.

Go Back
Yes, all cows calving in the same pasture will calve in 90 days or less.

A short calving season allows time for PI calves to be identified and removed prior to the breeding season. This is a critical management practice to prevent the spread of BVD within your herd.

Will you use an appropriate BVD vaccination strategy on heifers?

Click on the icon below to see appropriate vaccination strategies.

Yes, I will use an appropriate BVD vaccination strategy on heifers.

No, I will not use an appropriate BVD vaccination strategy on heifers.

Go Back
### BVD Vaccination Strategies for Heifers

<table>
<thead>
<tr>
<th>Not Appropriate</th>
<th>Single dose of killed virus vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate</td>
<td>Two doses of killed virus vaccine with the second dose at least 30 days prior to breeding*</td>
</tr>
<tr>
<td>Appropriate</td>
<td>One dose of modified live virus vaccine at least 30 days prior to breeding*</td>
</tr>
<tr>
<td>Appropriate (Recommended)</td>
<td>Two or more doses of modified live virus vaccine with the last dose at least 30 days prior to breeding*</td>
</tr>
</tbody>
</table>

*All vaccines given according to label instructions*

There are several possible vaccination strategies for heifers. The protocol shown in green is the most likely to establish a high level of immunity to BVD in your heifers. The protocols shown in yellow should provide adequate immunity. The protocol in red, however, will not establish immunity to BVD.
Yes, I will use an appropriate BVD vaccination strategy on heifers.

This is a wise choice. Vaccination creates herd immunity to BVD which will reduce the severity of the disease and decrease the spread of the virus within your herd. Vaccination of heifers is the most critical for establishing good herd immunity to BVD.

Have the mature cows in your herd been appropriately vaccinated for BVD?

*Click on the icon below for a description of appropriate vaccination histories.*

Yes, the mature cows in my herd have been appropriately vaccinated for BVD.

No, the mature cows in my herd have not been appropriately vaccinated for BVD.

Go Back
Yes, the mature cows in my herd have been appropriately vaccinated for BVD.

Your herd has been appropriately vaccinated. It should be relatively easy at this point to develop an excellent vaccination strategy for your herd.

Will you continue to use an appropriate BVD vaccination strategy on mature cows?

Click on the icon below to see appropriate vaccination strategies.

Yes, I will continue to use an appropriate BVD vaccination strategy on mature cows.

No, I will not continue to use an BVD appropriate vaccination strategy on mature cows.

Go Back
Yes, I will continue to use an appropriate BVD vaccination strategy on mature cows.

Annual vaccination of mature cows is important to maintain immunity to BVD in your herd. The same BVD vaccination strategy should be used on bulls as your heifers and cows. A high level of herd immunity will be established by using a sound vaccination strategy for all cattle in the herd.

Will you apply appropriate surveillance methods?

*Click on the icon below to see appropriate surveillance methods.*

Yes, I will apply appropriate surveillance methods.

No, I will not apply appropriate surveillance methods.

Go Back
Yes, I will apply appropriate surveillance methods.

An ongoing surveillance program is important to determine the success of your BVD control measures. It will also be important for early detection of problems in your herd so that the impact of diseases or improper management can be minimized. Your surveillance program should include watching for clinical signs of disease (such as lower than expected pregnancy rates, aborted fetuses, birth defects, low birthweight calves, or poor calf health) and submitting samples from all aborted and underweight calves for BVD testing. Additional surveillance may be beneficial depending on your marketing scheme and aversion to risk.

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The program that you have chosen to eliminate BVD from your herd has some limitations. Your herd is at risk for exposure to BVD through high risk contact. In this situation, you are relying on herd immunity to prevent the formation of new PI calves. Excellent herd immunity can be established with the vaccination strategy that you selected but it will not prevent the formation of PI calves 100% of the time. Please take a creative look at your operation to determine if any changes could be made to avoid this high risk contact. If high risk contact cannot be eliminated, you may want to reevaluate your decision to test and cull from a financial perspective. Testing for BVD is still the best control strategy if eliminating BVD from your herd is your goal. Surveillance will be extremely important so any PI calves can be removed from your herd before additional PI calves are created.

Work closely with your veterinarian to evaluate these recommendations and make the best choices for your herd. This herd health strategy, with the exception of whole herd testing, should be followed every year.

If you would like to revise some of your answers, please close out of the program and go through BVD CONSULT again from the beginning. Changing some of your answers may change the other recommendations, or the emphasis that is placed on a particular practice.
Please answer the following questions to view your report. (Only the first question is required.)

The following information is used for research and stats purpose only.

*What is the purpose of this visit to BVD CONSULT?
  - A trial run to try the site or a teaching demonstration of BVD control principles.
  - Actual Development of a BVD program for a beef herd.

What state is this herd located in? Mississippi

How large is your herd?
  - 0-25
  - 25-50
  - 50-100
  - 100-300
  - > 300

Is your herd commercial, seedstock or both?
  - Commercial
  - Seedstock
  - Both

Does your herd calve in the spring, the fall or both?
  - Spring
  - Fall
  - Both
BVD CONSULT

This report has been generated specifically for this herd. Use of these recommendations for other herds may not create the desired results. The following report records your answers and the responses that were given.

Yes, I have active BVD in my herd.

Yes, I will institute a testing strategy that identifies all BVD PI cattle and remove them from my herd.

You have made a wise decision. By testing and removing PI cattle you will greatly reduce the impact of BVD on your herd. Be sure to test and cull PI cattle prior to bringing any new cattle into your herd so they are not exposed to the BVD virus circulating in your herd. If you are not sure which cattle to test and when to collect the samples, please select ‘Go Back’ and then click on the more information icon.

Contact your veterinarian to get specific information about sample collection and shipment of the samples to a laboratory.

No, I will not quarantine and test all new cattle coming into my breeding herd.

This is not a wise choice. If you do not quarantine and test newly purchased cattle, you risk bringing additional BVD into your herd. Why risk exposing your herd to BVD after you have invested in testing and...
BVDConsult

• For BVDV-infected herds, the tool can help to create a plan to remove infected cattle and establish a strategy to reduce the likelihood of the herd becoming re-infected – biocontainment
• For uninfected herds, BVDConsult can help the producer and herd veterinarian minimize the likelihood of introducing BVDV and reduce the impact if the herd is exposed – biosecurity
• Alternatively, the tool can help producers understand why their current practices may not be effective – risk communication
BVD CONSULT and BVD information

www.bvdconsult.com

www.bvdinfo.org