

**HELP
PROTECT
FETAL
HEALTH.**



zoetis[™]

SELECTING THE RIGHT VACCINE FOR YOUR OPERATION.



STEP 1

Understand the difference between modified-live virus (MLV) and killed vaccines.

MLV VACCINES	KILLED/HYBRID VACCINES
Contains a live virus that helps stimulate immunity without causing disease.	Contains a killed virus that cannot cause disease.
Creates an immune response without an adjuvant.	Requires an adjuvant to enhance the immune response.
Helps provide a rapid, long-lasting and clinically effective immune response. ¹⁻⁶	Immune response may not be as complete or as long-lasting as MLV vaccines.
Most are effective with a single dose.	Usually requires more than one dose.
Fewer post-vaccination reactions. ⁷	Adjuvant may cause post-vaccination reactions.
Safe when used according to label directions.	Safe when used according to label directions.
Helps provide protection against infectious bovine rhinotracheitis (IBR) abortion and bovine viral diarrhea (BVD) persistently infected (PI) calves.	Does not provide protection against IBR abortion and BVD PI calves.*

*With the exception of CATTLEMASTER GOLD FP®, a hybrid vaccine, which helps guarantee protection of IBR abortion and BVD PI calves.

STEP 2

Decide which type of vaccine works for you.

VACCINATION DECISION TREE

KNOWN VACCINATION HISTORY

If you answer “yes” to most of the questions below, MLV vaccines are an excellent choice for your operation.

- Is your breeding season well-structured (A.I., bull access during specific times, multiple breeding seasons)?
- Do you keep good records of your herd’s vaccination history?
- Are you able to vaccinate yearling heifers prior to breeding?

YES

BOVI-SHIELD GOLD FP
OR PREGGUARD GOLD FP

ANNUAL VACCINATION*

*IMPORTANT LABEL
DIRECTIONS FOR
BOVI-SHIELD GOLD FP
OR PREGGUARD GOLD FP

NO

CATTLEMASTER GOLD FP

ANNUAL VACCINATION

UNKNOWN VACCINATION HISTORY (purchased animals)

CATTLEMASTER GOLD FP

ANNUAL VACCINATION



Heifers and cows must receive two doses between weaning and breeding, with the second dose approximately 30 days prior to breeding.

MONTHS
12

BOVI-SHIELD GOLD FP and PREGGUARD GOLD FP can be administered safely to pregnant cows only if they were vaccinated according to label directions with any BOVI-SHIELD GOLD FP or PREGGUARD GOLD FP vaccine at prebreeding and again within 12 months. Heifers must receive at least two doses of BOVI-SHIELD GOLD FP or PREGGUARD GOLD FP® with the second dose administered approximately 30 days prebreeding.

FOR HELP IN DETERMINING WHICH VACCINE IS BEST FOR YOUR OPERATION, CONSULT WITH YOUR VETERINARIAN.

Bovi-Shield
GOLD HB

CattleMaster
GOLD

PregGuard® **GOLD**

STEP 3

Look for vaccines that are labeled and guaranteed for fetal protection against IBR abortions and BVD PI calves.

Not all reproductive vaccines are the same. Select vaccines that offer:

- Protection against IBR abortion and BVD PI calves
- Longer demonstrated duration of immunity (DOI) to help ensure cattle are protected during critical exposure periods
- A Fetal Protection (FP) Guarantee, which guarantees that when reproductive vaccines from Zoetis are used according to label directions:
 - No calves will be born persistently infected with BVD
 - Cows are protected against IBR abortions

The following product lines are backed with the FP Guarantee:

- BOVI-SHIELD GOLD FP 5 HB
- BOVI-SHIELD GOLD FP
- CATTLEMASTER GOLD FP
- PREGGUARD GOLD FP



STEP 4

Fetal Protection Claims

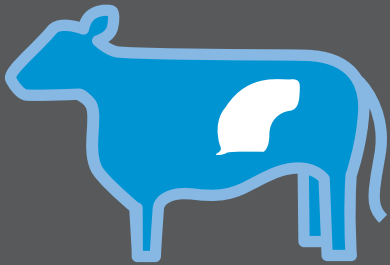
MLV VACCINES	BVD Virus Types 1 & 2 Persistently Infected	IBR Abortion	FP GUARANTEE
BOVI-SHIELD GOLD FP 5 VL5 HB	✓ ≥ MONTHS 12	✓ ≥ MONTHS 12	FP
PREGGUARD GOLD FP 10	✓ ≥ MONTHS 12	✓ ≥ MONTHS 12	FP
Express® FP 5 VL5	✓ ≥ MONTHS 12	✓ ≥ MONTHS 12	(BVD PI ONLY)
Vista® 5 VL5 SQ	✓ ≥ MONTHS 7*	✓ ≥ MONTHS 7	
Pyramid® 10	✓		
Titanium® 5 L5 HB			
KILLED/HYBRID VACCINES			
CATTLEMASTER GOLD FP 5 L5**	✓	✓	FP
Vira Shield® 6 + VL5 HB			
Triangle® 10			

*DOI based on fetal infection studies, not PI studies. Actual demonstrated DOI is 206 days.

**CATTLEMASTER GOLD FP® 5 L5 is a hybrid vaccine.

VACCINATION HELPS PROTECT FETAL HEALTH AND HELPS GUARD AGAINST ABORTION.

Why fetal protection is needed:



- The fetus is without protection for most of the pregnancy, relying on the dam's immune system
- Disease prevention is crucial throughout gestation, especially since the fetus does not develop an immune system until the third trimester
- Vaccination programs can help improve colostrum quality, to help calves fight off early infection

BVD and IBR can have a big impact on the reproductive performance of your herd.

BVD

- Can lead to embryonic loss, abortion and birth defects
- PI calves can shed the virus and continue to infect the herd

IBR

- Can result in infertility problems and abortion

HELP PROTECT FETAL HEALTH.



¹ Cortese VS. Bovine virus diarrhea virus and mucosal disease. In: Howard JL, Smith RA, eds. *Current Veterinary Therapy 4, Food Animal Practice*. Philadelphia, PA: WB Saunders; 1999;286-291.

² Daly R. Timing of vaccination in beef cattle herds, in *Proceedings*. Applied Reproductive Strategies in Beef Cattle, Rapid City, SD. 2006:190-195.

³ Jones C, Chowdhury S. A review of the biology of bovine herpesvirus type 1 (BHV-1), and its role as a cofactor in the bovine respiratory disease complex and development of improved vaccines. *Anim Health Res Rev* 2007;8:187-205.

⁴ Osorio FA. Infectious bovine rhinotracheitis and other clinical syndromes caused by bovine herpesvirus types 1 and 5. In: Howard JL, Smith RA, eds. *Current Veterinary Therapy 4, Food Animal Practice*. Philadelphia, PA: W.B. Saunders; 1999:283-286.

⁵ Rodning SP, Marley MSD, Zhang Y, et al. Comparison of three commercial vaccines for preventing persistent infection with bovine viral diarrhea virus. *Theriogenology* 2010;73:1154-1163.

⁶ van Drunen Little-van den Hurk S. Cell-mediated immune responses induced by BHV-1: rational vaccine design. *Expert Rev Vaccines* 2007;6:369-380.

⁷ Cortese VS. Clinical and immunologic responses of cattle to vaccinal and natural bovine viral diarrhea virus (BVDV). Western College of Veterinary Medicine, University of Saskatchewan, 1998.

Do not use in pregnant cattle (abortions can result) unless they were vaccinated, according to label directions, with any BOVI-SHIELD GOLD FP[®] or PREGGUARD GOLD FP vaccine prebreeding initially and within 12 months thereafter. Do not use in calves nursing pregnant cows unless their dams were vaccinated within the past 12 months as described above.

To help ensure safety in pregnant cattle, heifers must receive at least 2 doses of any BOVI-SHIELD GOLD FP or PREGGUARD GOLD FP vaccine with the second dose administered approximately 30 days prebreeding.

The Zoetis 100% BVD PI-Free Guarantee and the IBR Abortion Guarantee will be administered through Zoetis VMIPS (Veterinary Medical Information and Product Support) at 800-366-5288. Proof of purchase is required. Calves born to BVD PI-positive cows or heifers do not qualify for the guarantee. This guarantee does not apply to, and Zoetis shall not be liable for, any (x) damages caused as a result of the improper handling, misuse or abuse of the vaccines that are the subject of this guarantee, or the willful misconduct or negligence of any third party, or (y) any indirect, punitive, special, incidental or consequential damages. Zoetis reserves the right to modify or cancel the terms and conditions of this guarantee.