## STOP STRESSING OUT ALREADY STRESSED CATTLE.

#### KEY TAKEAWAYS

MODIFIED-LIVE BVD VACCINES IN HIGH-RISK CATTLE CAN HAVE A NEGATIVE IMPACT ON THEIR IMMUNE SYSTEM.



#### **DON'T MAKE THE PROBLEM WORSE**

Stressed cattle have elevated blood cortisol levels which negatively affects their immune system and impacts their ability to fight disease. Modified-live virus (MLV) vaccines work by infecting an animal's cells in order to reproduce. Modified-live Bovine Viral Diarrhea (BVD) specifically reproduces in immune tissues which causes a drop in white blood cell count, further reducing the animal's disease-fighting ability.

KILLED BVD VACCINES
DON'T TAX THE IMMUNE
SYSTEM OF HIGH- STRESSED
CALVES THE WAY
MLV BVD VACCINES DO.



#### **CONSIDER YOUR OPTIONS**

Most calves that are transitioning from the farm have already been exposed to BVD either through prior vaccination(s) or natural exposure. Subsequently, the objective for the protocol used can shift from establishing immunity to boosting it. Killed BVD-containing vaccines do not infect the calf's cells and do not have the same negative effect like MLV BVD vaccines. In fact, recent research (Falkenberg, et. al. 2023) has shown that cattle which receive a killed BVD vaccine after they have been given a MLV BVD vaccine (or exposed to BVD) at or before weaning, showed a superior immune response to cattle that received another dose of MLV vaccine.

PRO-BAC™ 4 IBRk + BVDk IS A PRODUCT DESIGNED BY CATTLEMEN FOR CATTLEMEN.



#### A UNIQUE SOLUTION

Following years of buying high-risk cattle and treating them even after vaccination, three Texas cattlemen with the know-how and motivation set out to develop a better solution. In the end, they created a safe and effective line of vaccines specifically developed to deliver better, more relevant protection for high-and ultra high-risk cattle. Pro-Bac 4 + IBRk & BVDk contains a killed BVD to provide the protection you need without the added risk of MLV.





### THE MOST COMPREHENSIVE BOVINE RESPIRATORY DISEASE (BRD) VACCINE FOR HIGH-RISK, STRESSED CATTLE

#### A VACCINE DESIGNED SPECIFICALLY FOR

SALE BARN/ MIXED-ORIGIN CATTLE • LONG-HAUL CATTLE • DROUGHT-DERIVED CATTLE • EARLY-WEANED CATTLE

#### **CHECK ALL THE BOXES WITH ONE SHOT**

#### **KILLED VIRAL ANTIGENS**

Bovine Viral Diarrhea (BVD) Infectious Bovine Rhinotracheitis (IBR)

#### **KILLED BACTERIAL ANTIGENS**

Mannheimia haemolytica Type A1 Mannheimia haemolytica Type A6 Pasturella multocida Histophilus somni

PRO-BAC IS THE ONLY PRODUCT LINE ON THE MARKET THAT CONTAINS MANNHEIMIA HAEMOLYTICA TYPE A6 WHICH CAN ACCOUNT FOR UP TO 30% OF M. HAEMOLYTICA-RELATED BRD CASES.

# Living Rhinotrachetis-Virus District Strains, Killed Virus, Haemophilis Somma-Mannheimin Haemophilis So

CODE OR VISIT BIMEDABIOLOGICALS.COM TO LEARN MORE

#### WHY DOES IT WORK?

Reveal ATS, our proprietary adjuvant acts as an Antigen Transport System (ATS) which optimizes the presentation and delivery of antigens, while trapping endotoxin so it isn't freely released into the bloodstream. The result is unparalleled bacterial protection without the harsh side affects you would expect from a multivalent Gram-negative vaccine.



