



Mannheimia haemolytica is the primary cause of bacterial pneumonia and the No. 1 calf killer.^{1,2} Bovine viral diarrhea (BVD) Types 1 and 2 viruses are two of the major viral causes of bovine respiratory disease (BRD).

ONE SHOT® BVD helps provide protection against all three.

***M. haemolytica* + BVD TYPE 1 + BVD TYPE 2**

For healthier, higher-value calves on sale day, help protect calves from BRD at a young age. In one convenient dose, ONE SHOT BVD offers the same level of protection as ONE SHOT and BOVI-SHIELD GOLD® BVD administered independently.

COMPLETE RESPIRATORY PROTECTION FOR CALVES.

Use ONE SHOT® BVD and INFORCE 3® concurrently for protection to help get calves started off right in the background, stocker or feed yard.



INFORCE 3®

USE CONCURRENTLY ON ARRIVAL FOR BACKGROUNDERS, STOCKERS OR FEEDLOTS.

- A single intranasal dose rapidly provides protection where viruses attack first.
- Provides at least six months of protection against IBR respiratory disease after single nostril administration.
- The first and only respiratory vaccine labeled for the prevention of disease caused by BRSV.

Convenient, comprehensive protection from:

- Bovine respiratory syncytial virus (BRSV)
- Infectious bovine rhinotracheitis (IBR) virus
- Parainfluenza 3 (PI3) virus
- *M. haemolytica*
- BVD Types 1 and 2 viruses

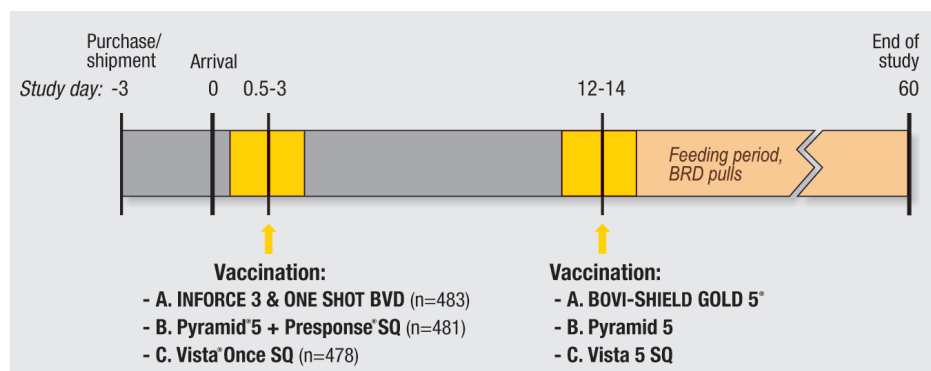


ONE SHOT® BVD

- The highest level of protection available against *M. haemolytica* and BVD Types 1 and 2 viruses.
- Helps neutralize *M. haemolytica* leukotoxins before they can destroy white blood cells and lead to lung damage.
- Rapid protection against *M. haemolytica* and BVD respiratory disease.³

INFORCE 3® + ONE SHOT® BVD DEMONSTRATED \$ PER HEAD ADVANTAGES

TRIAL RESULTS DEMONSTRATED DIFFERENCES IN VACCINE PROTOCOLS.



**USE INFORCE 3 +
ONE SHOT BVD
FOR CATTLE
ON ARRIVAL**

HEALTH AND PERFORMANCE RESULTS DURING 60-DAY RECEIVING PERIOD

Item	Group A (INFORCE 3 + ONE SHOT BVD; BOVI-SHIELD GOLD 5)	Group B (Pyramid 5 + Presponse SQ Pyramid 5)	Group C (Vista Once SQ; Vista 5 SQ)	P value
Pens	16	16	16	
Initial head count (n)	483	481	478	
1st BRD treatment (%)	42.7	44.1	46.6	0.49
2nd BRD treatment (%)	8.0 ^a	10.1 ^{ab}	13.6 ^b	0.01
3rd BRD treatment (%)	3.7 ^a	3.7 ^a	6.7 ^b	0.03
Mortality (%)	4.4	6.4	7.6	0.09
Chronics (%)	1.7	0.9	1.5	0.55
Initial body weight (lb)	477.0	477.0	474.0	0.84
Day 60 body weight (lb)	617.0	615.0	615.0	0.94
Deads-in Performance				
Avg. daily gain (lb)	2.2	2.1	2.1	0.69
Avg. daily DM intake (lb)	12.8	13.0	13.0	0.83
Feed/Gain*	5.8	6.1	5.9	0.27
Deads-out Performance				
Avg. Daily Gain (lb)	2.3	2.3	2.4	0.62
Feed/Gain*	5.5	5.2	5.2	0.46

^{ab}Least squares means in rows with different superscripts are significantly different ($p \leq 0.05$)

*Feed to gain was analyzed as separate variables, not simply a ratio of ADG and DMI shown above.

**TALK TO YOUR ZOETIS REPRESENTATIVE OR VETERINARIAN
ABOUT INFORCE 3 AND ONE SHOT BVD.**

Or visit completecalfprotection.com.

**INFORCE 3® + ONE SHOT®
BVD**

¹ U.S. Department of Agriculture. Animal and Plant Health Inspection Service. Mortality of calves and cattle on U.S. beef cow-calf operations. Available at: http://www.aphis.usda.gov/animal_health/nahms/beefcowcalf/downloads/beef0708/Beef0708_is_Mortality.pdf. Accessed February 10, 2019.

² Powell J. Livestock Health Series: Bovine Respiratory Disease. University of Arkansas Cooperative Extension Service. FSA 3082. 2009.

³ Data on file, Walz PH, Riddle KP, Richardson AP, et al. Impact of passive immunity induced by maternal vaccination on subsequent immunization and disease-sparring in early-weaned beef calves challenged with highly virulent BVDV, Zoetis Inc.

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