

# Impact of feeding Bovamine Defend® on health and performance of beef calves during backgrounding



## Location: Commercial stocker operation in Tennessee

### Study Design:

- Exp. 1 (998 hd., 470 ±21 lb). Cattle arrived Nov 2016 through Jan 2017
- Exp. 2 (978 hd., 470 ±20 lb). Cattle arrived May 2017 through July 2017
- Cattle were commercially available crossbred bulls, steers, and heifers (bulls banded on arrival)
- Two trt (CON and BOVD) and 5 pens/trt in each study
- Diet 1/3 soybean hulls, 1/3 hominy, and 1/3 corn gluten pellets
- Mineral supplement ± Bovamine Defend® was mixed in feed
- Cattle housed in ~35 acre grass paddocks with covered fence line feed bunk
- DOF averaged 125 and 126 d for Exp. 1 and Exp. 2, respectively

## Results

Cattle supplemented with Bovamine Defend® were able to maintain health and resist disease:

- Requiring fewer pulls for antibiotic treatment
- Fewer cattle succumbing to disease resulting in death

### Improved health status resulted in:

- Improved ADG throughout the study for all cattle
- Improved ADG from 0-35 d to heifers
- Heavier final weights by 16 lb averaged across both studies (at \$1.45/lb this equals an additional revenue of \$23.20/hd)
- Cattle receiving BOVD had a 50% lower antibiotic drug cost than CON cattle
- Reduced death loss in both experiments for cattle receiving BOVD ( $p \leq 0.001$ )
- A 1 percentage point reduction in death loss equals \$822.50 when the initial cost of cattle is \$1.75/lb

Table 1. ADG and health status of cattle receiving CON or BOVD rations in Exp. 1

Variable	Steers		Heifers		p-value		
	CON	BOVD	CON	BOVD	sex*trt	sex	trt
0- 35d ADG (lb/hd/d)	1.28	1.30	1.12	1.36	0.06	0.44	0.03
0-125d Final ADG (lb/hd/d)	2.81	2.93	2.73	2.81	0.43	0.0001	0.001
1 <sup>st</sup> pull, %	26.5	16.3	34.7	20.0	0.49	0.07	0.0001
2 <sup>nd</sup> pull, %	15.7	6.7	13.0	2.8	0.76	0.19	0.0001
3 <sup>rd</sup> pull, %	3.2	1.3	2.0	0.0	0.95	0.27	0.07
Dead, %	6.9	3.6	10.2	0.9	0.09	0.85	0.0001

Table 2. ADG and health status of cattle receiving CON or BOVD rations in Exp. 2

Variable	Steers		Heifers		p-value		
	CON	BOVD	CON	BOVD	sex*trt	sex	trt
0- 35d ADG (lb/hd/d)	2.18	2.21	1.39	1.89	0.0001	0.0001	0.0001
0-125d Final ADG (lb/hd/d)	2.63	2.82	2.21	2.52	0.02	0.0001	0.0001
1 <sup>st</sup> pull, %	26.2	15.5	17.7	9.4	0.71	0.02	0.003
2 <sup>nd</sup> pull, %	14.2	4.8	9.4	1.0	0.81	0.05	0.0001
3 <sup>rd</sup> pull, %	2.0	0.5	0.0	0.0	0.35	0.12	0.34
Dead, %	5.3	2.5	7.3	0.0	0.15	0.85	0.001

Figure 1. Pull rates and death loss for steers in Exp. 1

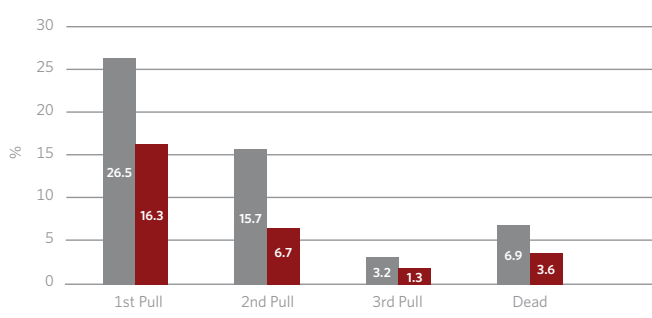


Figure 3. Pull rates and death loss for steers in Exp. 2

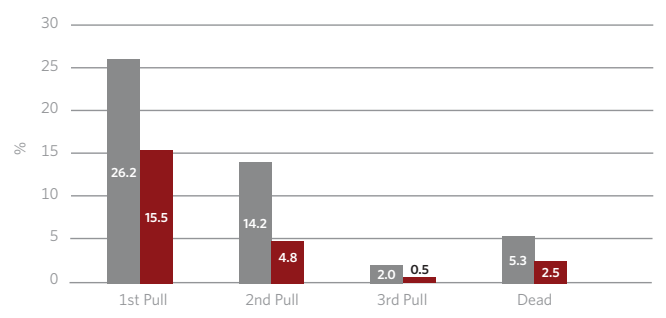


Figure 2. Pull rates and death loss for heifers in Exp. 1

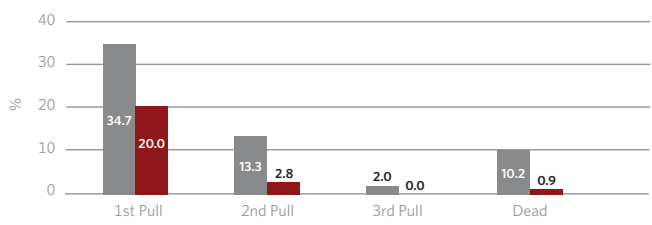


Figure 4. Pull rates and death loss for heifers in Exp. 2

