

# Processing on Arrival to Enhance the Health of Calves at the Feedyard/Backgrounding Operation

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## INTRODUCTION

Armed with the information on immunology presented earlier, it is easy to understand the tremendous advantage the pre-shipment processed calf has in mounting a protective immune response, following boosting, in the face of the stresses and disease challenges they experience as they enter the realm of their new environments.

Calves that are properly immunized can stay ahead of and above disease challenges in spite of the stressors they experience.

This ability to stay healthy translates to an economic advantage for the buyer. This economic advantage can be realized both from a savings in treatment costs and increased performance.

## Why should I have to re-vaccinate pre-shipment processed calves??

If you will recall the protection vs. challenge graphs you'll understand the importance of maximizing protection prior to the time when disease challenge is maximized. As long as protection or resistance to disease stays above the challenge, the calves will remain healthy.

During the shipment process calves will experience a certain amount of stress. Stress has a tendency to lower the level of resistance an animal may have previously experienced. This lowering of resistance coupled with increased exposure to disease organisms may allow a previously healthy calf to become sick several days after arrival.

If a properly immunized calf is boosted upon arrival, the immune system is able to respond almost immediately to the vaccine. This response, in most cases, will be of the magnitude and duration to provide ample protection to the new arrival.

The longer the time span between arrival and boosting, the lower the success rate in providing protection against disease. These perceived failures in the pre-shipment programs in protecting against disease are a direct result of the stress experienced in shipping in addition to the increased exposure to disease causing organisms!! Failure to properly booster calves in a timely fashion leads to perceived failures in the pre-shipment programs.

## What should I booster with?:

Virals: IBR, BVD, PI3, BRSV.

Bacterials: Clostridials, Pasteurella, Haemophilus, 5-way Lepto.

I would recommend that a feeder/backgrounder take full advantage of pre-shipment programs by boosting any and all of the vaccines that were included in that program.

I would remind the feeder/backgrounder that if any new or different vaccines are included in their program, they need to make sure that primary and secondary doses are administered.

Label directions should be followed when administering the booster dose. If boosters are not given in a timely fashion, maximal advantage of the priming dose is lost.

## **Economics of Sickness**

### Kansas State University:

Dr. Gerald Stokka indicates that the average cost of treating a sick calf, per sick pen visit, is \$12.00 - \$15.00 per head. Just one trip to the sick pen would go a long way toward covering the costs of paying the premium of pre-shipment program.

### Northeast Missouri Comparison Trial:

A recent vaccine comparison trial conducted in a midwest feedlot uncovered costs as high as \$41.47 per sick calf accumulated over a six month period of time. It is not unusual to incur significant treatment costs in groups of lightweight, long haul, highly stressed commingled feeder calves.

### Texas A & M Ranch to Rail Program:

A recent report published by the Texas Agricultural Extension Service clearly illustrates the economic advantage of healthy calves. Data generated from 1,582 steers was included in this study. Costs of production and performance information on all the calves were tracked from the time they left the ranch till the time of slaughter.

The average treatment costs above processing was \$5.80 for all the calves in the study. Those costs ranged from a low of \$0 to a high of \$42.61.

The profit per healthy calf was \$176.38 compared to a profit of \$85.15 per sick calf. Healthy calves averaged \$91.23 more profit per head!! Sick calves had \$27.36 more invested per head in medicine costs than healthy calves. In addition to out of pocket medicine costs, sick calves experienced a \$63.87 per head loss due to reduced efficiency compared to the healthy calves. To quote Dr. John W. McNeill, Texas A & M, "An effective health program at the ranch level can reduce sickness and medicine cost, enhance performance, increase quality grade and boost profits".

The Texas A&M pre-shipment program has been tagged VAC-45. VAC stands for value added calf. The 45 stands for the number of days they recommend the producer keep the calf after weaning before delivery to the feeder. Dr. McNeill calculates that the producer spends \$32.00 -\$35.00 per head for feed, labor and vaccines during that 45 day period. Calves gained 60 pounds during that 45 day period. Producers received \$.03-\$.08 per pound premium for calves on the VAC-45 program over calves not on the program.

Partial Budgeting Template Comparing Premium Paid for Pre-Shipment Processing vs. Costs of Sickness:

POSITIVE IMPACTS	NEGATIVE IMPACTS
Increased Revenues	Decreased Revenues
Decreased Costs	Increased Costs

Total Positive  
Impacts \_\_\_\_\_

Total Negative  
Impacts \_\_\_\_\_

Net Impact = Positive Impacts - Negative Impacts

GOOD IMMUNITY CAN BE OVERCOME BY  
POOR MANAGEMENT