

## Update on Preconditioning Beef Calves Prior to Sale by Cow Calf Producers

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What's a guy from Florida know about beef production?

I will make no political promises?

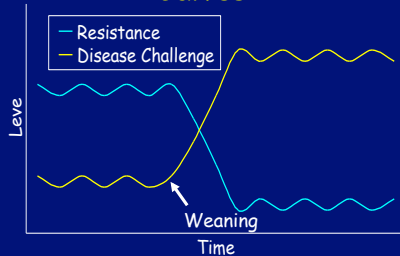


## Objectives of a Preconditioning Program

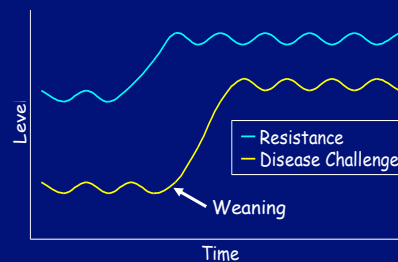
- Get calves over the weaning process
- Stimulate the immune system
- Teach calves to eat feed
- Gain 1-1.5 lbs day

Produce calves with predictable, favorable health!!!

## Non Preconditioned Commingled Calves



## Vac-45 Calves



## Introduction

- Preconditioning has been shown to decrease feedlot morbidity and mortality by 6% and 0.7%, respectively. (Cole, 1985)
- Market premiums have been associated with preconditioning due to the improved health status of the calves. (Minert et al., 1988)

## PERCEIVED Performance Differences by Texas Cattle Feeders Association Feedlot Managers

	Preconditioned <u>Calves</u>	Non Preconditioned <u>Calves</u>
Sick %	9.2	36.4
Death loss %	1.5	4.3
ADG, lb/d	2.9	2.6
Conversion (lbs/gain)	6.3	6.9
Choice, %	50.4	35.8
Outs, %	2.5	6.9

Avent 2002

## Why All the Fuss?

	<u>Sick</u>	<u>Healthy</u>
Death loss, %	4.46	.56
ADG, lb	2.66	2.96
Medicine, \$	28.76	0
Choice, %	29	42
Select, %	62	53
Standard, %	9	5
Net Income, \$	-10.83	80.94
Value difference \$/cwt (arrival)		<b>\$15.09</b>

17,000+ hd 1992-2001 TAMU Ranch to Rail Program

## We Want to Avoid the Wrecks...



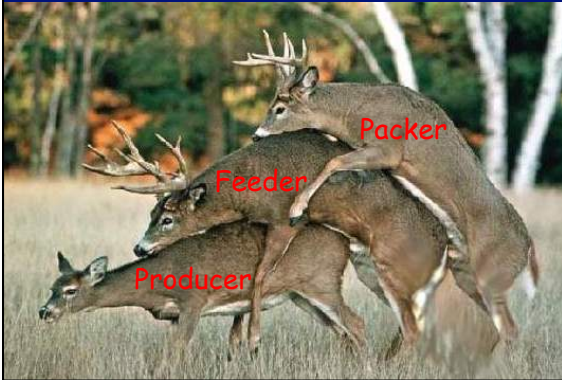
## Advantages of Preconditioned Calves for the Feedlot or Stocker Operation

- More predictable, favorable health
- Reduced medicine cost
- Start on feed quicker
- Improved gain
- Improved carcass merit

## Disadvantages of Preconditioning for the Feedlot or Stocker Operation

- Cost more
- Unknown "guarantees"

## Beef Industry Structure?



## Disadvantages of Preconditioning for the Cow Calf Producer

- Potential for market prices to decrease during the preconditioning period
- Additional expenses
  - feed, hay, pasture, mineral
  - vaccines, animal health products
  - labor

## Advantages of Preconditioning for the Cow Calf Producer

- Potential for increased prices/"premiums"
- Commingling into large groups
- Control shrink
- Potential for additional pounds
- Establish reputation for quality calves

## Using Preconditioning to.....

- Predict Future Performance
  - Evaluate the calf without maternal effects
  - Managed intensively
  - Identified individually
- Add value to undervalued (over discounted) calves

## Objectives

- Quantify the effect of preconditioning performance on feedlot performance and carcass characteristics.

## Using Preconditioning ADG to Predict Future Performance

- |   |   |
|---|---|
| • Preconditioning <ul style="list-style-type: none"><li>- Preconditioning ADG</li></ul>   | • Carcass <ul style="list-style-type: none"><li>- Hot Carcass Weight</li></ul>                                    |
| • Feedlot <ul style="list-style-type: none"><li>- Feedlot ADG</li><li>- Feed Efficiency</li><li>- Days on Feed</li><li>- Cost of Gain</li></ul> | <ul style="list-style-type: none"><li>- Quality Grade</li><li>- Ribeye Area/100kg</li><li>- Yield Grade</li></ul> |

Savell 2008

## Materials and Methods

- 1575 steers and 1550 heifers were separated from their dams on a single commercial cow/calf operation in South Florida over a 15d period.
- Calves were processed on the day of weaning at a preconditioning yard in North Central Florida.
- Calves were sorted into lots based on sex and weight class.

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## Materials and Methods

- During processing calves were...
  - Weighed individually
  - Identified electronically
  - Modified live respiratory vaccine
  - 8-was clostridial vaccine
  - Injectable avermectin anthelmintic w/ clorsulon
  - Topical fly control treatment
  - Vitamin B complex
  - Antibiotic
  - Ear tag
  - Fire brand
- Calves were processed at 89 hd/hr

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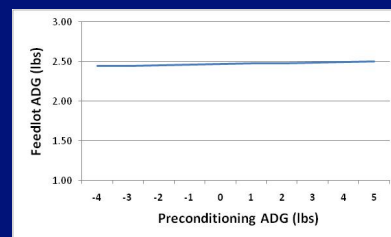
## Materials and Methods

- Calves were preconditioned for approximately 43d (34-51d) on pasture.
- A commercial supplement was fed at 3% of live body weight.
- 1100 steers and 421 heifers that comprised the large weight class were then shipped to a commercial feedlot operation in Western Kansas.

## Materials and Methods

- At the feedlot calves were...
  - Individually weighed
  - Re-vaccinated
  - Implanted
  - Processed through ECM
- Calves were reprocessed every 60d until harvest and sorted on d 120, d 180, and d 240. Pens were closed out on d 300.

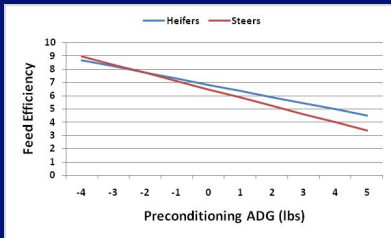
## Effect of Preconditioning ADG on Feedlot ADG



P=0.54

Savell 2008

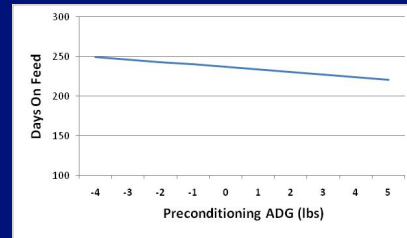
### Effect of Preconditioning ADG on Feed Efficiency



P<0.05

Savell 2008

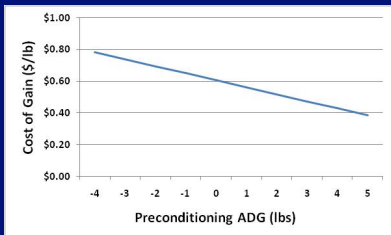
### Effect of Preconditioning ADG on Days on Feed



As Preconditioning ADG increased by 1 lb, Days on Feed decreased by 3.3 days. (P<0.005)

Savell 2008

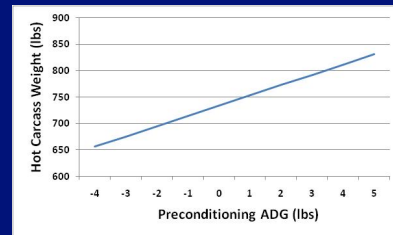
### Effect of Preconditioning ADG on Feedyard Cost of Gain



As Preconditioning ADG increased by 1 lb, Cost of Gain decreased by 4.4 cents/lb. (P<0.05)

Savell 2008

### Effect of Preconditioning ADG on Hot Carcass Weight



As Preconditioning ADG increased by 1 lb, Hot Carcass Weight increased by 8.8 lb. (P<0.0001)

Savell 2008

### Preconditioning ADG Summary

- Preconditioning ADG was not a good predictor of Feedlot ADG
- As Preconditioning ADG increased
  - Feed Efficiency improved for steers and heifers
  - Cost of Gain was reduced
  - Hot Carcass Weight increased
  - No effect on Quality Grade or Yield Grade was observed

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### Using Preconditioning to Control Shrink

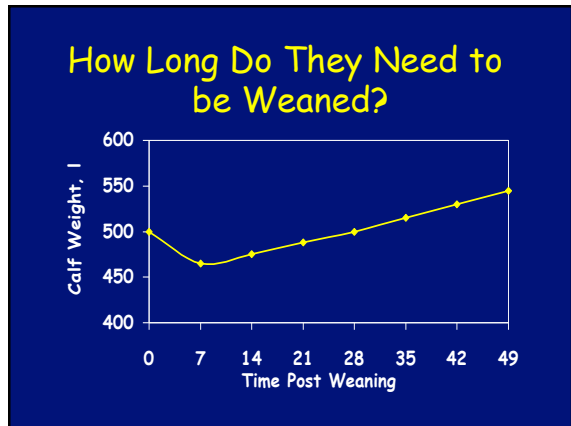
- Traditional (n=19)
  - Calves weaned 5/19/00
  - 12 steers / 7 heifers
  - Sold at sale barn 5/20/00
- Preconditioned (n=100)
  - Calves weaned 5/20/00
  - 58 steers / 42 heifers
  - Sold at NETBIO Special Stocker/Feeder Sale 7/12/00





### Using Preconditioning to Control Shrink

	Traditional	Preconditioned
# head	19	100
Weaning Wt, lb	492	501
Shipping Wt, lb	492	571
Sale Barn Wt, lb	466	563
Shrink, %	5.3	1.5
Pencil shrink, %		2.0
Payweight, lb	466	551
Weight change, lb	-26	50



### Does Length of the Preconditioning Period Matter?

Item	0d	15d	45d	p value
Feedyard ADG	3.5 <sup>a</sup>	3.7 <sup>b</sup>	3.8 <sup>c</sup>	.01
HCW, lb	741 <sup>a</sup>	763 <sup>b</sup>	781 <sup>c</sup>	.02

Minimal differences observed for:  
 Marbling Score REA  
 YG Lung Lesions  
 Fat Thickness Liver Abscesses

*Adapted from Macek et al., 2001*

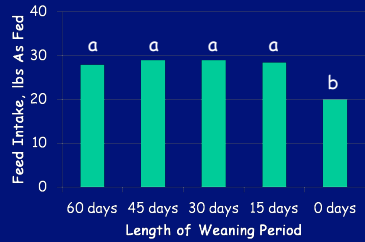
### Does Length of the Preconditioning Period Matter?

Item	0-21d	21-40d	41-60d	61+d
Feedyard ADG	2.95	3.17	3.26	2.98
Marbling Score	467	480	480	495
HCW, lb	750	783	761	781

Minimal differences observed for YG

*Waggoner 2005*

### Effect of Length of Weaning Time on Feed Intake During the First 30 Days After Feedlot Arrival



Adapted From Bolte et al., 2009

### When Might Preconditioning Result in Better Returns?

- Impact of previous nutrition on preconditioning results.
  - Calves from a drought area
  - Calves from an overstocked ranch

### What effect does previous nutrition have on the preconditioning period?

Stocking Rate	Pair/acre*	Calf ADG	Calf BCS
High	1.75	.94	5.5
Medium	1.25	2.30	6.8
Low	.75	2.70	6.9

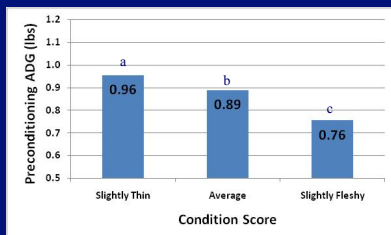
\* Pair=1500lbs (cow and calf)  
Trial duration 2/16/00 to 6/9/00

### What effect does previous nutrition have on the preconditioning period?

Stocking Rate	ADG 7d	ADG 21d	ADG 41d
High (n=8)	-0.91	1.76	1.88
Medium (n=34)	-1.60	1.41	1.64
Low (n=8)	-5.14	0.60	1.02

Trial duration 6/9/00 to 7/20/00  
1/2 Hereford, 1/4 Angus, 1/4 Brahman

### Effect of Condition Score on Preconditioning ADG



As Condition Score increased, Preconditioning ADG decreased by 0.018 lb/d. (P<0.05)

Savell 2008



Who's Going to Pay Me?

## Are we asking the right questions?



"Say ... what's a mountain goat doing way up here in a cloud bank?"

## How can I get the same results and spend less money?



## An Economic Analysis Must Be Carefully Evaluated.....



## Sometimes we oversell things...



## Is Preconditioning Always Profitable?

- Many factors involved
  - Genetic potential of calves
  - Market demand for calf type
  - Uniformity of calf crop
  - Shifts in calf prices
  - Feed cost
  - Labor availability

- 1 To find a woman you need Time and Money therefore:  
 $Woman = Time \times Money$
- 2 "Time is money" so  
 $Time = Money$
- 3 Therefore  
 $Woman = Money \times Money$   
 $Woman = (Money)^2$
- 4 "Money is the root of all problems"  
 $Money = \sqrt{Problems}$
- 5 Therefore  
 $Woman = (\sqrt{Problems})^2$  (A\*)  
 $Woman = Problems$

## Economic Evaluations?

Can Vary Depending On Which Side of the Fence You Are On...



## How Much "Premium" Should I Expect for My Preconditioned Calves?

Most research data suggest there is a \$1.5-6/cwt "premium" for preconditioned calves (*Thrift and Thrift, 2011*)

Industry data would suggest that \$5-8/cwt is more normal

Premiums were lower when:  
 Calves were sold in the winter  
 Calves were heavier  
 Cattle markets were strong

*Dhuyvetter et al, 2005*

## Is Preconditioning Always Profitable?

- Premiums generally decline during times of high prices
- Potentially they should go up because of greater total investment/calf???
- Would like greater assurance of health and performance

## What are your priorities?



## Economics of Preconditioning Identify Your Market

Cattle Preconditioned for Special Sale  
 Economics are critical

Cattle Preconditioned for Retained Ownership  
 Economics are secondary

## Economics-Should Cattle Be Preconditioned in Drylot or on Pasture?

	<u>Drylot</u>	<u>Pasture</u>
ADG, lb/d	1.4	1.1
Feed Cost, \$/hd	60.84	11.91
Total Cost, \$/hd	66.77	14.01
Net Income, \$	-28.87	15.72

*Mathis et al., 2008*

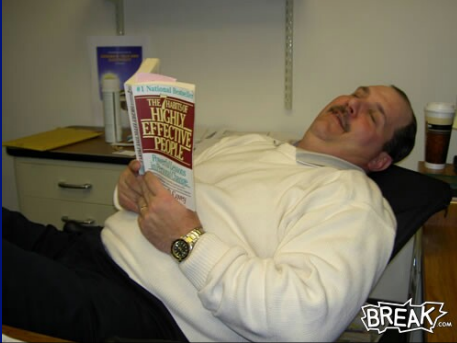
## Do the Calves Need to be Third Party Certified to Receive a Preconditioning Premium?

Iowa State research suggest there is a price premium differential for calves that have been third party certified

\$6.15/cwt with certification  
 \$3.40/cwt without certification

*Bulut and Lawrence, 2006*

## Suggestions to be Most Effective....



These are my suggestions and thoughts..... they come with no guarantee that something might go wrong

## Is Preconditioning Always Profitable?

- Most potential may be for undervalued (over-discounted) calves.
  - Heifers
  - Non Black
  - Genetic type that is discriminated against
- Preconditioning will not make a genetically inferior calf superior!

## Is it worth it to precondition my calves? "Who's gonna pay me?"

- Positives
  - Control shrink
  - Add extra weight
  - Sale calves with added value
  - May be useful to "profile" calves
- Negatives
  - not as easy
  - market can turn south
  - expenses for vaccines and feed

Do the positives outweigh the negatives?

## Is there only one way?



## Hope I Have Not Left You Confused?