

# *Just How Important Is Crossbreeding & Heterosis?*



*Dr. Patsy Houghton*

*Prepared for*

*Colorado Beef Profit Alliance*

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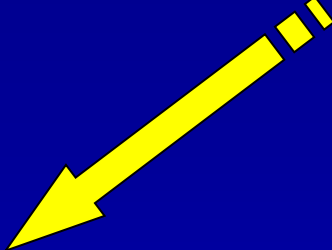
Oh, crap!  
Was that  
TODAY?



REGAN

**Heifer  
Development**

**Retailer**



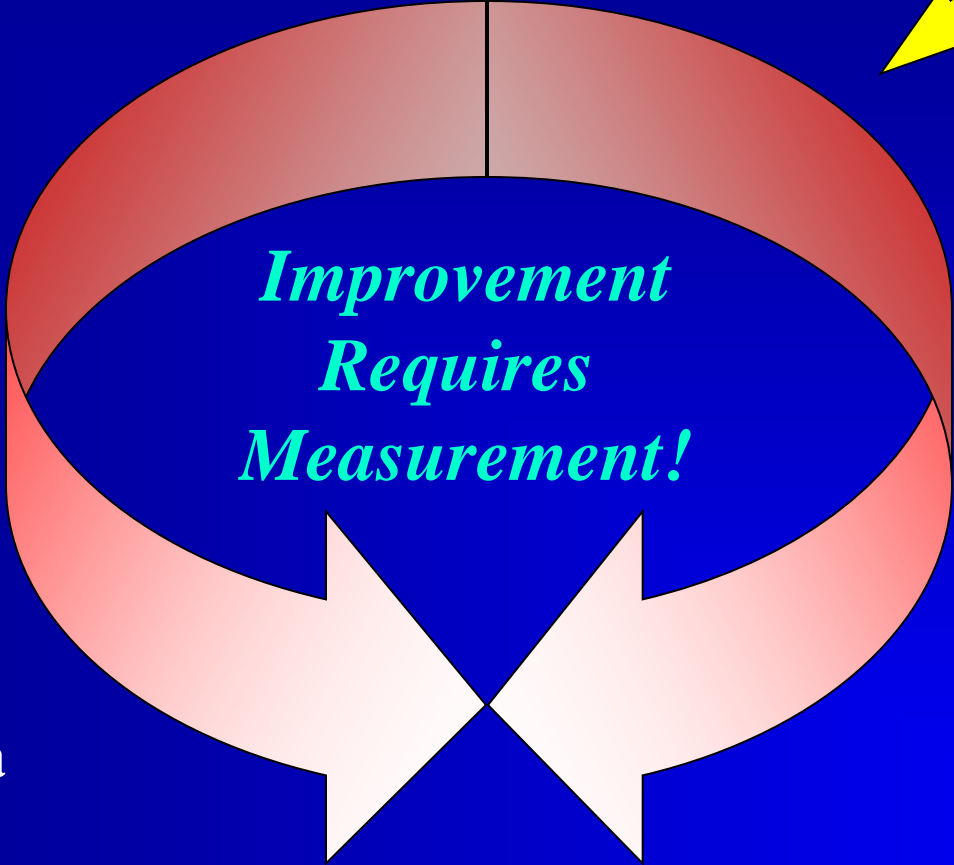
**Rancher**

**Cow Herd  
Performance**

*Improvement  
Requires  
Measurement!*

**Feed Yard  
Performance**

**Carcass Data**





2012 Yard Expansion

# Heartland Cattle Company

## *Professional Heifer Development & Research Center*

- **Over 84,000 heifers developed & bred**
- **Nearly 150,000 calves started right**
- **Over 75,000 cattle fed to finish**
- **Nearly 40 research projects**
  - ✓ *Proprietary data trials*
  - ✓ *USDA trials for product clearance*
  - ✓ *Company sponsored research trials*

*Our Mission Is To...*

*Solve Our  
Customers' Problems  
Cost Effectively!*

# *High Roughage*

## *...Limit Fed!*



# *Biosecurity* *...is Important!*



*Pregnancy  
...is the Goal!*



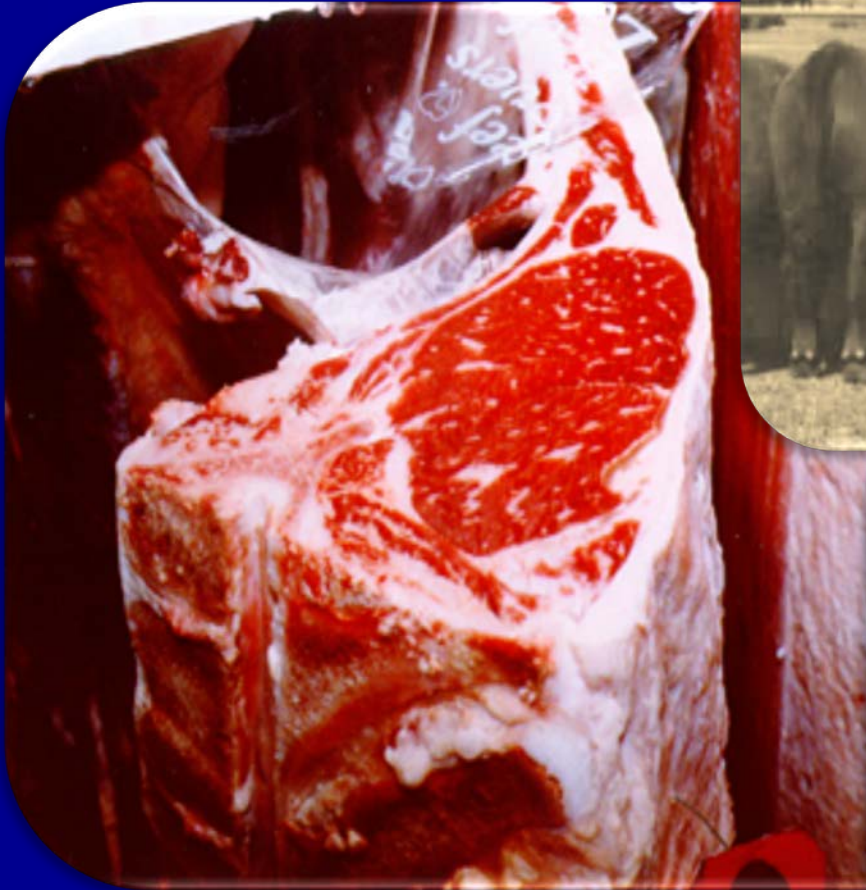
*Productive Females*

*...Placed on Ranch!*



*High Quality*

*...Consistent Product!*



# **A High Value is Placed on Economically Important Traits!**

➤ **Fertility**

➤ **Longevity**

➤ **Immune Response**

➤ **Fleshing Ability**

➤ **Disposition**

✓ *Injury (Cattle and/or People)*

✓ *Carcass Quality/Red Meat Yield*

# Crossbreeding Can Improve Economic Traits *Quickly!*



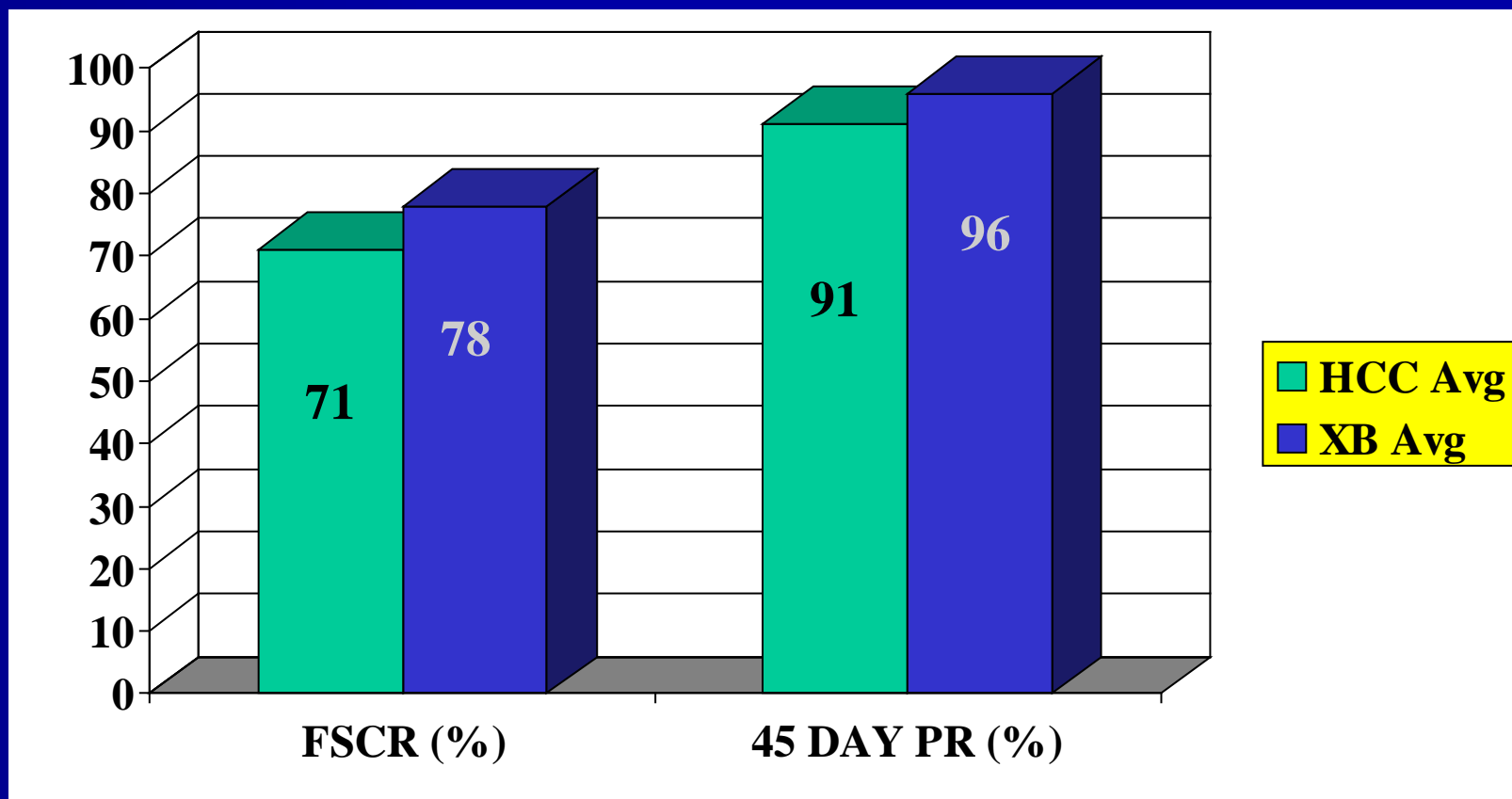
# Crossbred Cows are the Key!

## *Value of Maternal Heterosis Summarized*

- Net calving rate improves by 4%
- Weaning weights increase by 16%
- Longevity improves by 1.3 years
- *Current costs/values means added profit can easily exceed \$100/cow*

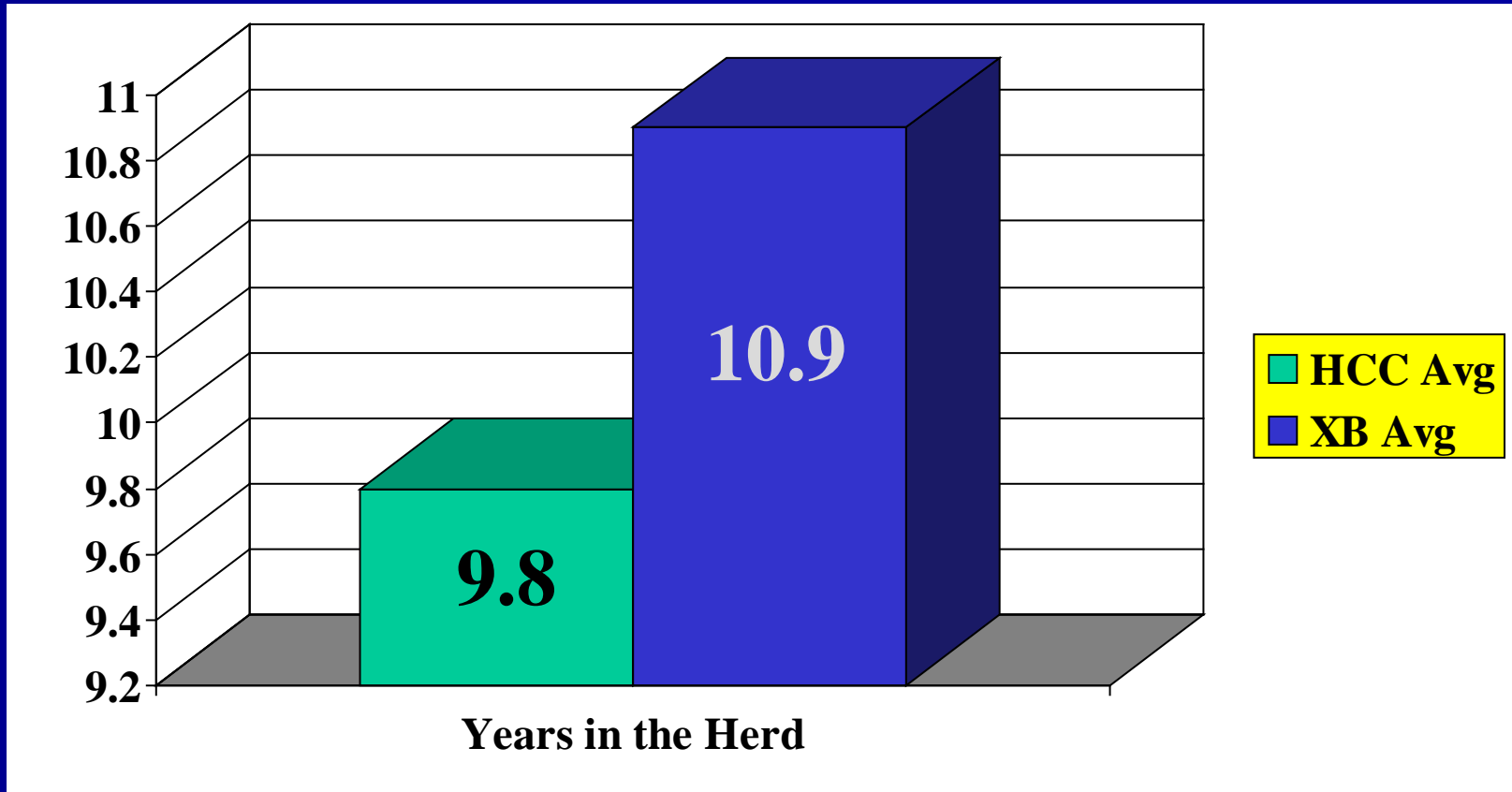
*✓ Ritchey, 1998; Weaber, 2012, Beef 2012*

# Comparison of First Service Conception Rate (FSCR) and Pregnancy Rate (PR)\*



*\*Estrus Synchronized; 45 Day AI Season at Heartland Cattle Co.*

# Longevity Comparison\*



*\*From heifers developed and AI'ed at Heartland Cattle Co.*

# A Great Example of Longevity!

*Photo courtesy of Dr. Dan Buskirk, Michigan State University*



07-22-11

# Check Out The Maternal Instinct!







*So...*

*What's the  
Downside?*

# Crossbreeding Challenges

- **Increased birth weight**
- **More calving difficulty**
- **Dependability of EPDs**
- **Consistency issues**
- **Maintaining heterosis**
- **Increased management**

# Designing the Right Crossbreeding Program...

- **Current breed composition**
- **Forage/pasture availability**
- **Marketing goal/s**
- **Flexibility**
- **Complexity**
- **Commitment**

*Planned Crossbreeding will help:*  
*Place Selection Pressure on Fertility*

➤ *Crossbreed first,  
...and then*



- ✓ *Closely Control Nutrition*
- ✓ *Limit the Breeding Season to 45 Days or Less*

# *Planned Crossbreeding will:* *Enhance Calf Crop Value*



## ➤ **Superior Genetics**

- ✓ *Fertility*
- ✓ *Maternal*
- ✓ *Growth*
- ✓ *Meat*

# *Planned Crossbreeding will:* *Improve Retention of Young Cows*



- **Avg. 8-10% Improvement**
  - ✓ *Heterosis*
  - ✓ *Nutrition*
  - ✓ *Culling*
  - ✓ *Timing of breeding*

*Planned Crossbreeding Improves Longevity:*  
*More lbs of Beef Weaned /Acre of Grass*



➤ **Mature  
Producing  
Cows are the  
Most Efficient  
Harvesters of  
Grass and  
Forage**

# Successful Crossbreeding Programs

## Require Discipline & Meticulous Records:



➤ You  
Cannot  
Manage  
What You  
Cannot  
Measure!

*Better Cows*

*...for Better Profit!*

