

What Really Matters...

Learning from How and When Cows "Break"

John Conway
Bill Stone
Jerry Bertoldo



Not so useful:

~~Cull Rates~~

- ➡ May include those sold for Dairy
- ➡ Says nothing about underlying problems
- ➡ But may "light up" the need to look deeper

Not so useful:

~~DHI Cull Codes~~

- ✓ Left for Dairy
- ✓ Left for low production
- ✓ Left for reproduction
- ✓ Left for injury/other
- ✓ Left – died
- ✓ Left for mastitis
- ✓ Left for feet/legs
- ✓ Left for udder
- ✓ Left – no reason

- ✎ Better than "cull rate"
- ✎ Does not allow for full sequence of insults
- ✎ Lean on details for quick, deep analysis
- ✎ Some are "fast and loose" with single code
- ✎ *May* allow analysis of trends over time

What Really Matters is...

Learning from How and When Cows "Break"

Who?

When?

How?

Why?

Analysis

Connecting to a memory of an individual may bring back the seriousness of the insult

Gives you the advantage of seeing trends over time -- i.e. rash of fresh cow problems when transition group size goes beyond threshold.

Exactly what symptoms were observed & treated. Becomes part of readily searchable record.

Gets to the root cause. Best way to improve processes & practices in a way that's meaningful.

Broken Cows, Kept or Shipped -- Likely Causes

(Note date with event entry) Cow ID-->

		265	287		
3	Dry/Transition Related	Dystocia- physical injury -----	22-Jan		
4		Ketosis -----	25-Jan		
5		Sub-clinical Ketosis -----			
6		Milk Fever -----			
7		Sub-clinical Milk Fever -----			
8		Retained Placenta -----	23-Jan		
9		Displaced Abomasum -----			
10		Fatty Liver -----			
11		Metritis -----			
12		Fresh Cow Mastitis* (day 1 - 14) ---			
13					

Feet/Legs Related

Physical Injury to Foot -----

Infectious Foot Rot -----

Heel Wart -----

Laminitis Related Lesions

-Yellow Soft Horn -----

-Hemorrhage -----

-Double Sole -----

-White-line Disease -----

-Sole or Toe Ulcer -----

-Deformed Claws -----

-Nutrition (acidosis) suspect? ----

Hock Injury/Infection -----

17-Mar

Repro

Delayed, Weak or Abnormal Heats -

25-Apr

Failure to Conceive -----

2-Jun

Embryonic Death/Abortion -----

Mastitis	Contagious -----			
	Chronic Environmental -----		16-Jun	
	Acute Environmental (Coilform) -----			
	Other (name) -----			
	Infectious Disease (name) -----			
	Physical Injury -----			
	Unexplained Death -----			
	Kept in Herd -----		✓	
	Beefed or Died on (date) -----	5-Sep		

Broken Cow Analysis and Actions

A. Total Number Cows Freshening in Period

B. Total Number Broken Cows (Kept & Shipped) in Period

C. % Broken Cows ($B \div A$)

D. Total Broken Cows Beefed/Died in Period

E. % Beefed/Died Broken Cows in Period ($D \div B$)

Visual Analysis of Trends - How are Cows being Broken? (birdseye view of record)								
Numerical Verification of Visual Analysis								
(we recommend looking at suspect areas as a percent of total)								

Which Underperforming Production Systems are Suspect as to Where/Why Cows are Breaking?

Dry Cow

Transition Cow

Lactating Cow

Feeding

Reproduction

Genetics

Milking

Replacements

Physical Environment(s)

Crop Storage _____

Crop Harvest _____

Crop Production _____

Within each Underperforming System, what is (are) Root Cause Reasons for Underperformance/Broken Cows?

(we recommend getting together with Veterinarian, Nutritionist, other advisors to analyze all aspects of suspect systems)

For a great array of Dairy
Production analytical tools go to:

<http://www.ansci.umn.edu/dairy/toolbox/toolbox.htm#mgmttools>

(especially note UW Vets' # 4: [Goal Form - Estimate of Economic Losses](#))

Lameness: Causes and Sequence of Events

Nutrition

- Excessive Grain
- Finely Chopped Forage
- Improper Feeding Management
- Incorrect Ratio of Concentrate to Forage

Increased Lactic Acid Production

Lowered pH

Death of Gram Negative Bacteria

Infectious Diseases

- Metritis
- Mastitis
- Retained Placenta

Molds/Mycotoxins

Endotoxin Release

Histamine

Genetics

Vaso-Constriction/Dilation (Hoof Corium)

Metabolic Disorders

- Milk Fever
- Ketosis

Weakened Claws (Hooves)

- Breakdown in Supportive Connective Tissue
- Poor Quality Horn Formation

Environment/Management

- Stress
- Trauma
- Exercise
- Trimming

Manifestations

- Yellow Soft Horn
- Deformed Claws
- Double Sole
- Sole or Toe Ulcer
- White Line Disease
- Hemorrhage

Lameness!

What Improvements to Underperforming System(s) will be Implemented?									
Within what Timeframe Should you see Measurable Improvement?									
(we recommend focusing on new trends established after improvements have had full effect)									

