Systems impact on health issues

Dairy Grazing Conference 2009
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University of Missouri

Systems

- Confinement
- Hybrid
- Management Intensive Grazing (MIG)

Confinement

- Everything happens all the time
- Short lag between management modification and effect realization
- Continuum of health issues

Management Intensive Grazing

- Seasonal management
- Seasonal diseases
- Lag time between management change and realization of effect

Farm cycle

<u>Winter/Fall</u>
- Dry period 50 days
- Farm maintenance
- Vacations

<u>Spring</u>
- 6-10 week spread

Dry off → Calving → Breeding → Lactation → Dry off

<u>Spring/summer</u>
- Conserve pasture
- 83 days to breed back

<u>Summer</u>
- Pregnancy confirmation

Management Intensive Grazing

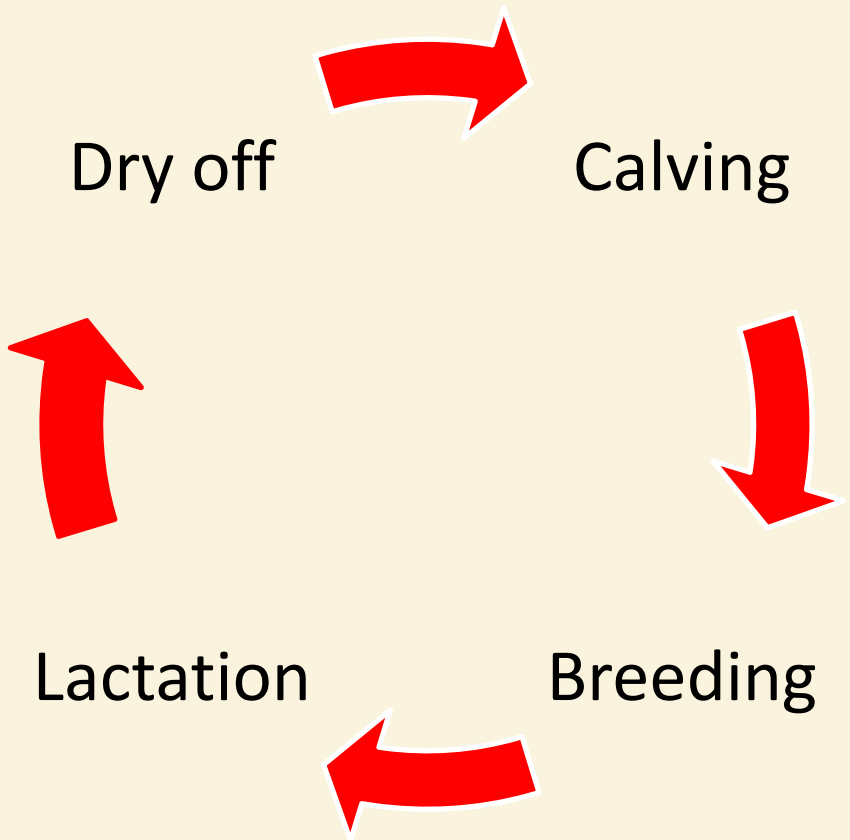
- Seasonal management
- Seasonal diseases
- Lag time between management change and realization of effect

Seasonal challenges

- Feed requirements
- Weather
- Variation in feed quality – energy
- Use of conserved feed
- Stocking rate

Hybrid Farm cycle Adaptation

- Two calving seasons
- Milk all year
- Mix of TMR and Grass



Hybrid

- Bi-seasonal approach
- MIG during suitable growing months
- Feed bunks when pasture growth stops

Systems comparison on health

- All have significant HUMAN effect
- Similar diseases recognized
- Gratification isn't instantaneous in hybrid and MIG
- Environment is important for all systems – especially for animal welfare
- Herd health budget spending is diverse

Environment

The 3 M's!

- Measure
- Monitor
- Manage

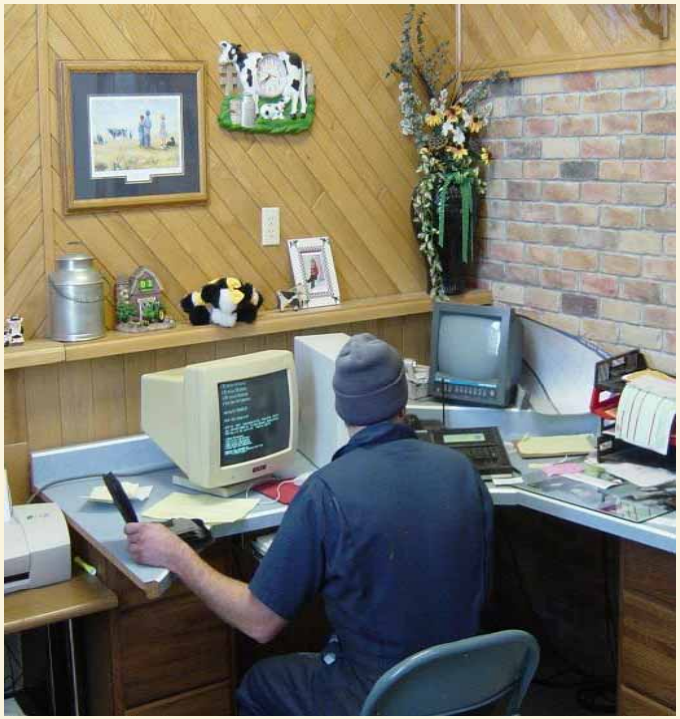
- Improve performance
- Detect problems before they become BIG problems
- Pro-active vs Re-active

What is the purpose of measuring?

- Don’t measure unless you are willing to react!
- It will be of no use to change something that we cannot assess, whether it is success or failure!

Data Recording

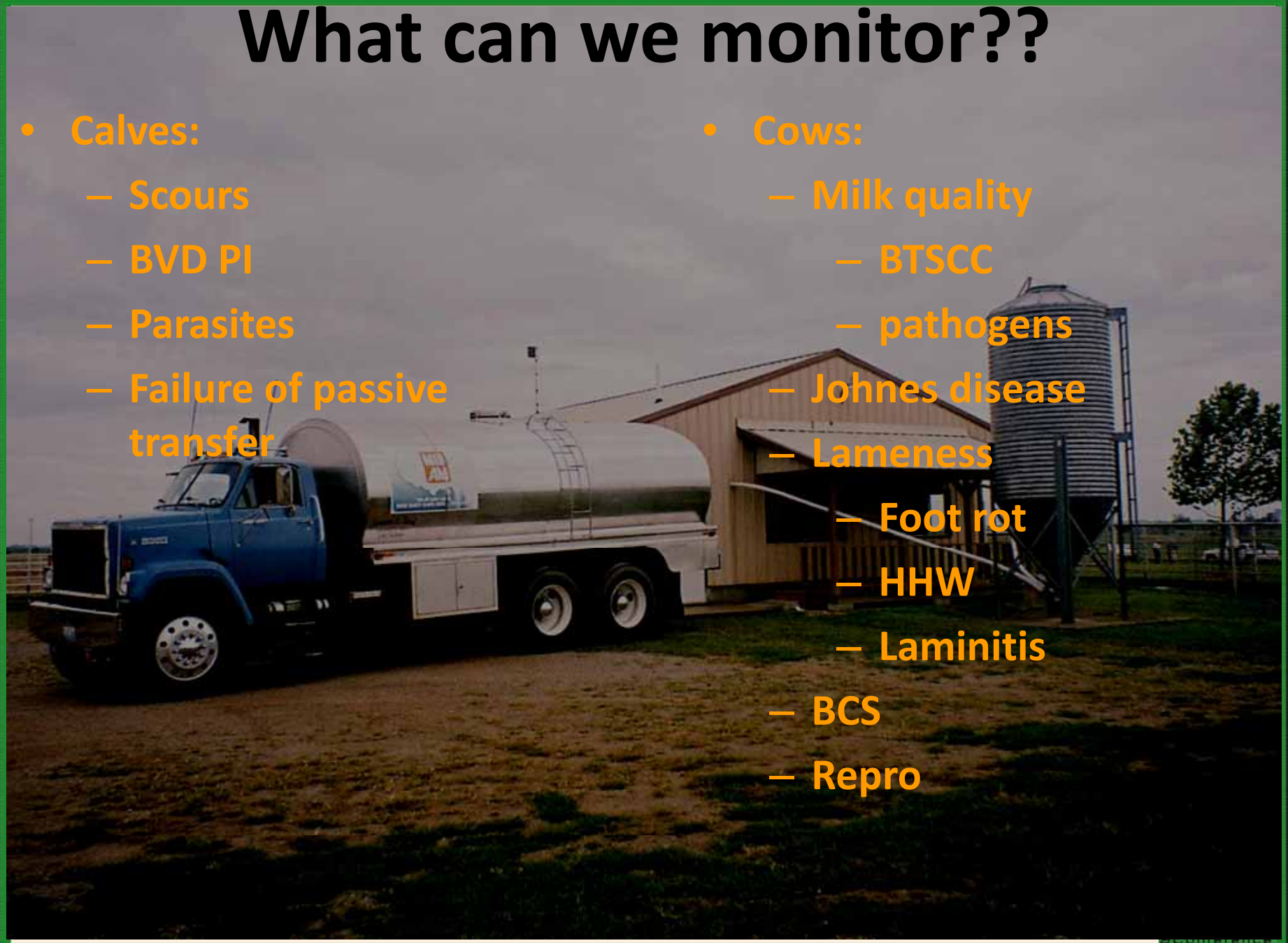
- Software
- Microsoft Excel or Access



Cow #	Pen	Lact	DIM	Score	Outcome	
						Lact= lactation #
						DIM= Days in milk
						Score= see sheet on
						scoring
						Outcome= ok,
						loss of quarter,
						sold, died, etc.

What can we monitor??

- Calves:
  - Scours
  - BVD PI
  - Parasites
  - Failure of passive transfer
- Cows:
  - Milk quality
    - BTSCC
    - pathogens
  - Johnes disease
  - Lameness
    - Foot rot
    - HHW
    - Laminitis
  - BCS
  - Repro



Data Collection

- Who is going to do the collecting of data?
- What will be used for a data sheet?

Report Preview :

Close

802 Herd Summary - Stage of Lactation and Udder Health

UNIV. OF MO FOREMOST DAIRY - 43090006
Date of Test 5/29/2009
Overall Herd

STAGE OF LACTATION PROFILE

		Stage of Lactation (Days)					
		1 thru 40	41 thru 100	101 thru 199	200 thru 305	306 +	Total or Avg
Number Milking	1st Lact	5	22	16	49	5	97
	2nd Lact	7	12	15	15	1	50
	3rd+ Lact	6	11	23	13	9	62
	All Lacts	18	45	54	77	15	209
Avg Daily Mlk Prod-uction	1st Lact	71	72	61	60	49	63
	2nd Lact	89	92	79	62	58	78
	3rd+ Lact	84	104	78	67	40	75
	All Lacts	82	85	73	62	44	70
SCC Score *	1st Lact	2.4	2.4	2.9	2.8	3.7	2.8
	2nd Lact	2.1	2.4	1.1	3.2	4.7	2.3
	3rd+ Lact	4.3	2.6	3.2	2.9	2.9	3.1
	All Lacts	2.9	2.4	2.5	2.9	3.3	2.7
SCCS > 3.9	Number	4	12	11	23	6	56
	Percent	22	27	20	30	40	27

* SCC data in this table are alw ays displayed as linear scores.

CURRENT SOMATIC CELL COUNT SUMMARY

	% Cow s by SCC SCore				
	0,1,2,3 Below 142,000	4 142,000-283,000	5 284,000-565,000	6 566,000-1,130,000	7,8,9 over 1,130,00
1st Lact	68	12	11	3	6
2nd Lact	76	10	6	0	8
3rd+ Lact	56	18	10	5	11
All Lacts	66	13	10	3	8

YEARLY MASTITIS SUMMARY

Date of Test	% Cow s by SCC Score					SCC	
	0,1,2,3 Below 142,000	4 142,000-283,000	5 284,000-565,000	6 566,000-1,130,000	7,8,9 over 1,130,00	Score	Actual
Month Dropped	56	14	11	8	11	3.4	418
6/24/2008	64	10	9	7	10	3.1	414
7/22/2008	67	11	8	4	10	3.0	356
9/3/2008	64	13	11	3	9	3.1	323
10/2/2008	63	17	8	9	3	3.0	223
10/29/2008	68	13	10	4	5	2.8	211
11/20/2008	68	13	11	4	4	2.8	181
12/18/2008	70	12	9	4	5	2.7	238
1/19/2009	61	16	12	5	6	3.0	272
2/19/2009	66	18	4	4	8	2.9	339
3/26/2009	71	13	6	4	6	2.6	220
4/23/2009	66	11	10	6	7	2.8	293
5/29/2009	66	13	10	3	8	2.7	309
Averages	66	13	9	5	7	2.9	282

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DRMS PCDART

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	All Lacts	82	85	73	62	44	70
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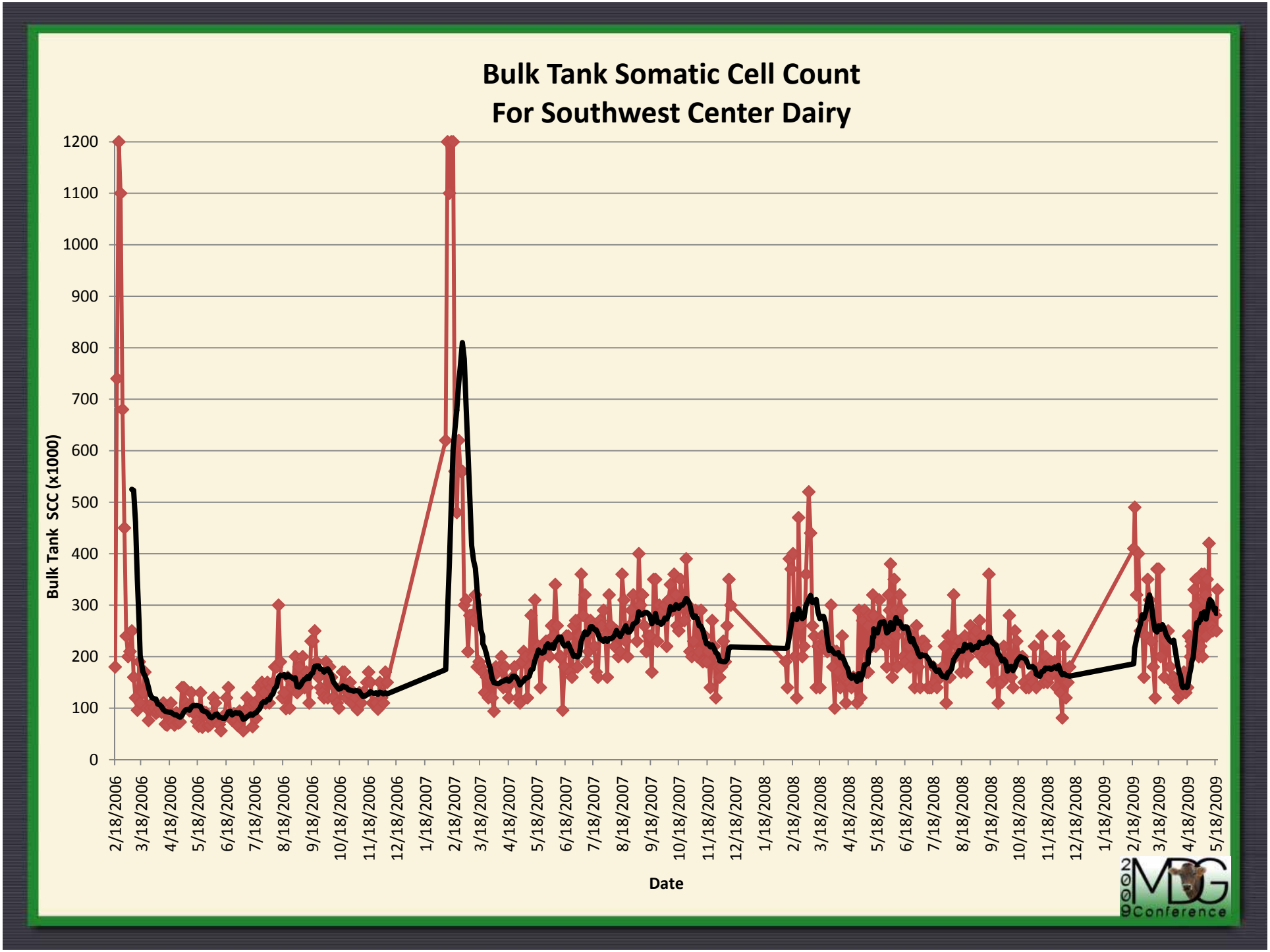
Bulk Tank Somatic Cell Count
For Southwest Center Dairy
Bulk Tank SCC (x1000)
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
2/18/2006
3/18/2006
4/18/2006
5/18/2006
6/18/2006
7/18/2006
8/18/2006
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5/18/2009
Date
2009 MDG Conference

Bulk Tank Culture								
			Enviromentals			Contagious		
Date	group	Mycoplasma	Coliforms	Staph sp	Environmental strep	Staph aureus	pyogenes	Step Ag
6/27/2005	am	positive	2550	83	20800	0	0	0
6/27/2005	pm	positive	183	110	14400	15	0	0
6/28/2005	am	positive	1550	73	20400	0	0	0

Date	Cow #	Bacteria
2/8/05	72	staph sp
2/11/05	1525	strep dysag
2/11/05	2396	Klebsiella
2/11/05	2396	staph sp
2/11/05	2597	strep dysag
2/11/05	2597	staph sp
2/11/05	2764	E. coli
2/11/05	2764	staph sp
2/11/05	2764	enterococcus
2/11/05	3017	strep dysag
2/11/05	3017	staph sp
2/11/05	3017	E. coli
2/11/05	3017	enterococcus
2/18/05	1694	strep dysag
2/18/05	1845	Klebsiella
2/18/05	3530	staph sp
2/18/05	3530	baccillus sp.
2/18/05	3700	strep dysag
2/18/05	956	strep dysag
2/28/05	1852	staph sp
2/28/05	2763	staph sp
2/28/05	2763	strep dysag
2/28/05	2891	Acranobacterium pyo
2/28/05	3661	strep dysag
3/9/05	4416	staph aureus
3/9/05	4416	E. coli
3/9/05	4416	enterococcus
3/9/05	4460	staph aureus
3/9/05	4473	staph aureus

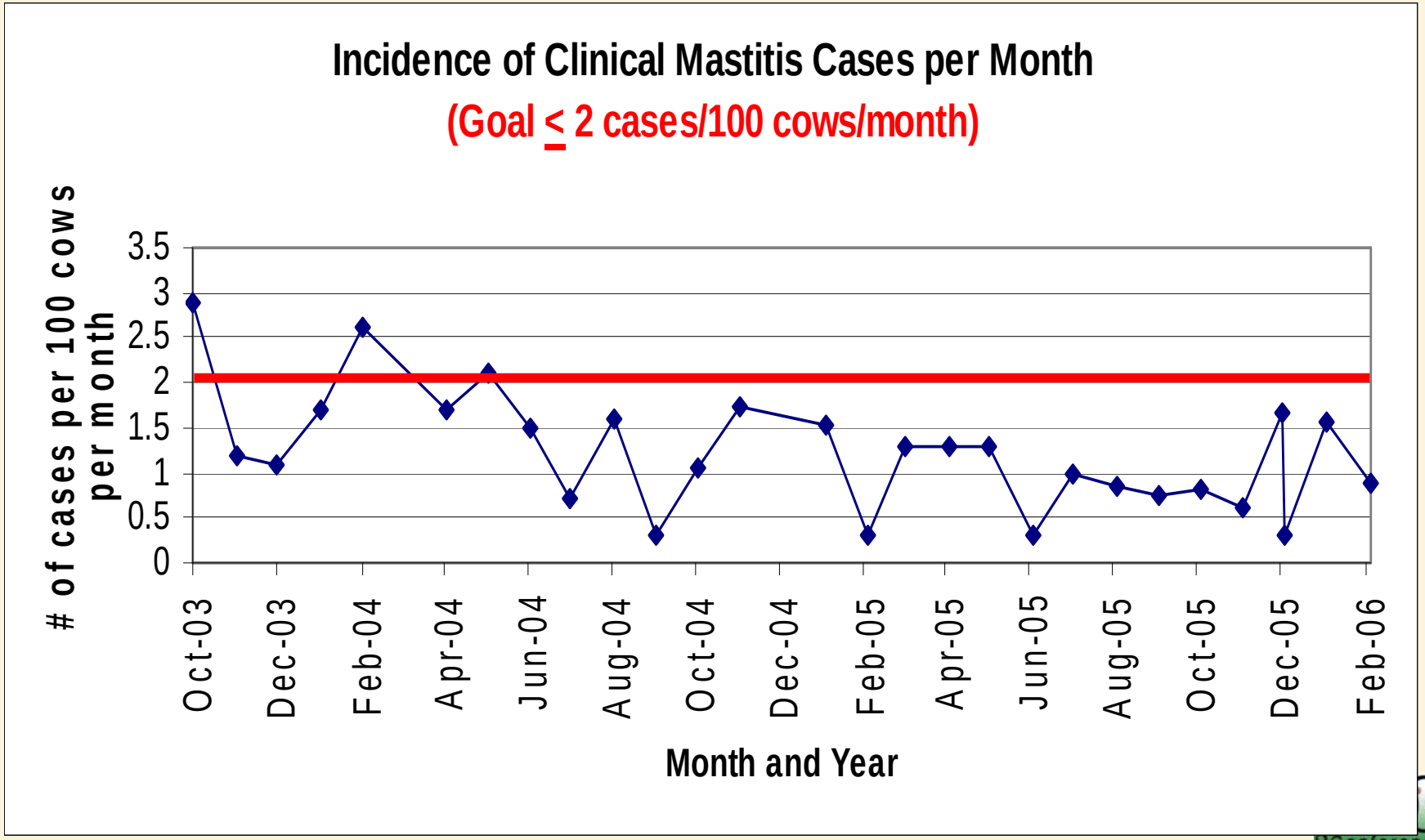
Quality Milk Parameters	May-09	Apr-09	Mar-09	Feb-09	Jan-09
Bulk tank SCC	309	293	220	339	272
% infected	27.1	26.9	21.8	21.9	28.4
% new infections	10.4	11	8.1	7.7	12.8
# of Clinical cases/100 cows	2.9	3.96	3	4.7	3.6
% of cows with high log1	22	12	21	22	33

Quality Milk Parameters	May-09	May-08	May-07
Bulk tank SCC	309	418	305
% infected	27.1	38.6	20
% new infections	10.4	19	10.9
# of Clinical cases/100 cows	2.9	6.8	4.1
% of cows with high log1	22	29	20

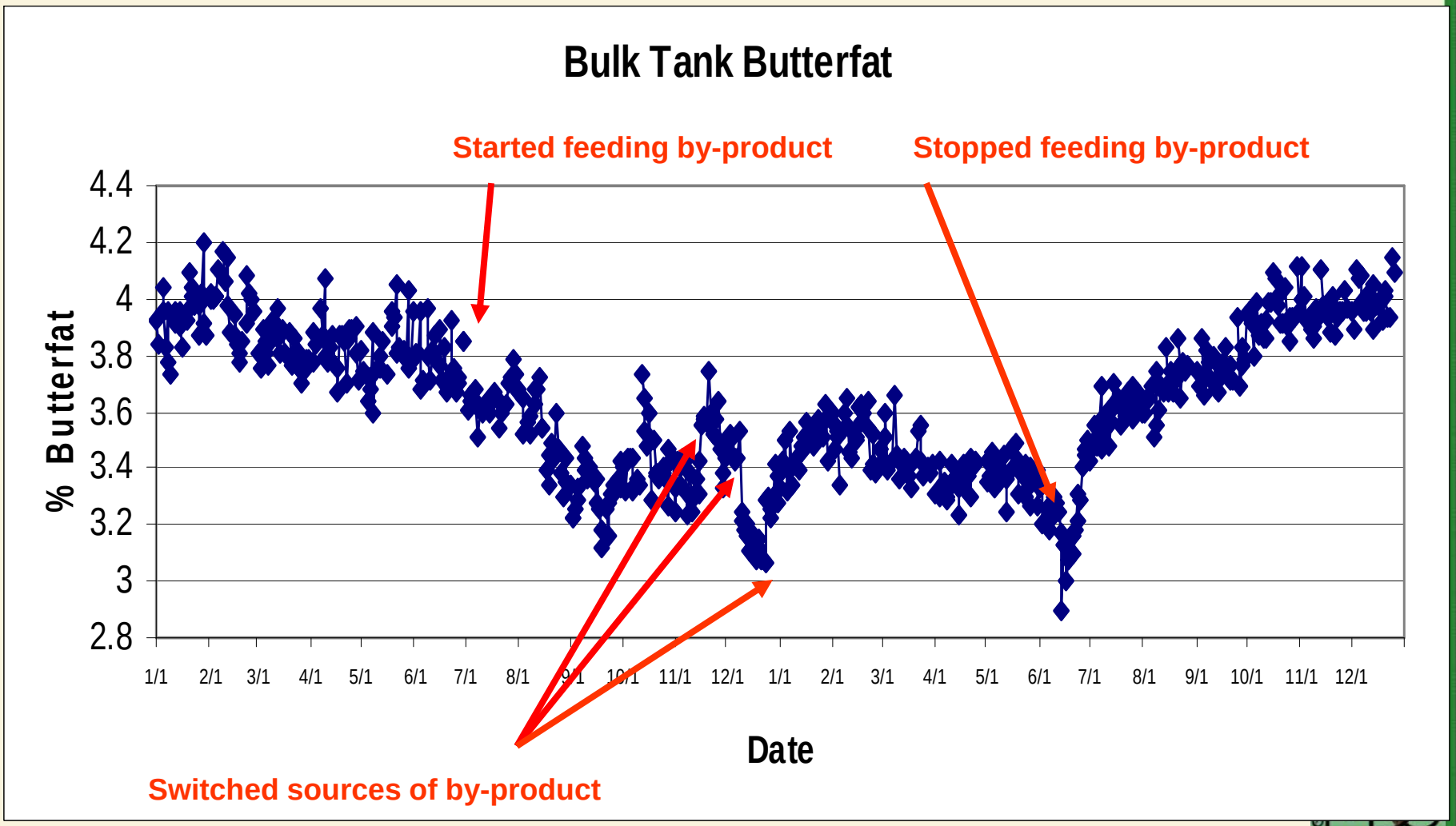
Record usage

- Annual consultation with veterinarian
  - Mastitis control
  - Dry-off plan
  - Plan prior to calving for fresh-cow mastitis management
  - Review PMO and milking technique

We want monitoring to appear boring!!



However, sometimes it is not boring!!



Define action points!

- Need to know what to do with information outside of expected
- Can you fix it yourself?
- Do you need to outsource help?

- What do you do with a spike in SCC?
  - Identify problem cows – how?
  - Treat or cull? How do you decide?
  - What do you treat with?
  - Was there a management change attributable to the spike?

- Increase in clinical mastitis at calving?
  - Where do you start?
    - What age group is affected? Or is it all cows?
    - What is the milking protocol?
    - How is clinical mastitis being diagnosed?
    - Did you hire an over enthusiastic milker?
    - What bug is causing it?

Final words of advice

- *Seek advice when appropriate*
- *Assess economic impact of a change in management system*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Questions/Comments?