

# THE PRACTICAL USE OF MILK RECORDING INFORMATION

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THE GLOBAL STANDARD  
FOR LIVESTOCK DATA

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Chile 2016



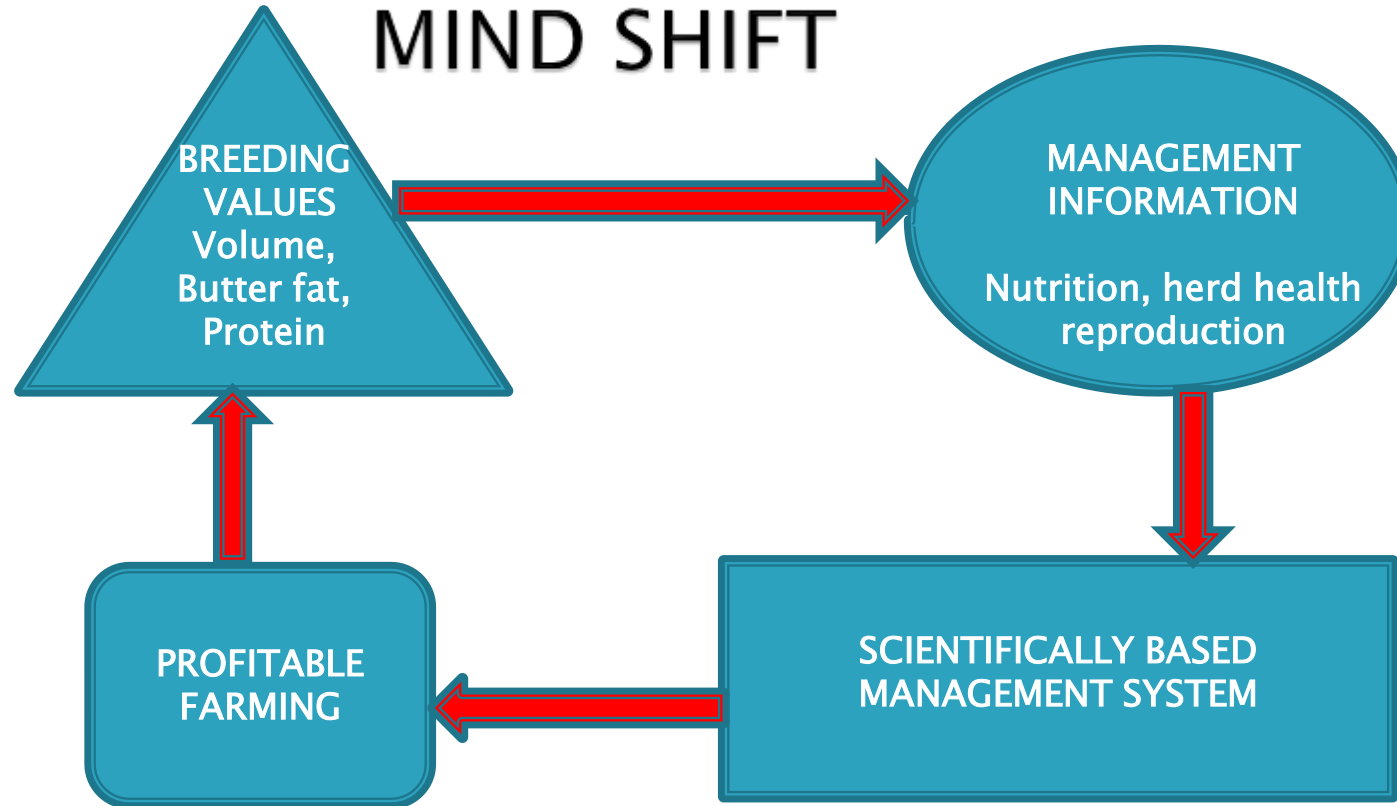
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# MIND SHIFT



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# Introduction

- ▶ Traditional milk recording data to identify selection candidates
- ▶ Still the case – sophisticated models, selection indices & genotype → effective selection for more profitable cows
- ▶ Not only genetic merit important but variation in phenotypes → management decisions & actions

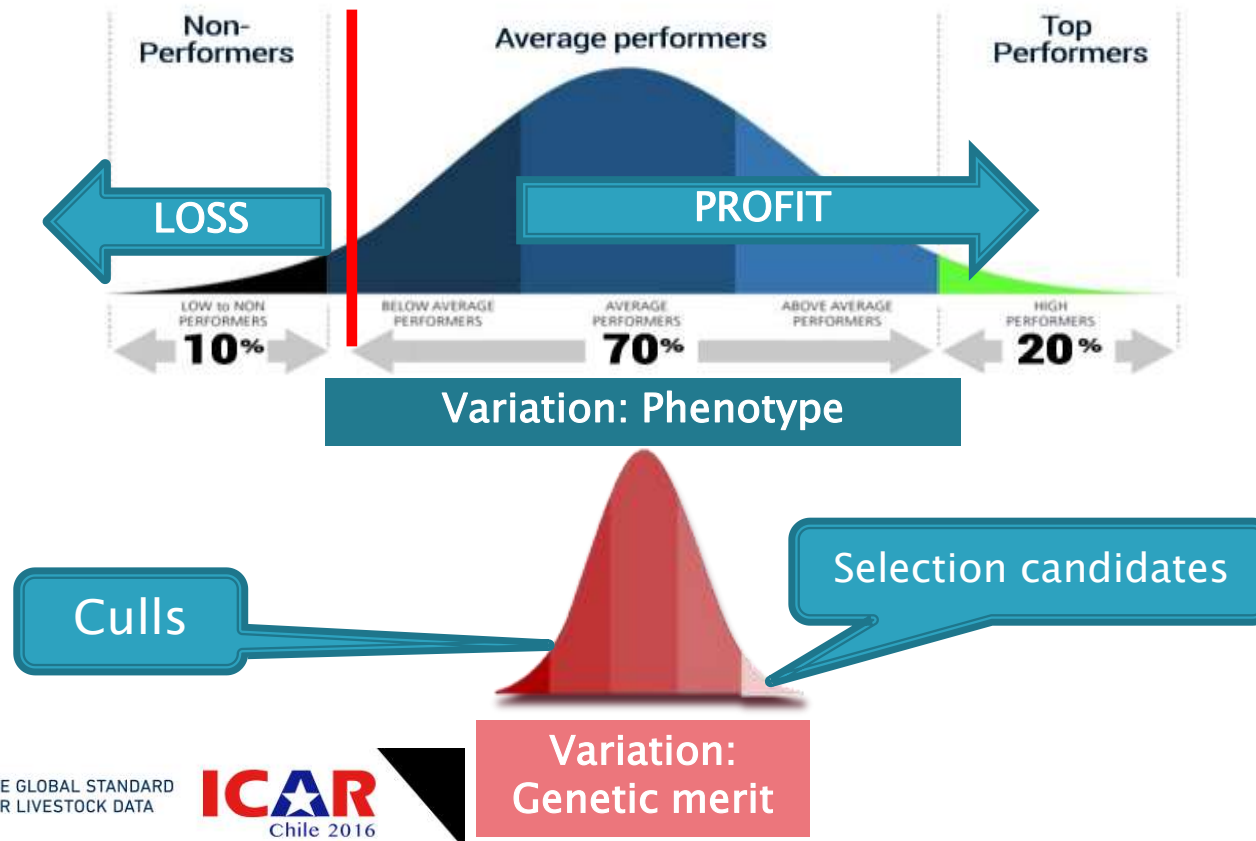


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# Using variation in genetic merit & phenotypic performance effectively



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# Recordings traits contributing to differences in sustainable profitability in dairy herds

## ▶ Beyond animal information

- milk production (kg milk per day),
- milk solids (percentage protein and fat),
- somatic cells per millilitre and
- milk urea nitrogen (MUN)

## ▶ Genetic selection indices indicate profit & loss

- variation in performance for the same properties -> adapt management practices to ensure optimum performance

# Measurement against biological and economic norms and benchmarking

- ▶ Identify best practices and measure own practices against them
  - Other herds (national, international, regional, same production system, etc.)
  - Biological & Economic norms
    - Examples:
      - Average days in milk for lactating cows,
      - Percentage of milk samples (cows) within certain somatic cell count levels,
      - Proportion of cows with MUN levels outside norms for optimal feeding of protein and
      - Ratio of nitrogen to energy in the diet, etc.





**LISTEN TO WHAT YOUR ANIMALS  
ARE TELLING YOU.**

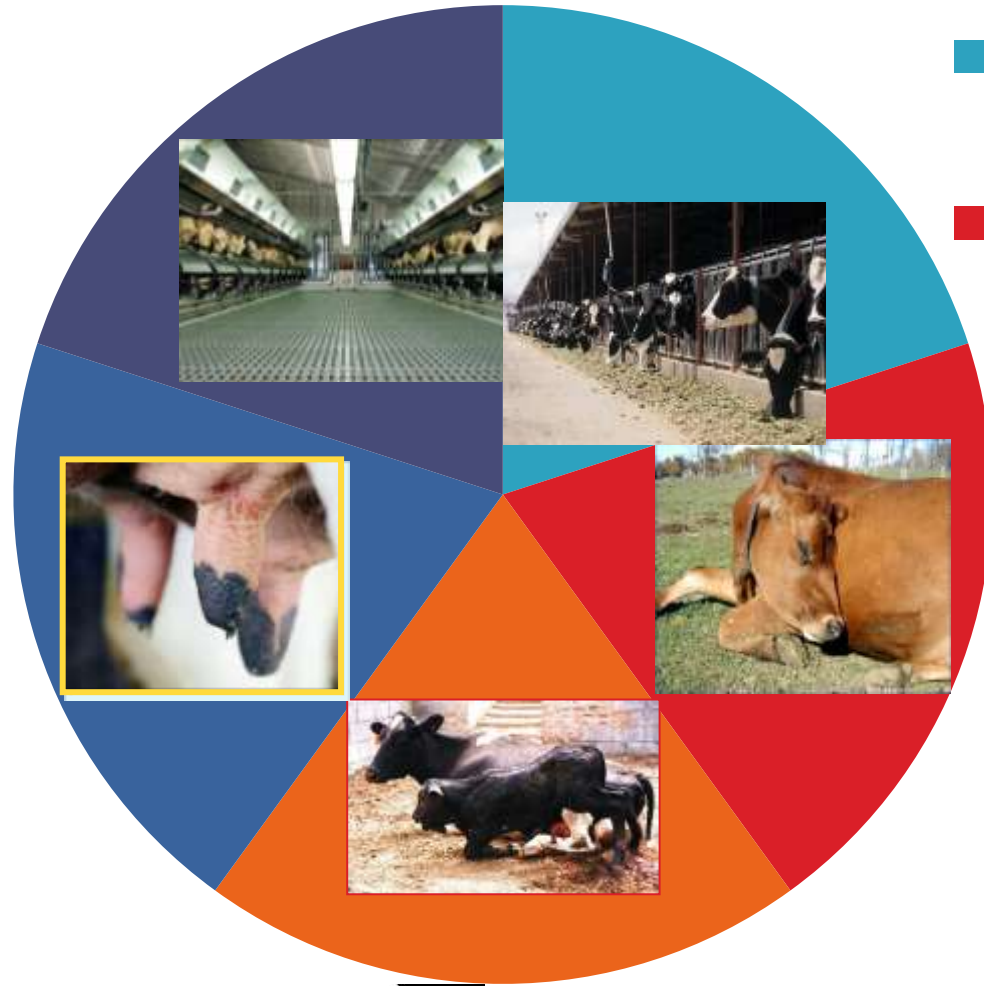


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■ NUTRITION

■ HERD HEALTH



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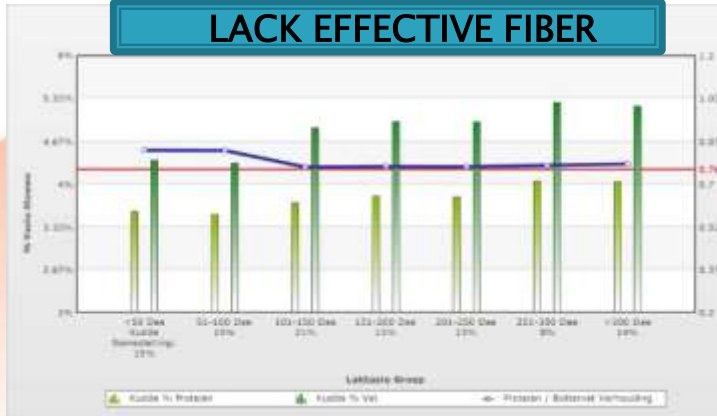
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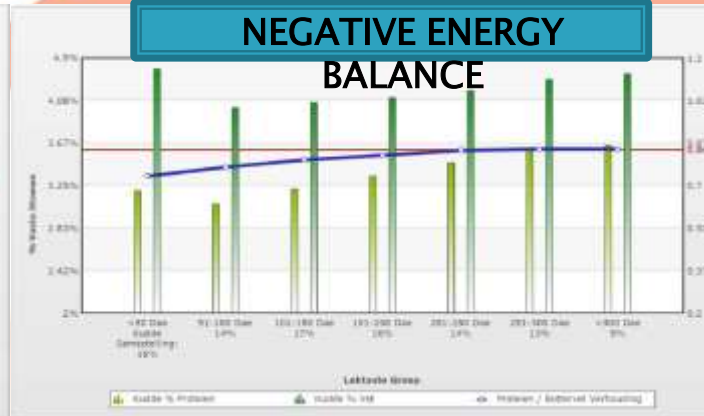


# NUTRITION

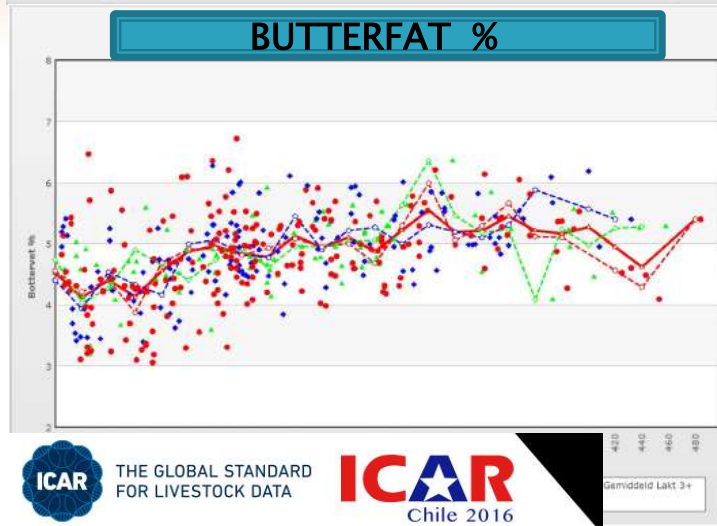
LACK EFFECTIVE FIBER



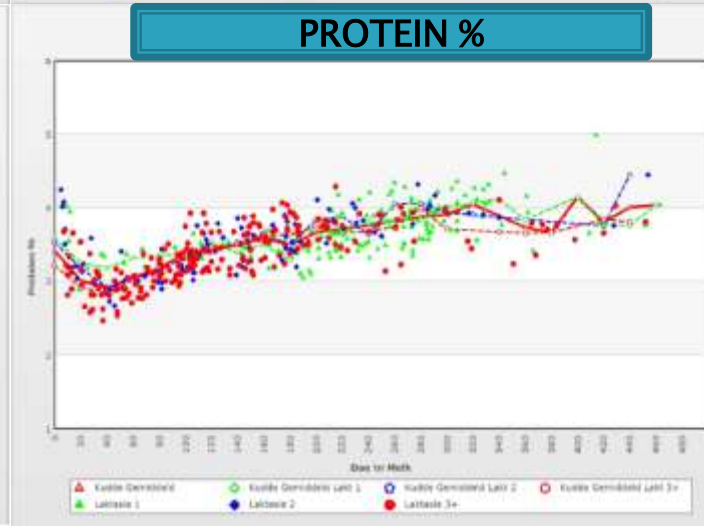
NEGATIVE ENERGY BALANCE



BUTTERFAT %



PROTEIN %



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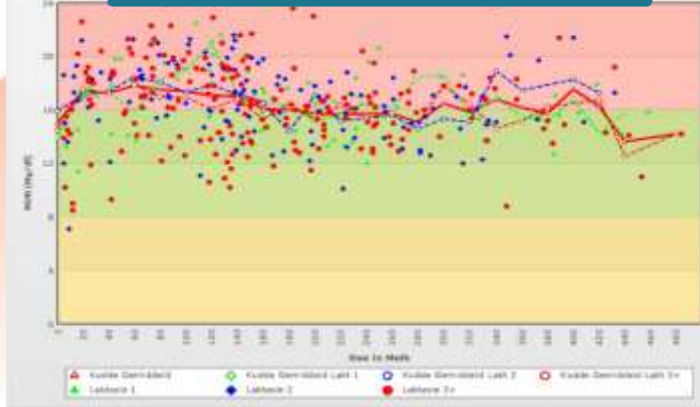
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Gemiddeld Lakt 3+

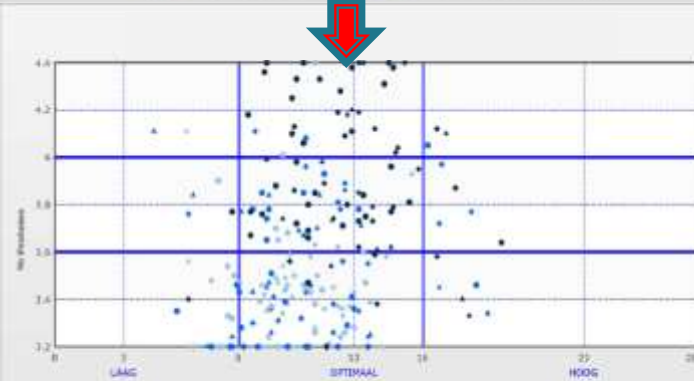
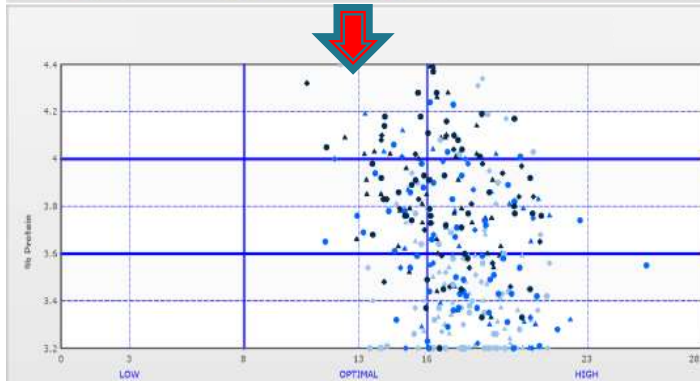


# NUTRITION

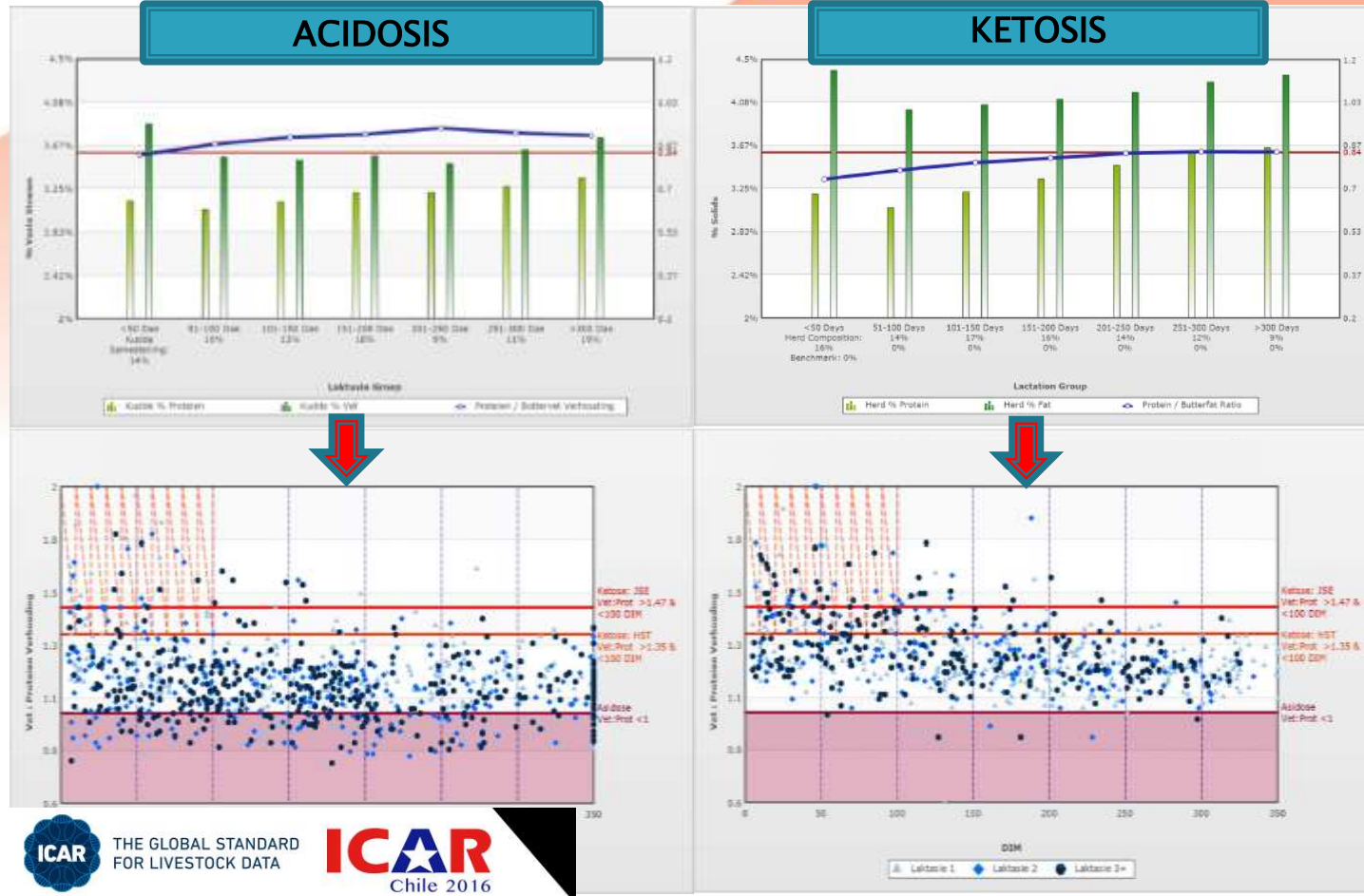
## INFLUENCE OF CRUDE PROTEIN



## ENERGY DEFICIENCY



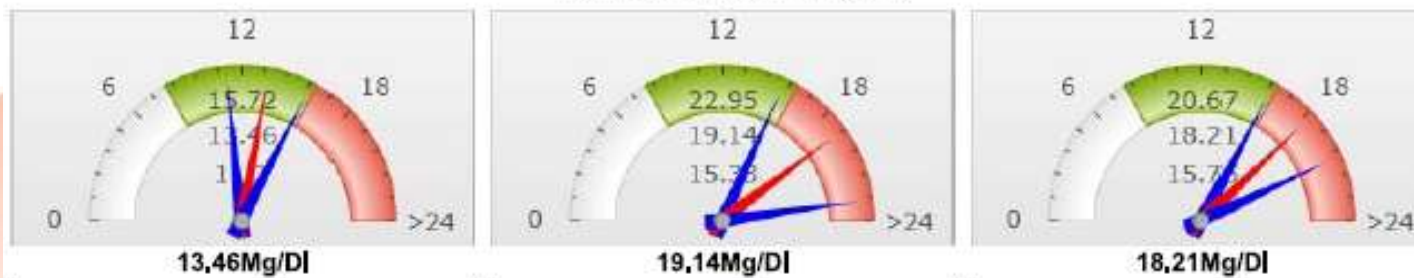
# HERD HEALTH



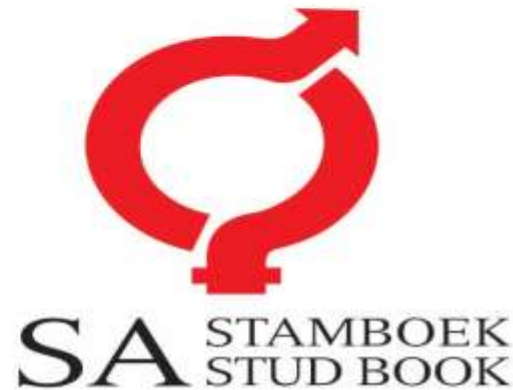
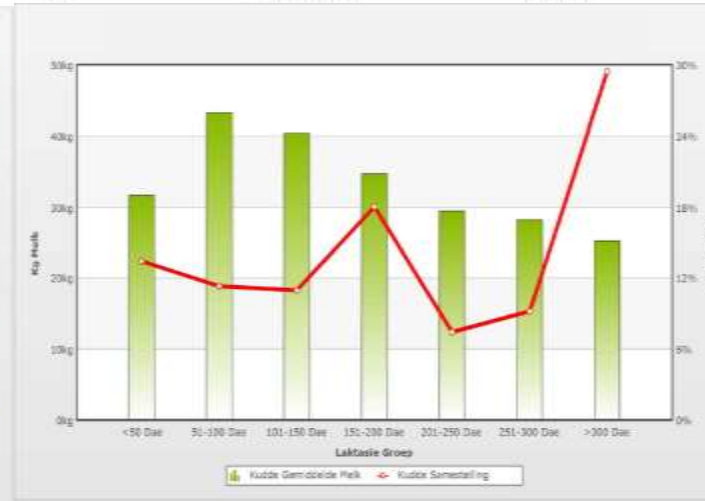
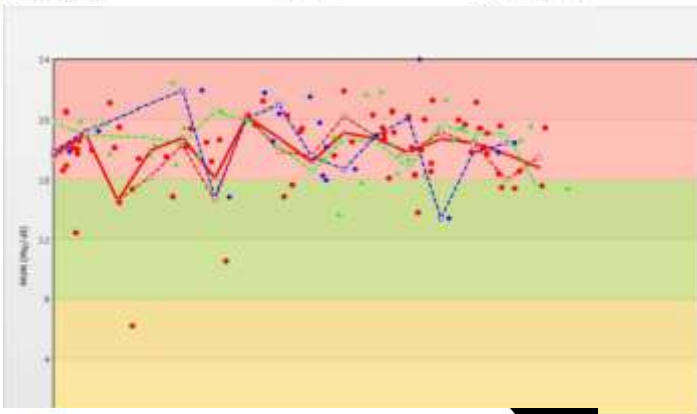


# REPRODUCTION

Melk Ureum Stikstof (Mg/Dl)

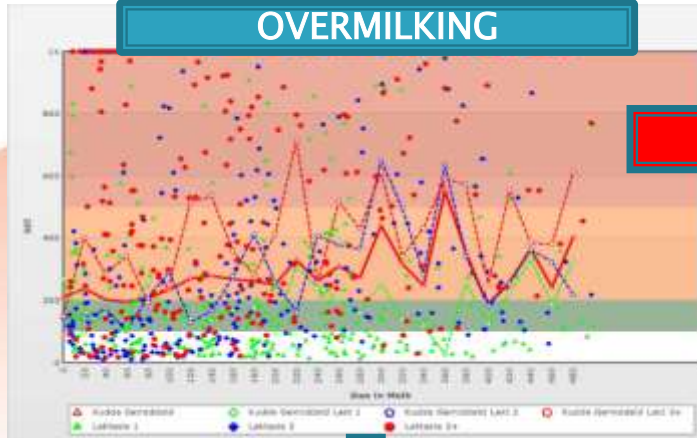


Gemiddeld	13,46	Gemiddeld	19,14	Gemiddeld	18,21
> 16 Mg/Dl	14,16%	> 16 Mg/Dl	78,07%	> 16 Mg/Dl	84,87%
< 8 Mg/Dl	0,88%	< 8 Mg/Dl	0%	< 8 Mg/Dl	0,84%

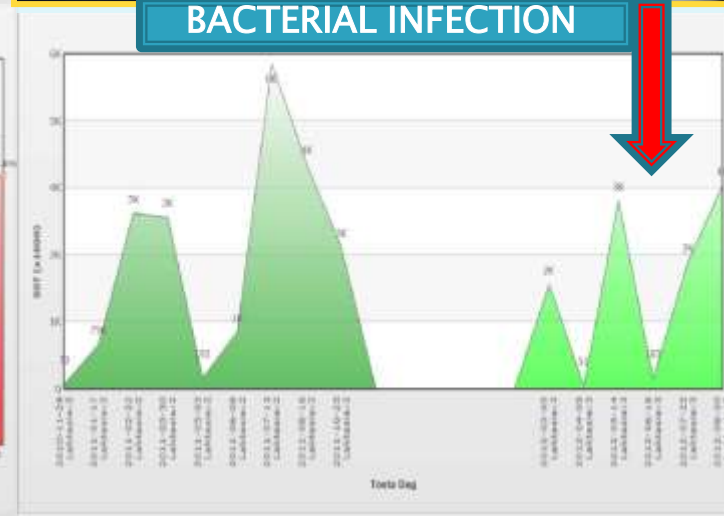


# UDDER HEALTH

OVERMILKING



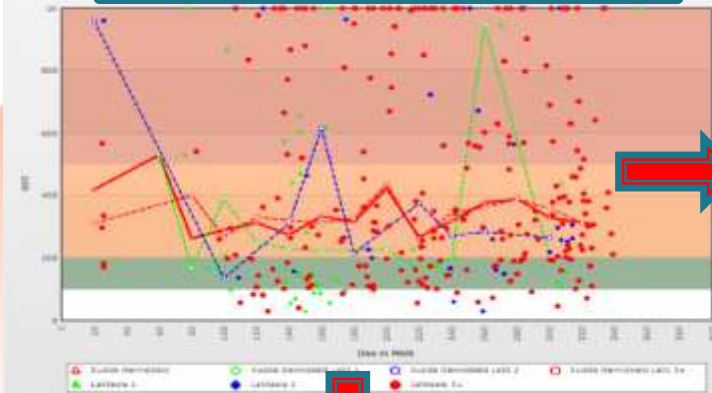
BACTERIAL INFECTION



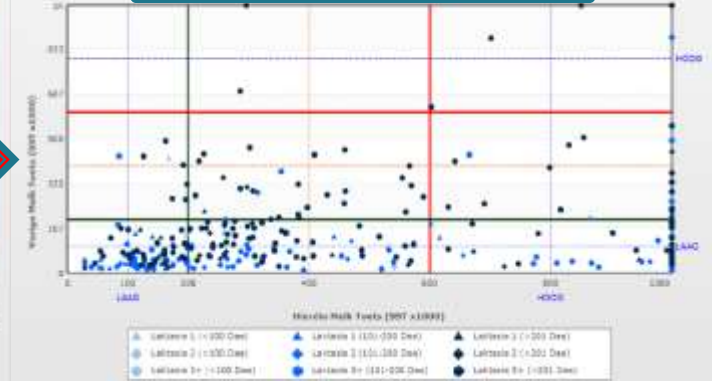
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# MILKING MACHINE

**FAULTY VACUUM**



**PRESENT LACTATION**



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## Treatment Lists: SCC (500 - 9999)

Breeder: -

Comp.No	Farm No	Parity	DIM	Kg Milk	SCC						
					2012-12-11	2013-01-14	2013-02-12	2013-02-26	2013-04-02	2013-05-07	2013-06-10
2011676471	6056	5	5	39.1	2132	5067	2879	7692			554
2012609919	10025	2	5	57.7	318	1113	1281	108	83		258
2012086738	8060	4	8	34.9		294					2018
2011634306	6005	5	8	41.8	932	4278	1475	822			571
2012309635	9064	3	8	46.7	124	113	1835	81			128
2011634348	6050	5	9	47.8	543	357	137	256			556
2012610206	10056	2	12	30	19	47	85	35			3865
2012862880	11059	1	12	32							1582
2012087561	7126	4	14	42.3	283	201	1065	603			58
2011759194	6085	4	14	17.1	112	188	2969				4113
2011676380	6065	5	18	68.7	1088	852					652
2012823239	11018	1	18	19.3					1923		
2011634009	6032	4	23	34.7			1866	391			
2012365447	9087	3	25	32.7	9999	1452	156	120			89
2011635519	2011635519	5	25	2	497	513			1461		
2011936768	7069	4	27	11.2	54	289	1409				48
2012309312	9033	3	30	47.4	297	643	14				237
2011492952	1338	6	31	40.1	683	1762	200				1116
2013067745	10062	2	31	43.9	43	39	26	48			813
2011488299	4201	6	31	34.9		873					
2012308439	7141	4	32	33.7	68	369	127	150			605
2012309486	9049	3	37	17.5	125					4225	
2011676284	6070	5	40	11.2	33	310	5205				2397
					65	3536	26			283	
					42	2148	2140			144	1681



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# Proportional Somatic Cells

#	COMP NO	NID	Lactation	DIM	Last Milk	SCC	Cells in Tank	% Contributed by this Cow	Cummulative % Contribution	Cummulative % Animals
1	<a href="#">2012030280</a>	6030	4	59	39.4	2319	91369	24.07	24.07	1.25
2	<a href="#">2011913122</a>	7044	3	40	33.8	2368	80038	21.09	45.16	2.5
3	<a href="#">2011911274</a>	5088	4	232	32.5	809	26293	6.93	52.09	3.75
4	<a href="#">2010924831</a>	3030	5	148	27.4	538	14741	3.88	55.97	5
5	<a href="#">2011910565</a>	5030	5	59	12.1	903	10926	2.88	58.85	6.25
6	<a href="#">2011909344</a>	4095	4	326	24.3	412	10012	2.64	61.49	7.5
7	<a href="#">2011911639</a>	6028	4	56	30	327	9810	2.58	64.08	8.75
8	<a href="#">2011911555</a>	6013	3	279	25.3	357	9032	2.38	66.46	10
9	<a href="#">2011913015</a>	7031	3	393	11.6	515	5974	1.57	68.03	11.25
10	<a href="#">2011910326</a>	5004	4	92	46.1	125	5763	1.52	69.55	12.5
11	<a href="#">2011911324</a>	5096	4	436	23	232	5336	1.43	70.95	13.75
12	<a href="#">2011911324</a>	5096	5	83	23	232	5336	1.43	72.36	15
13	<a href="#">2011912843</a>	7013							73.44	16.25
14	<a href="#">2011908684</a>	2135							74.45	17.5
15	<a href="#">2011911688</a>	6044							75.4	18.75
16	<a href="#">2012030116</a>	5059							76.32	20
17	<a href="#">2011912918</a>	7021							77.23	21.25
18	<a href="#">2012030165</a>	5104							78.14	22.5
19	<a href="#">2012030488</a>	7085							78.99	23.75
20	<a href="#">2012030579</a>	7096							79.81	25
21	<a href="#">2012844136</a>	8022							80.61	26.25
									81.4	27.5
									82.17	28.75

10% Cows contribute 66% Somatic Cells (in tank)



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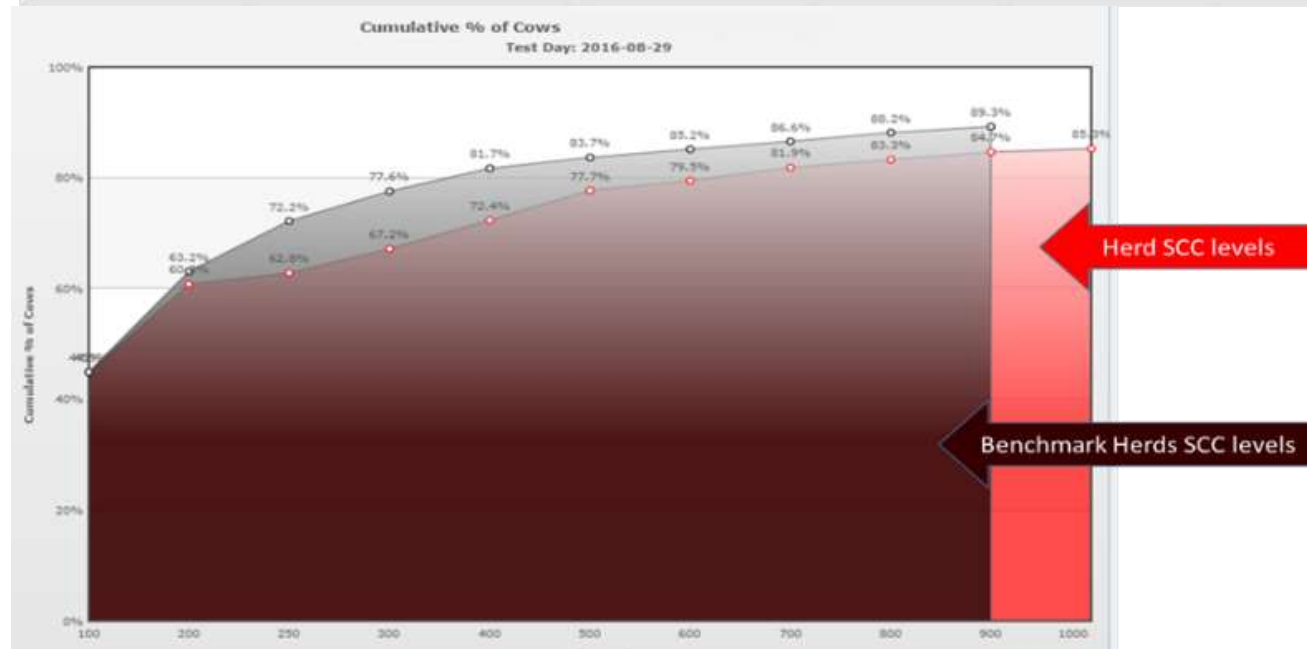


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# Benchmarking with other herds

	Milk Production (kg)	Butterfat (%)	Protein (%)	Lactose (%)	SCC (x1000/ml)
<b>Herd</b>	17.0	5.21	3.79	4.62	327
<b>Top 25%</b>	24.1	5.41	4.03	4.92	40
<b>Breed Avg</b>	20.1	4.86	3.74	4.72	321
<b>Bottom 25%</b>	15.4	4.37	3.48	4.60	290



# SUMMARY

- **Input cost restriction is the most important contributor to profit in dairy farming**
  - Enhancement of efficiency in dairy herds in all disciplines possible from milk recording
  - Possible for the Farmer and Advisor to use scientifically based management systems ensuring sustainable profit
  - Multidisciplinary and multifaceted approach possible & essential in advice and management interventions

# THANK YOU

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