



KNOWLEDGE CENTRE FOR AGRICULTURE

Cattle



**Our Milk®**  
- a pure pleasure

# Cell count/Mastitis/Bacterial counts European approach

EAAP 2014

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Dip ECBHM

Certified cattle practitioner

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PARTNER IN  
**DLBR®**  
DANISH AGRICULTURAL  
ADVISORY SERVICE







4...| 2. september 2014





6... | 2. september 2014















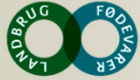
## Side by side – Fast exit





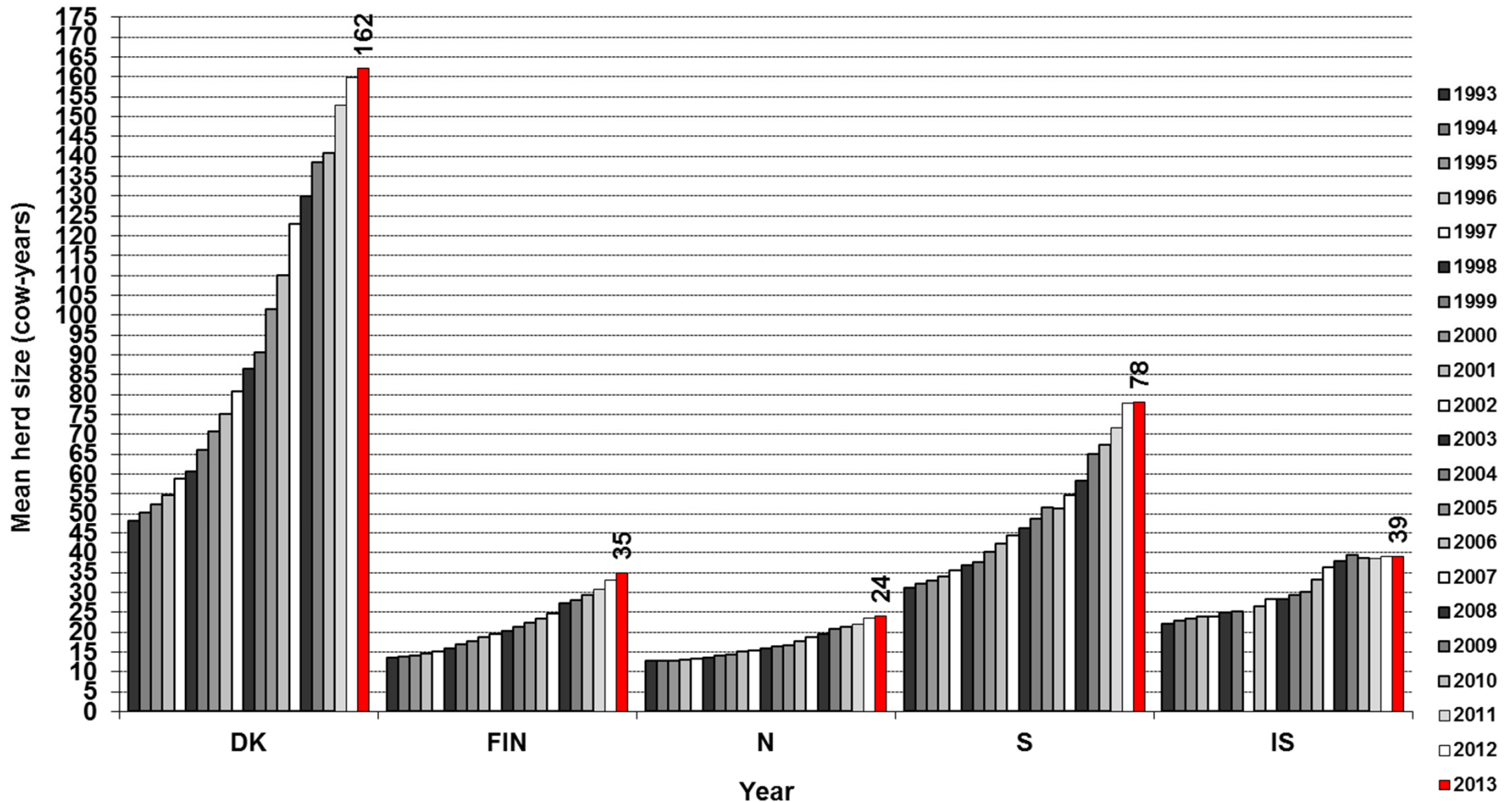


14... | 24 October 2011



# Average herd size in Nordic countries

Herd size within animal recording



# AMS in Nordic countries

Number AMS herds 31. december

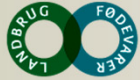
1400  
1200  
1000  
800  
600  
400  
200



1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013







## EU – and milk quality

Nr 853/2004 of 29 april 2004

- From animals with no infectious diseases that can be transmitted to humans via milk
- Healthy animals specially no genital diseases with discharge, enteritis with diarrhea or mastitis
- Total bacterial count TBC < 100.000 bacteria/ml
  - Geometric mean in 2 months
  - At least 2 samples pr week
- Somatic Cell Count SCC < 400.000 cells/ml
  - Geometric mean in 3 months with at least 1 sample pr month



# Denmark and infectious diseases

Free of

Foot and Mouth

Tb

Brucellosis

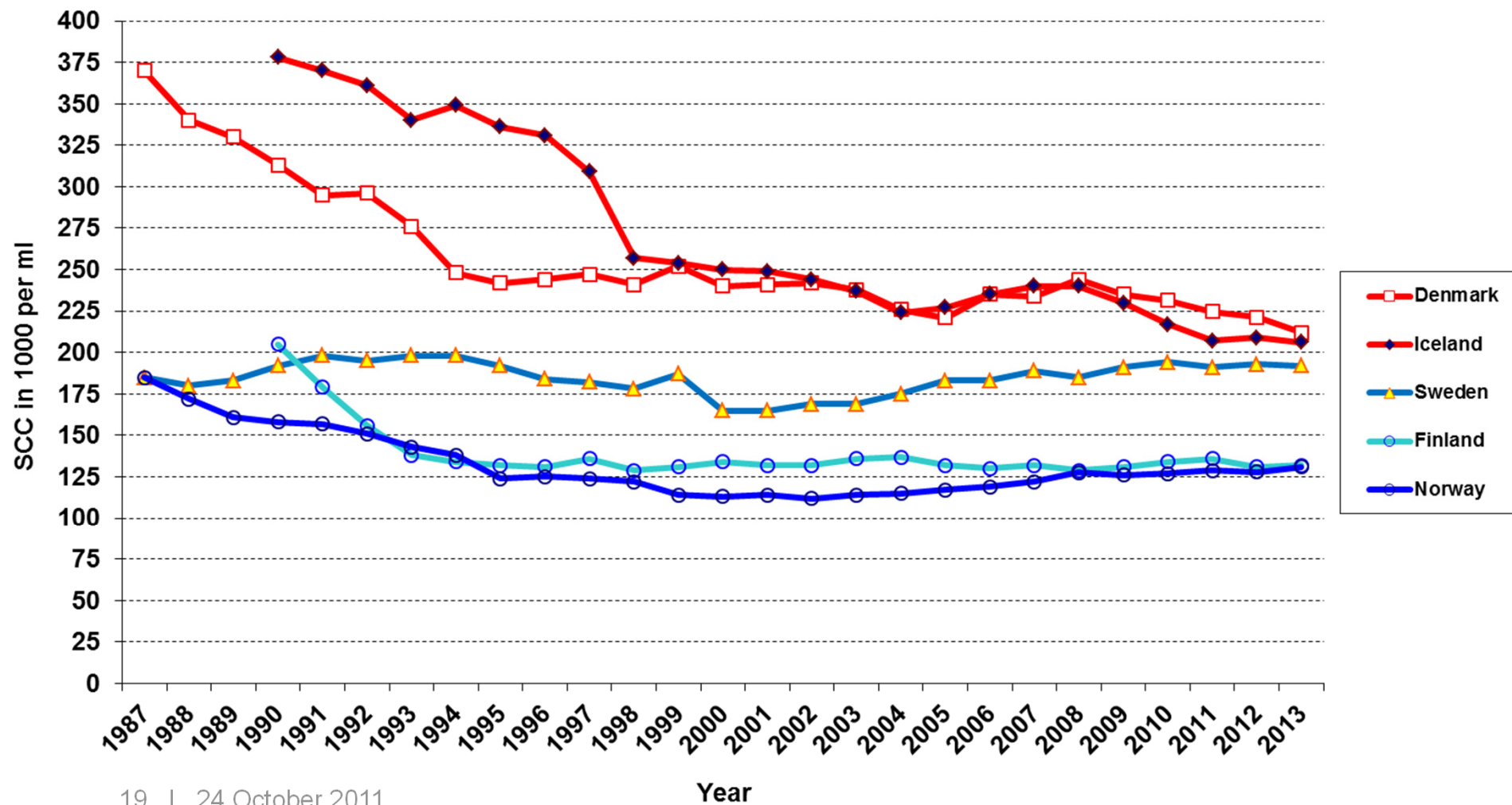
IBR

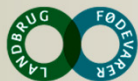
BVD (3)

Salmonella (2016)

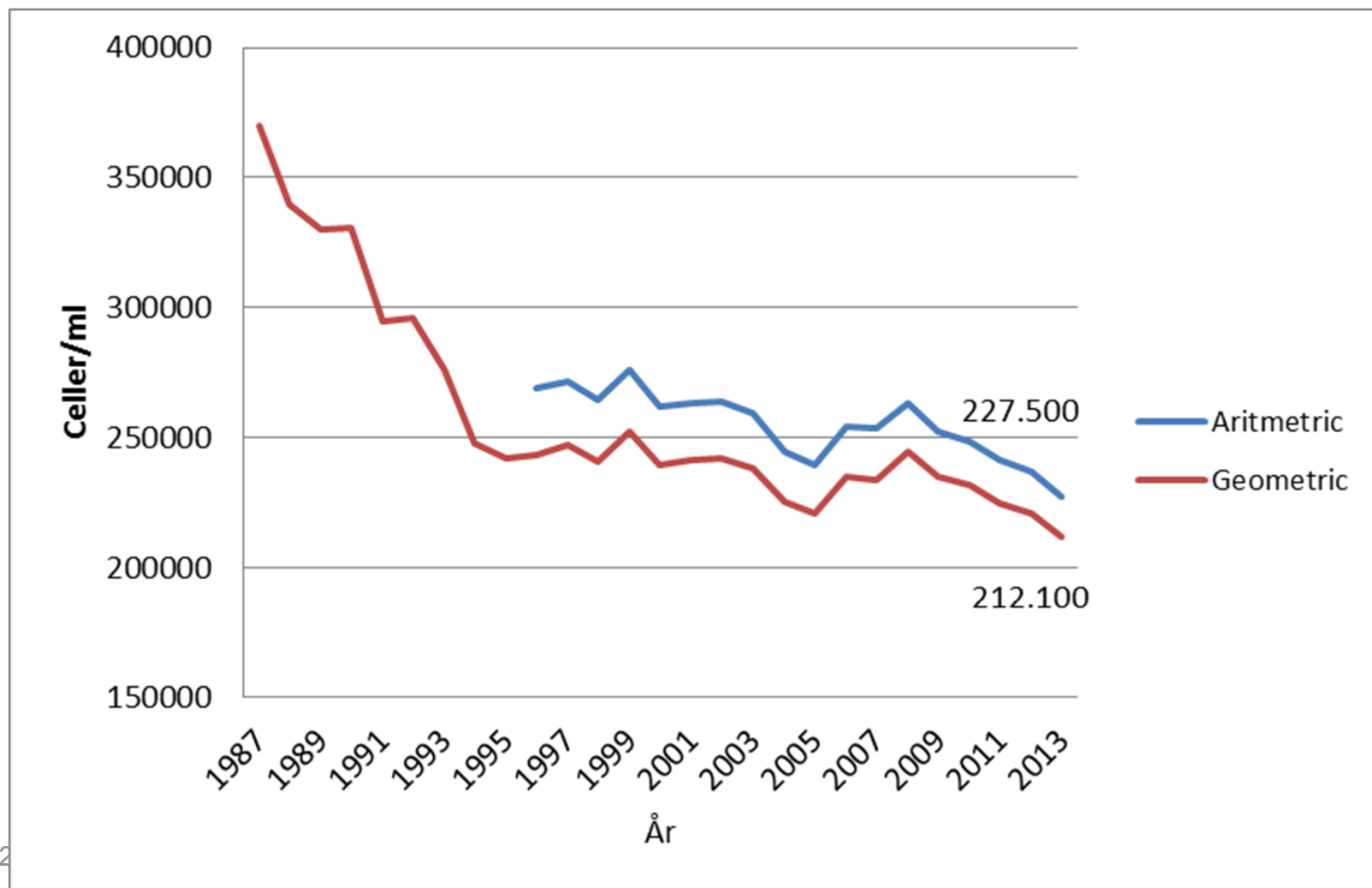
Johnes ?

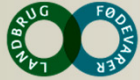
**BMSCC geometric means**



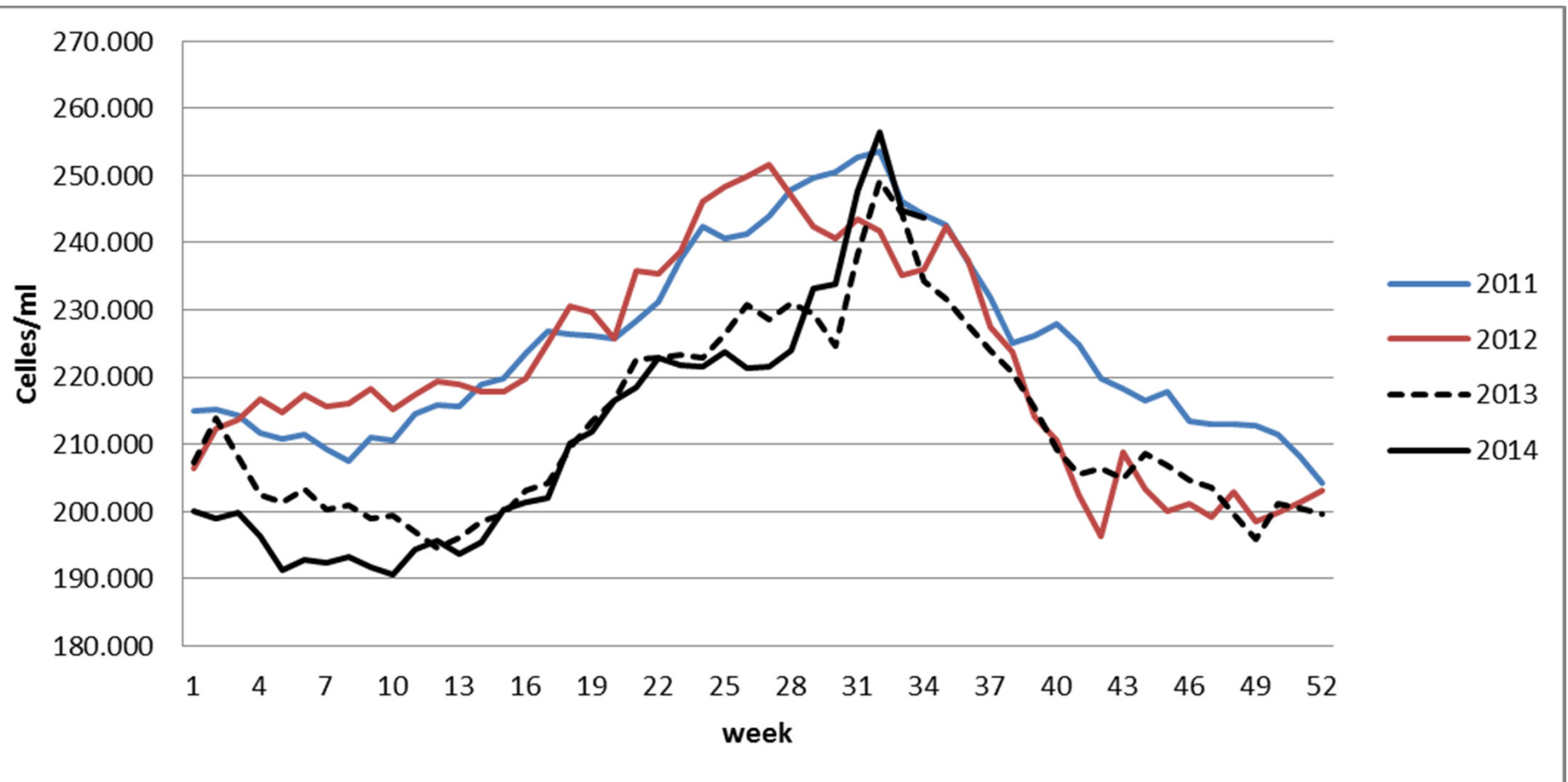


# Danish bulk tank somatic cell count 1987 - 2013





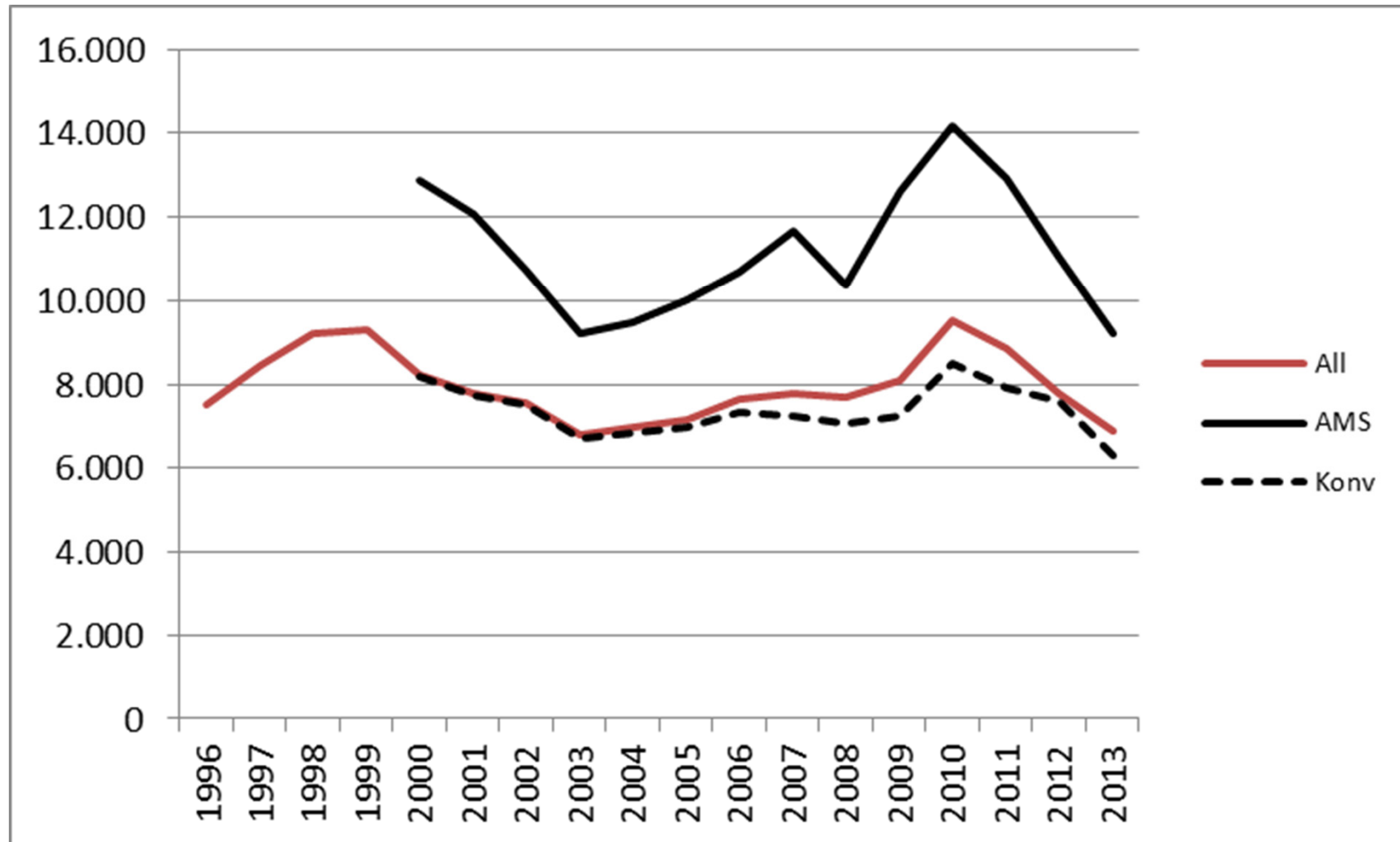
# Bulk Tank Milk SCC geometrisk somatic cell count pr week

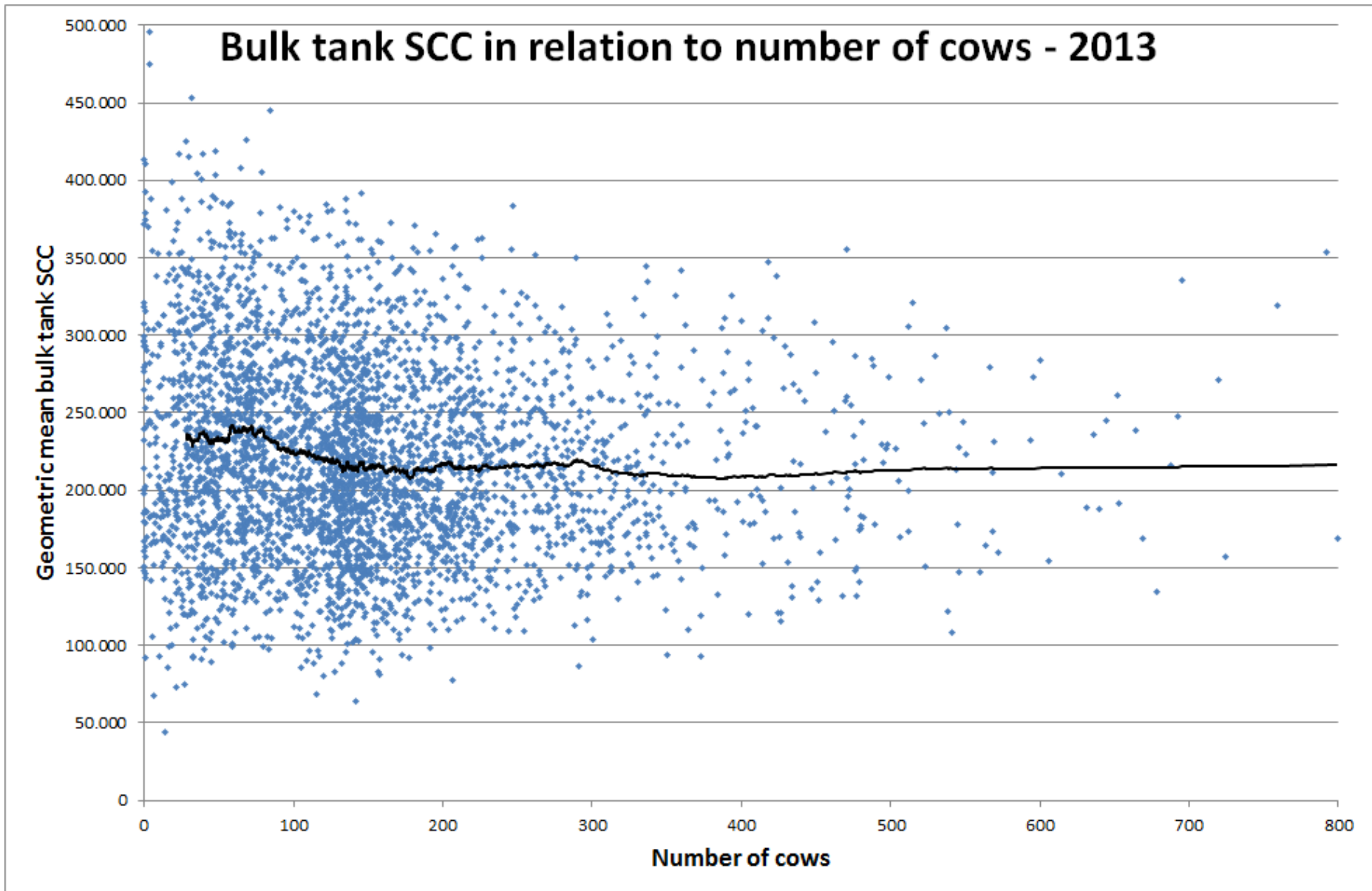
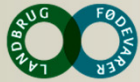


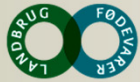


# Danish total bacterial count

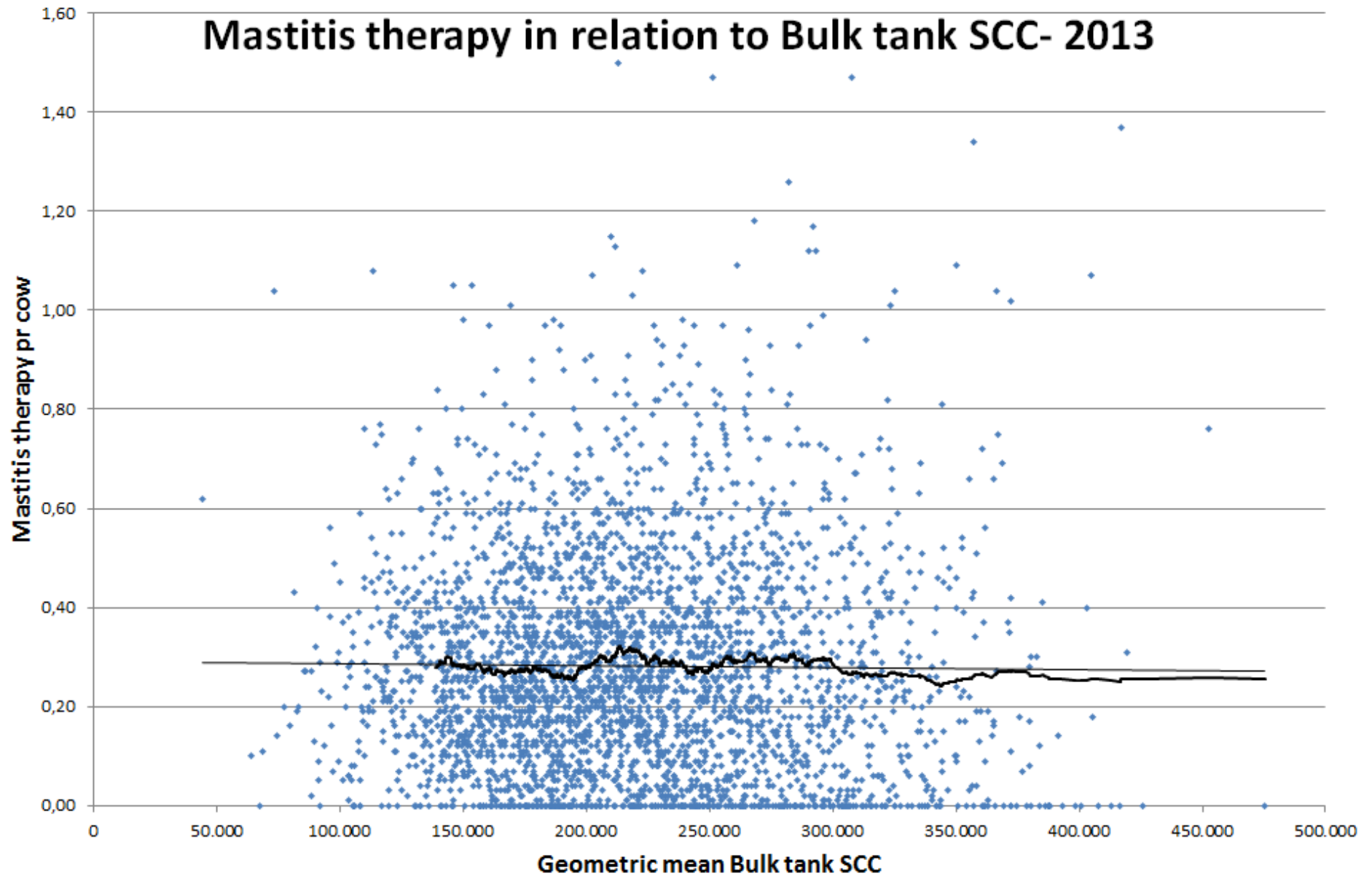
All and by milking system 1996 -2013







## Mastitis therapy in relation to Bulk tank SCC- 2013

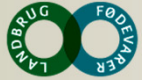






# ***Our Milk***

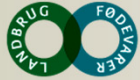
*- a pure pleasure*



## Our milk – a pure pleasure

### Goals

Bulk tank SCC	<(150,000)	NOW 100.000
Bulk tank TBC	<5,000	
Antibiotic residues	0	
Mastitis therapy	50% reduction	
Dry cow therapy	low increase	



## Change of attitude

- Farmers are highly modern food producers
- Therefore
  - Milk quality must be better
  - Focus on food safety – No contermination af milk
  - Focus on Prevention – Five point plan + clean cows
  - Focus higher production
  - Focus on biosecurity



# Mastitis prevention program

- Surveillance - Bulk tank milk by PCR
- Register data and present data – Dairy management system
- Diagnosis on farm
- Prevention



#### Find resultaterne i Dyreregistrering

Årsprøveresultater vil ikke længere blive fremsendt med post. Du og dine rådgivere kan se resultaterne af årsprøven i Dyreregistrering under - Vis udskrifter. Udskriften hedder PCR-Undersøgelse og dannes automatisk, når der er et prøveresultat. Du kan også finde resultatet på fanen Ejendom W i højre side af skærmbilledet i Dyreregistrering. Derefter vælges Sundhedsstatus. I Prøvetype vælges i rullemenuen PCR - og vælg Overvåg tankmælk. Når du klikker på prøvesvar med HØJRE musetast, kommer en menu, og du kan vælge vis PCR analysedata. Hvis du fortsat ønsker udsendelse af prøvesvar med post kan du henvende dig til det lokale RYK-kontor, der mod betaling kan fremsende prøvesvar til dig.

#### Prøveresultat af tankmælksundersøgelse

Bakterietype/gen	Tankprøve	Tidligere tankprøve resultater			
	28.01.14	17.12.13	12.11.13	12.10.13	30.09.13
Staf. aureus	32,0	38,0	32,0	33,0	29,0
Enterococcus sp	34,0	32,0	37,0	31,0	29,0
C. bovis	36,0	35,0	35,0	32,0	35,0
Beta-lactam	35,0	34,0	34,0	34,0	33,0
E.coli	40,0	33,0	40,0	35,0	24,0
Strep dysgalactiae	32,0	30,0	37,0	29,0	31,0
Staph sp	31,0	30,0	32,0	30,0	29,0
B-strep	40,0	40,0	40,0	32,0	35,0
Strep uberis	40,0	34,0	34,0	29,0	31,0
Klebsiella sp	40,0	40,0	40,0	40,0	40,0
S. marcescens	40,0	39,0	40,0	40,0	34,0
A. pyogenes+P. Ind.	33,0	34,0	38,0	36,0	35,0
Mycop bovis	40,0	40,0	40,0	40,0	40,0
Mycop sp.	40,0	40,0	40,0	40,0	40,0
Alger	40,0	40,0	40,0	40,0	40,0

Din tankmælk er blevet undersøgt med PCR-test for mastitisbakterier. Du kan bruge resultatet af testen til at vurdere, hvor i din besætning du kan sætte ind med forebyggelse af yverbetændelse. Testen fortæller nemlig hvilke bakterier, der dominerer i mælken, og giver dermed også et fingerpeg om, hvordan yverinfektioner i din besætning opstår - altså om der for eksempel sker smitte under malkning, eller om smitten stammer fra staldmiljøet.

For hver bakterietype, der er fundet i din tankmælk er der angivet en CT-værdi. Selvom det kan virke ulogisk, er det sådan, at jo lavere Ct-værdi, jo mere er der af den pågældende bakterie i mælken. En lav CT værdi angiver med andre ord et højt indhold af bakterien:

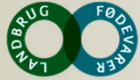
Bulk tank PCR

Ct value for the different bacteria and results of the last 5 testings



## Mastitis prevention program

- Surveillance Bulk tank milk by PCR
  - *Strep agalactiae*, *Mycoplasma bovis* and *Staphylococcus aureus*
- Register Data and present Data
  - Treatments
  - Culture – PCR cow results
  - DHI – individual cow SCC
- Diagnosis on farm
  - Milking performance and Vadia - dynamic test of milking machine
  - Control of environment
- Prevention
  - Five point plan
  - Clean cows



# DMS – Key point check udder health

## Benchmarking with same herd types

STATUS	NØGLETAL (ENHED)	OPNÅET	REFERENC VÆRDI	NEDRE ALARM	ØVRE ALARM	MÅL	OPNÅET VÆRDI I FORHOLD TIL SAMMENLIGNINGSGRUPPEN	RANGERING
<b>^ Sundhed - Yversundhed</b>								
●	Infektion, laktation (%)	24	28		22			10 / 26
●	Nyinfektion, laktation (%)	12	14		10			6 / 26
✓	Kurerede, laktation (%)	36	31	35				6 / 26
✓	Sygdomslængde, laktation (Perioder)	2,8	3,2		2,8			6 / 26
●	Kronisk inficerede, laktation (%)	15	18		13			11 / 26
●	Inficerede nykælvere, 1. kalvs (%)	16	17		8			18 / 26
●	Inficerede nykælvere, øvrige køer (%)	28	34		23			12 / 26
●	Nyinfektion, goldperiode (%)	23	22		18			13 / 26
●	Kurerede, goldperiode (%)	61	37	69				17 / 26

Valgte kriterier for sammenligningsgruppen - Race: DH, Driftsenhedsstørrelse (årskøer): 250 - 500, Økologi: Nej, Mælkeleverende: Ja, Malkesystem: AMS og Ydelse pr. årsko (kg EKM Mejeri): 9.000 - 11.000.

## Five point plan – (1969)

- Good milking with maintained equipment
- Dry cow therapy
- Post milk teat dipping
- Early treatment of acute mastitis
- Segregation and culling













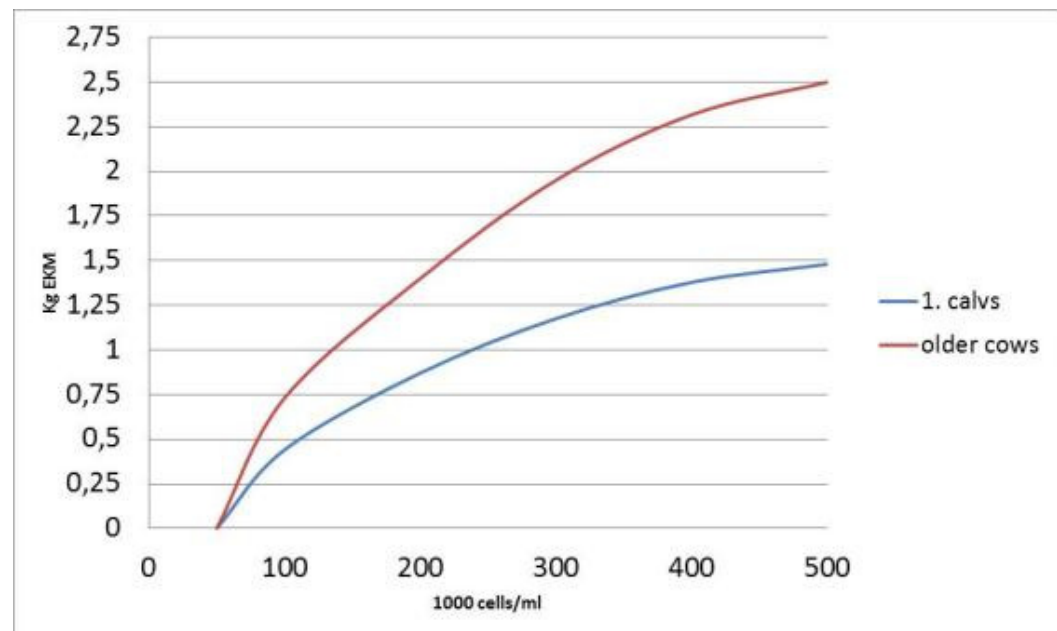






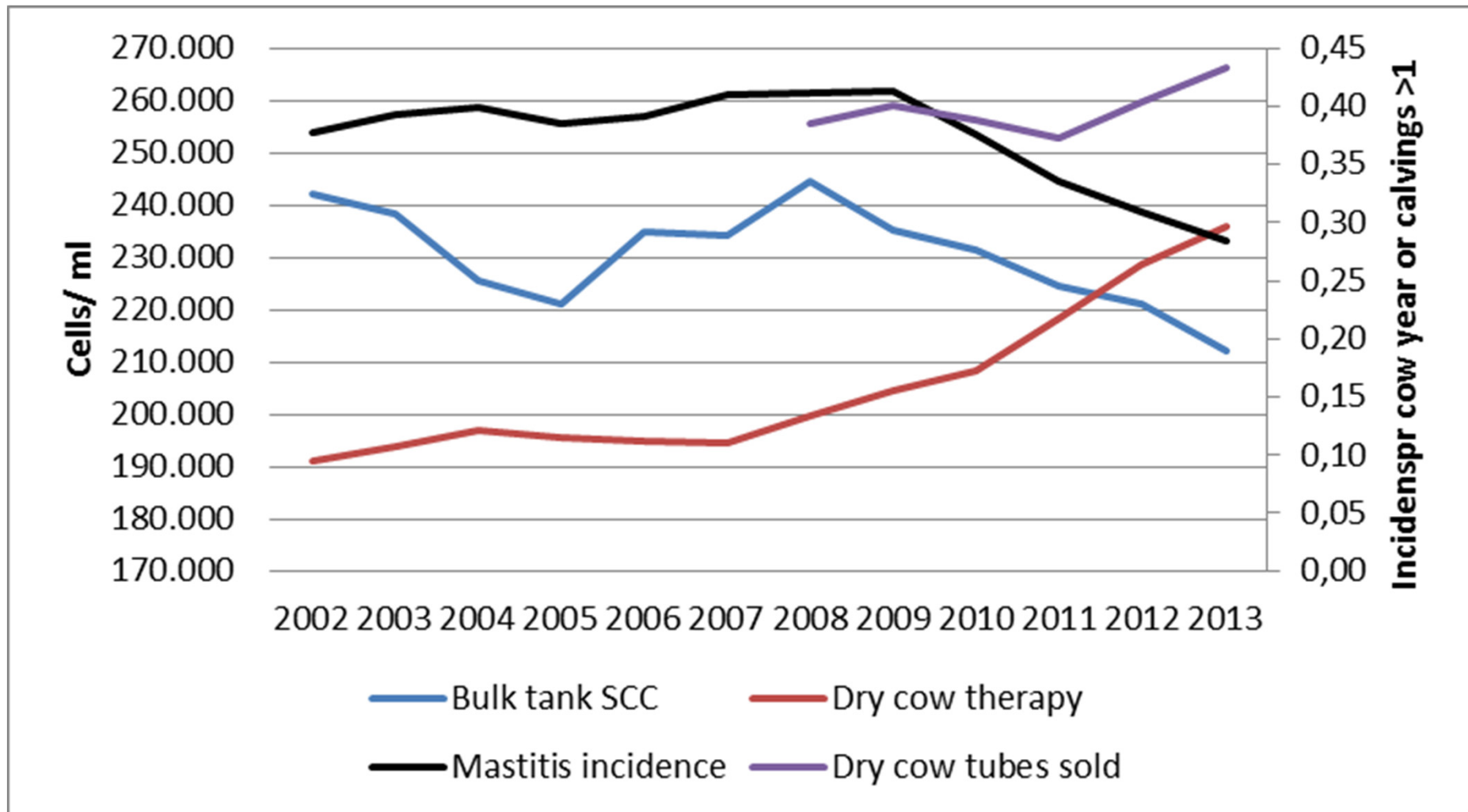
## Low SCC

- Good milk quality lower than 150,000
- Fighting the attitude that just below payment border is OK ex 400,000
- NO Every reduction in SCC is money





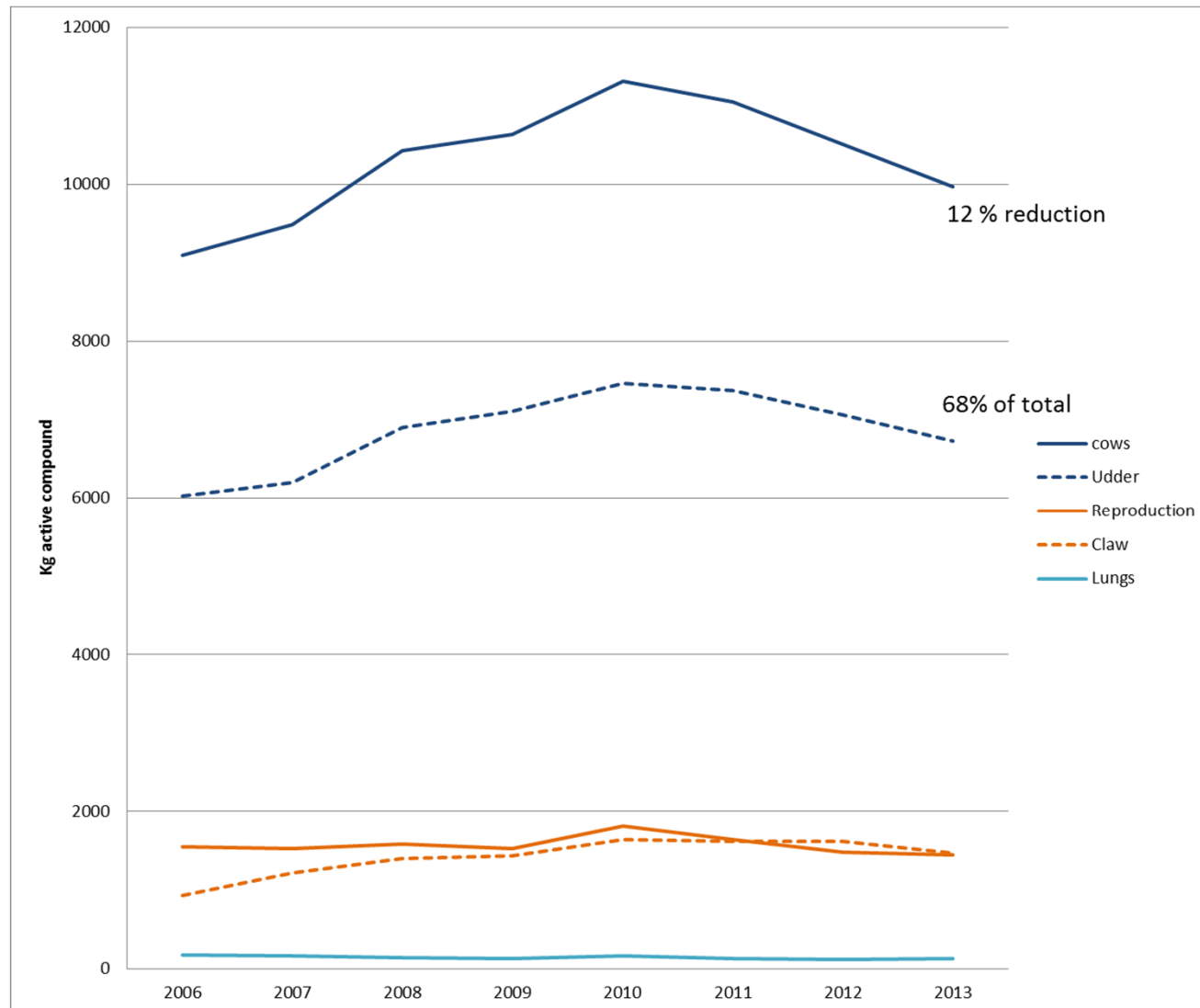
## Bulk Tanks SCC, Mastitis incidens and dry cow therapy





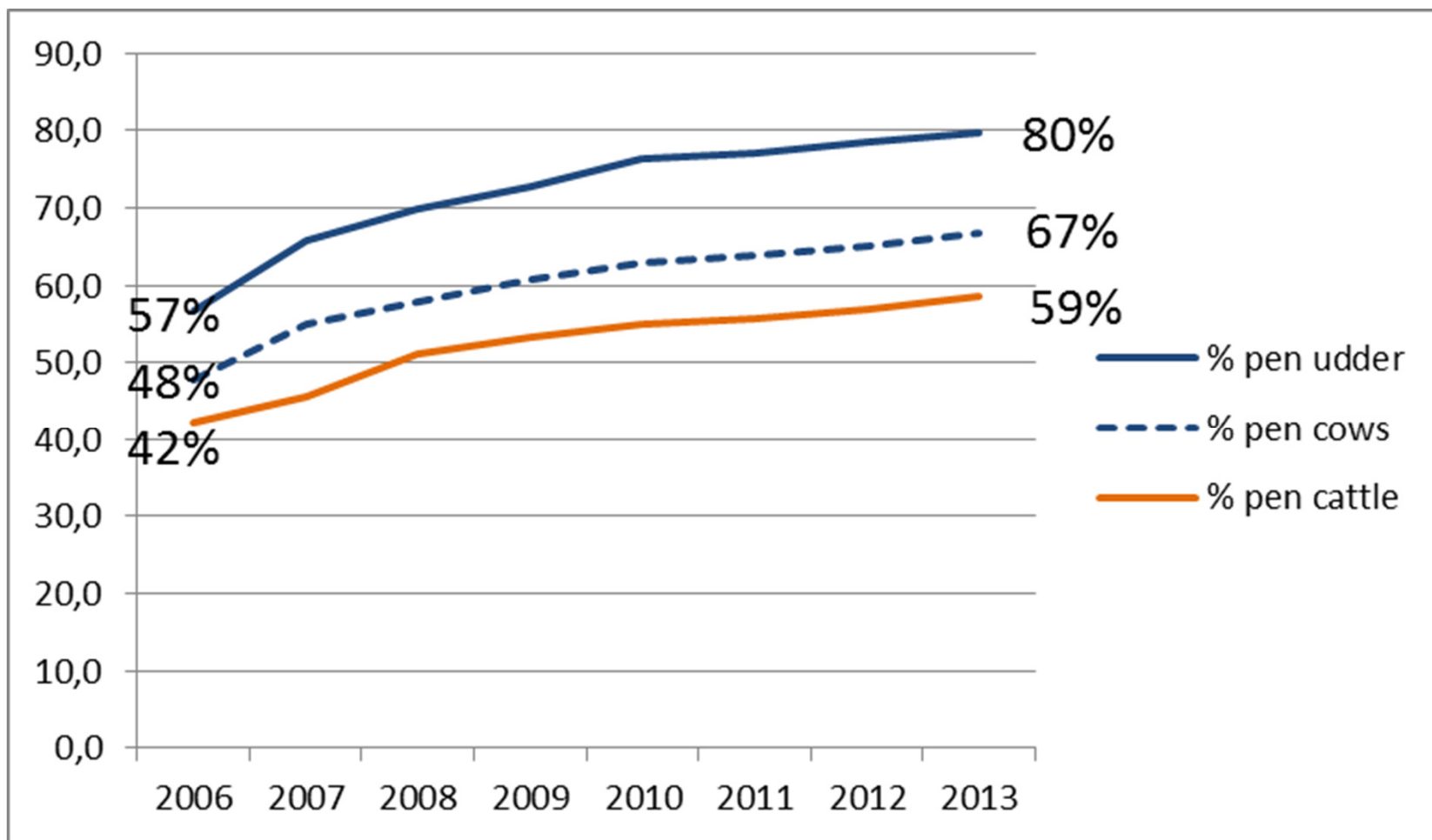


# Antibiotics to cows – Kg active compound





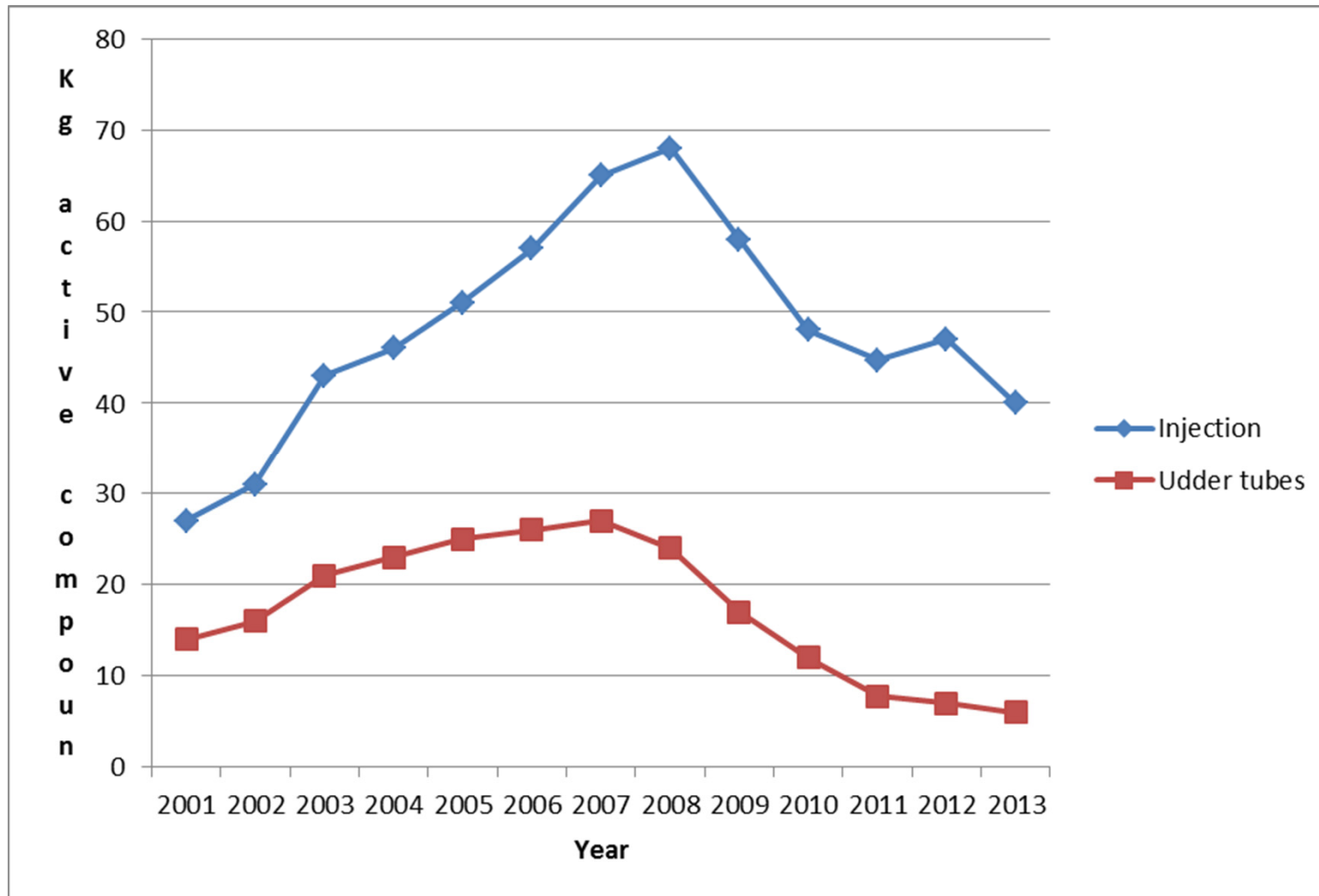
## The more you know the more penicillin





# Critical antibiotics

## 3+4 gen cefalosporines - No Flourokinolones





## Results so far since 2010

- 8% reduction i bulk tank SCC
- 23% reduction in mastitis treatments
- 12% increase in dry cow treatments (tubes sold)
- 14% reduction in kg antibiotics to cattle
- 12% reduction in kg antibiotics to cows
- 4% increase in penicillin to mastitis (total 80%)



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