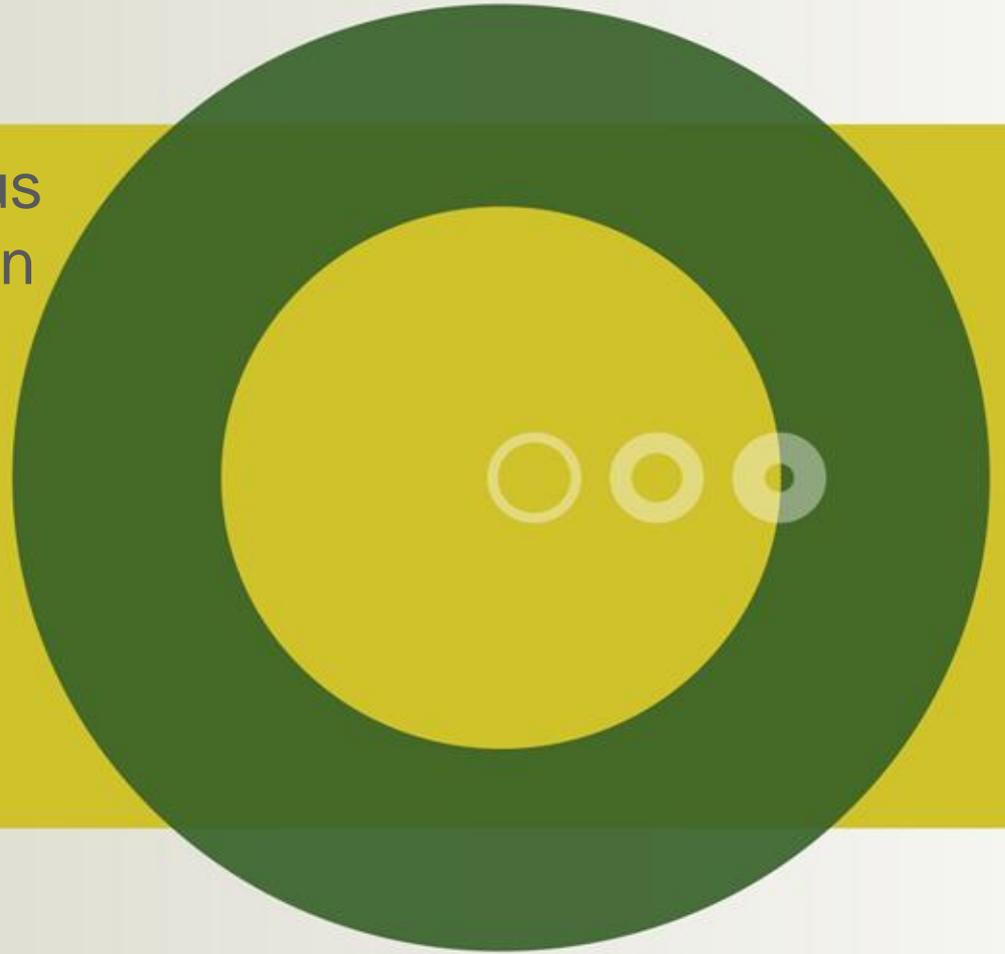


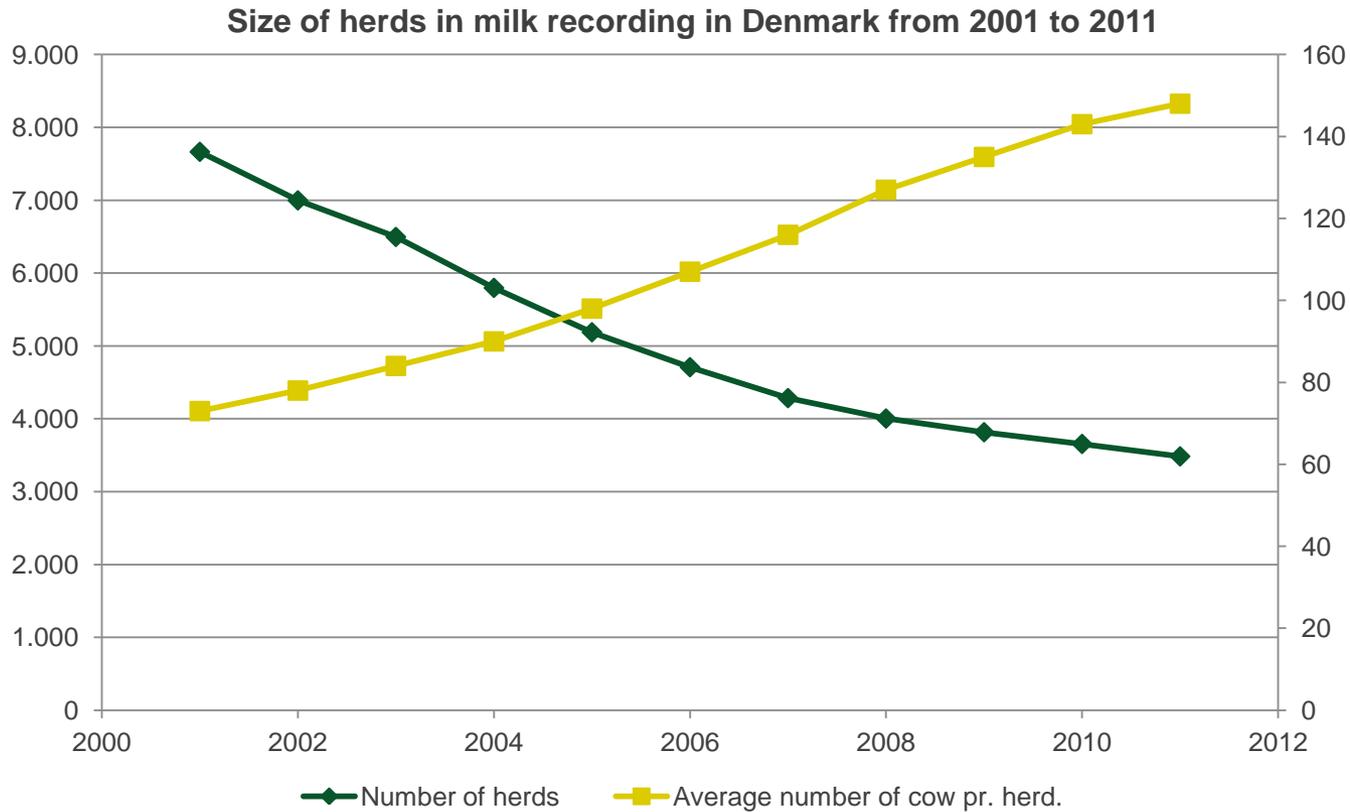
Logistics of the milk sample

Data and milk, with focus on additional services on recording samples

Niels Henning Nielsen
nin@vfl.dk



Increasing size of average herds = New challenges



The goal is a broader service and higher value.

- Secure connection between cow and sample.
- Sampling must interfere with milking as little as possible.
- The risk of error must be minimized.
- The sample must be handled with as little labor as possible.
- Development of multiple services offered to each herd.
- Increased value of milk recording.

The center is the sample - not the meter/equipment!

**We already
paid to get
the sample
from the
cow to the
lab**

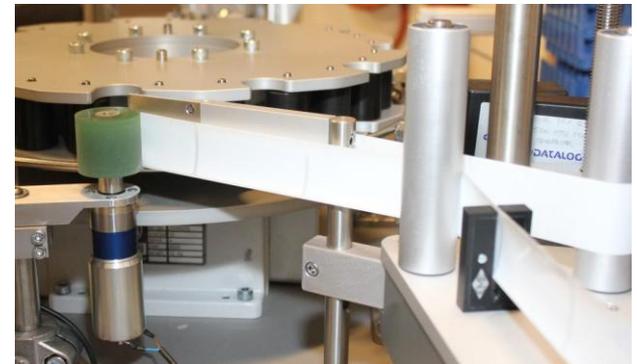
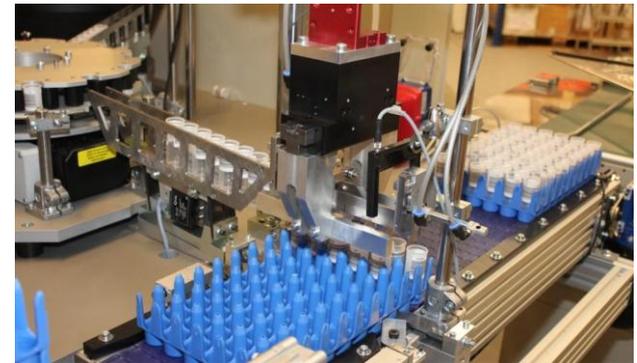
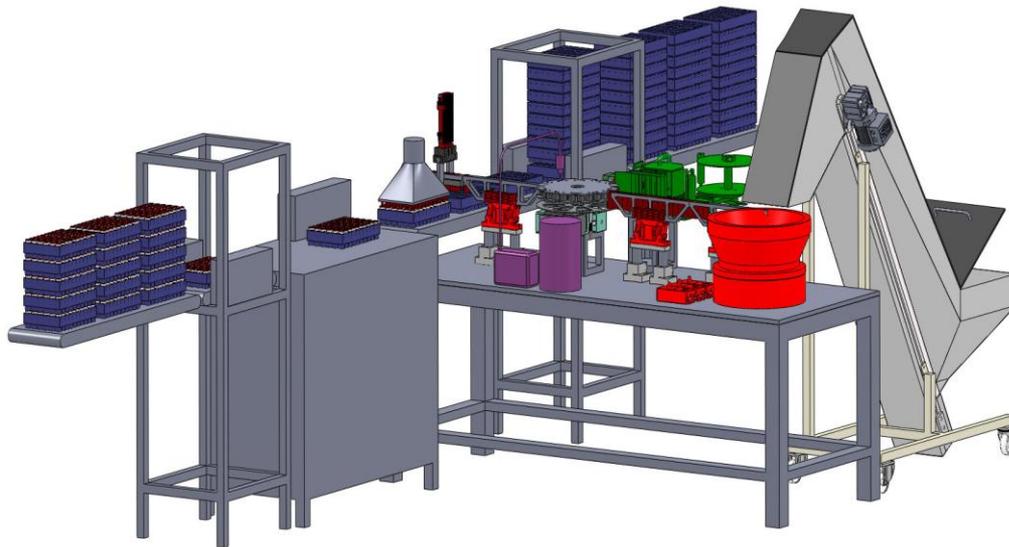


**Why not collect
more information,
and add value to
the productline? –
and money to the
farmers purse!**

The real issue is to generate value on
the informations we collect.

All samples of barcode ensuring coherence between the cow and sample.

- Disposable barcode vials (Eurofins, DK)



Automation in milk recording

Software solutions for all known milking systems

Milking system	Number of herds	Percent	Number of cows	Percent	Average number of cow pr. herd
AMS/VMS	801	23%	139.579	27%	175
Tie stall	767	22%	41.357	8%	55
Rotary	139	4%	46.526	9%	284
Side-by-Side	209	6%	46.526	9%	250
Herringbone	1.533	44%	242.970	47%	160
Tandem	35	1%	5.170	1%	148

Automation in milk recording.

Barcode Vials	Electronic Milk Meter (EMM)	Lely-Shuttle	Auto sampler	Ezi-Scanner (fixed installed meters)	Antenna
  	  	  	  	  	 

Automation in milk recording.

Before

Recording

After

Lab



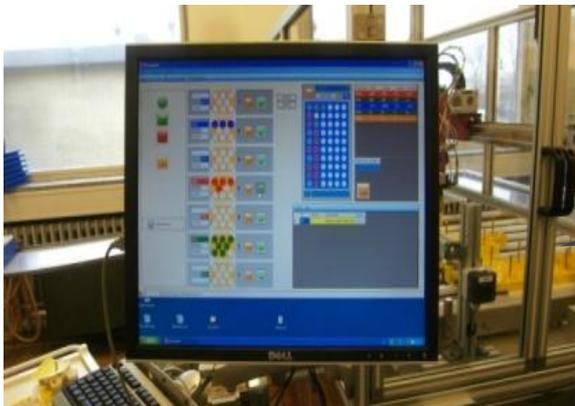
Additional services for veterinary samples

- We have in Denmark app. 5,5 mio. samples per year.
- We offer today analysis for Salmonella Dublin and ParaTB (Johnes) and PCR as part of the recording service.
- This can only be handled in a system with unique ID of vials, and safe link to the cow.
- 5 ILAS 3000 robots at Eurofins lab, Holstebro, Denmark
- 4 CombiFoss 4000
- 1 CombiFoss FT+
- Each robot is to handle app. 1.1 million samples per year.
- 1 Pic and Place Robot

Handling of samples, in the laboratory



The ILAS robot will identify vials for special analysis, and after the CombiFoss (fat, protein, and cell count) the racks are moved to the Pic and Place Robot



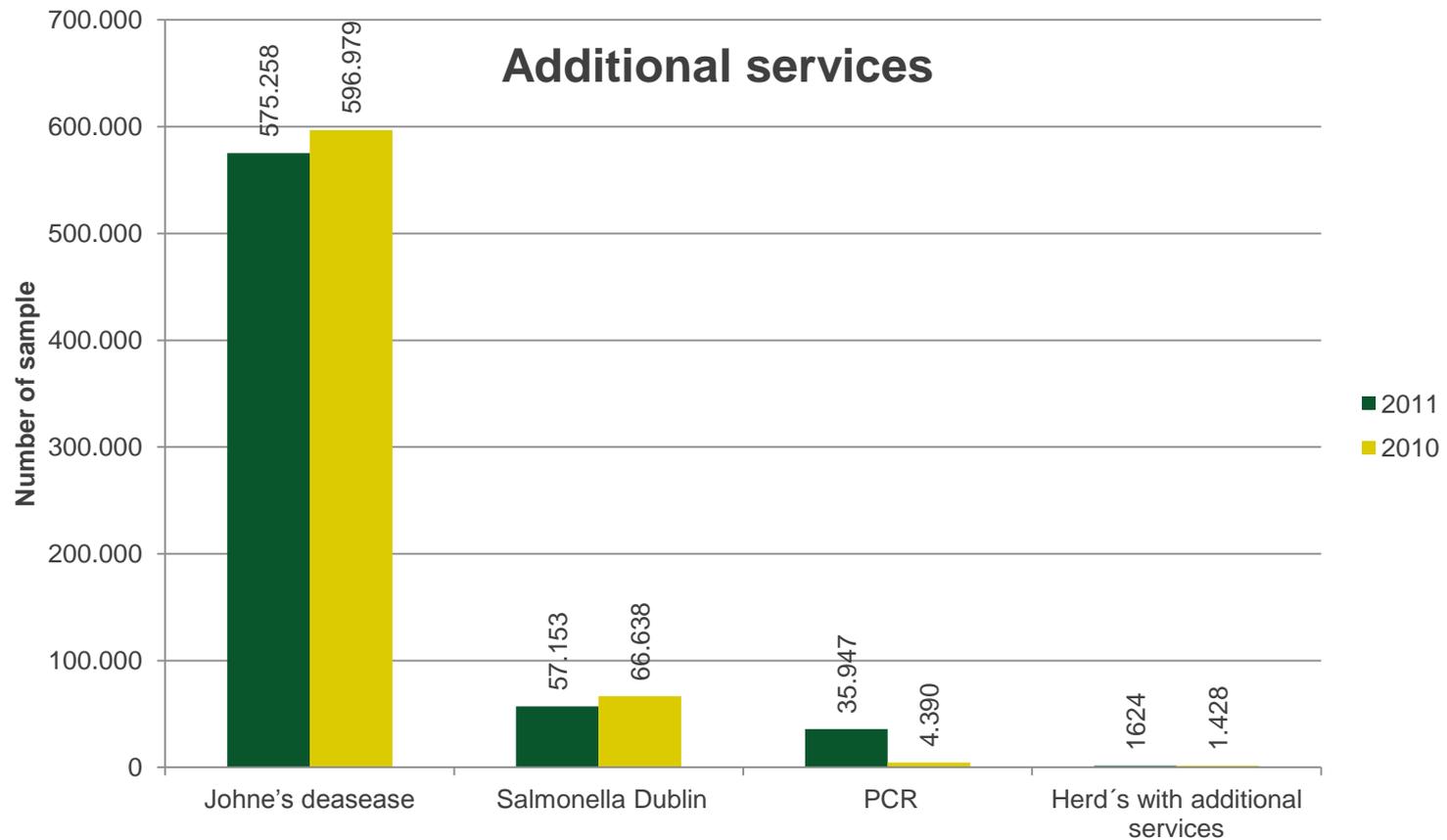
In The Pic and Place Robot it is determined which sample to be send forwarded to additional analyzes

Handling of samples, in the laboratory

- Automation of samples for Johnés deasease



Additional services



Selected for additional test at the farmers personal computer

dhed

eterinær analyser

[Strøring](#) | [Produktion](#) | [Sundhed V](#) | [Besætning](#) | [Dyr](#) | [Egen udskrift](#) | [Ins.plan](#) | [Dataudtræk](#) | [Masseindtastning](#) | [Bemærkning](#)

[n](#) | [Klövregi](#) | [Medicin](#) | [Klinisk/velfærdsreg](#) | [Besætningsdiagnoser](#) | [Beh. start](#) | [Behandlinger](#) | [Dokumenter J](#) | [Bluetongue](#) | [Vet. analyser](#)

Næste kontrollering med udtagning af veterinære prøver:

Næste planlagte ydelseskontrol:

Næste beregnet kælvedato er beregnet pr.:

Søgekriterier:
 CTV > Lakt. >

Bestilling til hele besætningen: Paratuberkulose Salmonella

Dyrnr	Lakt. nr.	Forventet			ParaTB						Salmonella			PCR				Godkendt	Ajourf	
		kælvning	kælvning	goldning	1	2	3	4	Inf. grp.	Prøve	1	2	Prøve	1	2	3	Prøve		Dato	
7-01403	4	17-10-12	148	106		0,2	0,1		5	<input type="checkbox"/>			<input type="checkbox"/>	5	1	3	<input type="checkbox"/>	<input type="checkbox"/>		
7-01410	3					0,0	0,0	0,0	0	<input type="checkbox"/>			<input type="checkbox"/>	1	1	2	<input type="checkbox"/>	<input type="checkbox"/>		
7-01424	4					0,1	0,1	0,3	5	<input type="checkbox"/>			<input type="checkbox"/>	4	3	5	<input type="checkbox"/>	<input type="checkbox"/>		
7-01428	3				0,0	0,0	0,0		0	<input type="checkbox"/>			<input type="checkbox"/>	4	5	2	<input type="checkbox"/>	<input type="checkbox"/>		
7-01444	4					0,1	0,0	0,0	0	<input type="checkbox"/>			<input type="checkbox"/>	1	5		<input type="checkbox"/>	<input type="checkbox"/>		
7-01445	4					0,1	0,0	0,0	0	<input type="checkbox"/>			<input type="checkbox"/>	1	1	1	<input type="checkbox"/>	<input type="checkbox"/>		
7-01447	3	30-07-12	69	27	0,0	0,0	0,0	0,0	0	<input type="checkbox"/>			<input type="checkbox"/>	4	3	2	<input type="checkbox"/>	<input type="checkbox"/>		
7-01457	3					0,2	0,1	0,1	0	<input type="checkbox"/>			<input type="checkbox"/>	1	1		<input type="checkbox"/>	<input type="checkbox"/>		
7-01470	3				0,1	0,1	0,6	0,7	5	<input type="checkbox"/>			<input type="checkbox"/>	5	3	4	<input type="checkbox"/>	<input type="checkbox"/>		

PathoProof kit configurations

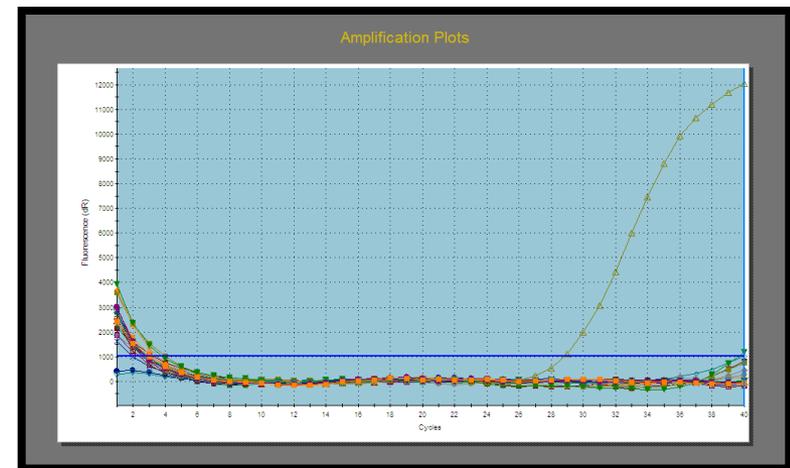
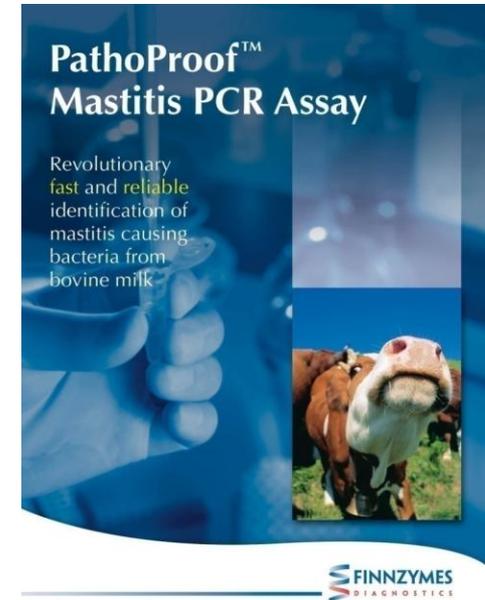
PathoProof Mastitis Complete-12

Staphylococcus aureus
Coagulase negative staphylococci
Streptococcus agalactiae
Streptococcus dysgalactiae
Streptococcus uberis
Escherichia coli
Corynebacterium bovis
Enterococcus faecalis and *faecium*
Klebsiella pneumoniae and *oxytoca*
Serratia marcescens
Arcanobacterium pyogenes and *Peptostreptococcus indolicus*
 Staphylococcal beta-lactamase gene

⇒ These bacteria are responsible for >95 % of all clinical and subclinical mastitis cases

PathoProof Mastitis Major-3

Mycoplasma bovis
Staphylococcus aureus
Streptococcus agalactiae



Dry cow treatment (veterinarian decides)

- Staf aureus if < 40
- Strep dysgalactiae < 40
- Strep uberis < 40
- Strep agalactiae (B) < 40

- Other bacteria typical < 30-32

Selective treatment at cows before drying of

- Last time cell count for example > 200.000
- Second last cell count value select > 3
- Third last cell count all cows select for example > 200.000
- Third last cell count value select for example > 3
- It is possible to have more than one kriteria at the same time

Receives an SMS when there is an analytical result

Tilmelding til e-mail / sms besked

Mulige modtagere:

Mobil	Email	Navn	Ajourført	
			Dato	Af bruger
	ryksyd@slf.dk		22-02-10	RYKMJ
25210994		Flemming katborg	15-04-11	RYY653

Besked skal sendes i følgende situationer:

Tekst	Modtagere
Bestilling af veterinære prøver er afsendt	1
Kontrolleringen er beregnet	1
Kontrolleringsfejl	0
Meddelelser fra RYK / Dansk Kvæg	0
Når Fejlliste er dannet	0
Når nye ParaTB udskrifter er klar, Central print	0
Når nye ParaTB udskrifter er klar, lokal print	0
Når nye PCR resultater er klar	0
Når nye salmonella udskrifter er klar	0
Når nye salmonella udskrifter er klar, lokal print	0
Når nye salmonella udskrifter er klar, Central print	0
Ved bestilling af akut hændelsesliste	0
Ved fejl i indlæsning af Kliniske registreringer	0
Ved fejl i indlæsning af medicin til besætningen	0

Luk **Hjælp**

Modtagere

Angiv modtager:

Bestilling af veterinære prøver er afsendt

Tilmeld	Mobil	Email	Navn
<input checked="" type="checkbox"/>		ryksyd@slf.dk	
<input type="checkbox"/>	25210994		Flemming katborg

results at the farmers computer

Dansk Kvæg	Malkekvæg	PCR - Besætningsudskrift
	Bes-nr Kontrolldato 22.01.10 4	Udskrevet 08.02.10 15.32 Side 1 Jørgen Katholm 87 31 20 00 9985

Tankmælksundersøgelser

Dato	Staf a	Staf sp	Lac-tam	B-str	Str d	Str u	Ent	C. Bovis	E. Coli	Kle	S. Mac	A. pyo
20.01.2010	34,5	33,2	35,8	40	40	31,7	40	32	39,9	40	40	39,6

Enkeltdyrundersøgelser

CKRdyrn Dato	DEK	Staf a	Staf sp	Lac-tam	B-str	Str d	Str u	Ent	C. Bovis	E. Coli	Kle	S. Mac	A. pyo
-00023 2010	191	40	29,3	34,6	37,4	36,3	34,6	40	40	40	40	40	37,5
-00337 2010	415	40	24,8	26,2	40	40	40	40	26,1	40	40	40	40
-00549 2010	479	40	29,9	37,3	33,6	40	40	40	32,3	40	40	40	40
-00790 2010	194	40	27,4	30,1	40	40	39,4	40	27,7	40	40	40	40
-00830 2010	51	40	27,6	32,9	40	40	40	40	28,5	37,9	40	40	35
-01003 2010	374	40	37,4	40	40	40	40	40	28,4	40	40	40	40
-01031 2010	298	27,2	24,9	31,7	40	40	40	40	32,7	39,7	40	40	40
-01075 2010	176	27,2	24,7	26,6	40	40	38,9	40	30,2	40	40	40	40
-01077 2009	200	40	40	40	40	40	15,9	40	40	33,1	40	40	40
-01092 2009	642	29,1	22,4	24,7	22,8	40	40	28,6	23,5	40	40	40	36
-01098	308	40	25,4	40	40	22,6	36,9	40	26,7	40	40	40	33,5



See you in Aarhus



Welcome to
ICAR Technical Workshop
29. – 31. May 2013
in Aarhus, Denmark

For details check
www.icar2013.dk

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