

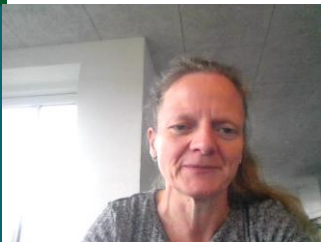
Maximum weaning capacity

- how to achieve the full potential of your sows

Chief Scientist, PhD, Vivi Aarestrup Moustsen,
SEGES Danish Pig Research Centre,
Honorary associate professor in animal husbandry, pigs,
University of Copenhagen



Good access to the teats makes piglet life easier 🐷



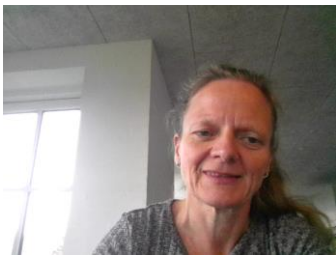
Nursing capacity of hyper-prolific sows

Number of liveborn piglets exceeds number of teats

- Need for nurse sows
 - Need for pens for nurse sows
 - Establishing nurse sows takes time
 - Piglets moved more than once have reduced weight gain until weaning

A milk letdown only lasts 8-10 seconds

- Space at the udder

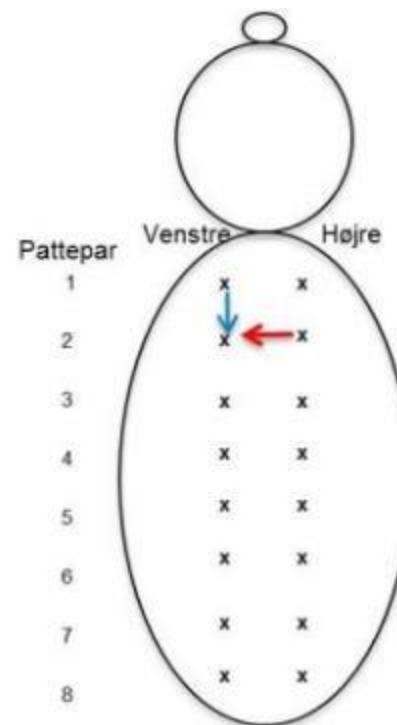


It takes milk producing tissue



Udder, glands and teats

- 10 herds
- App. 40 sows per herd
- App. 8 days post farrowing
- Counted glands and teats – left and right side
- Measured distance between teats
- Scored glands and teats



Mod.e. Thorsen, AU



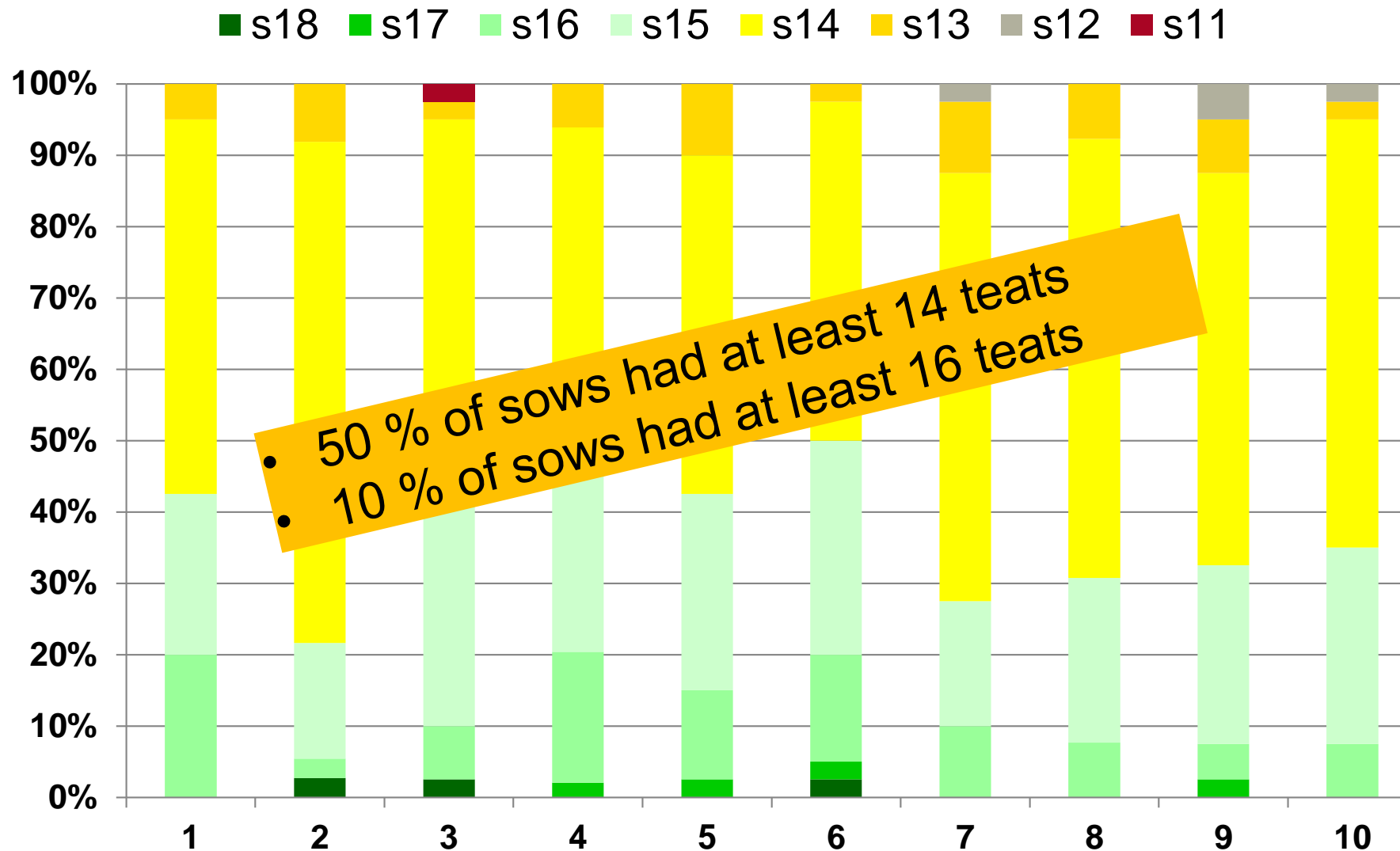
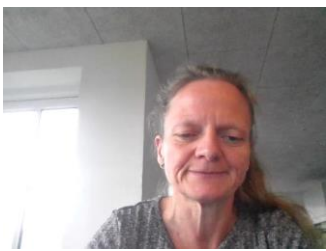
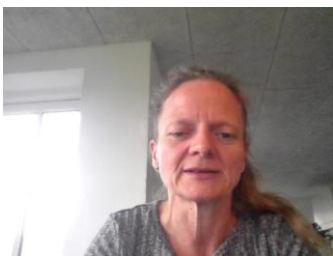
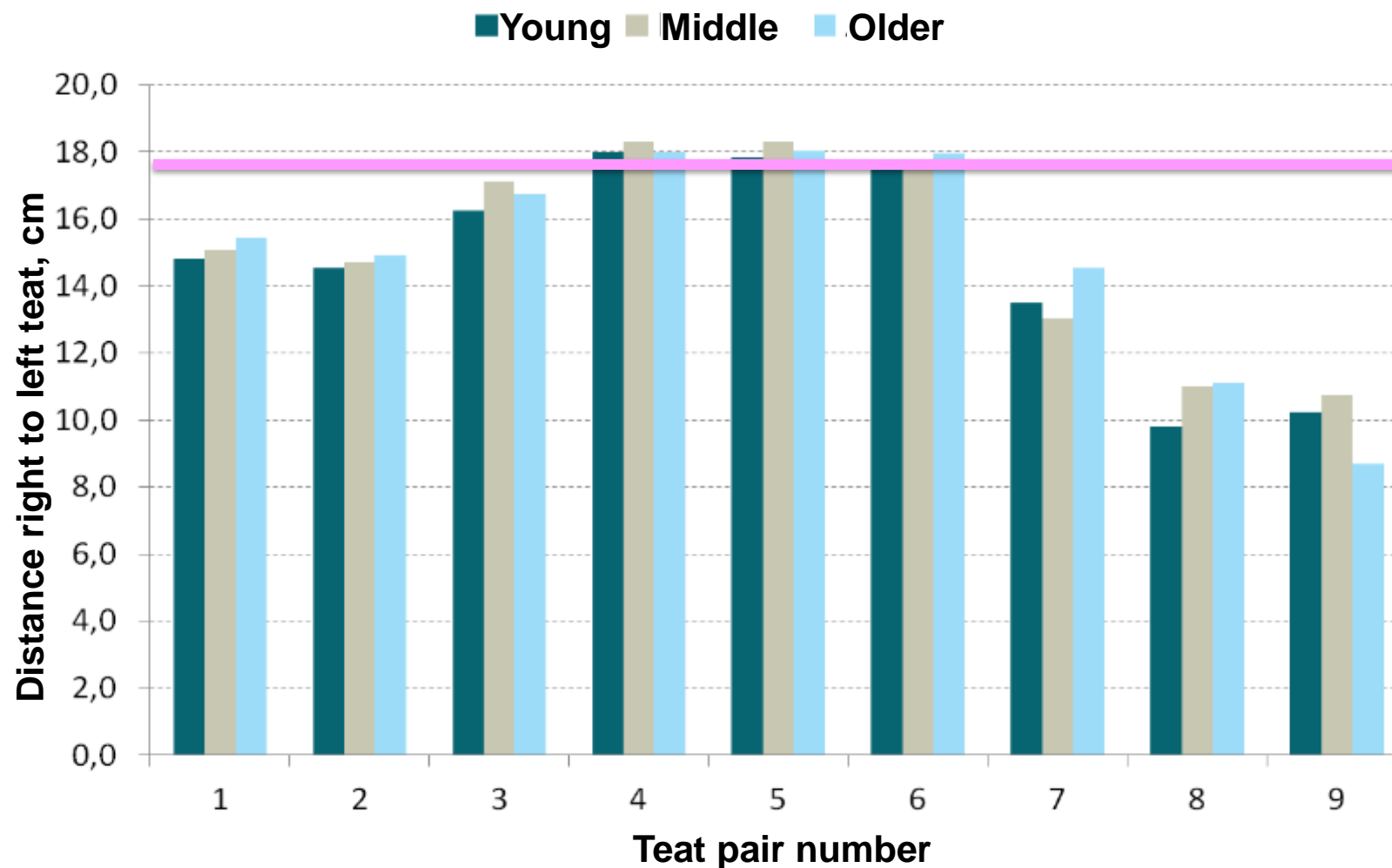


Illustration of total number of functional teats in the 10 herds (x-axis is herd id). S11 is proportion of sows' in herd with 11 functional teats, S12 is proportion with 12 functional teats and so on...



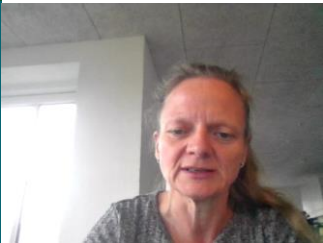
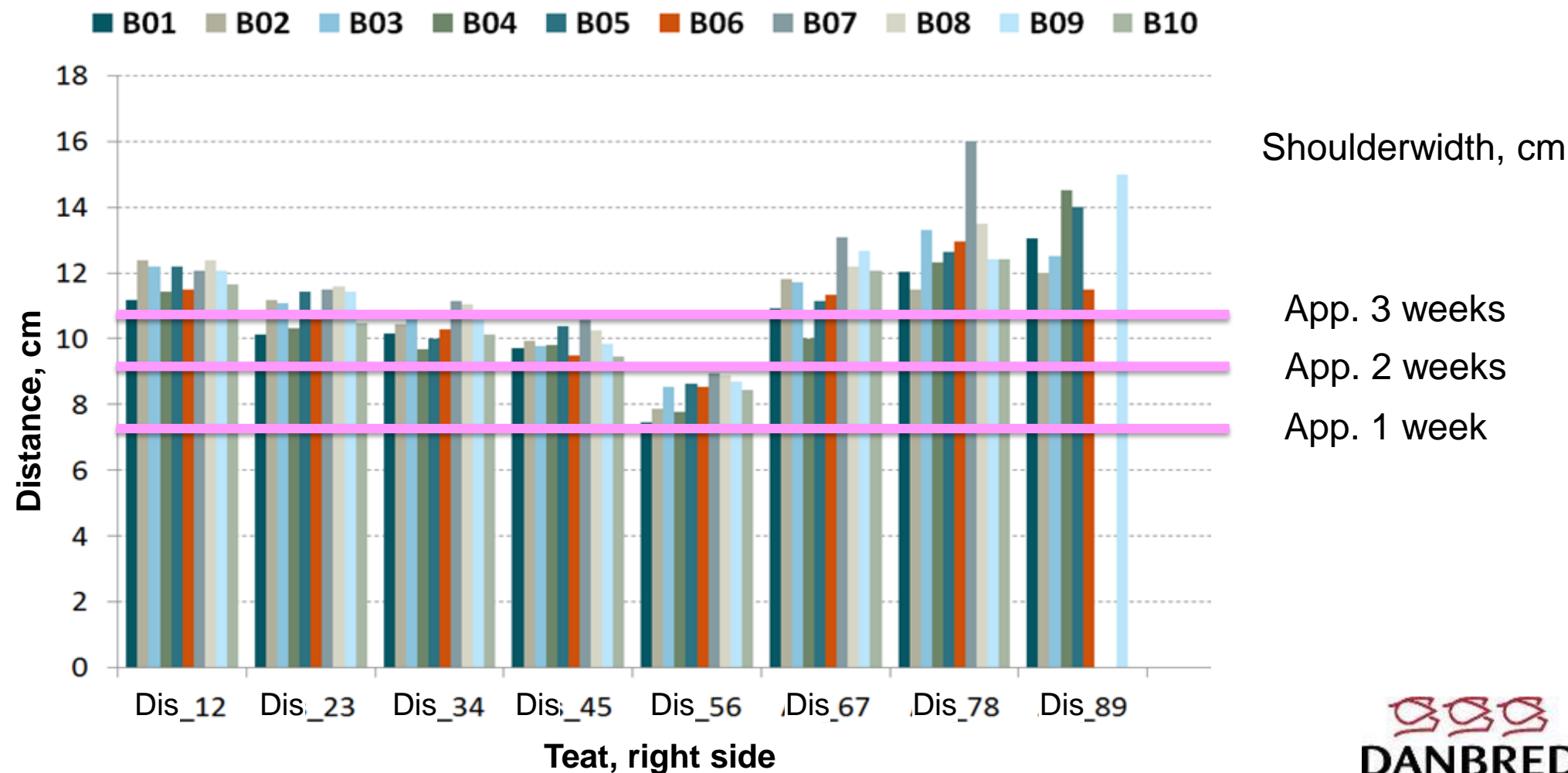
Dimensions of piglets and available space at the udder (1)

Distance right/left \approx height of piglets



Dimensions of piglets and available space at the udder (1)

Distance between teats \approx shoulderwidth of piglets



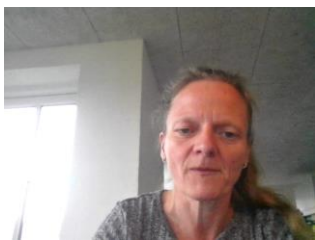
More piglets at the sow => less piglets moved away and less 'vacant' pens



- Equalize litters to 13
 - Need to move at least 600 piglets per 100 farrowing
 - Establish app. 46 nurse1-sows per 100 farrowings
- Equalize to 15
 - Need to move at least 400 piglets per 100 farrowings
 - Establish app. 27 nurse1-sows per 100 farrowings
- Equalize to 18-20
 - Need to move '0' piglets per 100 farrowings
 - Establish 'no' nursesows per 100 farrowings

From 13-15 piglets leads to app. 200 less piglets being weaned at 21 days

**Bonus:
More piglets have similar age and immune-status**



Can a sow nurse more piglets than the number of teats on the sow?

Without supplementary milk

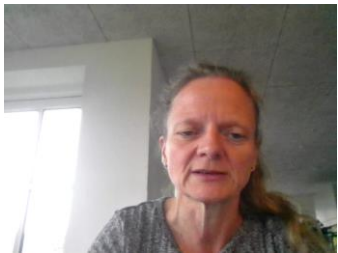
- Two treatments in our trial:
 - 15 teats – equalized to 15 piglets
 - 14 teats – equalized 15 piglets
- Assumptions
 - At weaning at least one piglet less at sows with 14 teats compared to sows with 15 teats



	15 teats	14 teats
Litters, no	73	73
Average parity	3,0	2,9
Liveborn, no/litter	18,5	19,2
Stillborn, no/litter	1,8	1,5
Totalborn, no/litter	20,3	20,6

Trial

- No supplementary milk
- The largest piglets were moved to nurse sows
- Smallest piglets were placed at 3rd-4th parity sows
- We were in the herd on Tuesdays;
 - 15 piglets in all litters Tuesday-start of trial
 - Litter in trial for 21 days (weighted again three Tuesdays later)
- If in risk of dying, staff could move a piglet away from it's litter



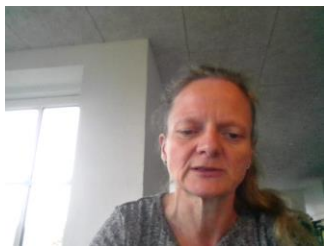
Results

Meddelelse
nr. 1197

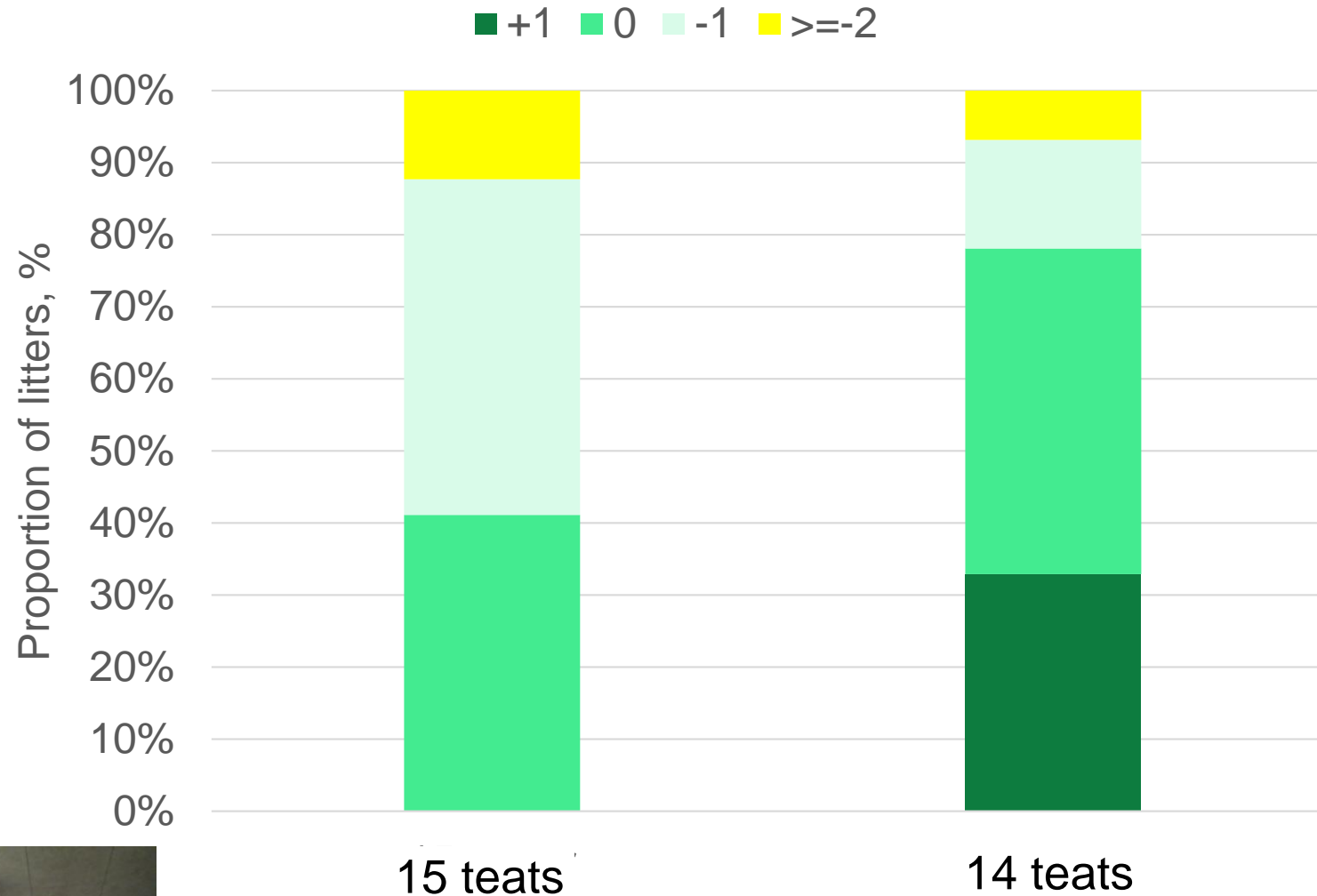
	15 teats	14 teats	P-value
Number pigs D21 ¹ , no/litter	14,3	14,0	0,61
Litterweight D21 ¹ , kg	92,4	90,7	0,31

¹ Fixed day of the week.

² Values are corrected means (LSMEANS).



Number of piglets D21 relative to number teats



- 30+ % of the sows nursed 15 piglets
 - 30 % of the sows with 14 teats nursed 15 piglets

→ Sows with 14 teats can be cared to nurse 15 piglets

Meddelelse
nr. 1197


DANBRED

 **SEGES**
Danish Pig Research Centre



Annual production figures from the herd - 2020

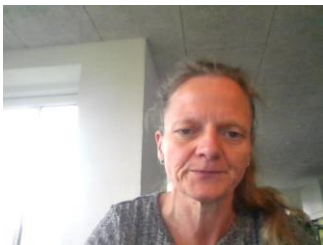
- Littersize 19.2 liveborn and 1.6 stillborn
- Numbers weaned per weaning 13.3 piglets
- Weaned per litter 17.0
- Liveborn dead before weaning 10%
- 29 lactation days
- 40.7 piglets per annual sow



Important routines in the herd's farrowing unit



- Preparation before farrowing
- Lactation days, list with nurse sows, sows nursing capacity
- Farrowing and litter equalization
- The small piglets
- Daily management in the farrowing unit



Before farrowing

- Count teats
- Supply straw
- Adjust crate
- Share sow history from gestation unit
- Daily surveillance of sows

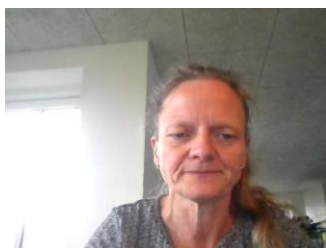


List with sows to be nurse1 and nurse2



- The list is made by the manager of the farrowing unit before the days with many farrowings
- Important to choose sows where piglets will thrive


AS					
sti	13	5695 ¹	14 stk	25/8	
	27	5697 ¹	12 stk	26/8	
	71	5698 ¹	16 stk	28/8	
	73	5555 ²	12 stk	28/8	
	77	5559 ²	13 stk	29/8	
	19	5554 ²	13 stk	30/8	
MS. lørdag					
sti	97	5576 ²	14 stk	11/9	
	106	5575 ²	14 stk	11/9	
	88	5388 ³	15 stk	12/9	
	90	5239 ⁴	15 stk	12/9	
MS søndag					
sti	96	5579 ²	14 stk	13/9	
	87	5573 ²	14 stk	14/9	
	104	5574 ²	14 stk	14/9	




Nursing capacity

- 1. Marcipan-piglets – same high quality and a large litter
- 2. Ok-piglets
- 3. Not good enough piglets







SO NR. 5194 FØDT: 1 / 2018

MOR: FAR:

Løbet		Født dato	Kuld nr.	Antal v. fødsel		Føravføring			Vaccination		Antal godkøbt el. bemærkninger	
Dato	v. omr.	Dato	v. omr.	Lev.	Døde	Dato	Antal	Vægt	Alder	I	II	
25/5	162	6/6	152	pr								2
31/10	16'			÷pr								24
17/3	16'			MS	12/10							45
6/8	16'			pr	vulvabid							12
				124-181								33
				små	16/7							
				÷pr								

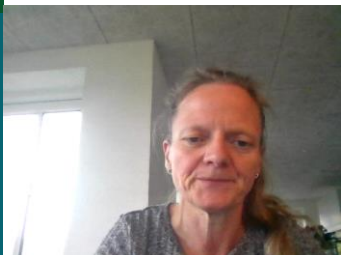


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				124-181		
				små	16/7	
				÷pr		



Farrowing

- Attention – ensure sows recover farrowing
- Quick litterequalisation
- Farrowing before lunch/lunch – litter handled in the afternoon/evening
- Small and born weak get glucose-syrup and are placed underneath the heat lamp



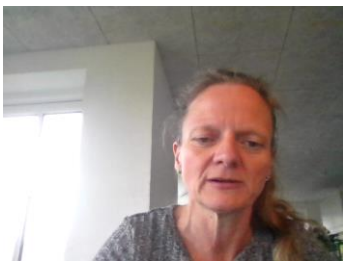
Litter-equalization and nurse sows



- The large piglets with dry umbilical cord to Nurse1-sows (2nd parity)

First in the creep with the sows own piglets, then together for 1-2 hours

- Litter-equalization to the rest of the sows
- Important piglets within litter are homogenous!

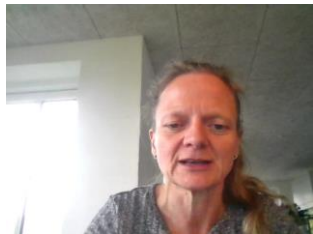


Matching of sows and piglets



Successful litter equalization

- 1st parity – Her own piglets, medium or large
- 2nd parity – Medium piglets – that are strong enough to be moved again day 6-7
- 3rd parity – Small piglets (if sows in previous lactations showed nursing capacity)
- 4th parity – Small piglets
- 5th parity and older – Medium and large piglets



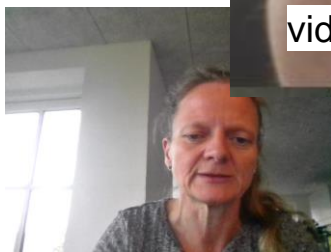
Make the small ones grow too

- Choose the best milking sows
- Glucose-syrup
- Warmth
- Dry creep areas





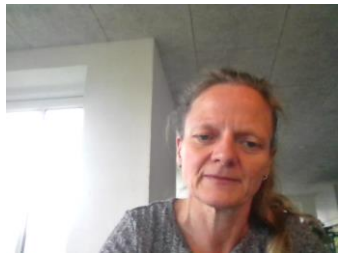
video



Everyday – observations of the individual sow

Check up on each sow each day

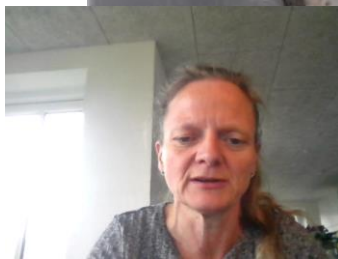
- Sow
 - Has she eaten her ration (or why not)?
 - Udder – what does it look and feel like?
 - Medication – is there a follow up on treatment from previous days
 - Shoulder – are there signs of potential lesion?
 - Crate adjustment
- Feed
 - Day 1-7 adjust every day
 - Day 7 and onwards – adjust every second day
- Piglets
 - Diarrhea?
 - Joint lesions?
 - Hungry?
 - Dry and warm creep area?



Space at and easy access to the udder



Space at and easy access to the udder



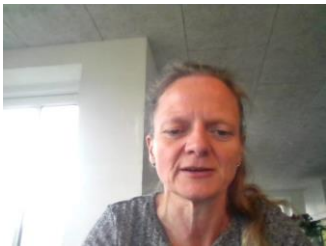
Care of sows with 14 teats can lead to more of them nursing 15 piglets 👍

Important experiences in herd:

- A piglet's growth is not enhanced by moving it - it needs the best place first time
- After equalization – no more movements (unless litter size < 10 piglets)
 - Have a strategy for placement of piglets
- 'Never' move a single piglet
- Seven days in a week!
- The team takes responsibility



**ACKNOWLEDGEMENT
to Mette and Gitte 👍**





Possible high weaning capacity
- the sows' potential is there

