



# The sow takes care of many piglets

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Flemming Thorup, SEGES Innovation

Grisekongressen, October 25th, 2023, Herning

SUPPORTED BY

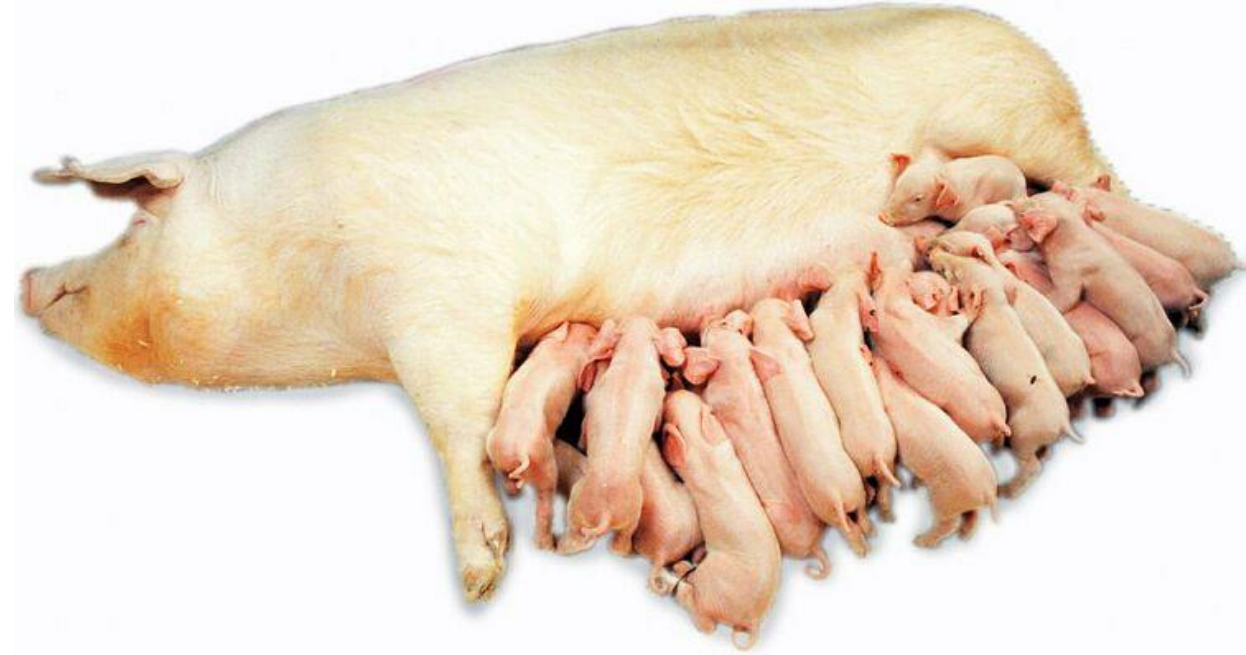
**Danish Pig** Levy Fund

**SEGES**  
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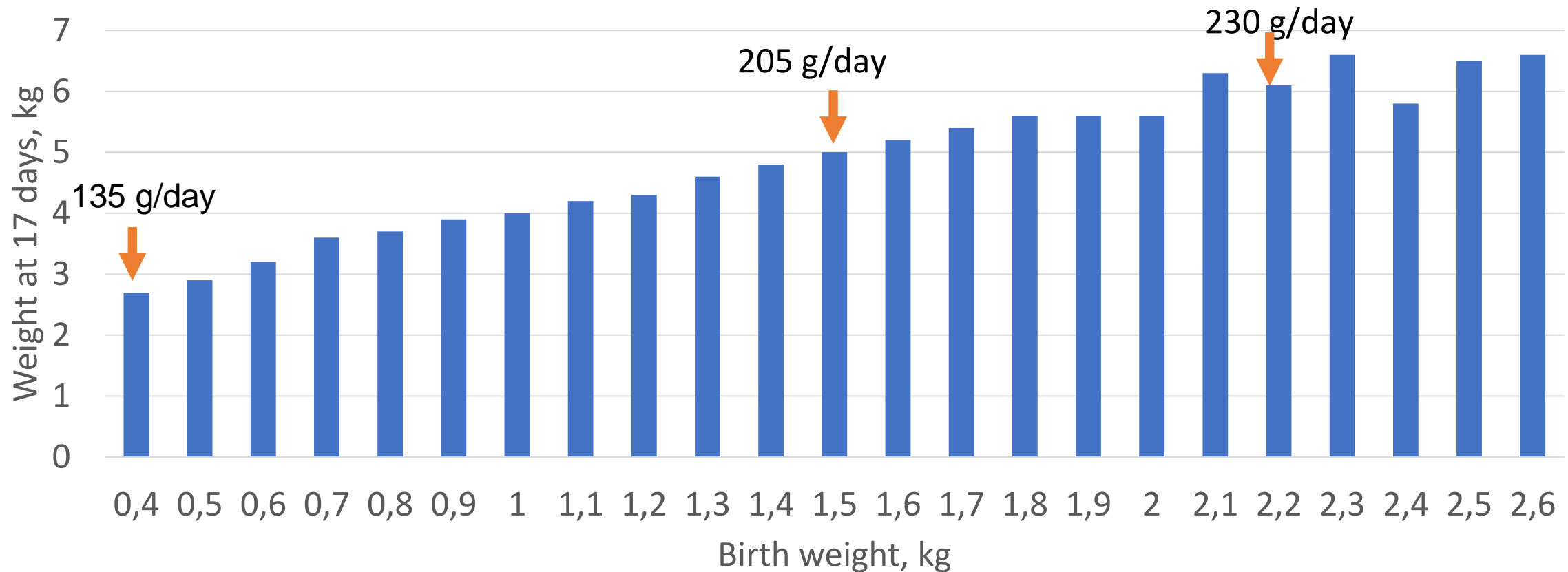


# We want the sow to wean many large piglets

- Flemming
  - This is how piglets grow
  - Piglets and teats gone missing
  - Factors affecting piglet growth
- Dennis
  - Employees at Molbo Agro
  - Production results
  - Nurse sows
  - Work plans



## A large piglet at birth weighs more on day 17



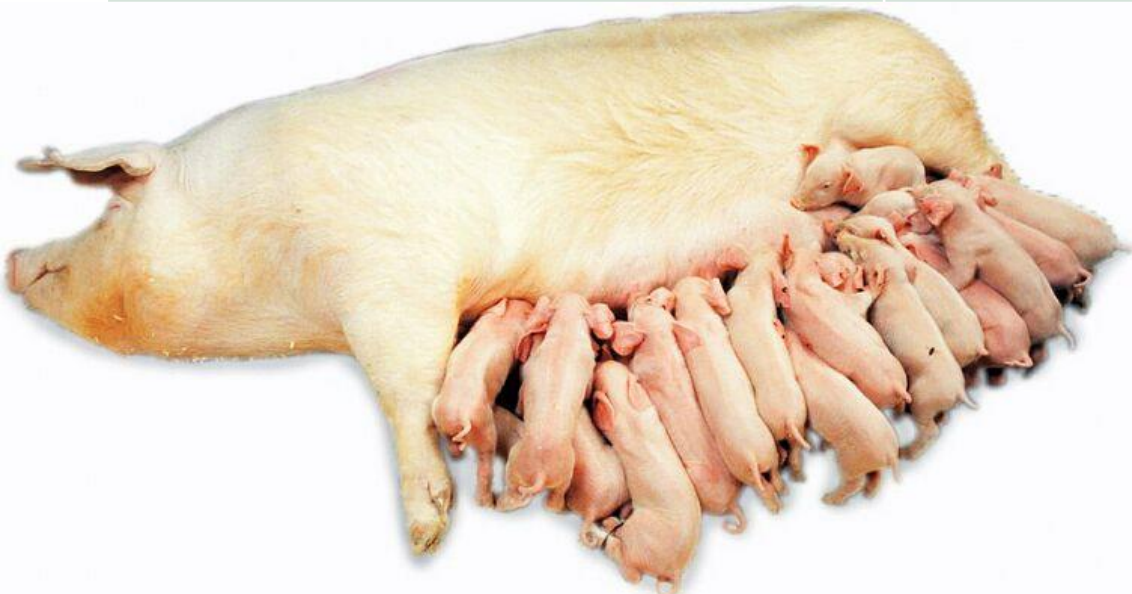
You cannot feed the sow extra to achieve a higher birth weight  
If the sow by mistake gets too little feed before farrowing, then birth weight will be reduced

Trial report no. 1153. 8,000 pigs

# When small piglets are given to a "small nurse" and the largest piglets to a nurse sow, do not adjust litters by size of piglets

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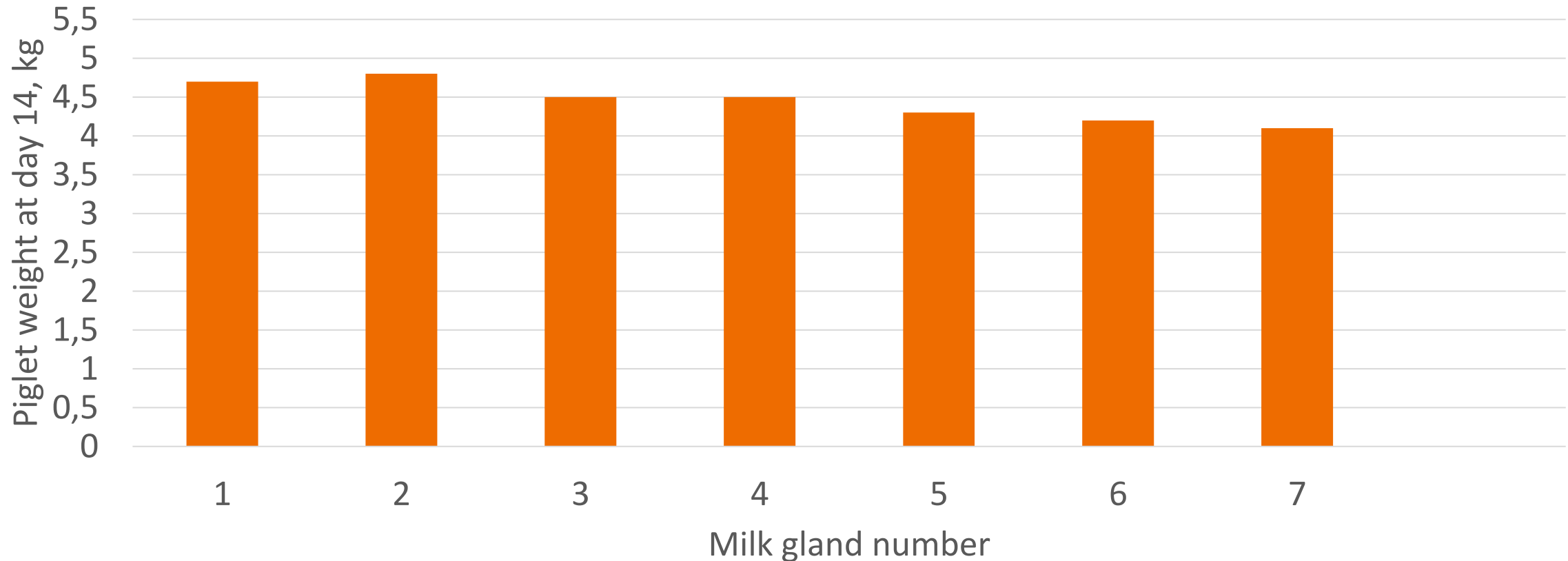
Group	Piglets were NOT sorted by weight	Piglets were sorted by weight
Number of litters	227	224
Weight before litter adjustment, kg	1.33	1.30
<b>Weight by day 17, kg</b>	<b>4.5</b>	<b>4.5</b>
<b>Survival, %</b>	<b>93%</b>	<b>92%</b>
<b>Piglets weaned from their own mother, %</b>	<b>69%</b>	<b>51%</b>



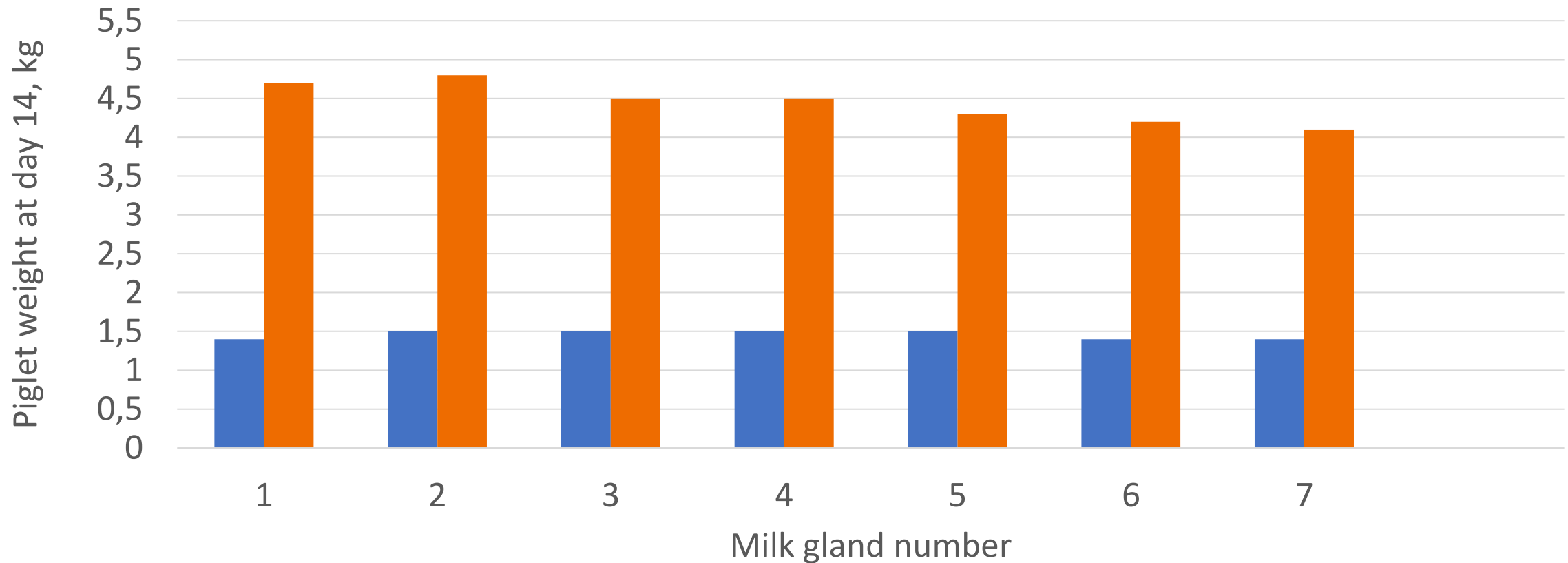
Trial report no. 1153. Two herds

# The front milk glands produce more milk

On day 14, piglets at the first glands weigh  $\frac{1}{4}$  -  $\frac{1}{2}$  kg more than the rest of the litter  
All glands can feed and wean a piglet



# The piglets do not know that the first glands are the best



**Piglets at both front and back milk glands weighed 1.5 kg at birth**

Thesis by Lise Lotte Koldsø, 2009

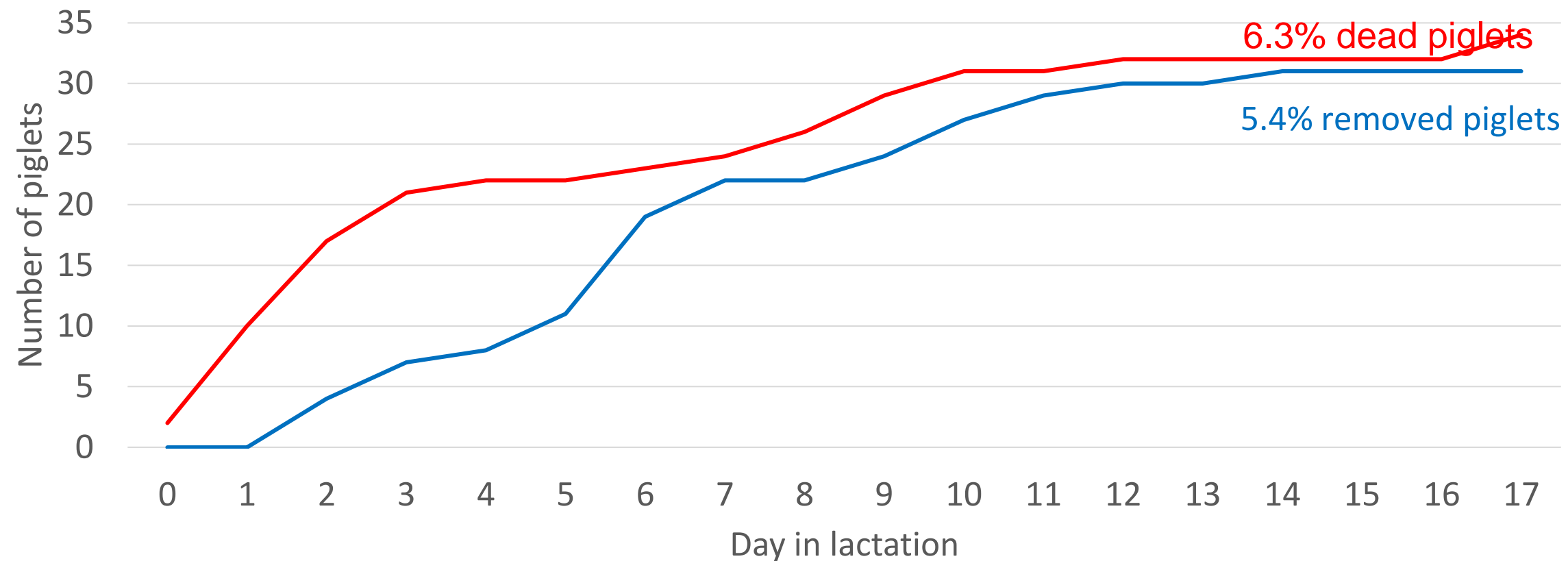
## Loss of piglets and dry milk glands

- All gilts should have at least 14 milk glands
- The best predictor for the number of functional teats at farrowing is the number of teats on a female piglet at weaning
- Check for milk gland tissue and intact teats just before or after farrowing



# Loss of piglets by day in lactation in 44 sows with 15 milk glands, nursing 13 piglets

## Sum of piglets missing during lactation

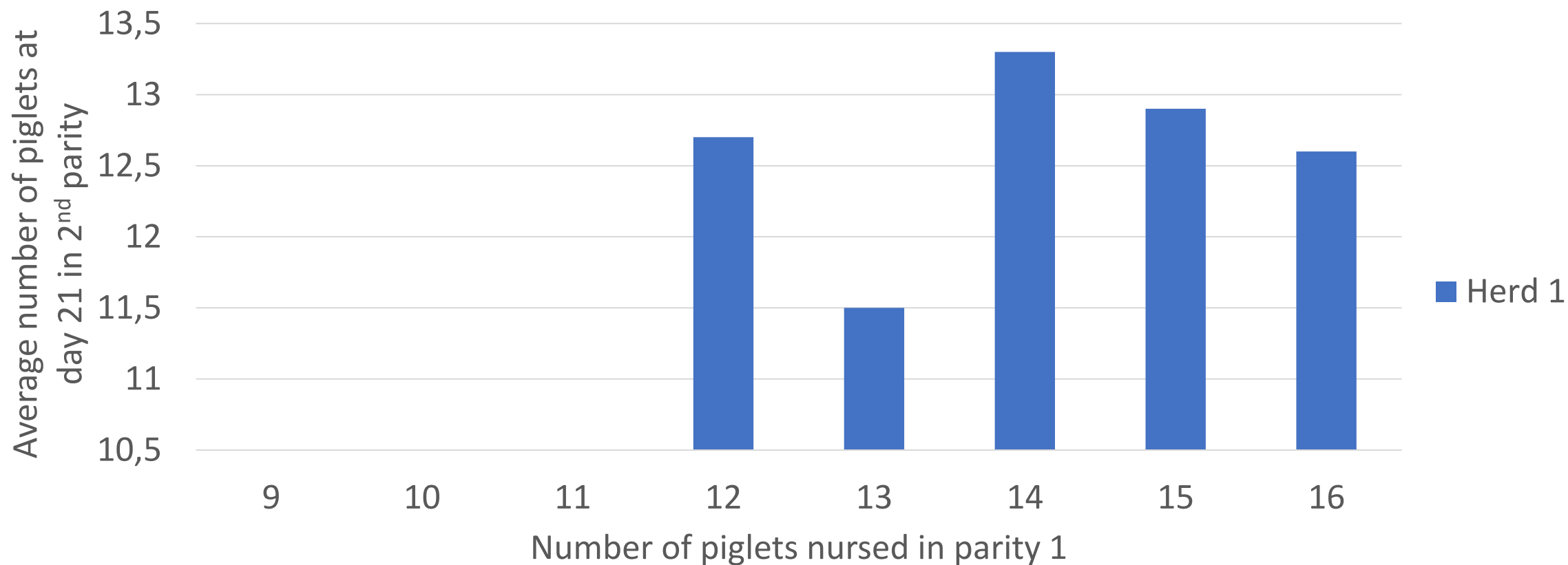




# Dry milk glands

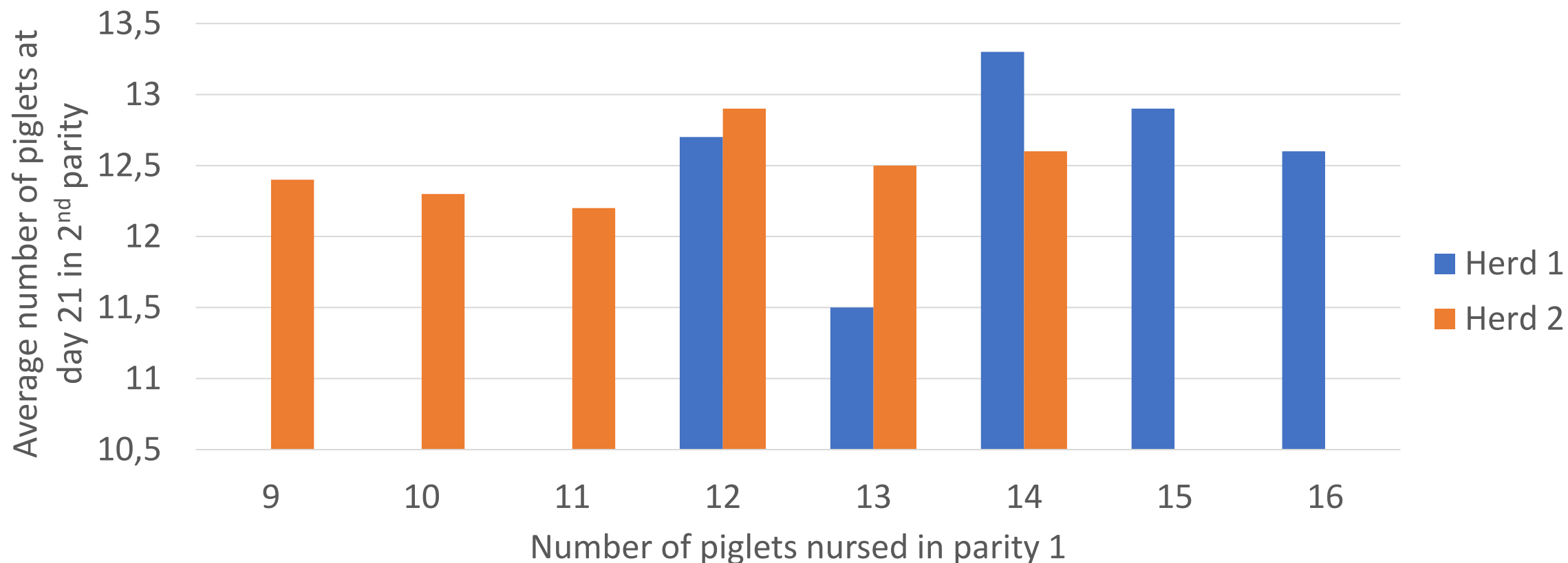


# The number of piglets on day 21 is not a good indicator of how many piglets the sow can nurse in the next litter



Correlation between piglets nursed day 21 in first and second parity  
Minimum 5 sows per column.

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## Effect on weaning weight when moving piglets

- Moving a piglet before it is 48 hours old does not affect weight at weaning
- Moving a small piglet that is more than 48 hours old, will reduce weight at weaning by app. 600 gram, but may just have saved the life of this piglet.
- Moving a large piglet that is more than 48 hours old, will reduce weight at weaning by app. 1 kg





## Other factors that reduce weaning weight

- Piglets born by gilts weigh app. 150 gram less at birth
- Piglets nursed by gilts grow app. 7 gram less per day = they weigh 150 gram less at weaning
- One extra piglet in the litter reduces weaning weight for each piglet in the litter by 150 gram
- One extra day of nursing increases weaning weight by 200 gram
  - If a nurse sow weans its 14 piglets 4 days ahead of planned weaning, weaning weight drops 800 gram per piglet or 11.2 kg per litter



# Conclusion

- Birth weight of the piglet affects weaning weight
- Extra nursing days increase weaning weight
- Nurse sows reduce average weaning weight
- The piglet does not know which teat is the best
- A dry milk gland is caused by a missing piglet. This gland will often produce milk again after the next farrowing
- The number of weaned piglets does not indicate how many piglets the sow can nurse in the next litter



# MolboAgro

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Driftsleder - Dennis Højlund Jørgensen

# Agenda

- The team:
  - Management
  - Sow unit/weaner unit & finishers
- E control/herd results
- Nurse sow specifics
- Timelines:
  - Daily routines, farrowing unit and weekly management
- What is it we do?
- Round up and questions



# The team - Management

Martin - Owner



Dennis – Herd manager



Jesper – Field responsible



# The team – sow unit/weaner unit & finishers

Anastasiia M.    Johanne - apprentice



Anastasiia C.



Alex



Taras





# Facts

- Roughly 680 sows/year.
- Annual production of 25-26,000 weaners.
- Finishers: 7-8,000 a year.
- Sale of 18-19,000 weaners.
  - Same buyer DK
- Fields roughly 550 hectare.
- Feed mixed on-farm on all sites.
- Gilts are purchased.
- Male pig production.



## E control/herd results

Results per litter	Planned	30.03-23-28.06.23	29.12.22-29.03.23
Live born/litter	18,5	18,7	18,2
Still born/litter	1,5	1,9	2
Weaned/litter	16,5	16,8	15,2
Weaned/ weaning	13,75	13,4	12,8
Lactation days/litter	30	29,5	31,6
Weaning weight/piglet	7	7,2	7,2
Mortality, %	8	10,4	16,5



## E control/herd results

Reproduction	Planned	30.03-23-28.06.23	29.12.22-29.03.23
Weaned piglets/sow /year	40	38.7	34.2
Weaned piglets	Planned	30.03-23-28.06.23	29.12.22-29.03.23
Gain/day	500	477	499
Feed conversion, FEsv	0,75	0,79	0,86
Mortality after weaning, %	1	1.4	2

# Nurse sows

- Step 1  
Find a 1-2-3 parity sow with piglets ready for weaning
- Step 2  
Find a 1-2-3 parity sow with healthy 14-18-day-old piglets
- Step 3  
Find a 1-2-3 parity sow with healthy 3-4-day-old piglets
- Step 4  
Move the largest newborn pigs to the sow with 3-4-day-old piglets
- Step 5  
Litter adjustment: Collect all small piglets with a sow with medium-large udder.
- Step 6  
Adjust the rest, but keep as many as possible where they were born



# Timeline – Daily routines

7:00

- Check farrowings
- Give water to sows
- Feed sows and piglets
- Give potato flour
- Give water to piglets
- Make nurse sows

9:00

- Break and plan the rest of the day
- Discuss problems

9:35

- Prepare feed for sows
- Check piglets
- Check farrowings

11:30

- Feed sows/give water

12:00

- Break

12:35

- Various tasks

14:30

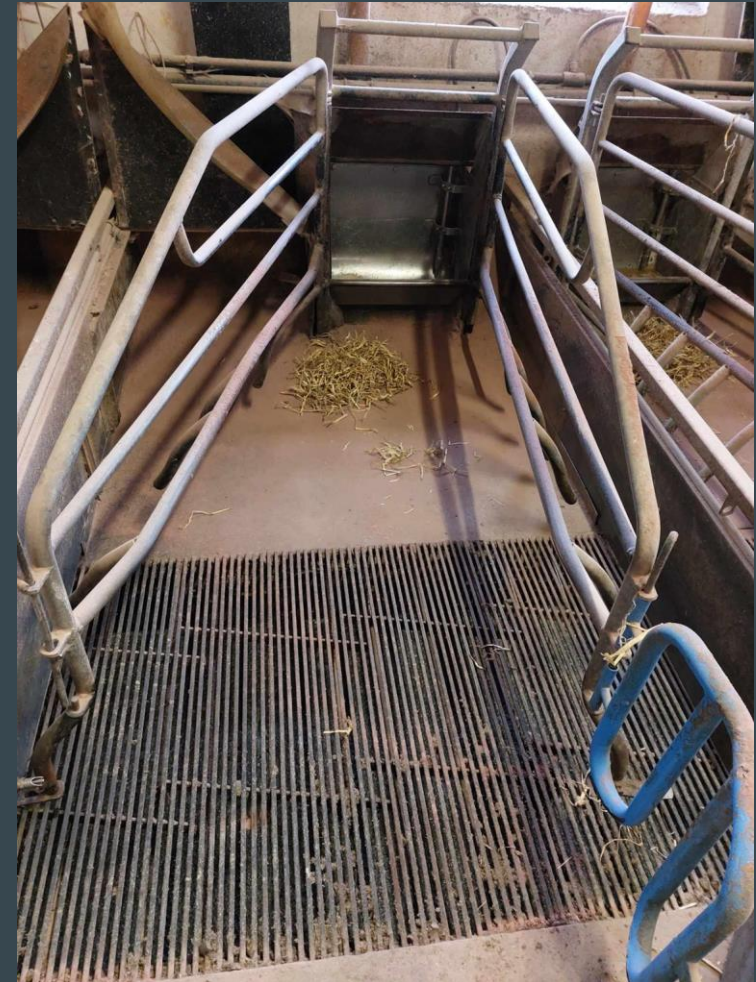
- Feed sows/give water
- Feed piglets
- Check farrowings

15:00

- Working day ends

# Timeline – Farrowing unit - (Day -7)

- Move sows to farrowing unit
- Straw
- Water
- 3.5 feed units/day until farrowing
- Glucose and Glauber salt until farrowing





# Timeline – Farrowing unit – (Day 0)

- Forceris + draxxin
- Litter adjustment
  - Biggest piglets moved to nurse sow
  - Smallest piglets moved to 2/3 sow
  - The rest placed with other sows, but with own mother as far as possible
- Count teats
  - Gilts: +1-2 piglets above number of teats
  - Rest: +1 above number of teats
- Water for sows
- Water for piglets (nipple drinker)



# Timeline – Farrowing unit – (Day 3)

- Follow-up
  - Final adjustments before the litter is fixed
- Tail docking
- Batch is fixed



# Timeline – Farrowing unit – (Day 7)

- Turn off heat lamps
- Follow-up
- Start on weaner feed





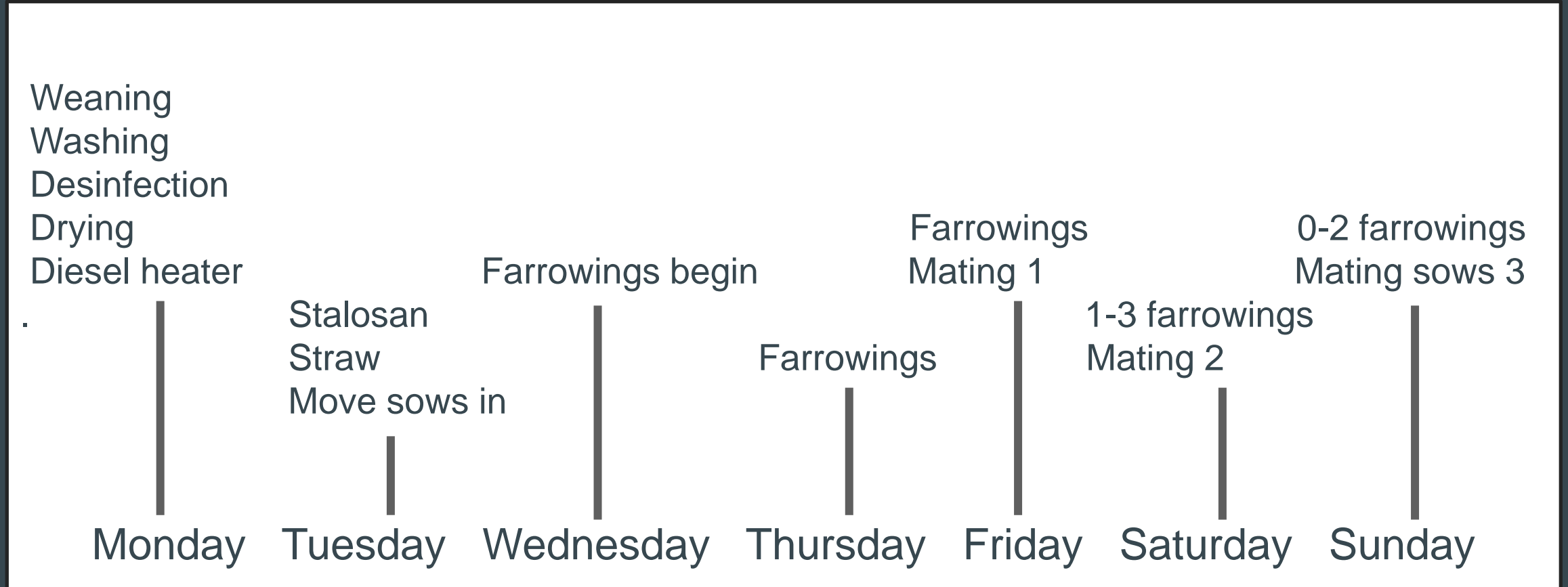
# Timeline – Farrowing unit – (Day 30)

- Weaning
  - All pigs in the section are weaned, regardless of weight
  - But considering age
  - Also applies to litters with weak piglets
    - To keep infection pressure low





# Timeline – Weekly management



# What do we do right?

- Two employees in the farrowing unit every morning
  - One checks farrowings/nurse sows etc.
  - One feeds pigs/checks the piglets
- Prepares the sow for farrowing
  - See day -7 timeline for the farrowing unit
- We are lazy – in the good way
  - It is not us, but the sow that takes care of the piglets.

# What do we do right?

- We are a team, we stick together and help each other out
- As the daily manager, I listen to every member of the team
- I am passionate and thorough – that rubs off on my co-workers
- I start in the sow unit every day and discuss/solve all issues by 9:00
- We are all different, we have different opinions and qualities, but we respect and help each other
- Team spirit = results!

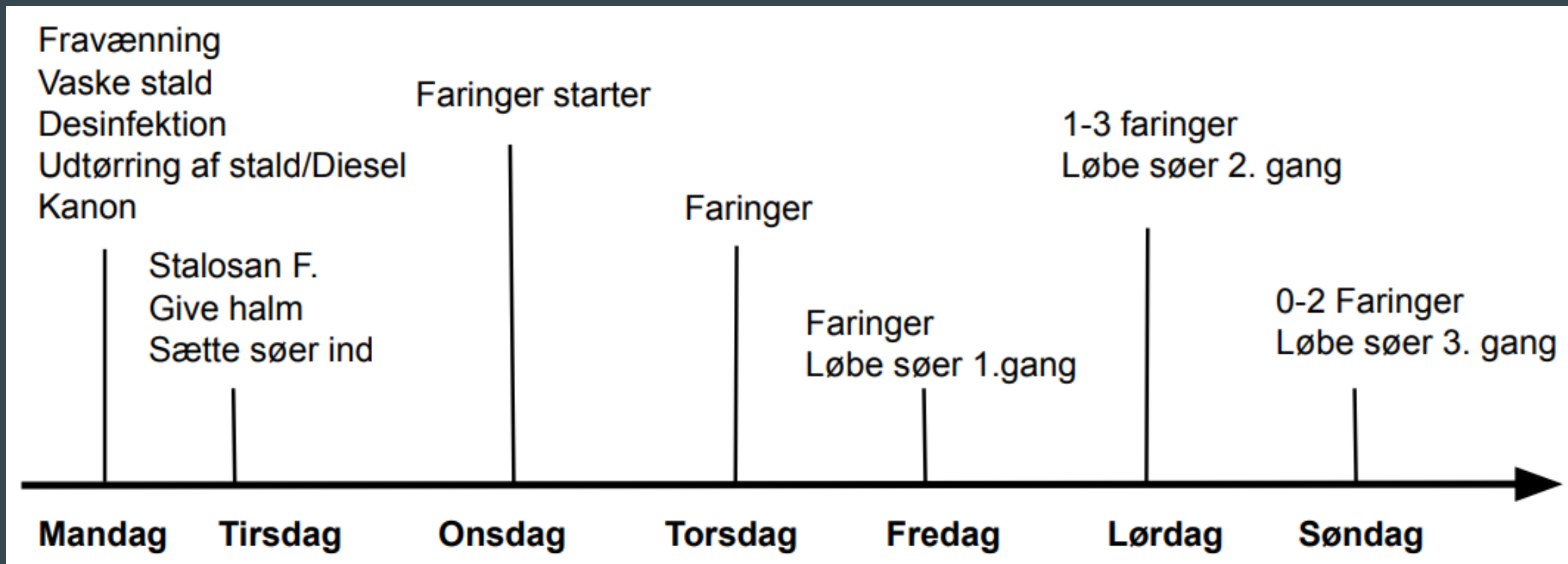
# Round up & Questions



# E control/herd results

			30.03.23	29.12.22
			28.06.23	29.03.23
		Plan	Sohold	Sohold
<b>Kuldresultater</b>				
Lev. fødte/kuld	stk	18,5	18,7	18,2
Dødfødte/kuld (frav. søer)	stk	1,5	1,9	2
Frav./kuld	stk	16,5	16,8	15,2
Frav./fravænning	stk	13,75	13,4	12,8
Dieg. dage/kuld	Dage	30	29,5	31,6
Frav. vægt/gris	kg	7	7,2	7,2
Dødelighed i farestald	%	8	10,4	16,5

# Timeline – Weekly management



# E control/herd results

		30.03.23		29.12.22
		28.06.23		29.03.23
		Plan	Sohold	Sohold
<b>Reproduktion</b>				
Frav./årsso	stk	40	38,7	34,2
<b>Fravænnede grise</b>				
Daglig tilvækst	Gr	500	477	499
Daglig foderforbrug	FEsv	0,75	0,79	0,86
Dødelighed efter frav.	%	1	1,4	2