

How to reduce the piglet mortality

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Danvet Annual Meeting, Pejsegården, Brædstrup
13 March 2023

Agenda

Interventions to increase piglet survival

Reduce the proportion of stillborn piglets

- Feeding before farrowing
- Strategic farrowing surveillance
- Monitoring of the development of stillborn piglets

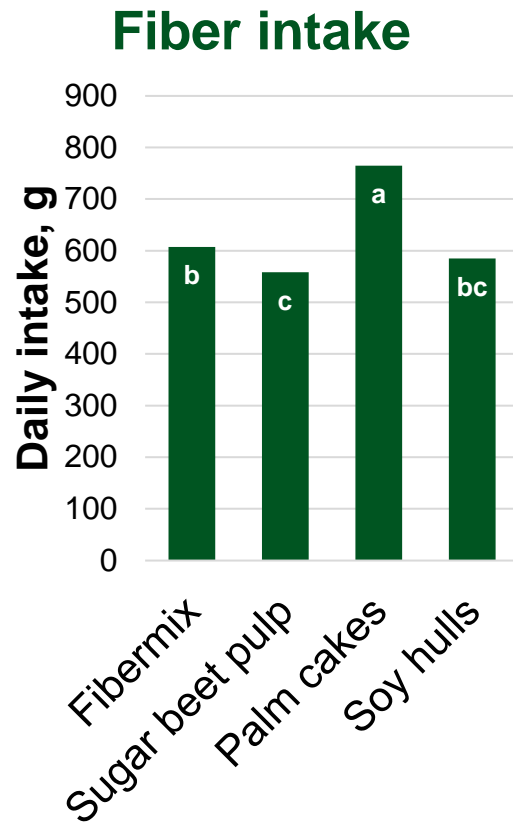
Reduce early piglet mortality

- Sow well being
- Pain relief
- Optimization of colostrum intake
- Litter equalization

The 5 most important interventions

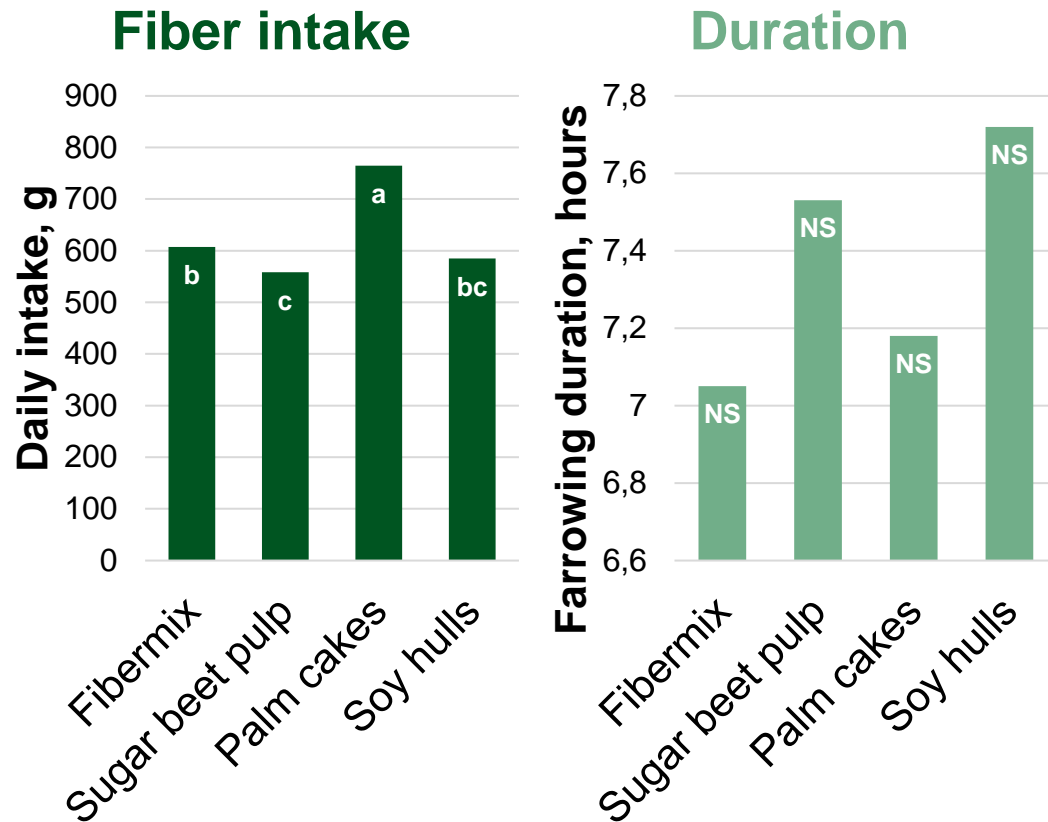
Fiber

Effect of different fiber sources on the farrowing process



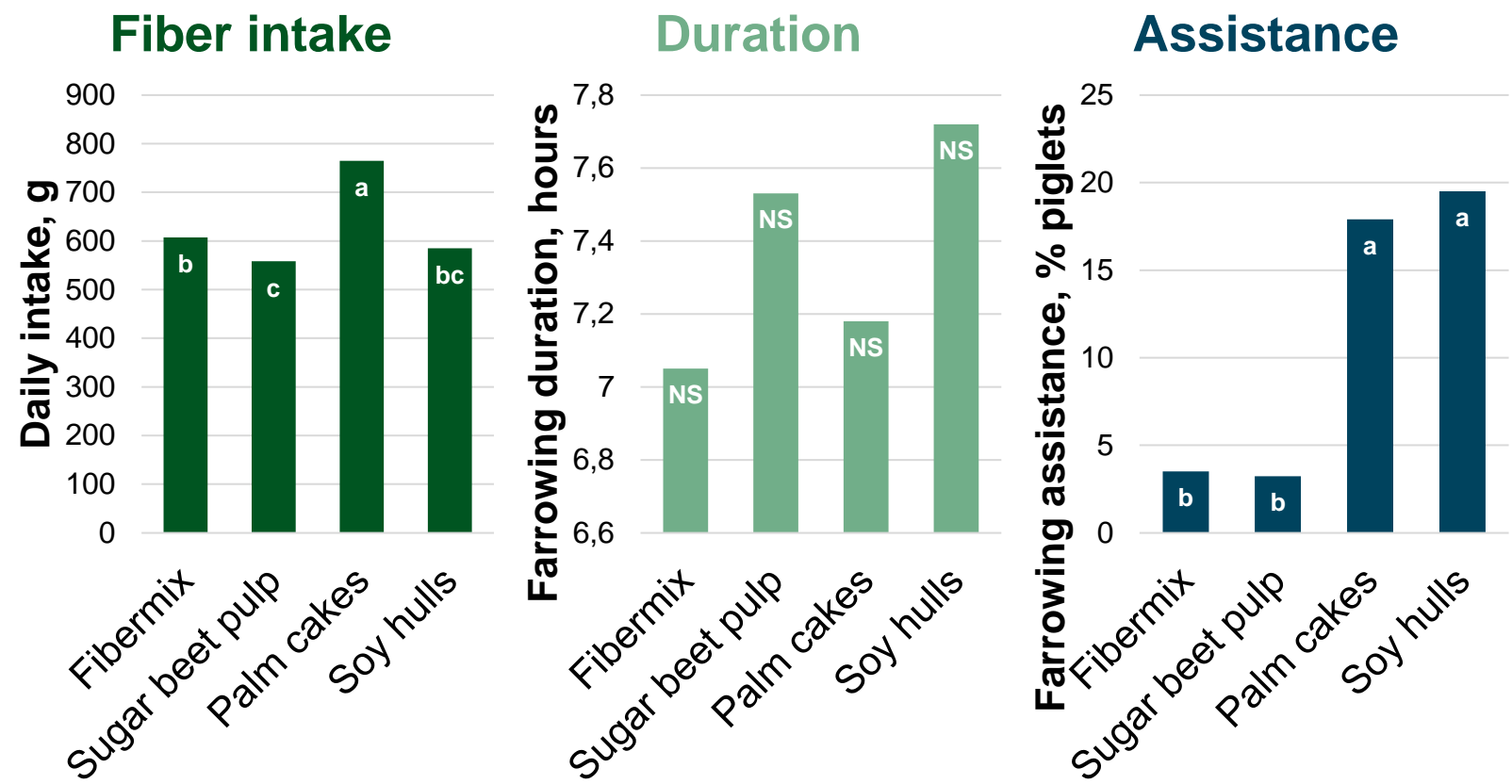
Fiber

Effect of different fibre sources on the farrowing process



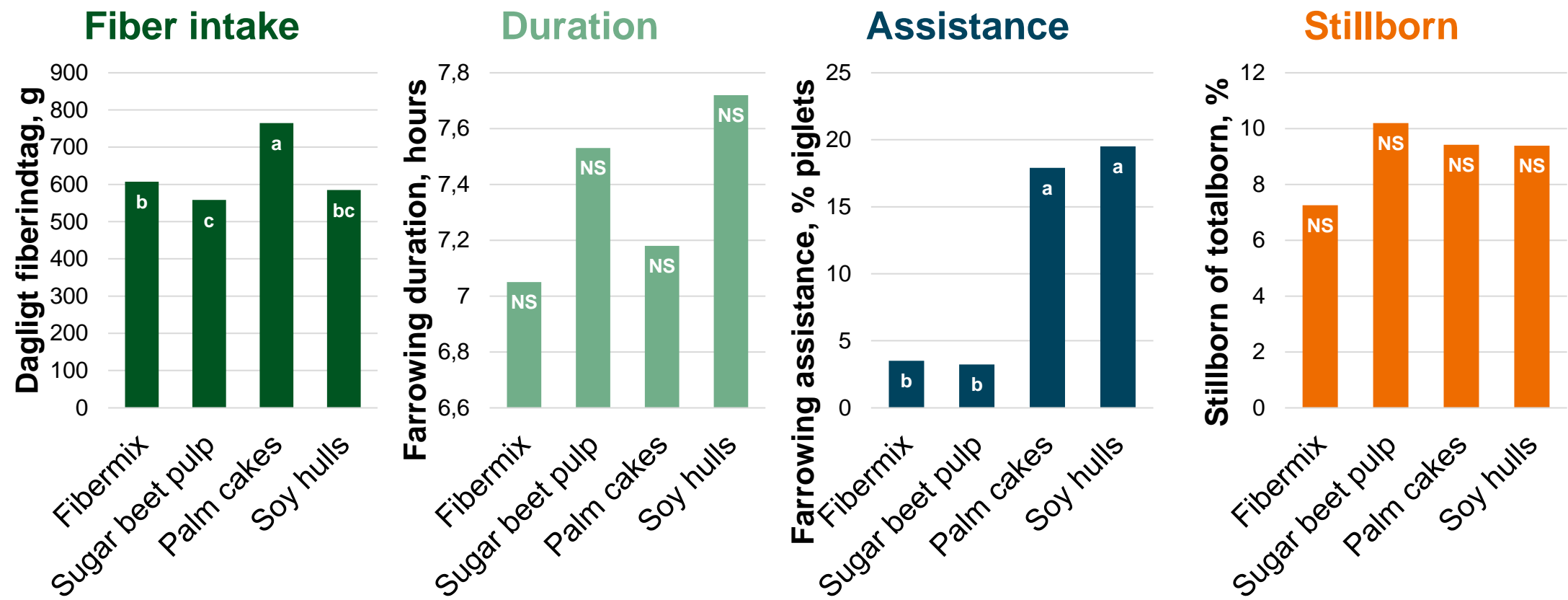
Fiber

Effect of different fibre sources on the farrowing process



Fiber

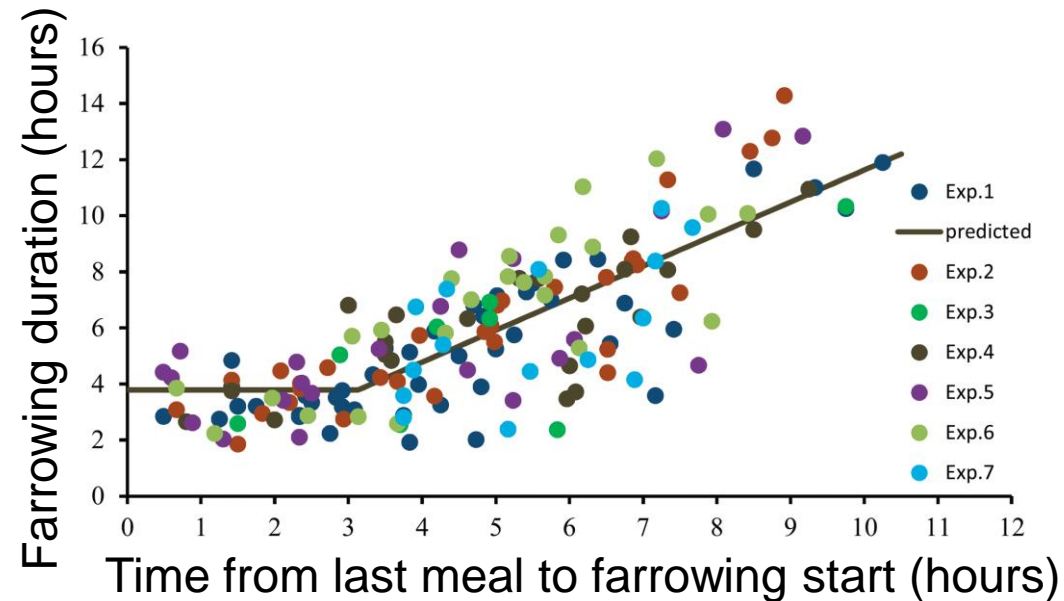
Effect of different fibre sources on the farrowing process



Feeding frequency

Analysis of several trials at AU indicates a potential

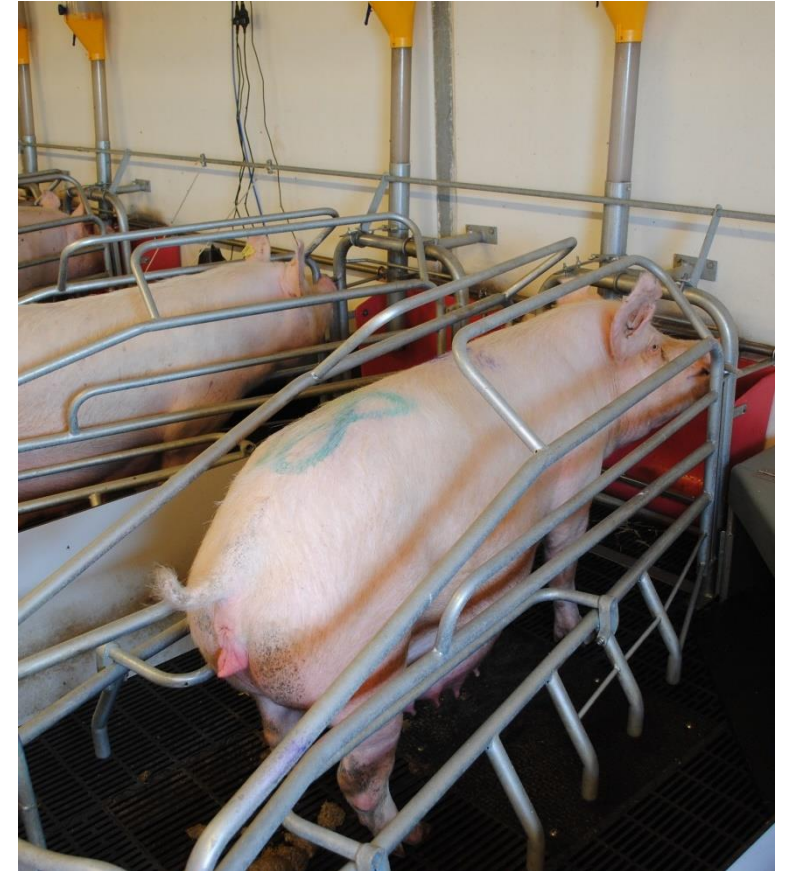
- The duration of farrowing increases linearly from 3 hours after the sow is fed
- Glucose uptake decreases after feeding (0-6 hours)
- Fiber must fulfill the need for energy between two feedings (4-24 hours)



Feeding frequency

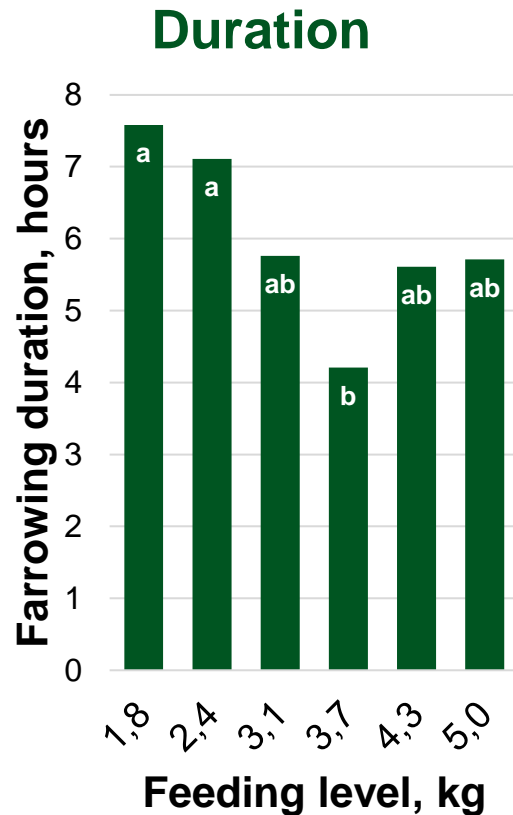
How can you make a difference at farm level?

- The easy solution
 - 3 feedings equally distributed around the clock
 - Consider 4 feedings a day
- Carefully consider the following
 - Is the feeding precision ready for 4 feedings a day?
 - What is minimum dosage of dry/wet feed?



Feeding level

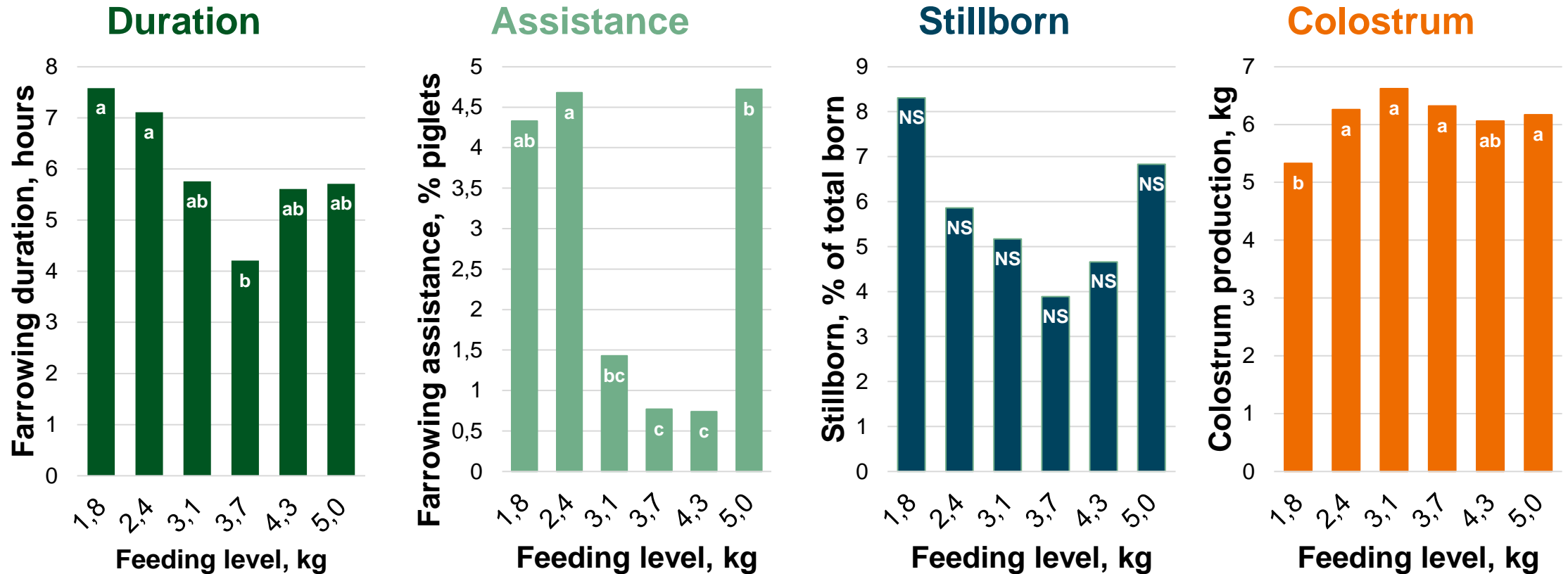
A higher feeding level before farrowing helps the sow



Low and high feeding levels may have same effects as constipation

Feeding level

A higher feeding level before farrowing helps the sow

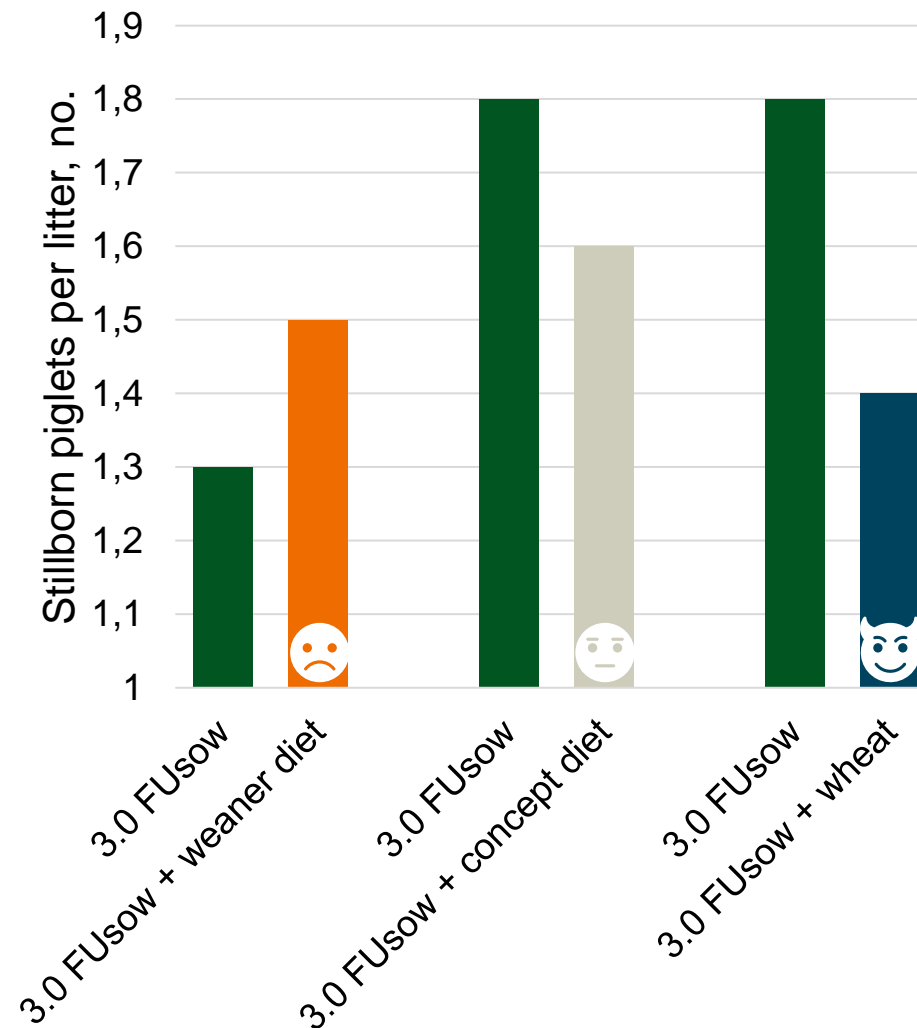


Feeding level

A higher feeding level and less protein before farrowing helps the sow

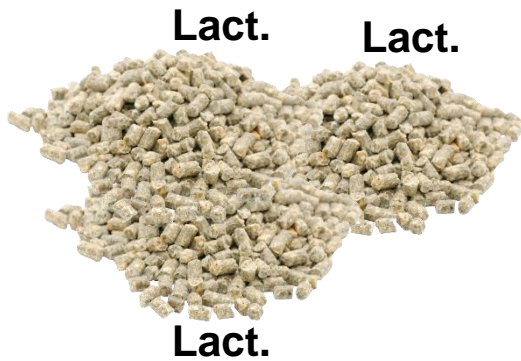
perhaps

- Sows inserted in farrowing unit
 - 3.5 FUsow per day
 - 2 days before farrowing reduced to 3.0 FUsow per day
- Extra feed for at least 2 days before expected farrowing
 - 1 FUsow per day as weaner diet
 - 1 FUsow per day as concept diet
 - 1 FUsow per day as wheat

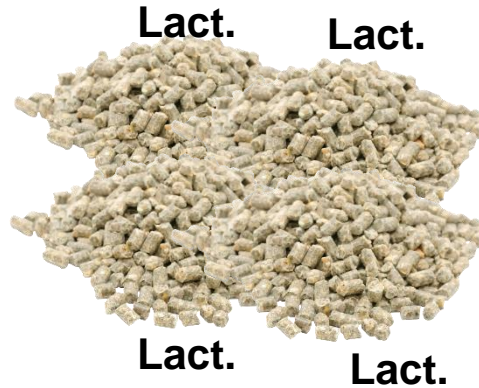


Feeding level

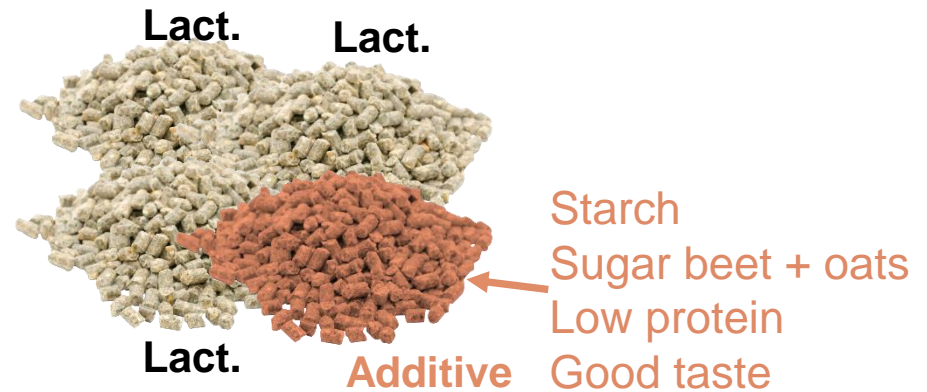
A higher feeding level and less protein before farrowing reduce stillborn



3 FUsow



4 FUsow



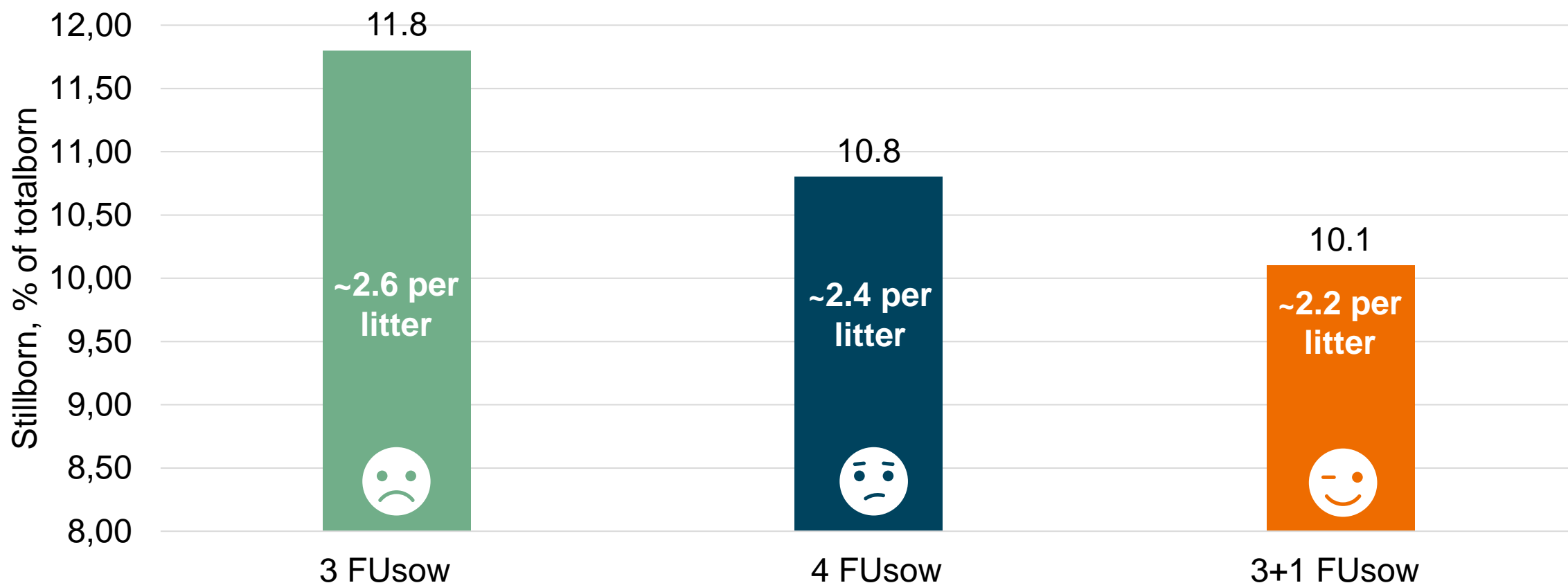
3+1 FUsow

- 2 herds
- 3 daily feedings 5:30/11:30/23:00
- Only 3rd to 7th parity sows included

Feeding level

A higher feeding level and less protein before farrowing reduce stillborn

significantly



P-value 3 FUsow vs 4 FUsow: 0.23 (NS)

P-value 3 FUsow vs 3+1 FUsow: 0.03(★)

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The 5 most important interventions



Strategic farrowing surveillance

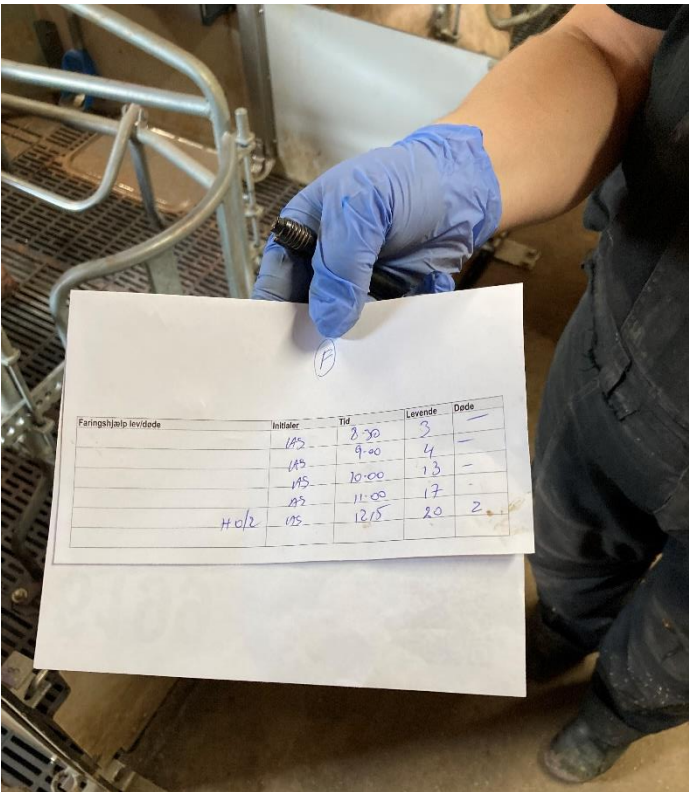
Make an effort where it matters the most

Trial running in three herds

- Three evenings/nights with increased surveillance and strategy for farrowing assistance
- **Herd 1**
 - Working hours 05.00-14.00 + night surveillance 18.00-04.00
 - All farrowings are observed every 30 minutes in working hours and evening/night
 - All piglets are counted and registered in Cloudfarms and birth assistance is carried out if no new piglets were born the last 30 minutes
- **Herd 2 + 3**
 - Working hours 07.00-15.00 + night surveillance 20.00-06.00
 - During working hours the normal strategy is still used
 - All farrowings are observed every 30 minutes at evening/night
 - All piglets are counted and registered in Cloudfarms and birth assistance is carried out if no new piglets were born the last 30 minutes

Farrowing surveillance

Focused effort will require registrations during the farrowing process



Simple registrations on paper

20.19 🔍 📧 📺 • Vo) 4G LTE1 📶 🔋

🔄 11:51

Faringer siden 2022-06-15 20:19:57

Faring 4, levendefødte 69 Gns.17,3, dødfødte 3 Gns.0,8, mummificerede 2, avlsdyr 0, Svagtfødt 0

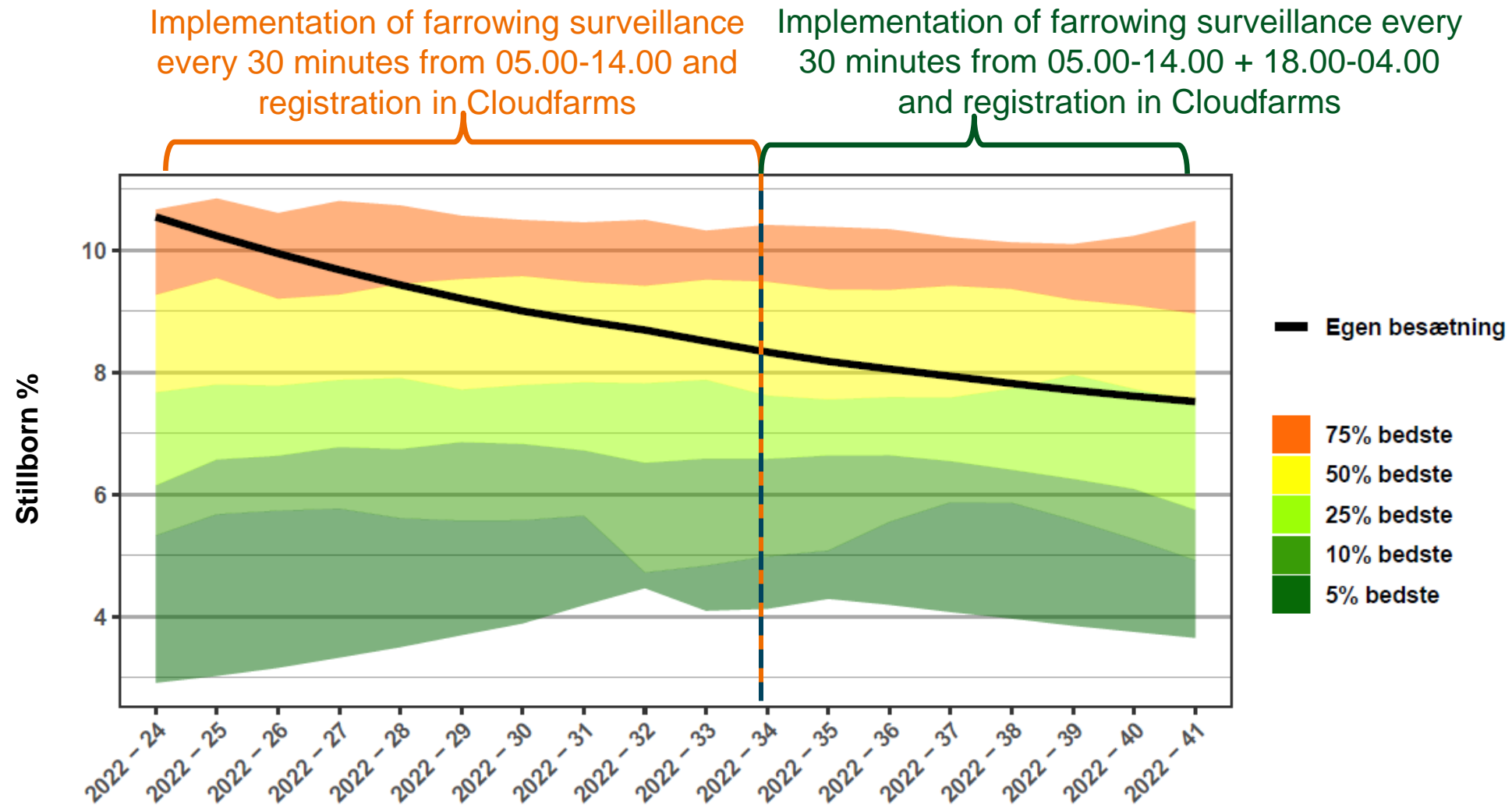
Sonavn	Alarm	L	S	M	A	S.F. Lok.	Hvornår	Hvem
3826		4	1			142/5/Farestald	tor. 20:17	ML
3820		17	1	0	0	177/6/Farestald	tor. 06:52	ML
3819		22	0	2	0	182/6/Farestald	tor. 06:47	ML
3675		26	1	0	0	216/5/Farestald	tor. 06:41	ML

●○

Continuous registrations in Cloudfarms during the farrowing proces.
Current farrowings are shown in orange and changes to white when the farrowing is finished – the overview is shown by turning the phone 90°

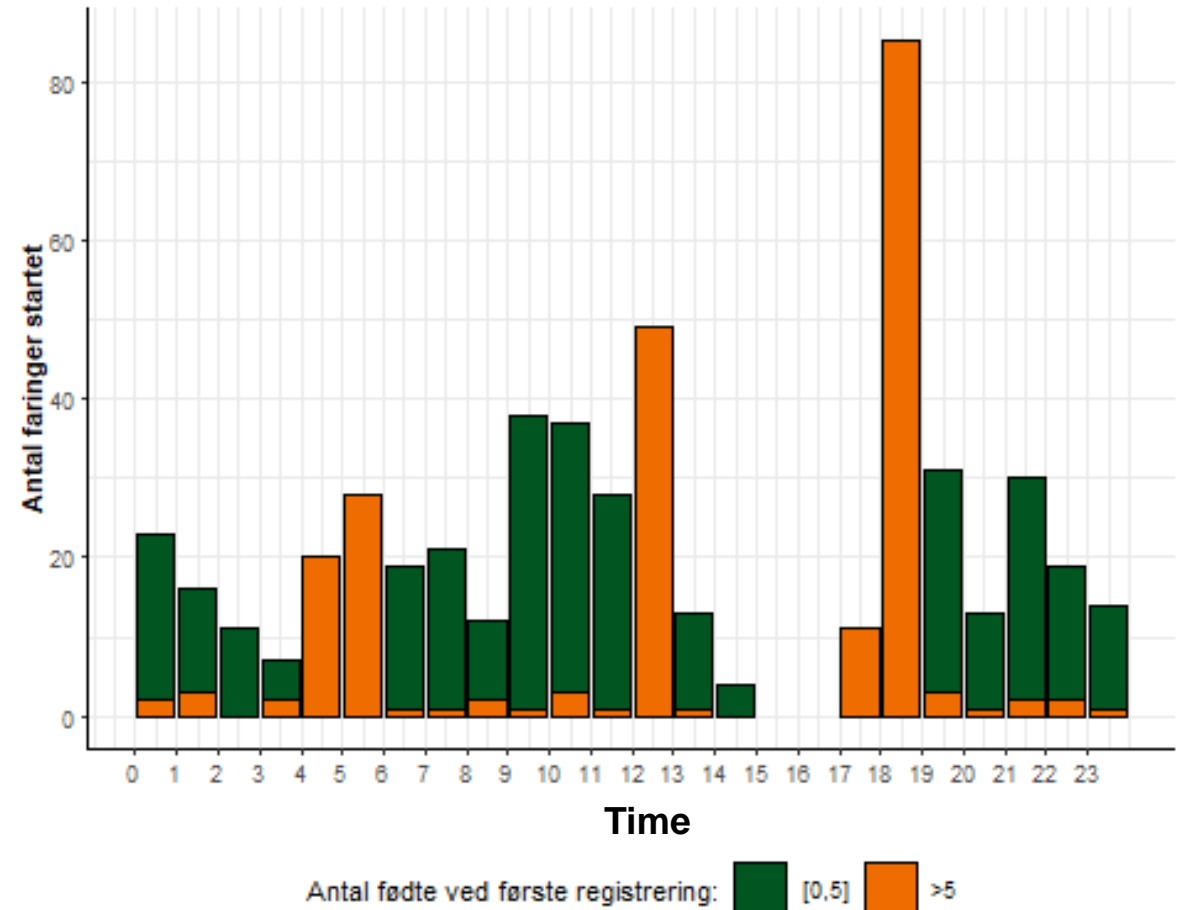
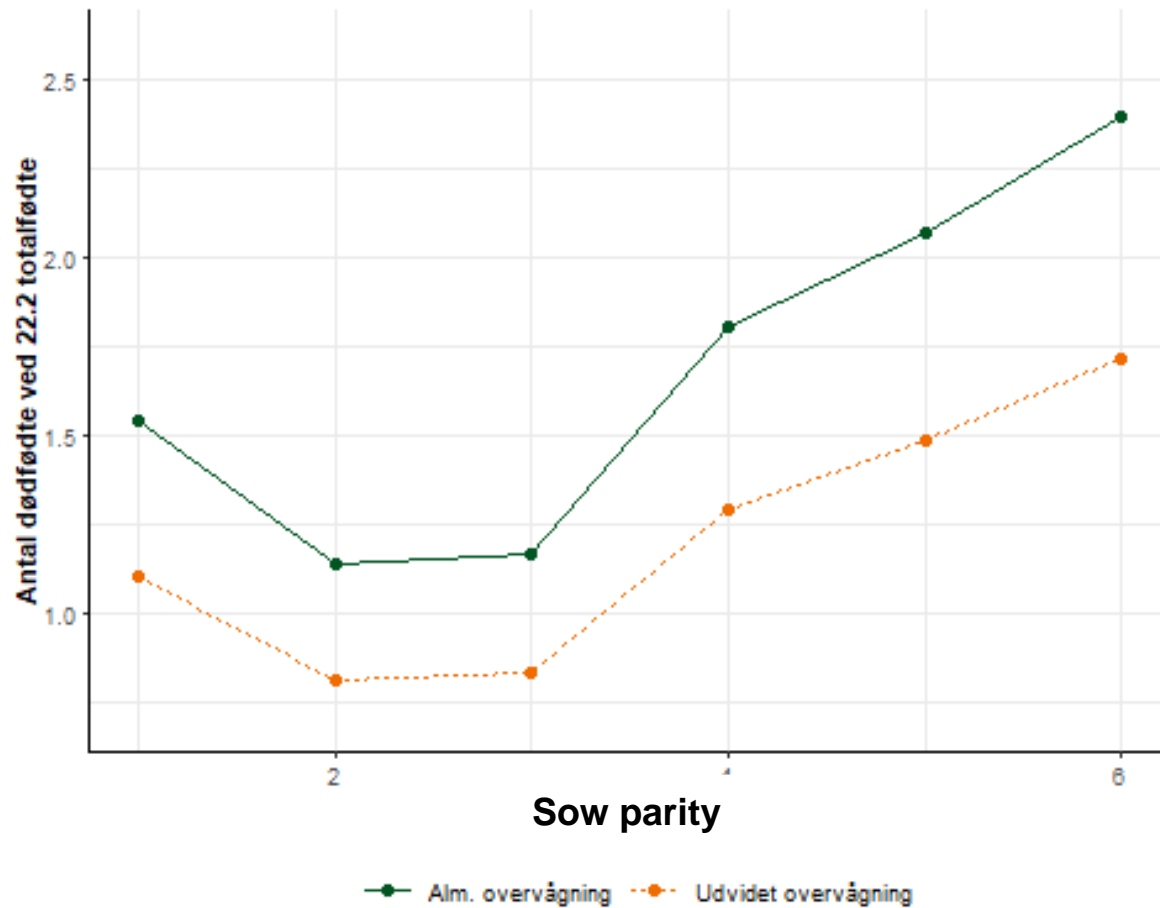
Preliminary results from herd 1

Effect of farrowing surveillance from 05.00-14.00



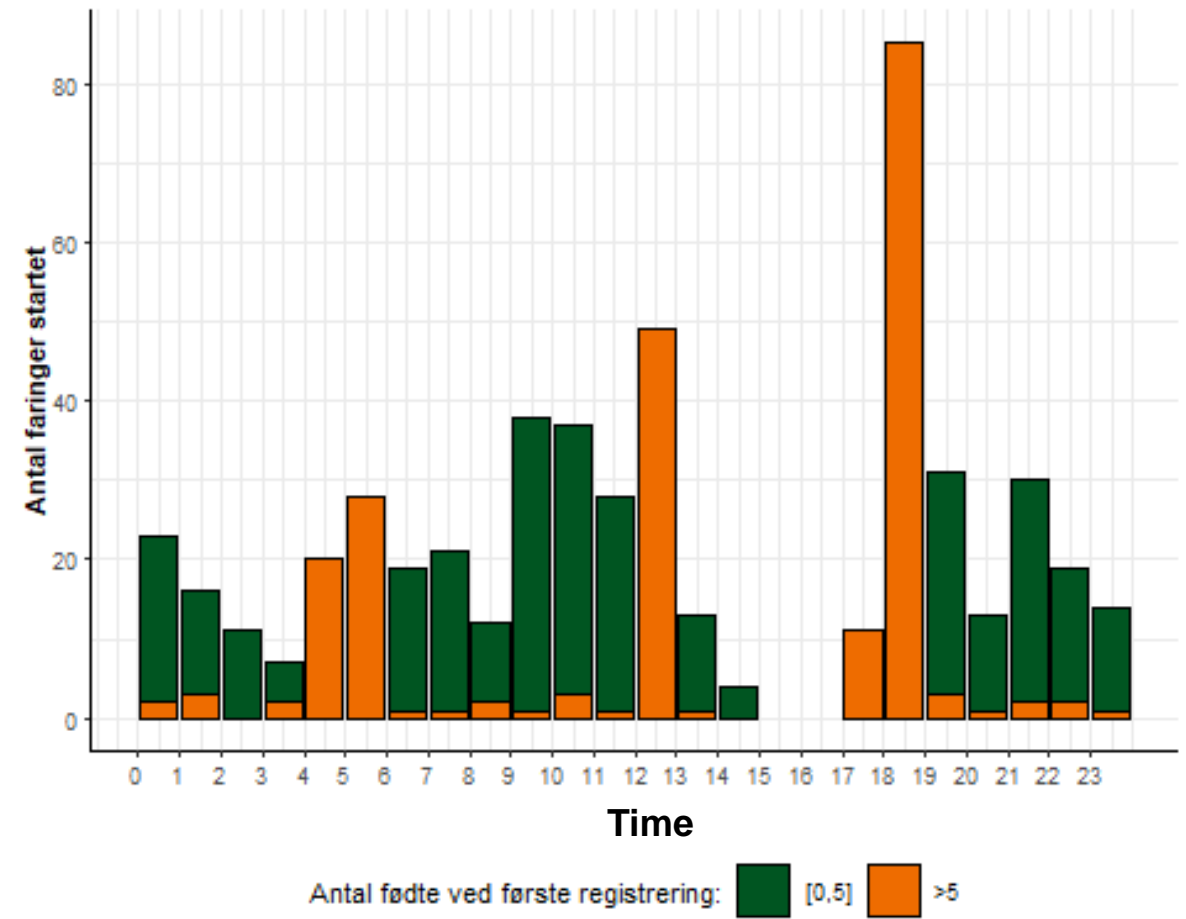
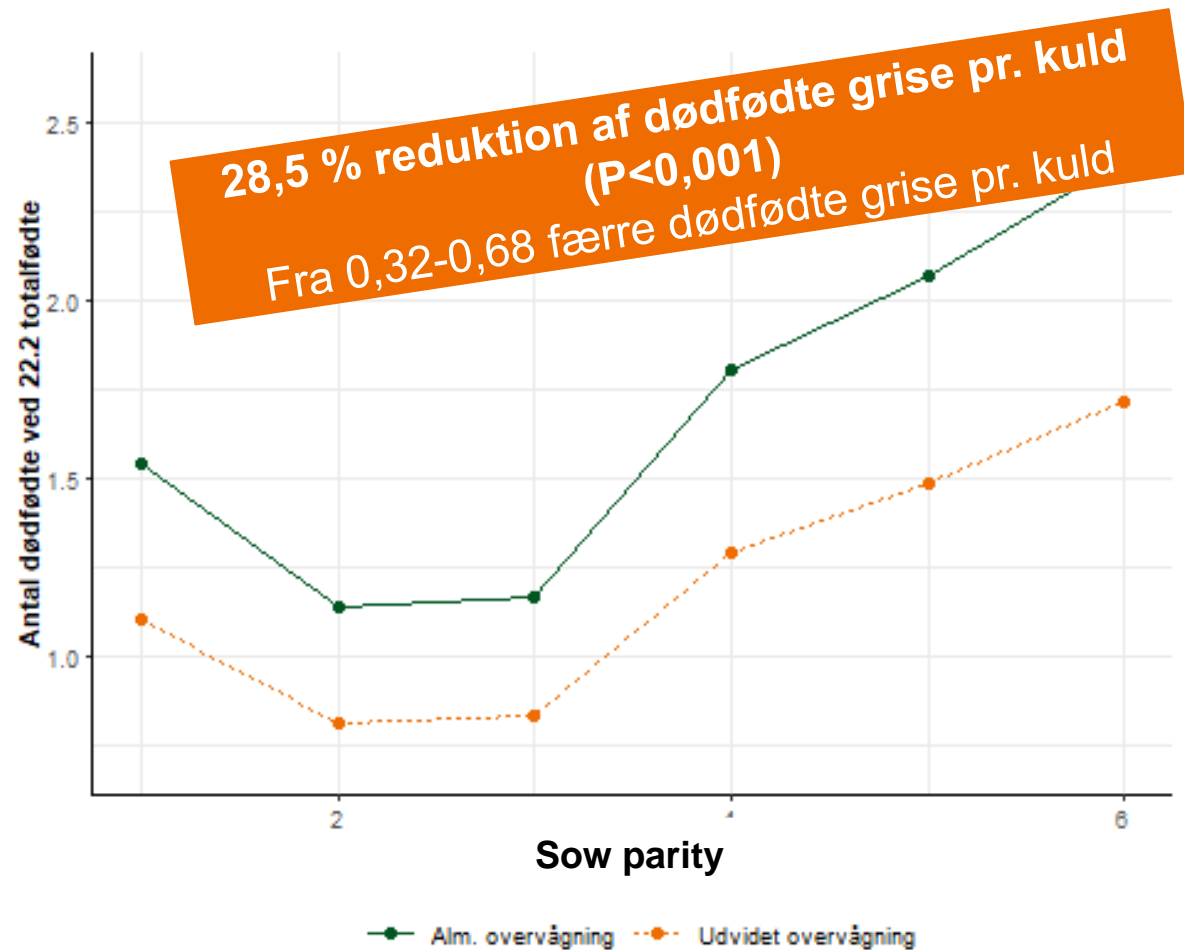
Preliminary results from herd 1

Effect of farrowing surveillance from 18.00-04.00



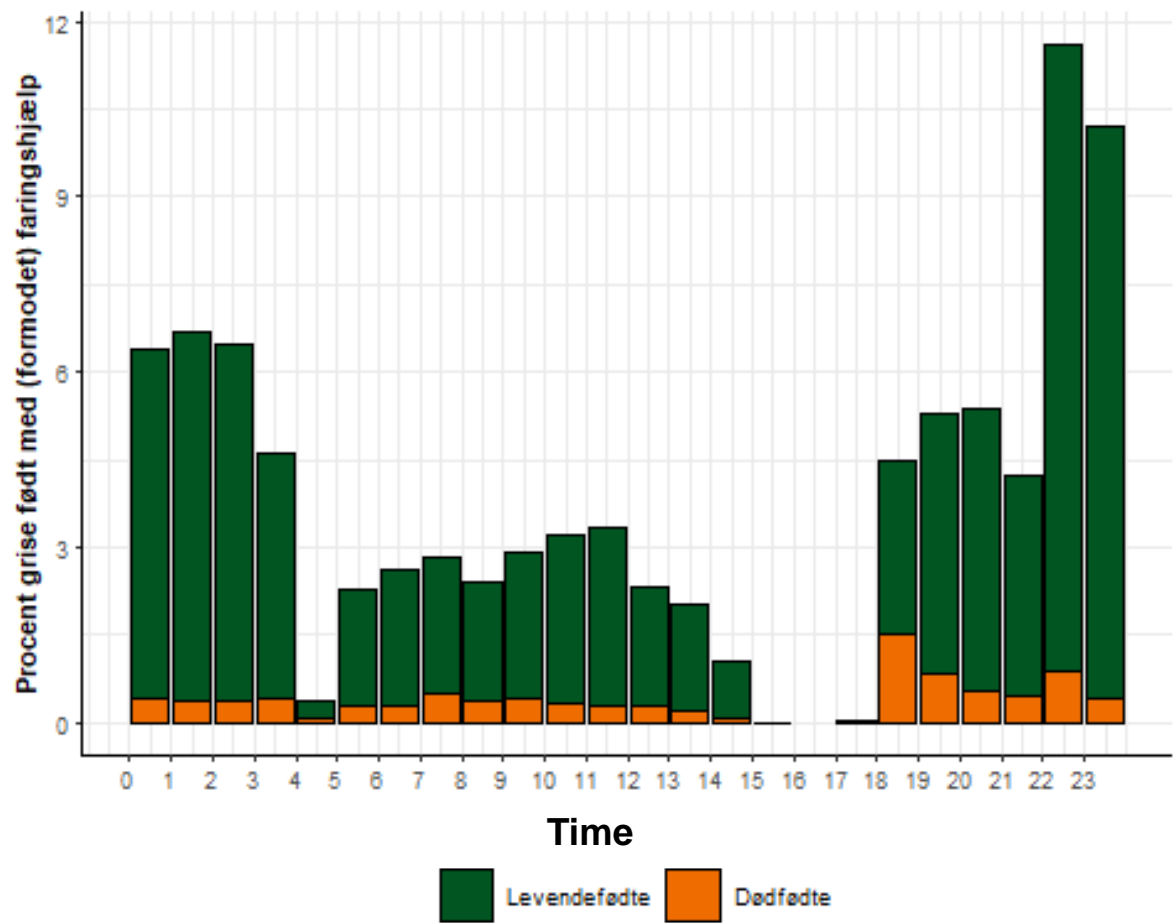
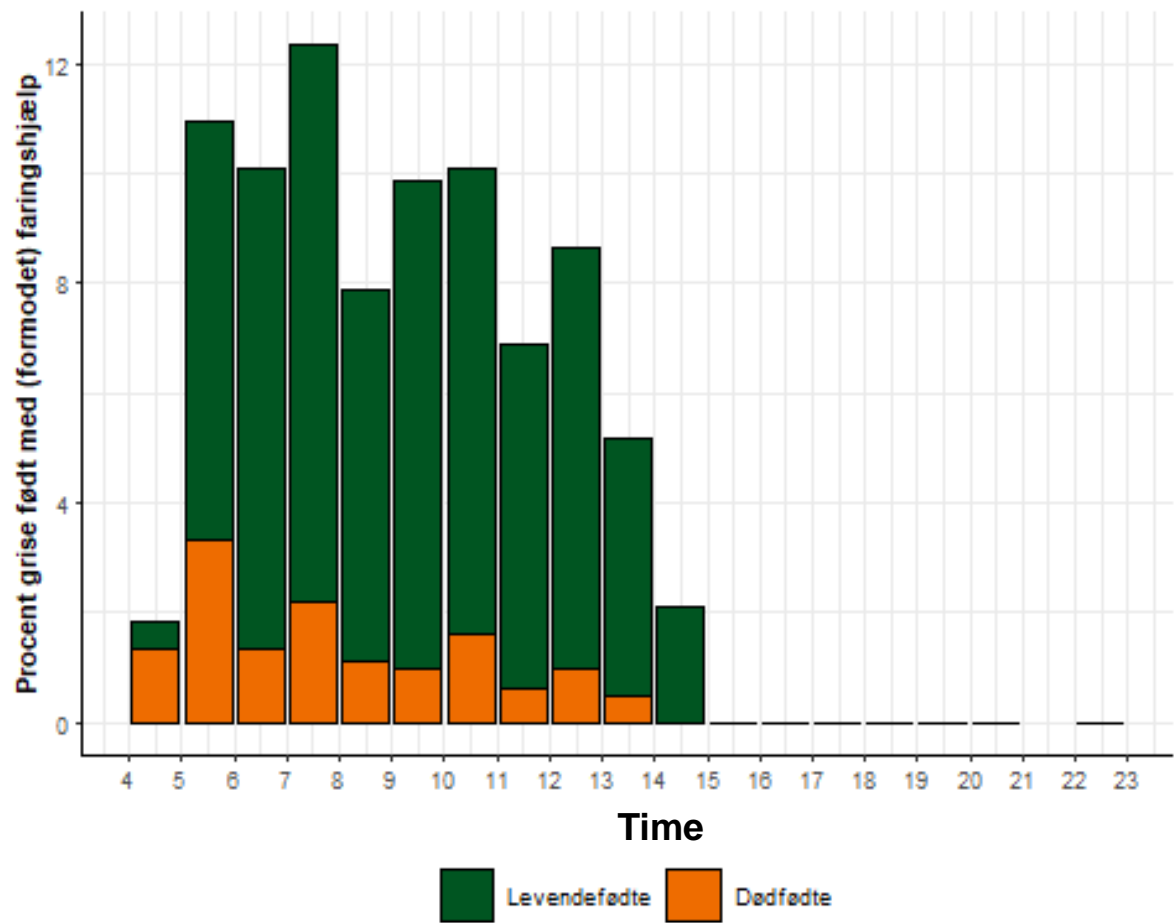
Preliminary results from herd 1

Effect of farrowing surveillance from 18.00-04.00



Preliminary results from herd 1

Effect of farrowing surveillance from 18.00-04.00



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The 5 most important interventions

Analysis of stillborn piglets in one herd

1.9 stillborn on average and increasing with sow age

Dødfødte \ Kuld	1	2	3	4	5	6	7..12	Sum	%	Akk. %
0	93	73	26	24	17	10	11	254	29,4	29,4
1	43	48	39	33	5	18	15	201	23,2	52,6
2	23	36	23	39	21	10	9	161	18,6	71,2
3	18	11	16	18	19	12	8	102	11,8	83,0
4	5	5	14	18	8	6	6	62	7,2	90,2
5..9	5	4	12	12	14	16	11	74	8,6	98,7
10..25			2	3	1	2	3	11	1,3	100,0
Sum	187	177	132	147	85	74	63	865	100,0	
%	21,6	20,5	15,3	17,0	9,8	8,6	7,3	100,0		
Akk. %	21,6	42,1	57,3	74,3	84,2	92,7	100,0			
Gns.	1,0	1,1	2,1	2,3	2,8	2,9	2,8			

In 17% of the farrowings ≥ 4 stillborn piglets per litter

Analysis of stillborn piglets in another herd

0.9 stillborn on average with evening and night surveillance

Dødfødte \ Kuld	1	2	3	4	5	6	7..12	Sum	%	Akk. %
0	110	96	77	51	52	35	39	460	49,8	49,8
1	42	46	45	33	22	32	24	244	26,4	76,3
2	21	22	24	20	19	19	19	144	15,6	91,9
3	5	4	12	7	9	11	5	53	5,7	97,6
4			1	2	2	2	4	11	1,2	98,8
5..9	1	1	2	1	1	2	3	11	1,2	100,0
10..25								0	0,0	100,0
Sum	179	169	161	114	105	101	94	923	100,0	
%	19,4	18,3	17,4	12,4	11,4	10,9	10,2	100,0		
Akk. %	19,4	37,7	55,1	67,5	78,9	89,8	100,0			
Gns.	0,6	0,6	0,9	0,9	1,0	1,2	1,1			

+ 20%-points

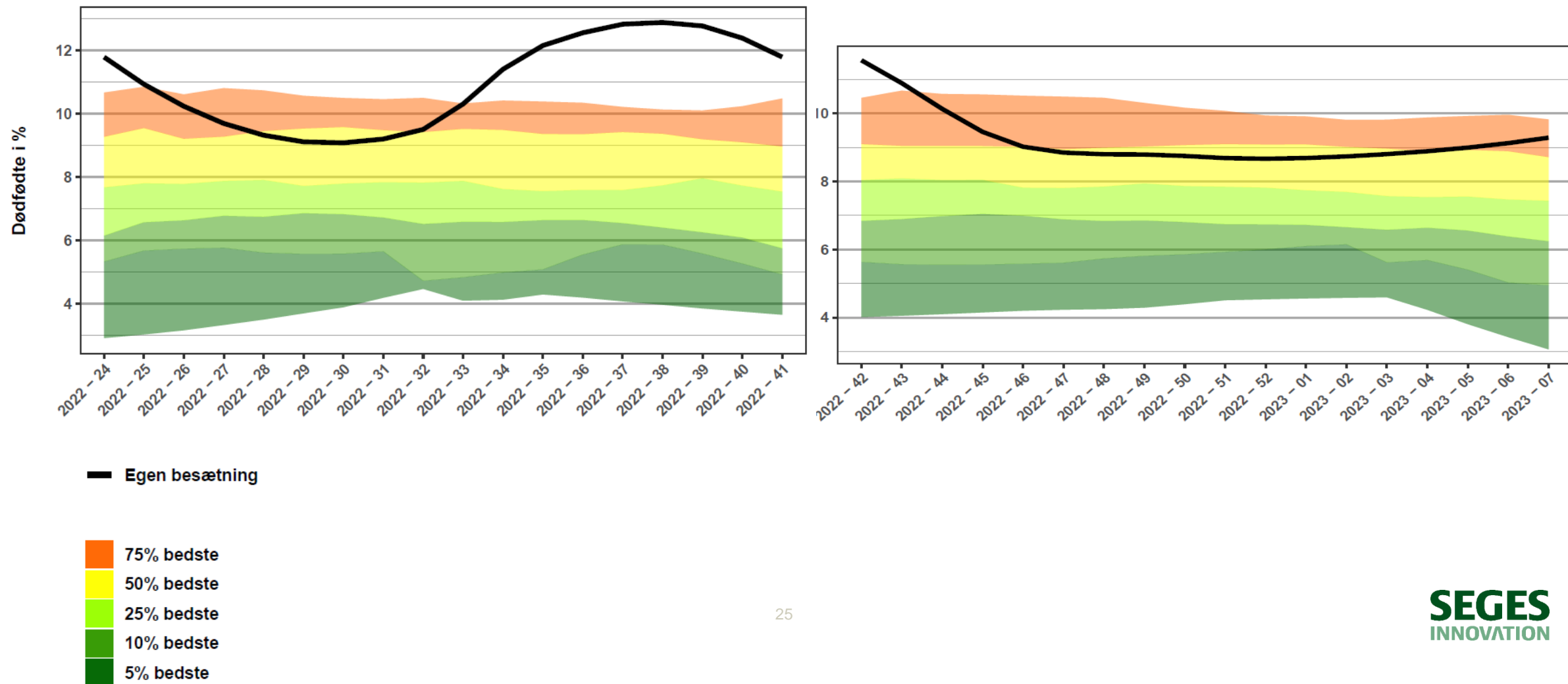
Largely the same

In 2.6% of the farrowings ≥ 4 stillborn piglets per litter

Change in stillborn -0,4 -0,5 -1,2 -1,4 -1,8 -1,7 -1,7

Analysis about stillborn piglets

SEGES *InSight* gives a benchmark and provides insight



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The 5 most important interventions

Recovery of the sow

- The udder is soft and delicate
- The sow can stand up and lie down without any difficulties
- The sow has a good appetite
- The sow's urine is clear or pale yellow
- The sow has no fever

If its temperature is above 39.5°C, the sow has a fever and should be treated according to the veterinarian's instructions.



Farrowing fever / MMA / Inflammation



Redness



Edema



Heat



Pain

Painkillers

Ketoprofen (app. 8,5 dkr.):

- e.g. Coxofen, Rifen, Kelafen

Meloxicam (app. 4,5 dkr.):

- e.g. Metacam, Loxicom

Natriumsalicylat (app. 3 dkr.)

- e.g. Sodilin, Solacyl

Carsten Grøndahl, Copenhagen Zoo

- *" Ketoprofen is the most powerful"*
- *"... its is cleaning up, closing down the endotoxins "*
- Works at the cyclooxygenase and also the lipooxygenase
- Prevents the production of bradykinin
- Stabilizes the lysosom cellmembrans, and inhibits the release of lysozymale enzymes, which mediates destruction of tissue
- Accumulate where there is inflammation

Ensuring colostrum

- When you give birth assistance mark the firstborn piglets (like the picture)
- After 8 hours you can move the marked piglets to a nursing sow
- Energyboost for the small/cold piglets, directly in the mouth
- Move small/cold piglets to the corner
- Sows produce colostrum until 24 hours after farrowing

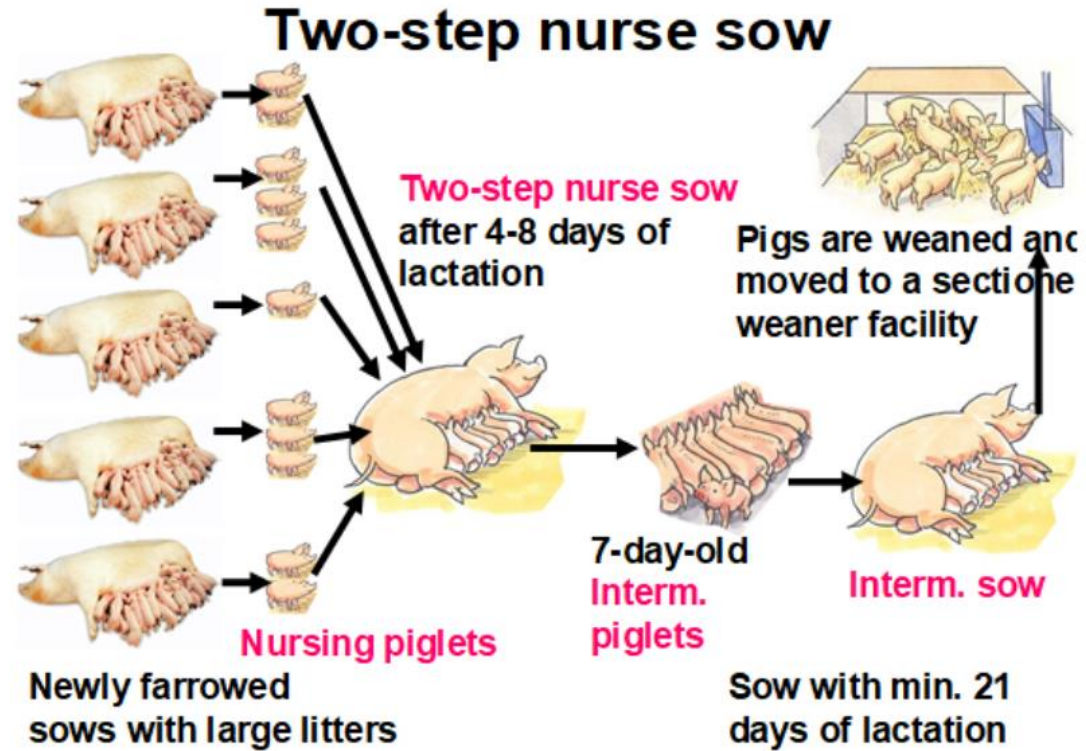


Split suckling in 45 minuttet



Photo: SEGES, farestaldsguide/private

Nurse sow



Nurse sows are needed, when there is a surplus of piglets from farrowing. Start by weaning the piglets from the intermediate sow, so this sow is ready for the piglets from the nurse sow. The nurse sow then receives the surplus piglets from the farrowing sows (the nurse sow for small piglets

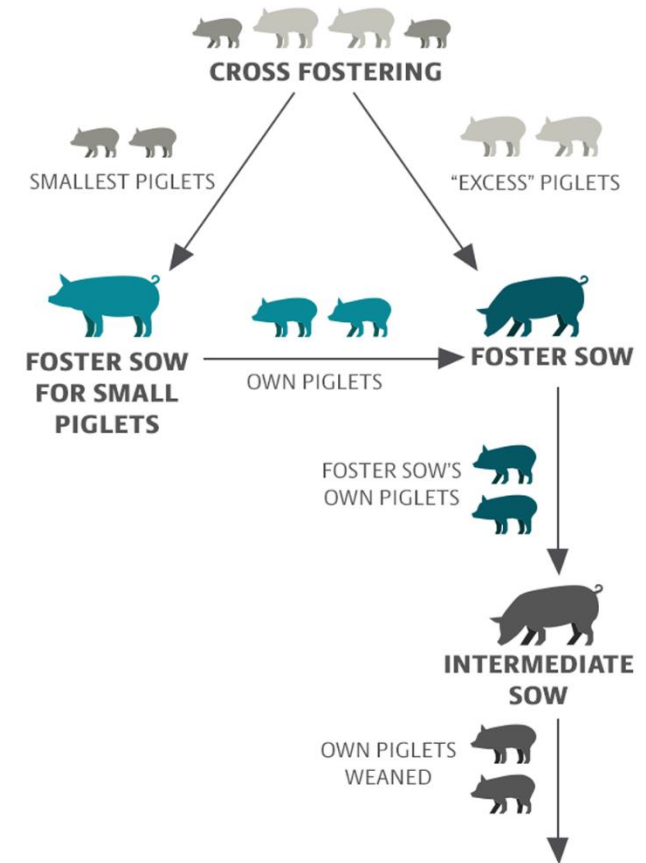
How many piglets pr. sow?

- Count the number of tits
- Piglets in the same litter must be equal in size
- Remember to adjust day 1 and 2 after farrowing



Cross fostering with smal piglets 500-700 gram

- Find the BEST 2.-4. parity sow
- Energy for the pigs (glucose)
- 175 watt light bulb
- MUST be succesfull
- If the sow dosn´t accept the small piglets you must change the whole team



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The 5 most important interventions

Your way to less stillborn piglets and higher piglet survival

The 5 most important interventions



Feeding before farrowing

- Try 4,0 FUsow to older sows 3-5 days before farrowing
- Use fibre in the sow diet (sugar beet pellets + oats)
- 650 g fibre per day for at least 3 days before farrowing



Strategic farrowing surveillance

- Effect of surveillance every 30 minutes during day time
- Effect of split working time
- Effect of evening or night surveillance



Recovery of the sow

- Focus on the well-being of the sow after farrowing
- The sow is essential



Pain relief

- Yes, of course
- Consider using Ketoprofen



Ensure colostrum intake

- Minimum 8 hours
- The best start for the piglet



Thank you for listening

danvet

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