

Danish Pig Production - Management and behavior and how SEGES uses this knowledge

Senior Scientist Lisbeth Ulrich Hansen

22nd of February 2022

STØTTET AF

Svineafgiftsfonden

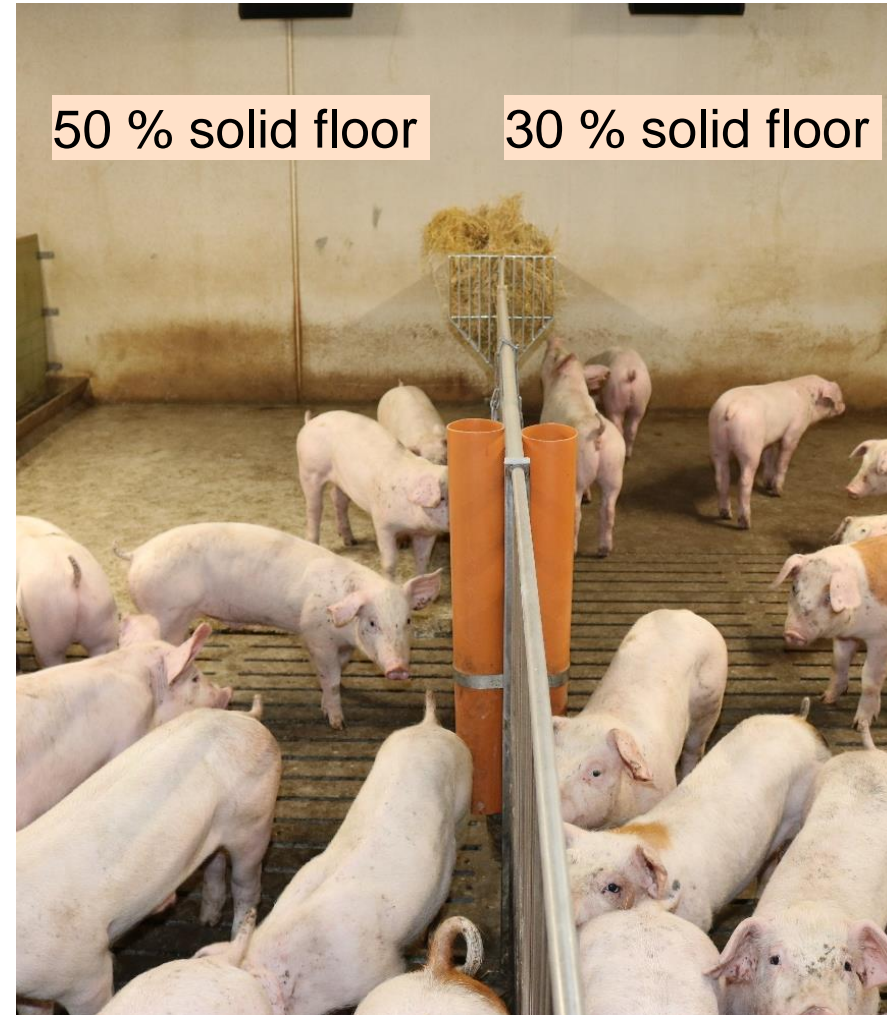
SEGES
INNOVATION

Focus on 3 topics from my daily work ;-)

- Fouling/manure on the solid floor – pigs from 30 kg to slaughter
- Rectal temperature – newborn piglets
- Sow mortality

Fouling/manure on the solid floor – pigs from 30 kg to slaughter

- 30 or 50 % solid floor?
- Using straw as a rooting material (tail biting)
- Environment issue (emission of ammonia)
- Behavior of the pigs



Chill effect

Table 4. Chill effect of velocity calculated by Eq. 1, assuming $c=-1$, $d=42$ °C and $e=0.25$.

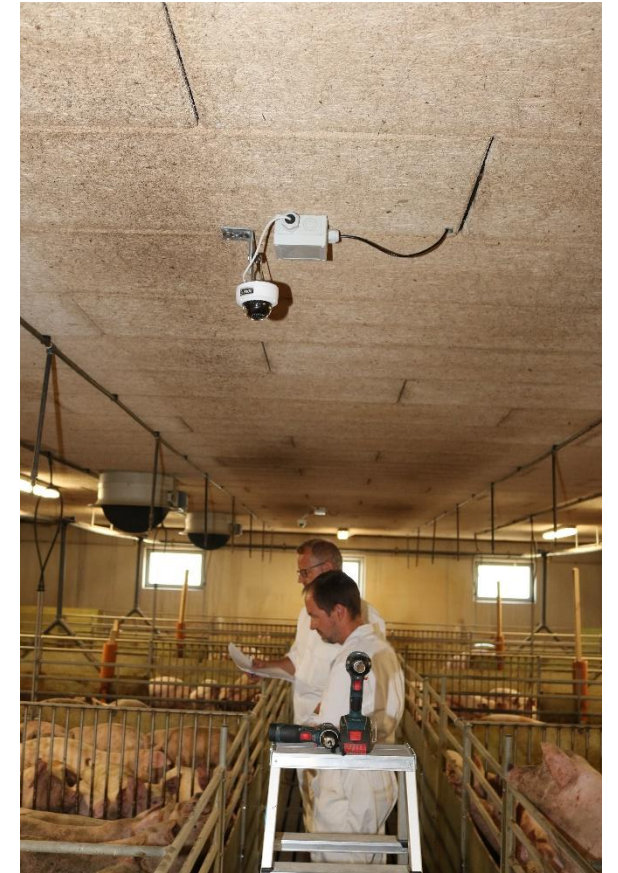
		Air velocity, m s ⁻¹				
		0.2	0.5	1.0	2.0	3.0
Ambient temperature, °C:	20	0	4	7	11	14
	24	0	3	6	9	12
	28	0	2	5	7	9
	32	0	2	3	5	6
	36	0	1	2	3	4

$$28 - 5 = 23 \text{ (experienced temperature)}$$

$$28 - 9 = 19$$

Air inlet in the ceiling





STALD 4 06-05-21

Day 19 09:30 Follow up on laying behavior / temperature

Stald4-Højre-box3



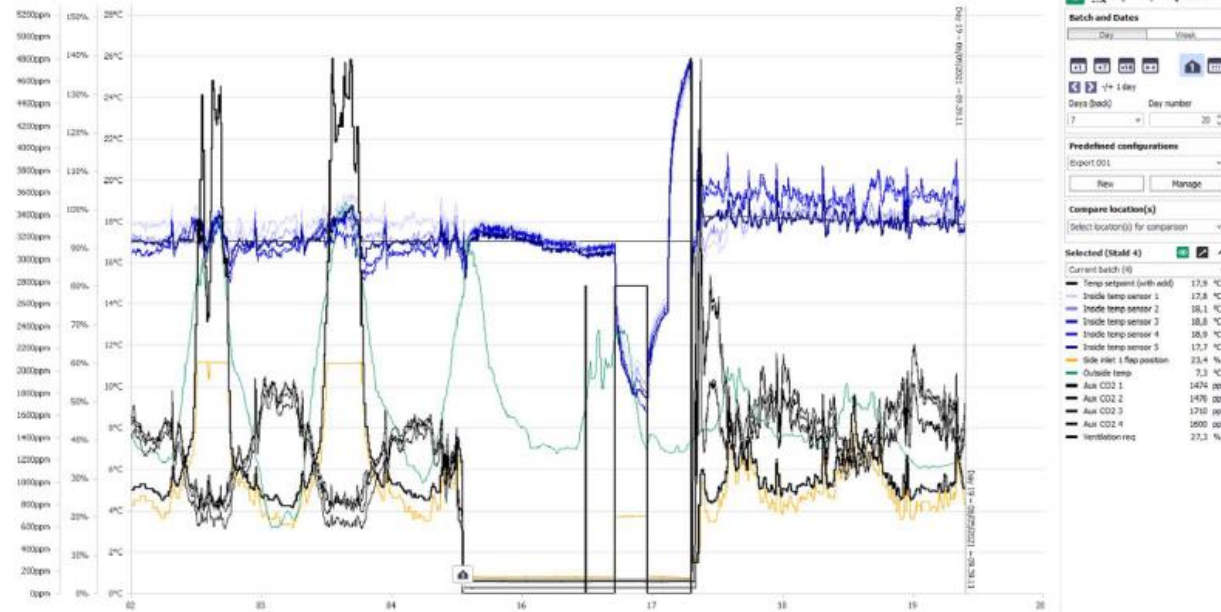
Stald4-Højre-box4



Stald4-Venstre-box7



Stald4-Venstre-box8



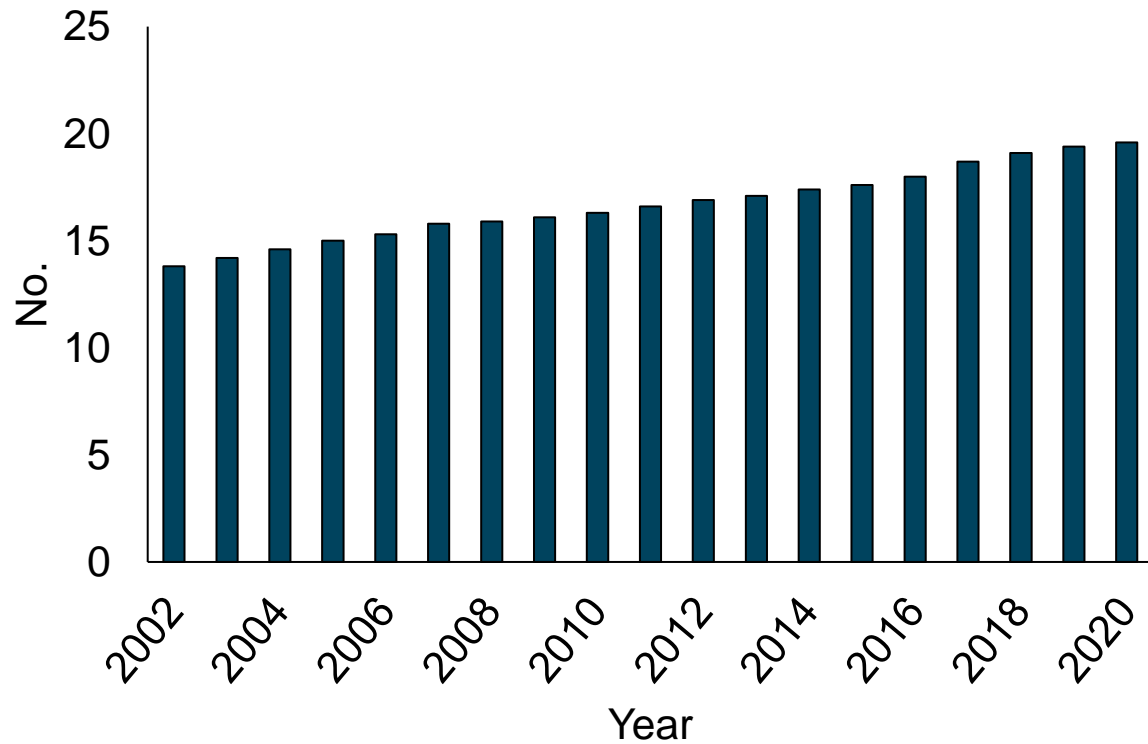
- Aktuel lejeadfærd ok

Focus on 3 topics from my daily work ;-)

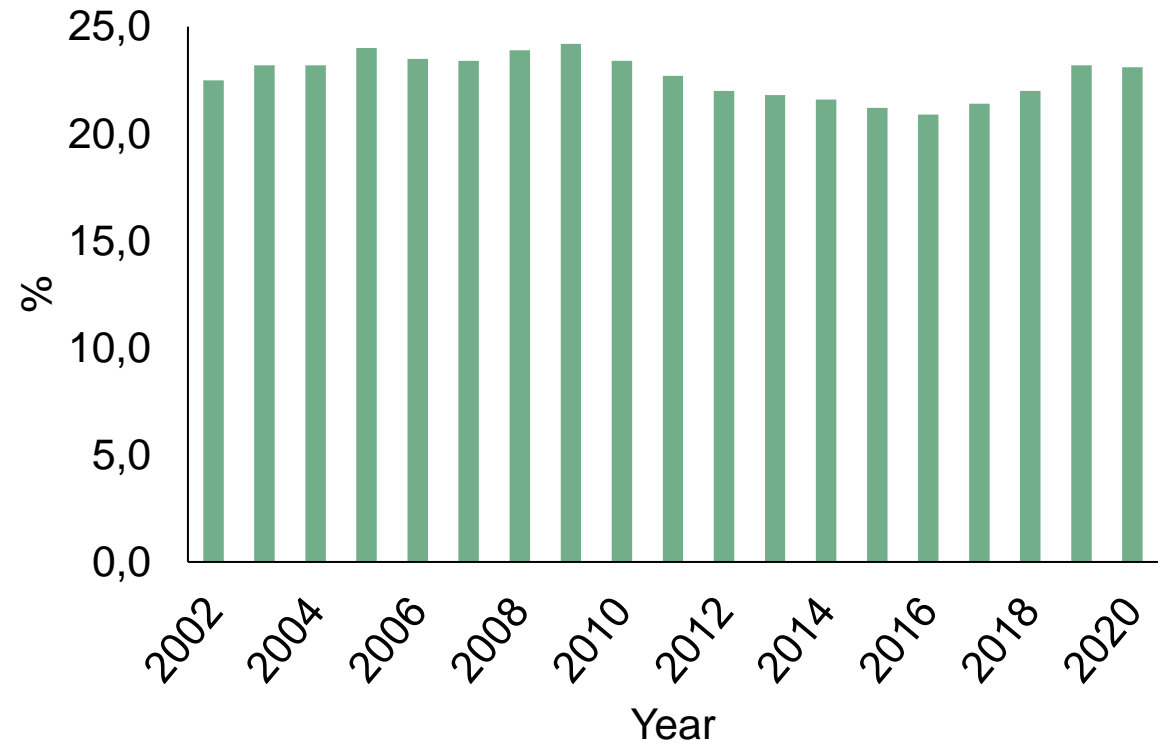
- **Fouling on the solid floor – pigs from 30 kg to slaughter**
 - 50 pct. solid floor can work, but requires inlet in the roof
 - Cheap environment technology
 - But requires focus on adjusting the ventilation
- Rectal temperature – newborn piglets
- Sow mortality

Higher litter size and higher piglet mortality

Litter size



Total piglet mortality



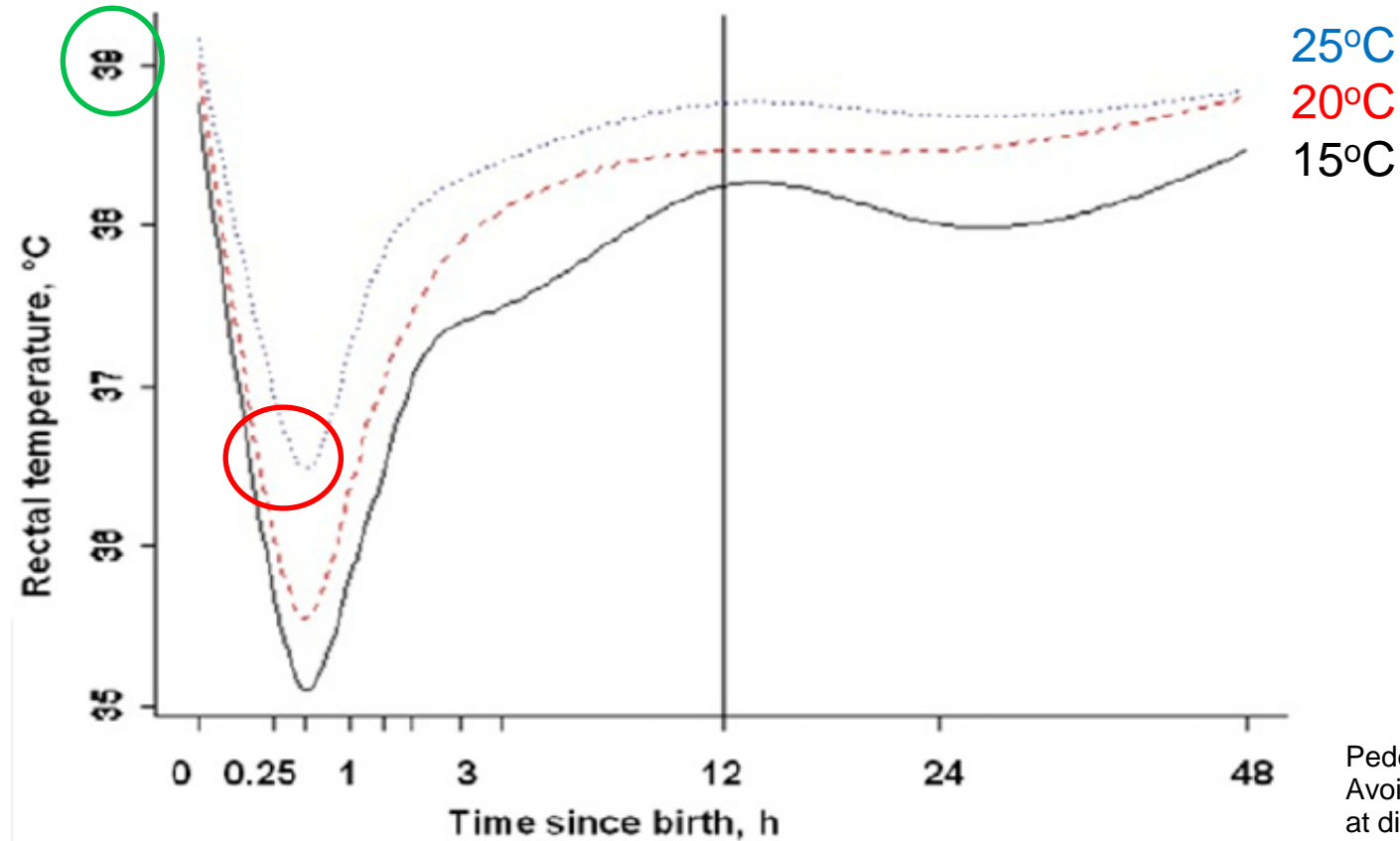
Focus on

Before parturition

During parturition

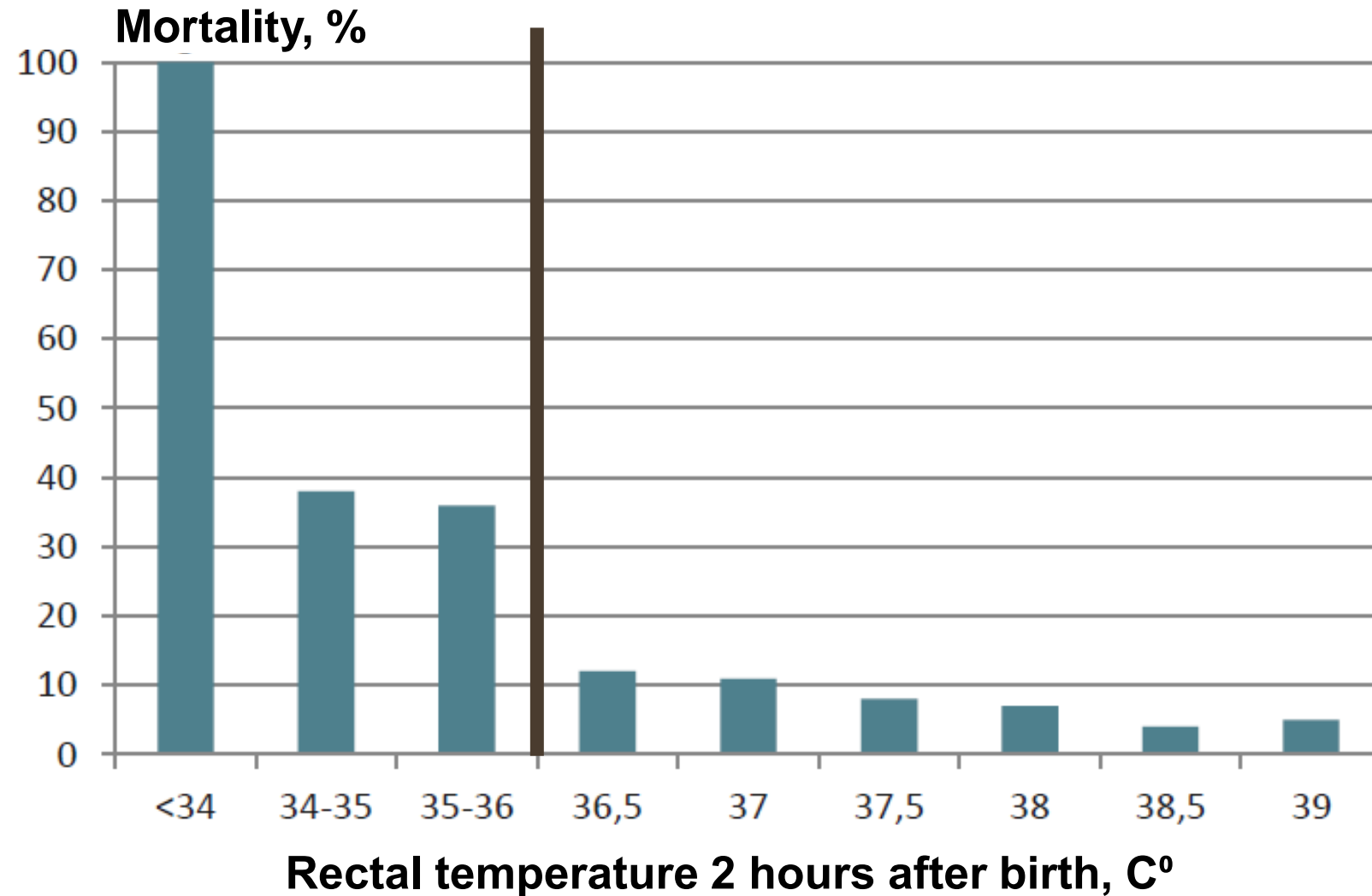
After parturition

Room temperature (15, 20 og 25 °C) and rectal temperature (time after birth)



Pedersen, L.J.; J. Malmkvist; T. Kammergaard; E. Jørgensen (2013).
Avoiding hypothermia in neonatal pigs: Effect of duration of floor heating
at different room temperatures. J. Anim. Sci. 91:425-432.

Mortality and rectal temperature – time after birth



Meddelelse 1087

Experiment

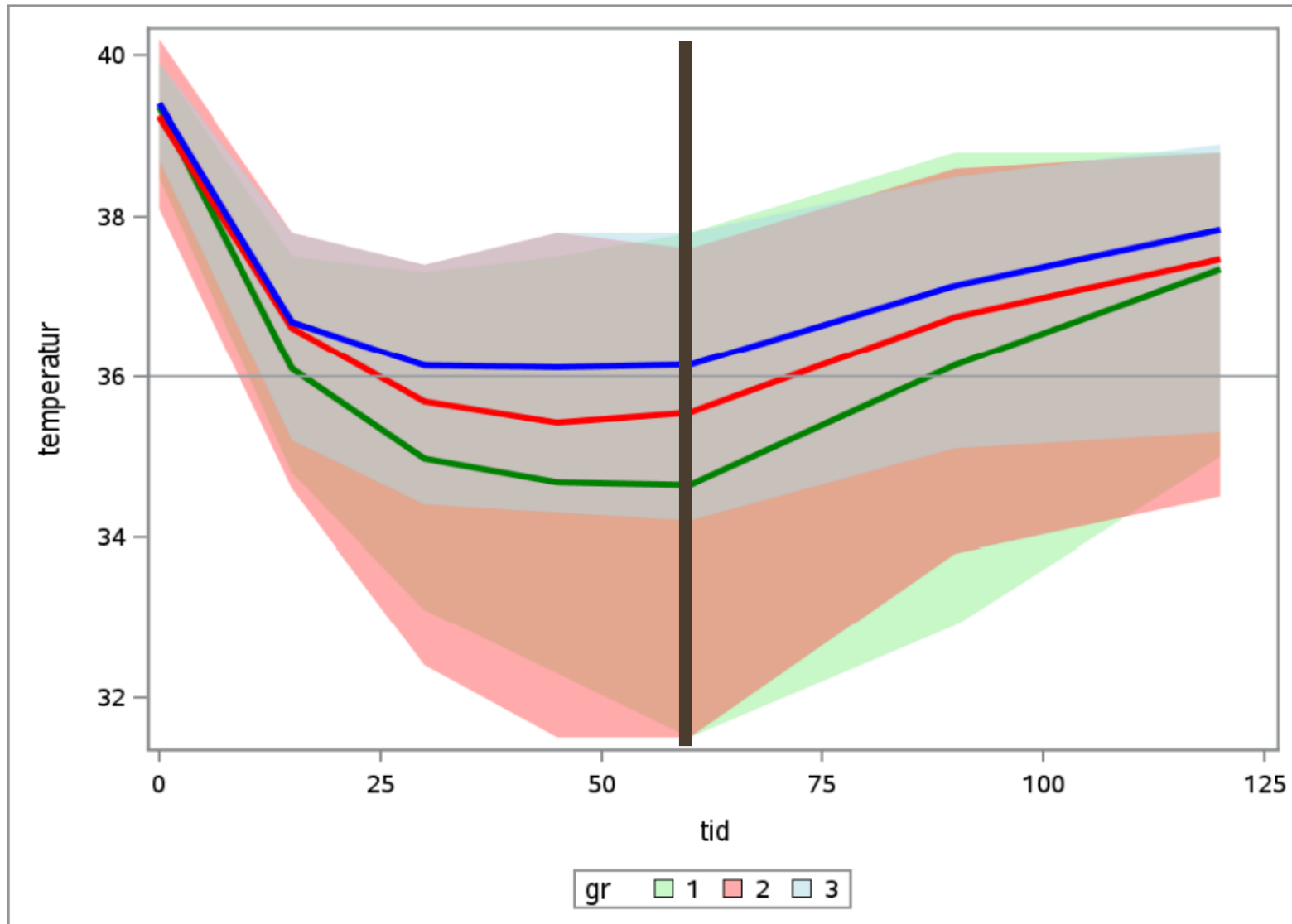


- **Control**: Piglets on slatted floor for 60 minutes
- **Treatment 15**: Piglets on warm mat for 15 minutes and 45 minutes og slatted floor
- **Treatment 60**: Piglets on warm mat for 60 minutes
- Moved to the sow after 1 hour

STØTTET AF

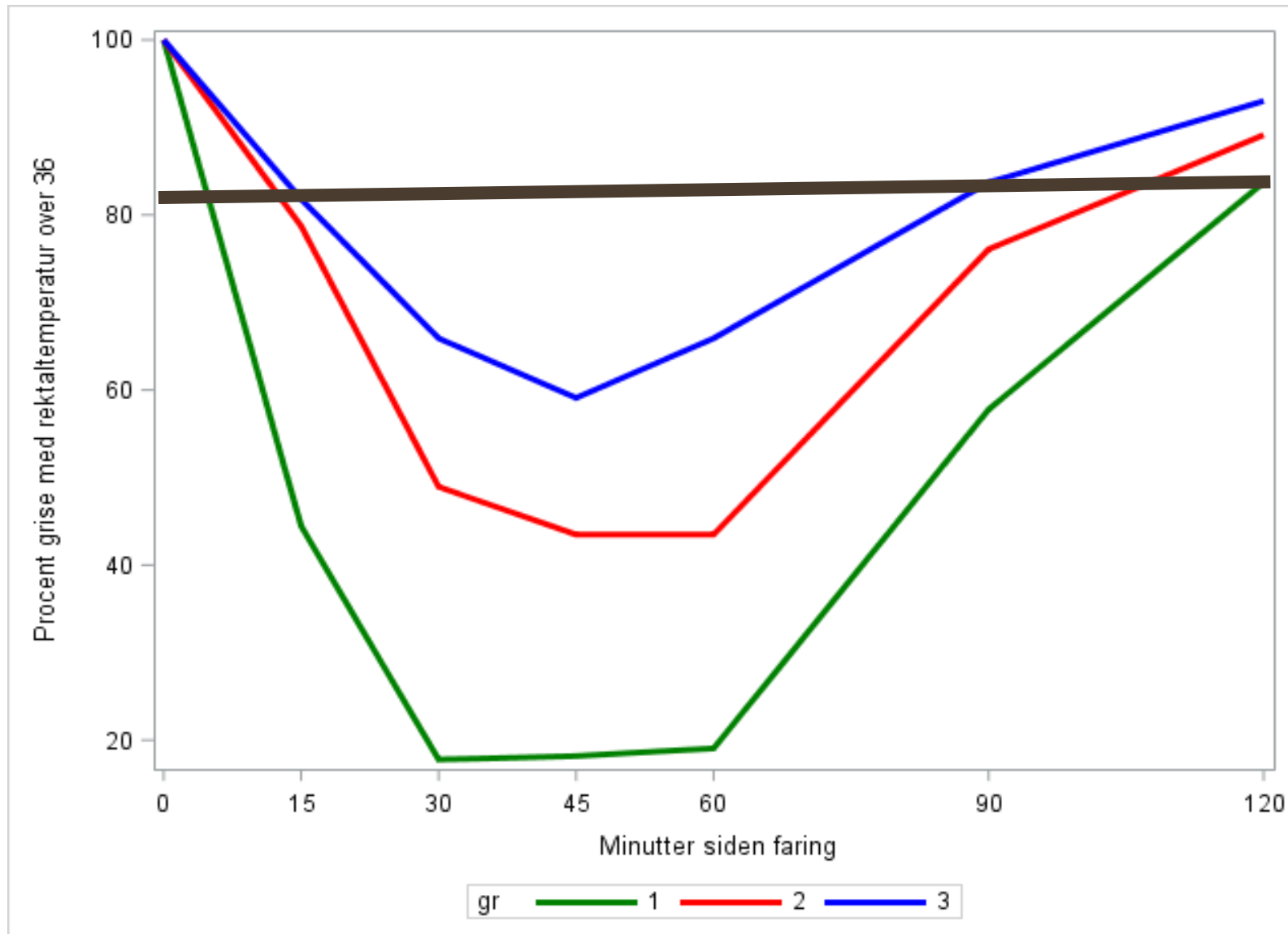
Svineafgiftsfonden
SEGES
INNOVATION

Rectal temperature from birth until 120 minutes after birth



- Control
- Treatment 15
- Treatment 60

Percentage pigs with rectal temperature over 36 °C



- Control
- Treatment 15
- Treatment 60

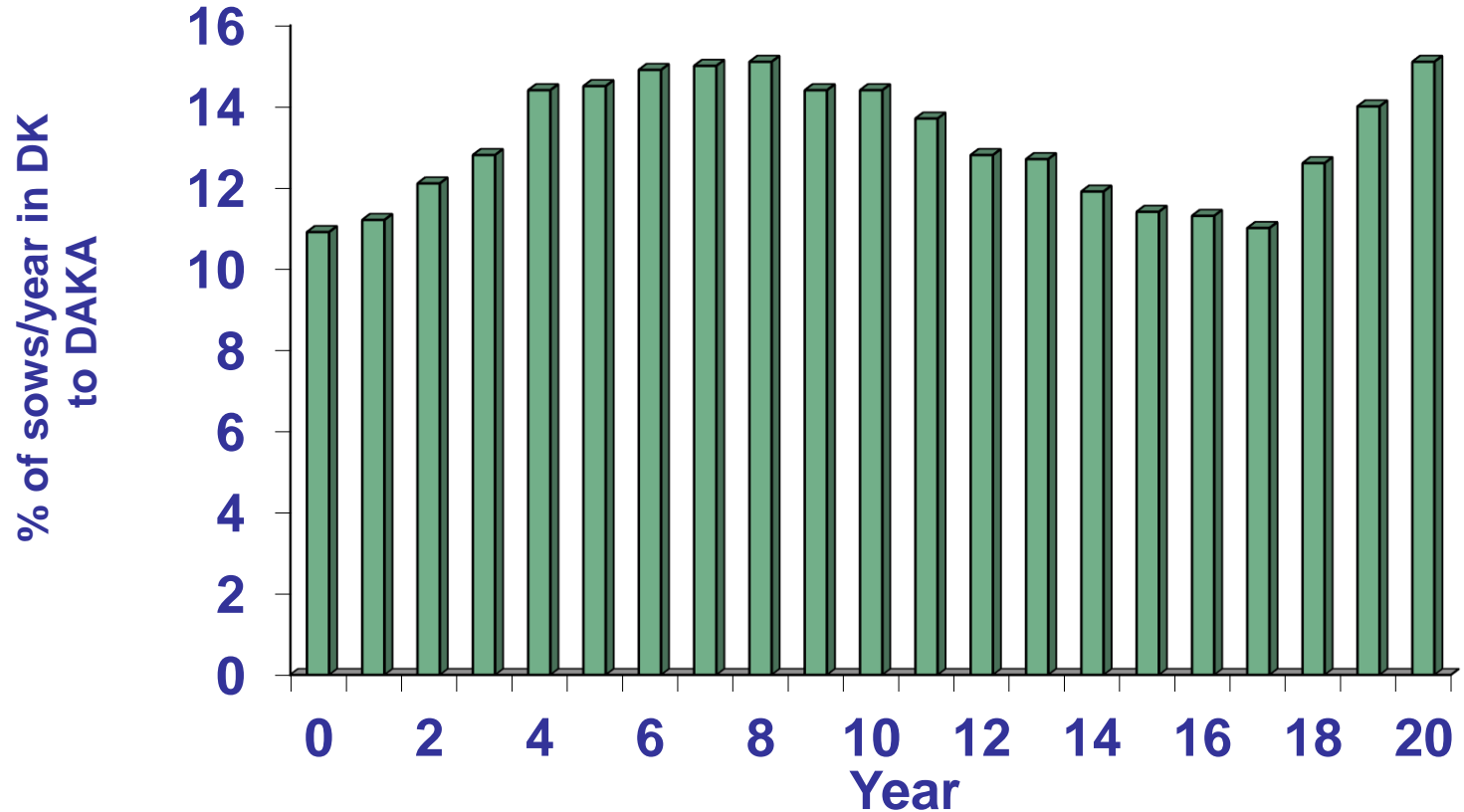
Focus on 3 topics from my daily work ;-)

- **Fouling on the solid floor – pigs from 30 kg to slaughter**
 - 50 pct. solid floor can work, but requires inlet in the roof
 - Cheap environment technology
 - But requires focus on adjusting the ventilation
- **Rectal temperature – newborn piglets**
 - Higher rectal temperature with a warm mat
 - A rectal temperature over 36 °C after 2 hours increase survival
- Sow mortality

Development in sow mortality 2000-2020



SoLiv 2.0

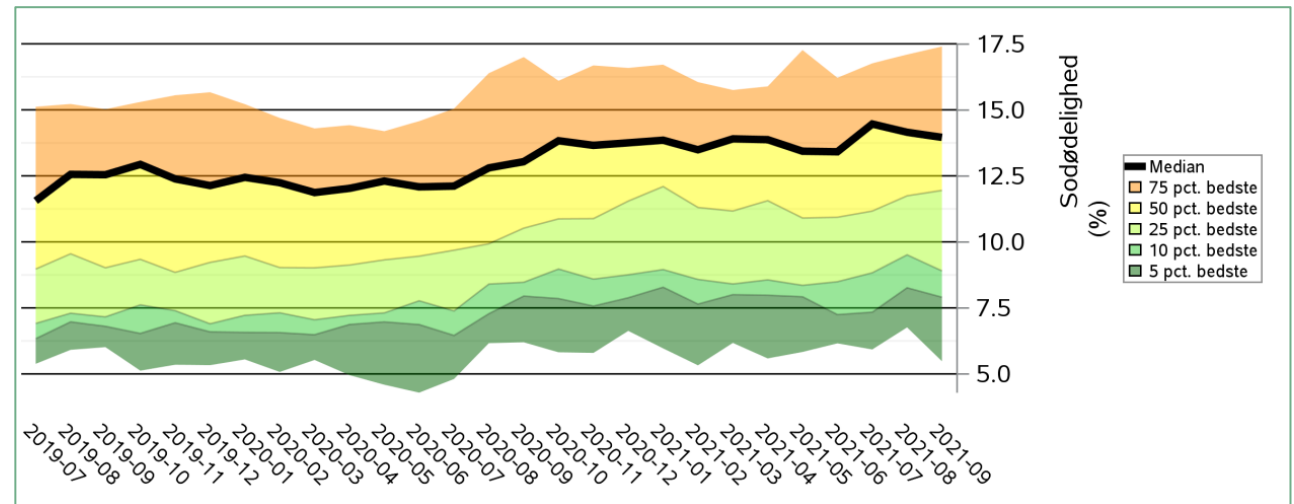
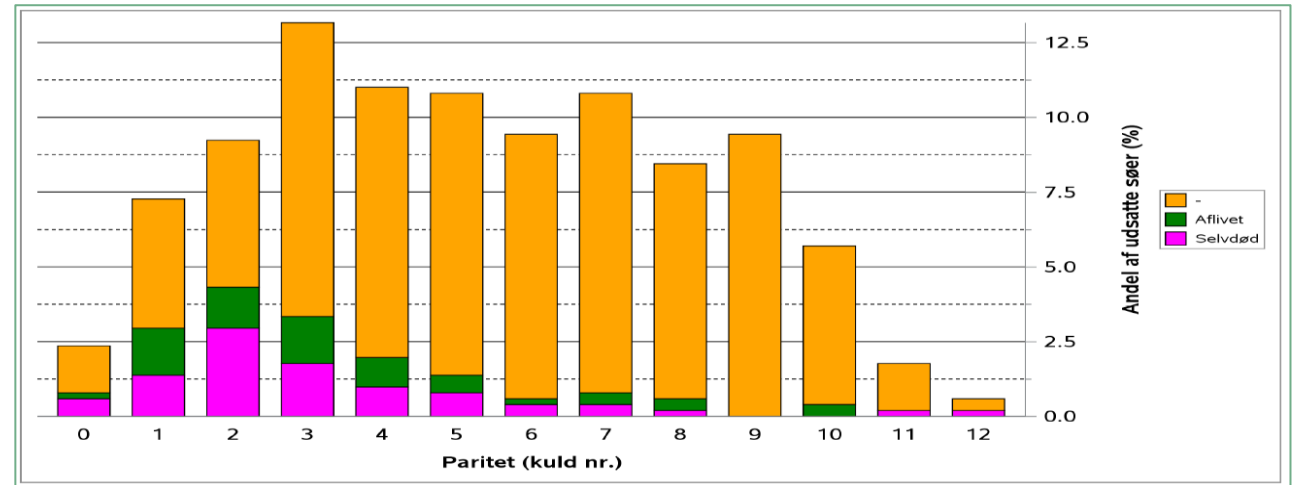


- Licence to produce – improved job satisfaction – improved economy

- Industry aim of 9% dead/euthanized sows of sows/year
- Need for an increased effort on most farms

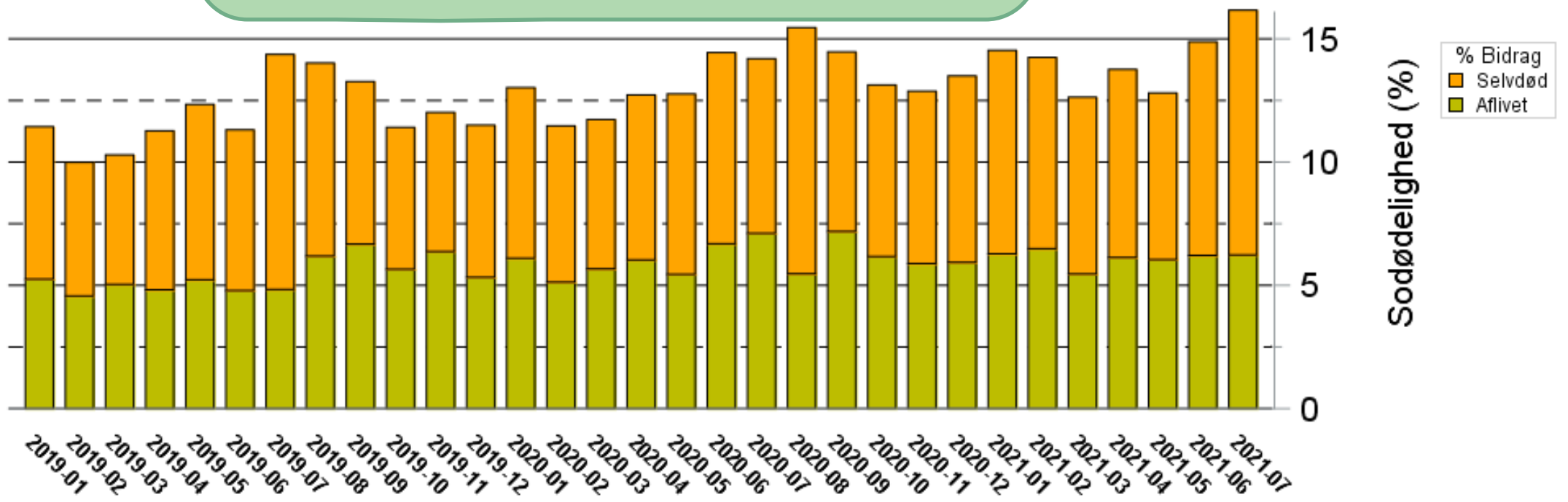
Improved insight at herd level with new SEGES tool

- Use information from your own herd
 - Parity
 - Time in cycle
 - Dead – euthanized
 - Diagnosis
- Benchmarking
 - Approx. 70,000 sows included in SEGES analyses



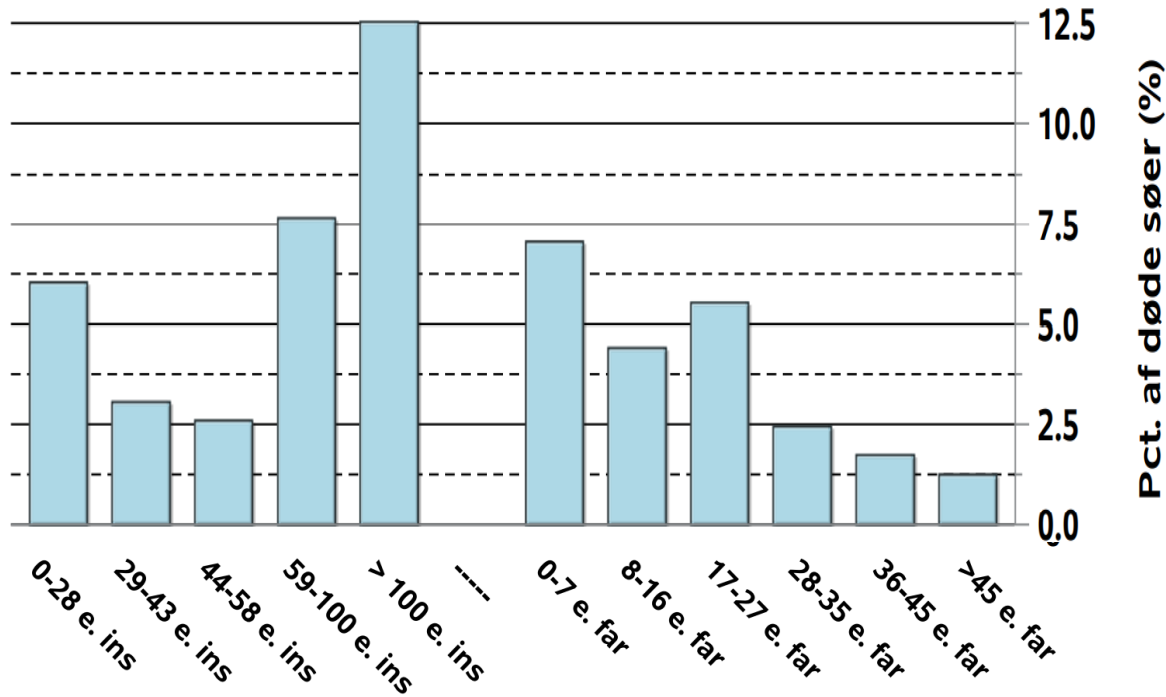
Distribution of sows that die or are euthanized (2019-2021)

- 50-60% dead
- 40-50% euthanized

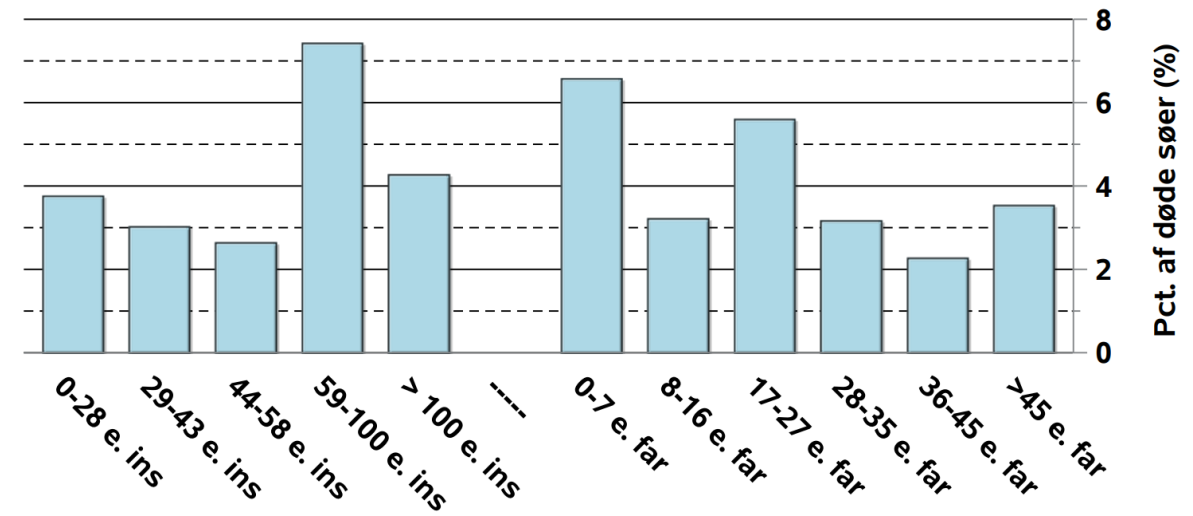


Time in cycle when sows die or are euthanized, % of sows

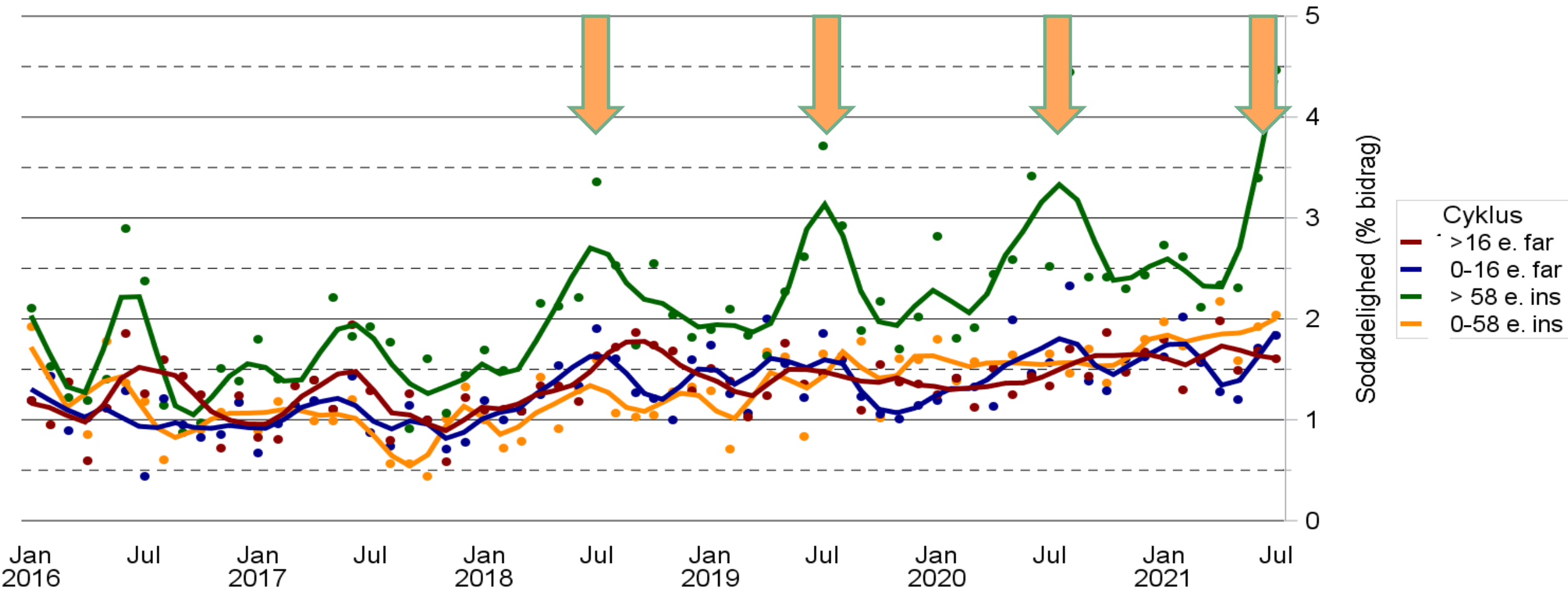
Dead



Euthanized



Distribution of sows that dies





Claws



Feeding of gilts and sows
Body condition



Introduction of gilts
Housing of gilts
Selection of gilts

Increased sow
survival rate
– focus on sow
mortality



Daily supervision
Use hospital pens

Grouping of gilts and sows
Floor and lying area



Daily work in the gestation unit

- Clean solid floor when needed
- Check that all sows eat their ration
- Mark 'OBS sows' for the daily supervision
- Take care of sows with severe problems



Daily inspection is a task in itself

- All sows must be observed moving every day
 - 90% of all treatments are caused by leg and claw problems
- Work two and two together!
- Pay extra attention to gilts and pens with newly-grouped gilts/sows
- Straw will encourage the sows get up
- Systems and clear arrangements
 - Herd vet
 - Monitor 'OBS sows' the following days
 - Journal / mark treated sows
- Move severe cases to hospital pen



Location of hospital pens – it must be easy!



Focus on 3 topics from my daily work ;-)

- **Fouling on the solid floor – pigs from 30 kg to slaughter**
 - 50 pct. solid floor can work, but requires inlet in the roof
 - Cheap environment technology
 - But requires focus on adjusting the ventilation
- **Rectal temperature – newborn piglets**
 - Higher rectal temperature with a warm mat
 - A rectal temperature over 36 °C after 2 hours increase survival
- **Sow mortality**
 - Management – management
 - Focus on the daily inspection and use of hospital pens
 - SEGES tool can help 😊