Lameness in sows

SEGES Innovation

April 11th 2023

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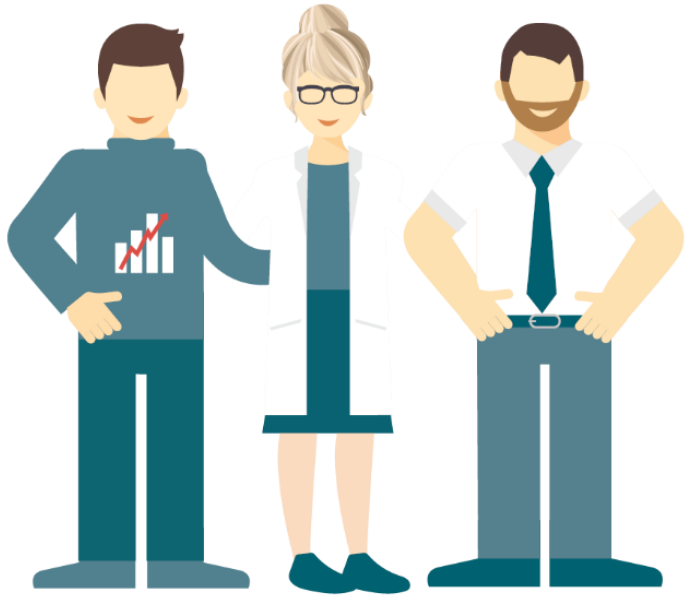
Carlsberg
COPENHAGEN
DENMARK
1847 ONWARDS

Portu
sbon
Casa
M


DANISH
QUALITY SLICED BACON
DANISH CROWN
SELECT
RINDLESS
UNSMOKED BACK BACON
WITH ADDED WATER
DENMARK
SLICED IN UK
Keep refrigerated
2002041247L2
DANISH CROWN
HALIFAX


AREA
42 925 km²
1%
of total
EU area

Vi connect science to practical farming



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Who are we?

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Two-level advisory system

Research & Development

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DIRECT information
(Congress, seminars, website etc.)

Advisors

Danish Agricultural Advisory Service

Vet Practices

Companies
(slaughterhouses, feedstuffs, farm technology etc.)

Pig producers

Agenda for today

Status on sow mortality in Denmark

Results from a Danish study on sow claws

Housing gilts and sows in Denmark – focus on leg and claw problems

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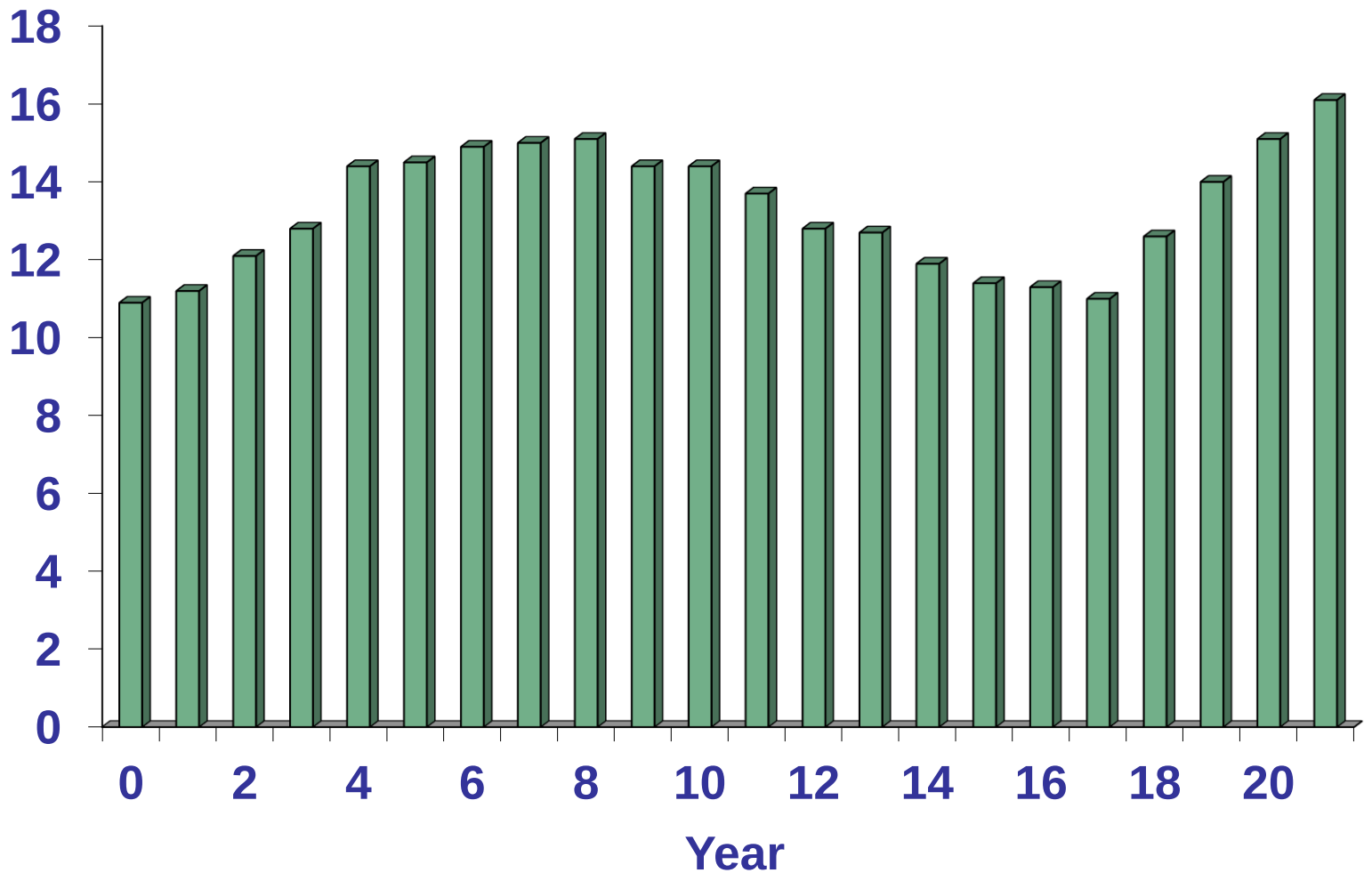
Sow mortality in Denmark from 2000 - 2021



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We collect information from Danish sow herds

- Today we have information from 200 Danish sow herds
- Both production herds and breeding herds
- We identify and explain patterns in data

AgroVision AGRICULTURAL SOFTWARE

CLOUDFARMS

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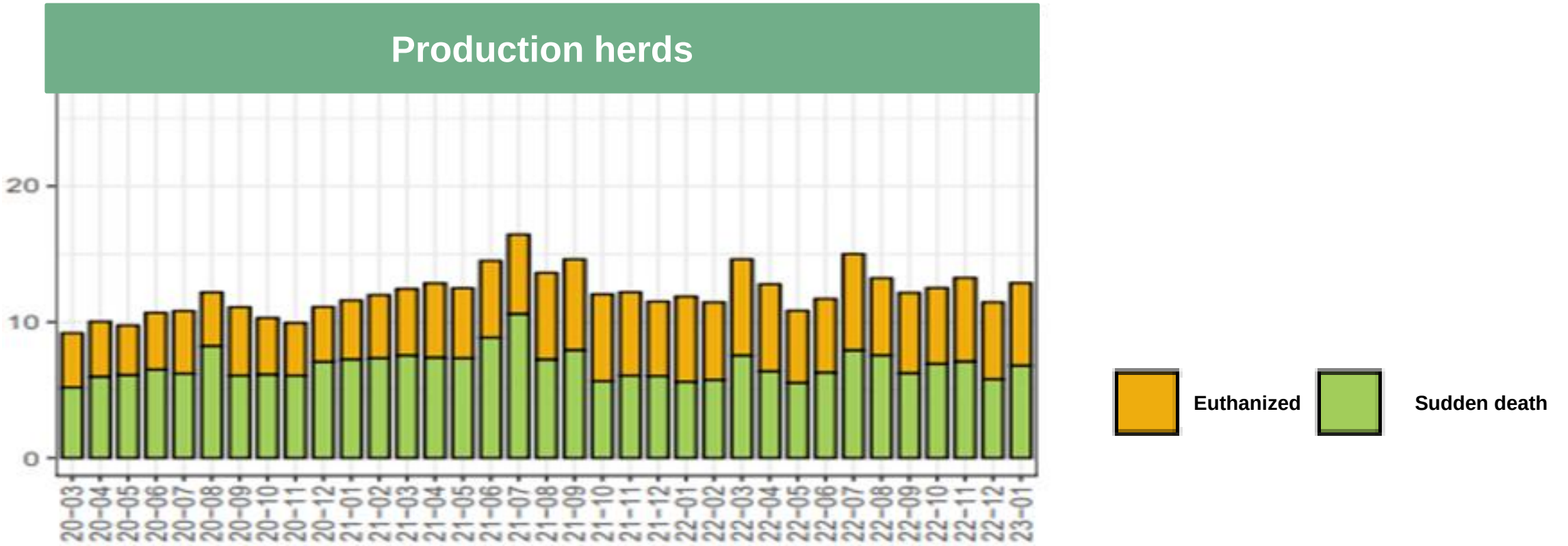
Sow mortality – in production herds



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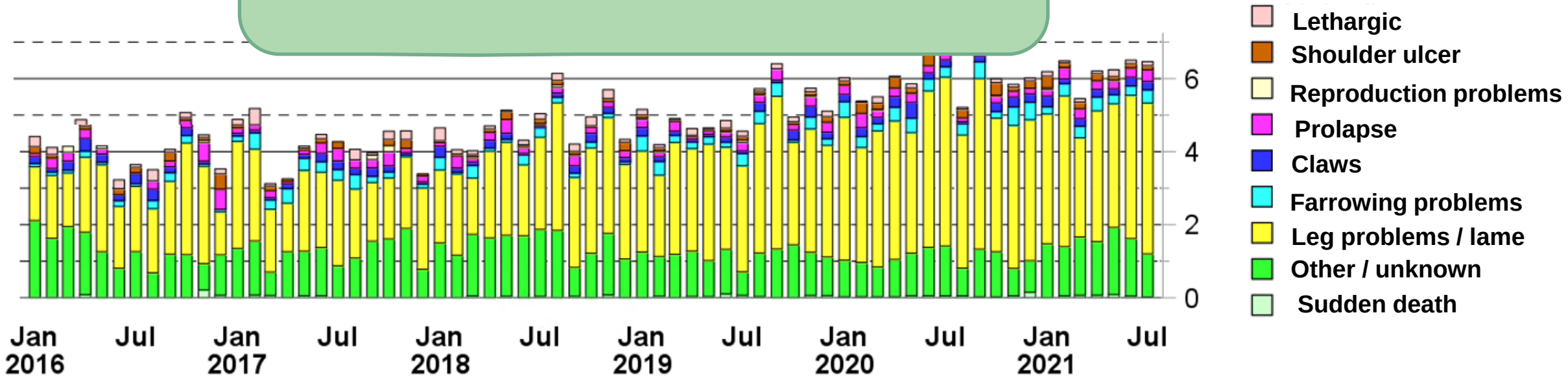
Sow mortality - causes of euthanization

60-70 percent of the sows are euthanized due to claw or leg problems



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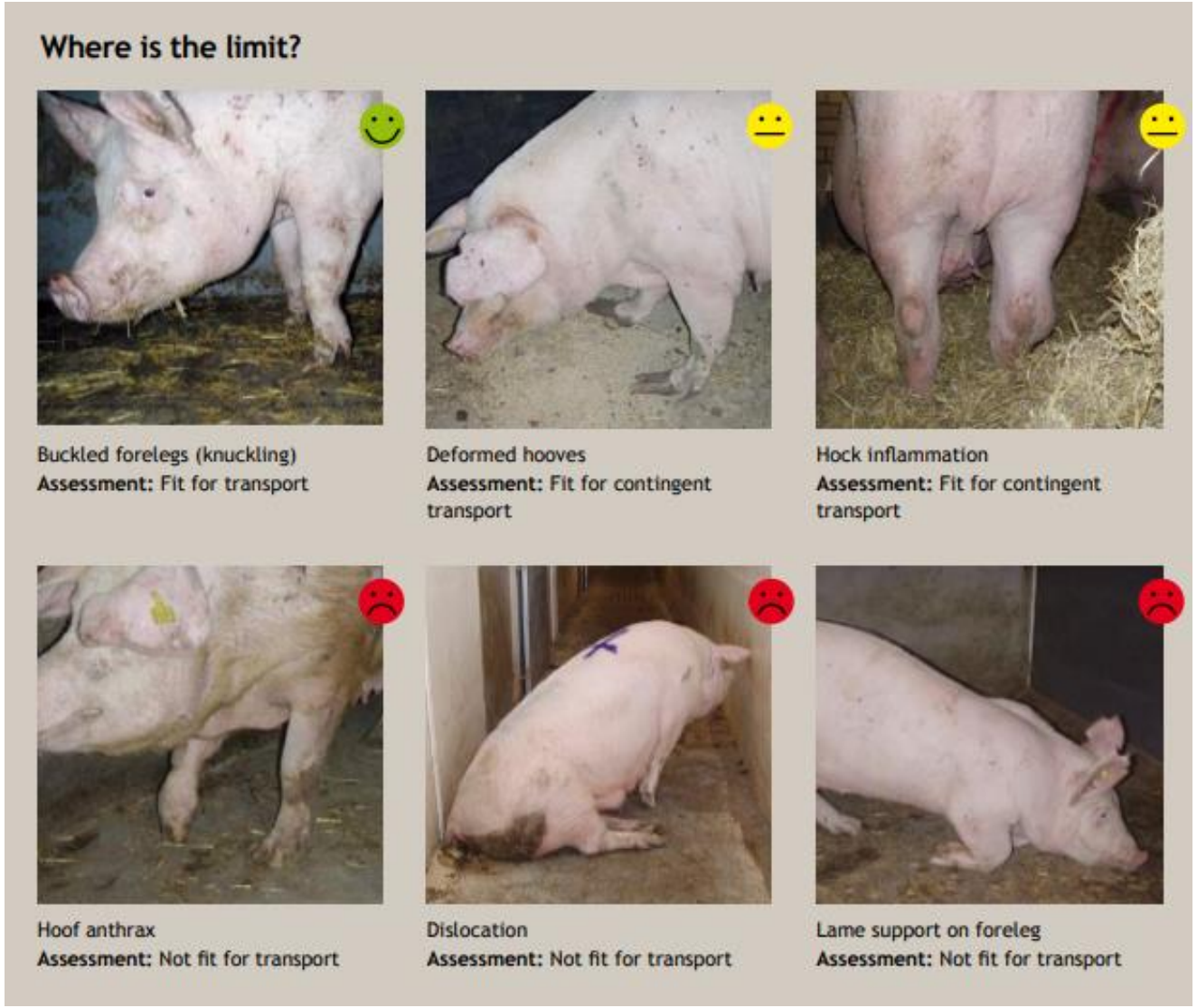
Why are Danish sows euthanized – and not send to slaughter?

Fitness for transport

EU regulations and Danish regulations

Not fit for transport:

- Lame sows
- Sows with severe wounds
- Sows with a prolapse
- Sows who are generally affected

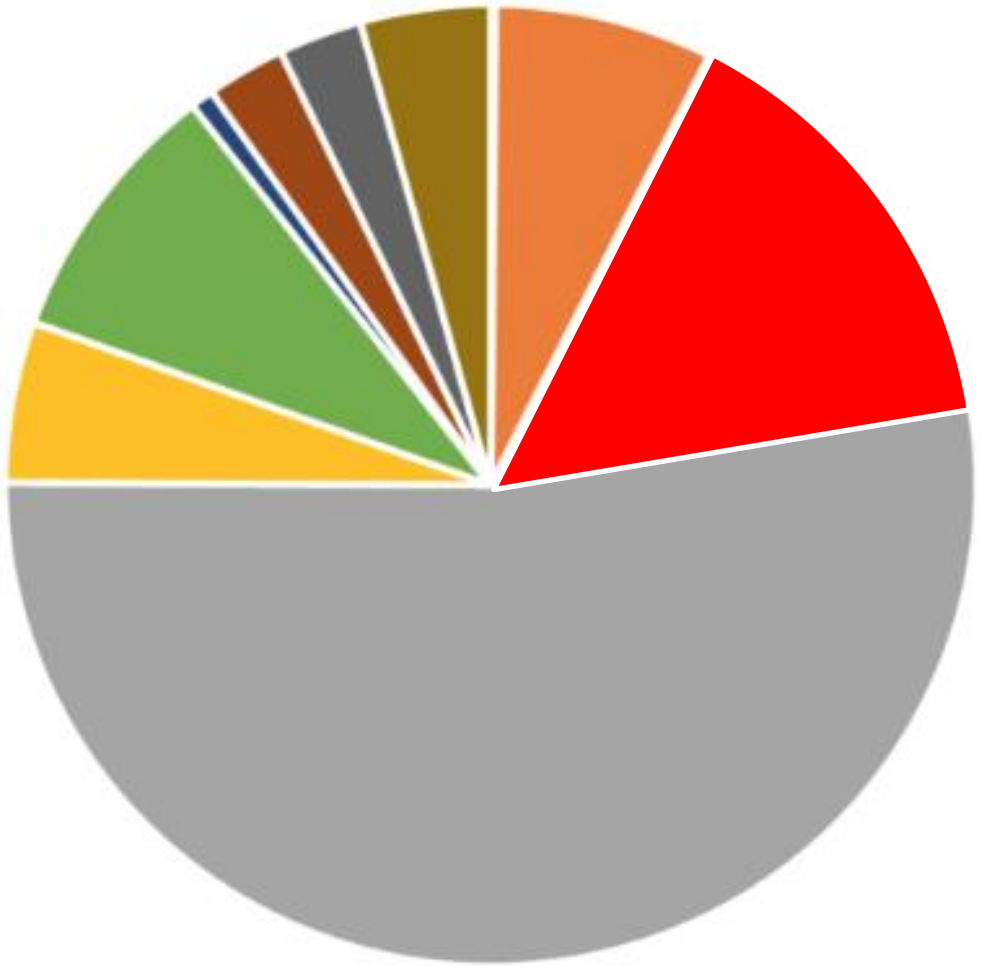


Sow claw pilot study

Hanne Bak, DVM, Ph.d., Dipl. ECPHM

Study Tour, Minnesota, April 2023

Farmer registrations – euthanized sows and gilts



- Several studies on leg disorders
- If registered, claw disorders are treated as one category
- Claw problems up to 20%

-> we need to know more!

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Pilot study

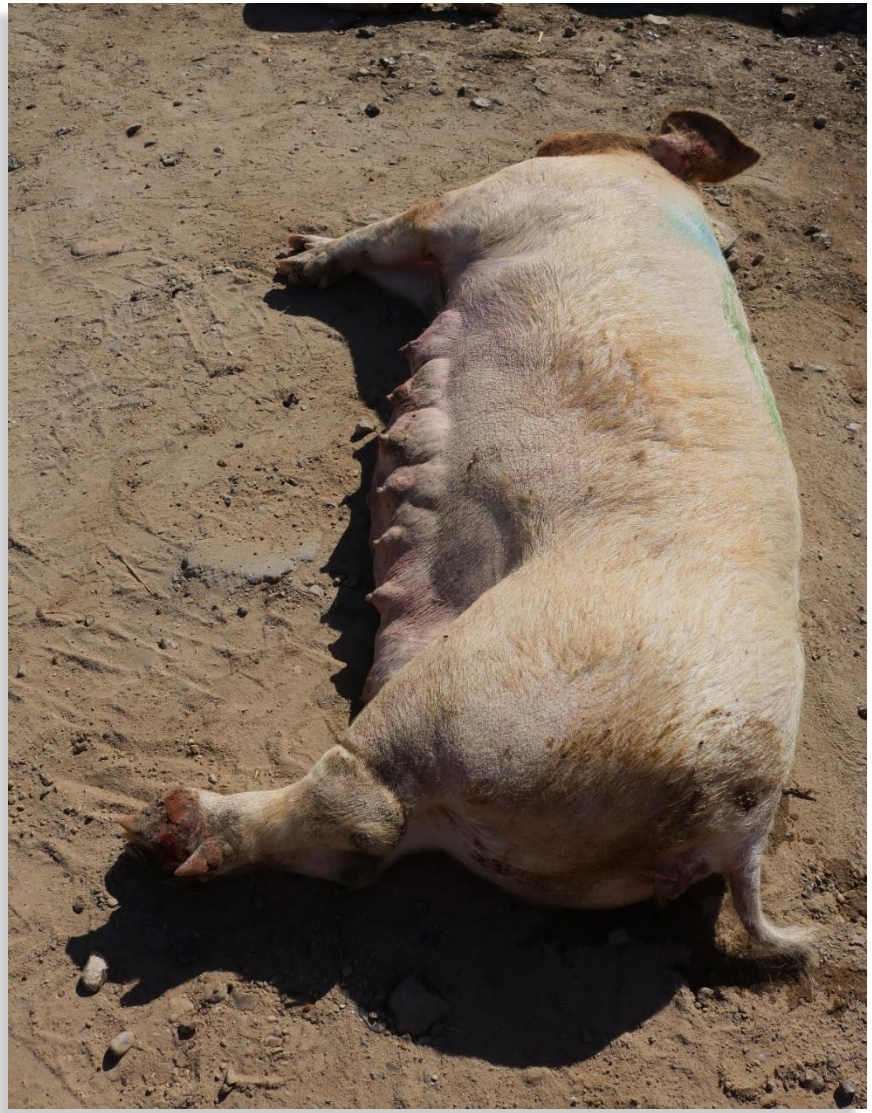
4 herds with high incidence of claw diseases

21 lame sows selected for claw autopsy

Characterization of bacterial flora

Main finding

1. Claw infection	9 sows
2. Laminitis	4 sows
3. Growth line congestion	3 sows
4. Traumatic/mechanical	4 sows



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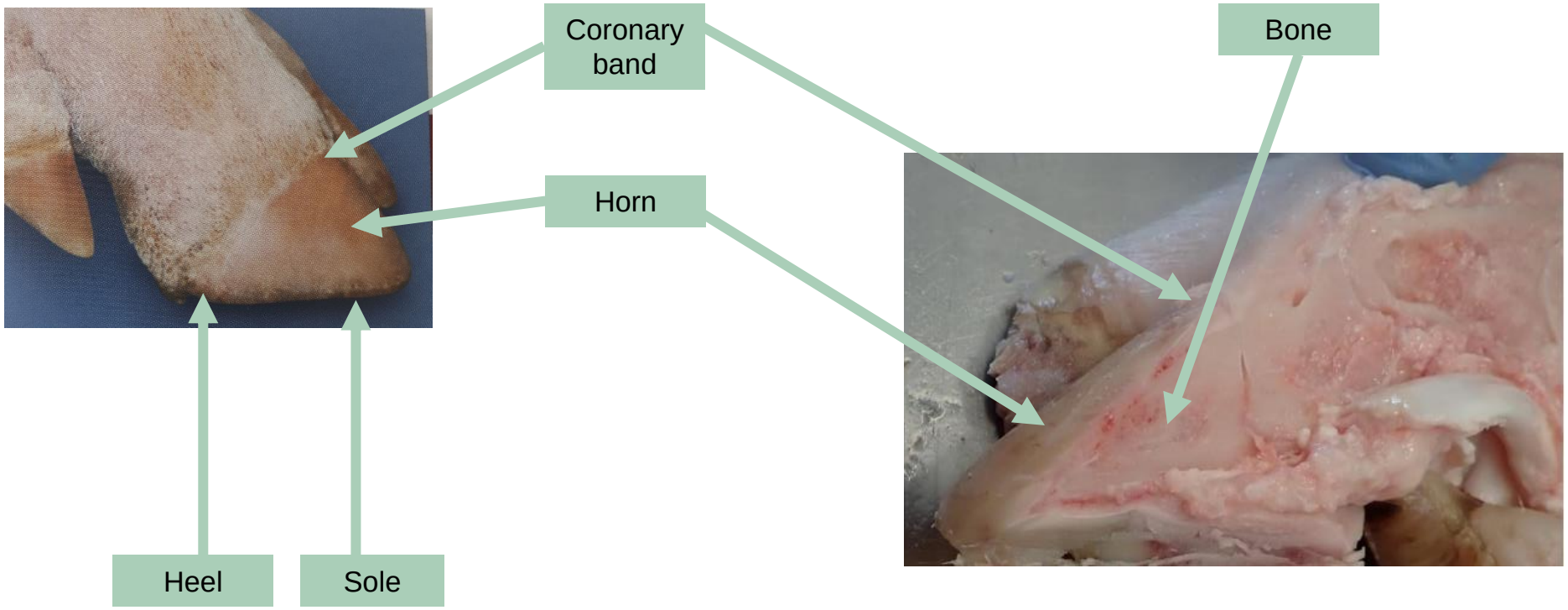
The claw



1. Claw infections

- Infections are caused by bacterias from the local environment
- Entrance through damaged skin/horn
- Cronical lesions ->

  No effect of antimicrobial treatment

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Clinical presentation

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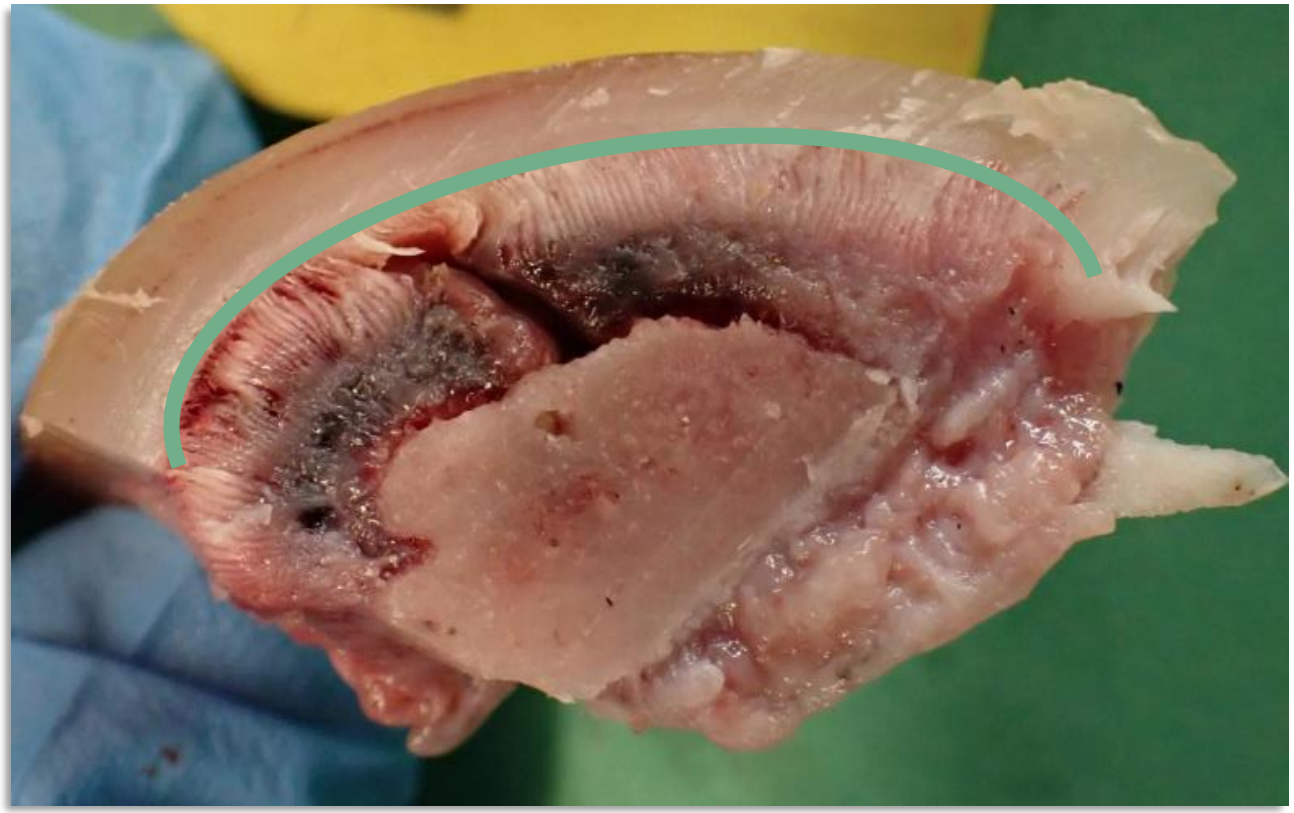
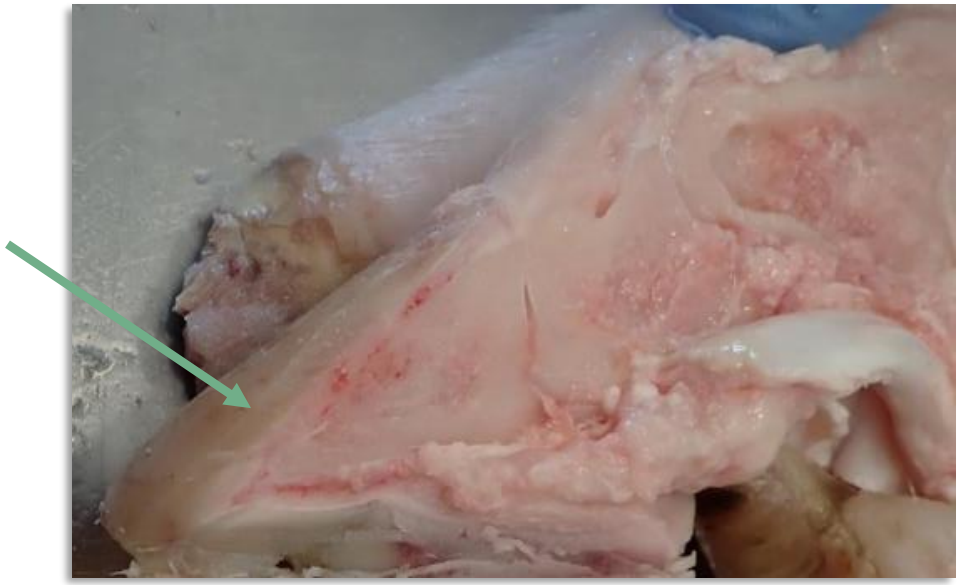
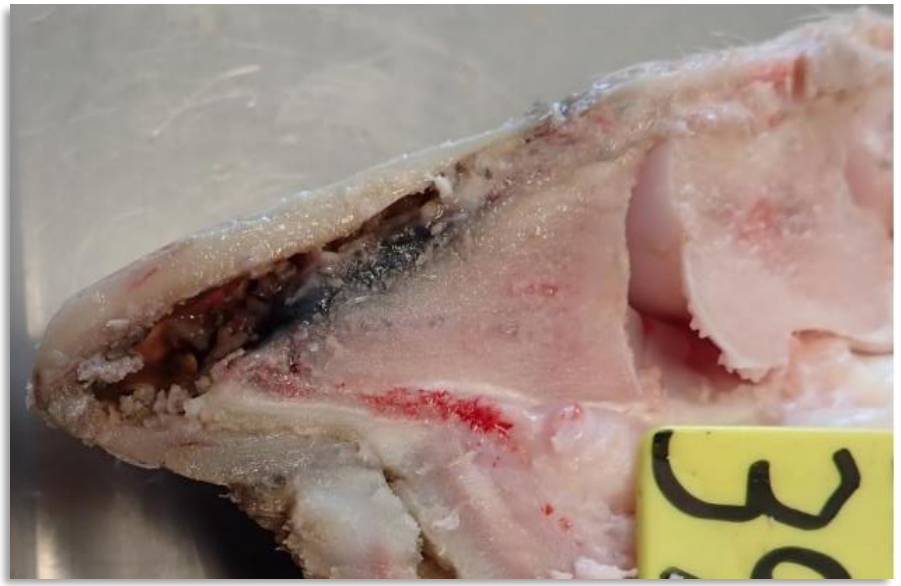
2. Laminitis



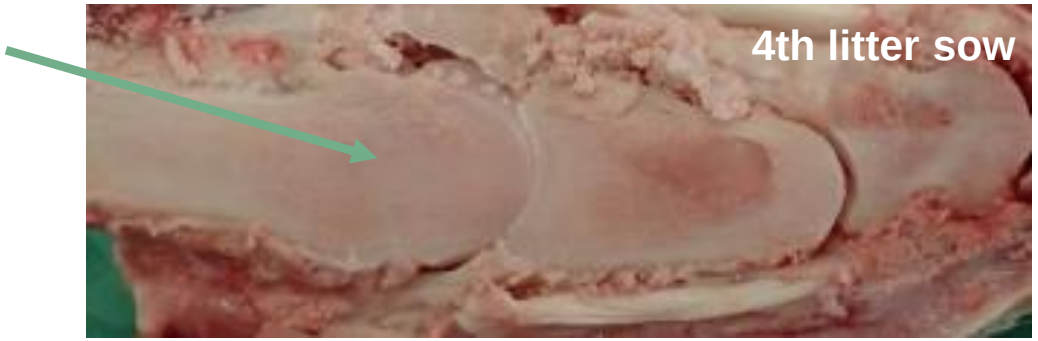


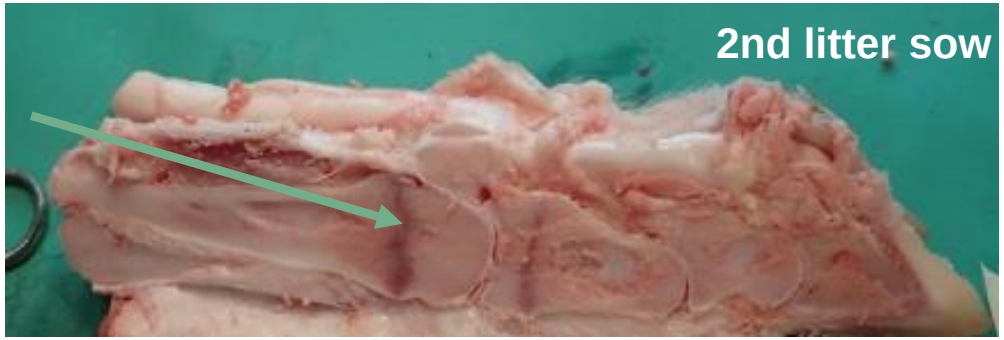


Clinical presentation

3. Growth line congestion

- In 3 sows, wide and reddened growth lines was the only autopsy finding
- Histopathological examination revealed congestion in the growth lines
- In other species, congestion is seen after vigorous play or over-exercise
- Do the young sows develop lameness, because they are not fully grown?





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All 2nd litter sows showed growth line congestion

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The lameness does not always reflect the pathological findings

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In most cases, the damage is worse than the lameness

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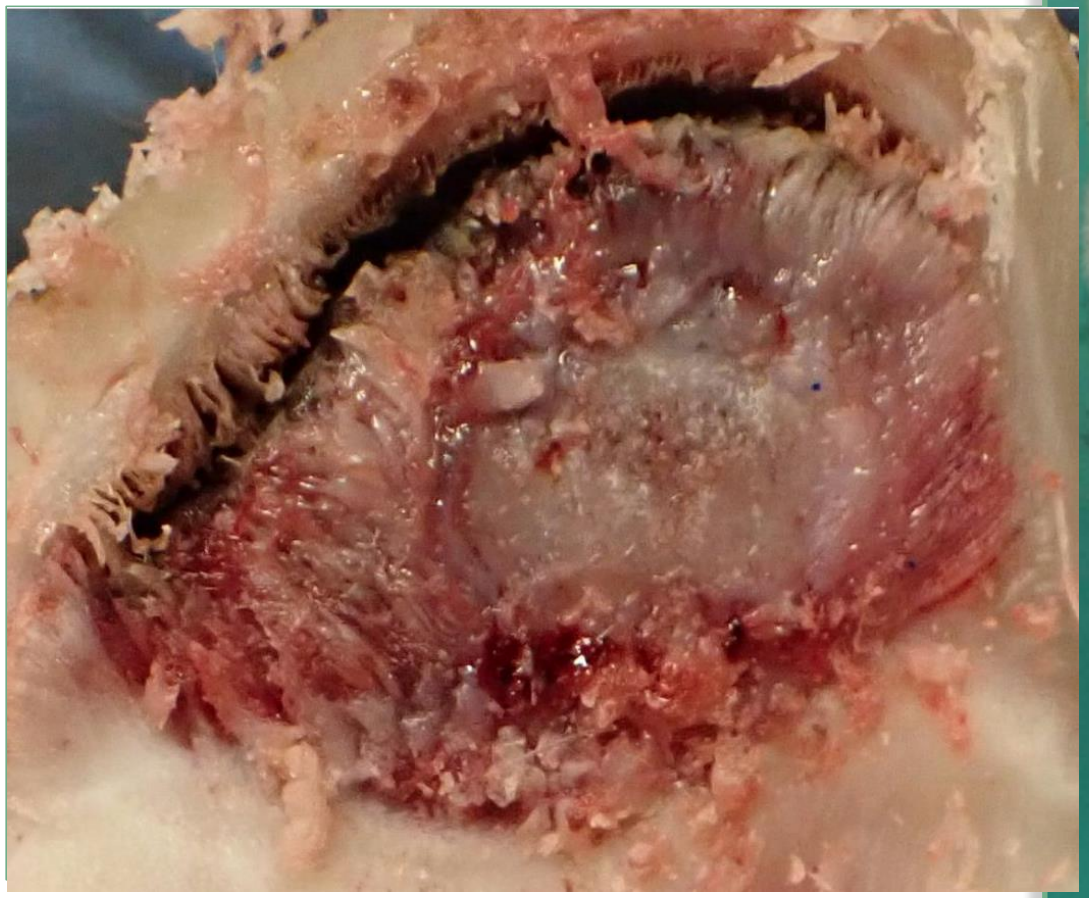
Many lame sows with claw lesions cannot be saved



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Diagnosis

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Conclusion

- Bacteria entered through damaged skin or horn
- Lameness was a poor diagnostic parameter
- Antibiotic treatment will not be effective for claw lesions, once the lameness is recorded
- Observation of defect claws and wounds can give an earlier warning
- Local antimicrobial treatment will stop infection, before it enters the deeper tissues

Preventive measures should be preferred over treatment:

Proper feed composition, hygiene, claw trimming, floor quality

Housing gilts and sows in Denmark – focus on leg and claw problems

Chief Scientist Lisbeth Ulrich Hansen

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Designing the young gilt

Age, dage	77	91	105	119	133	147	161	175	189	203	217	231
Weigth, kg	30	38	48	59	72	83-86	96-100	109-112	123	133	143	153
Backfat, mm									11-12	>12		13-15
Feed/day, FEsv*	1,4	1,65	1,95	2,25	2,55	2,8	2,9	2,9	2,9	2,9	2,9	3,5




Evaluation of the gilts – leg and claws

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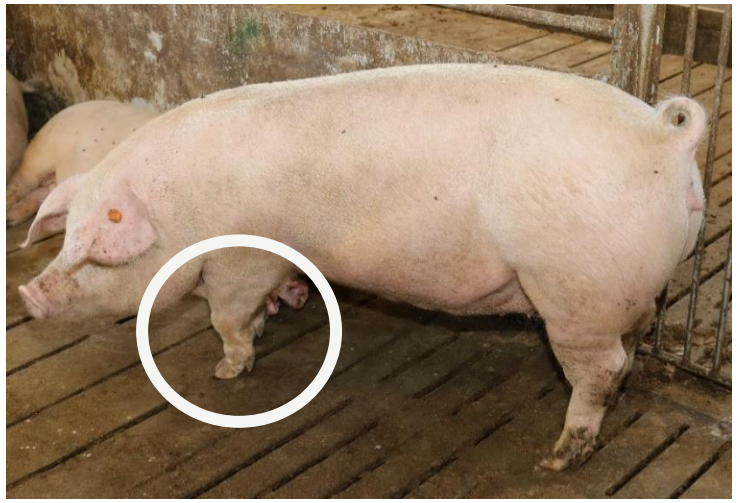
Prevention by culling gilts/sows with leg/claw problems



Select gilts with correct leg position and healthy, uniform claws

Assess leg position every time you move gilts/sows

Cull gilts and sows with :

- Forelegs: buck-kneed or ”turned outwards”
- Hind legs under position
- Upright forelegs/hind legs
- Non-uniform/long claws

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Area requirements – gilts

	Legislation	Recommended
7-30 kg	0,3 m^2/gilt	+ 20 %
30-50 kg	0,4 m^2/gilt	+ 20 %
50-85 kg	0,55 m^2/gilt	0,75-1,0 m^2/gilt
85-110 kg	0,65 m^2/gilt	1,0-1,5 m^2/gilt
110 kg +	1 m^2/gilt	1,5-2,0 m^2/gilt

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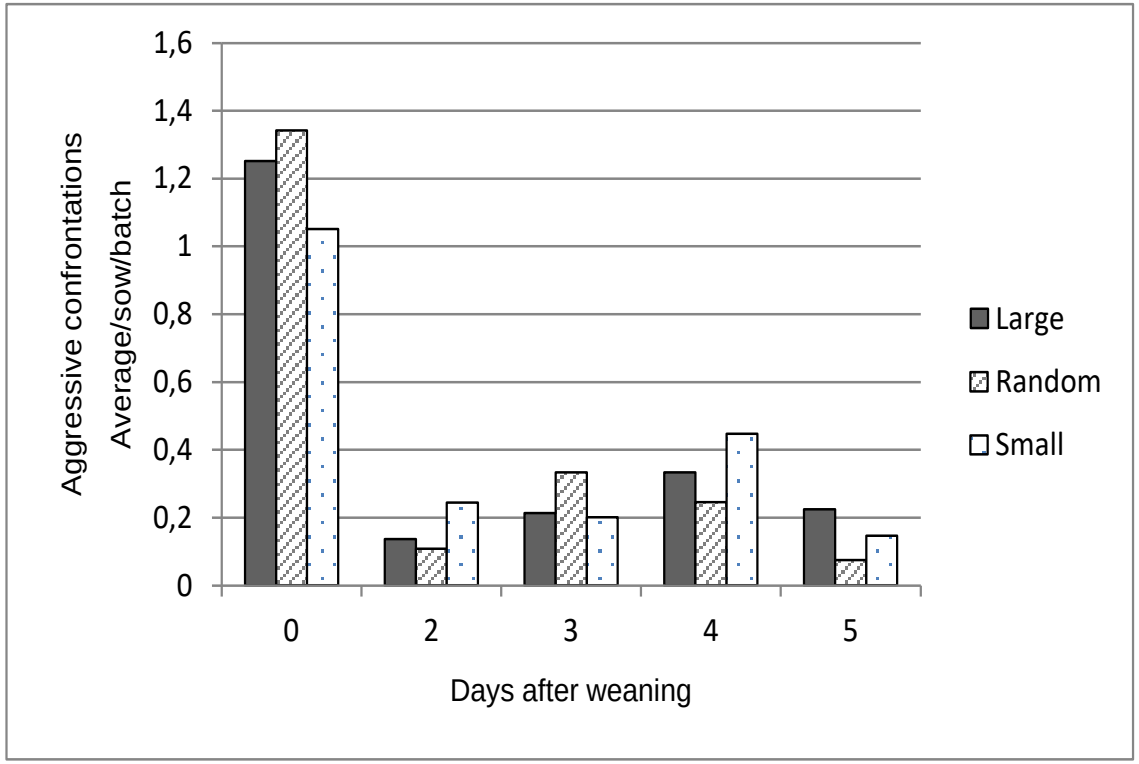
Mixing sows



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Leg problems

Significant higher frequency of leg problems on slatted floor compared to deep litter

- Stocking density had an impact on the frequency of sows treated for leg problems
- 1,8 m^2/sow respectably 3,5 m^2/sow in the activity area

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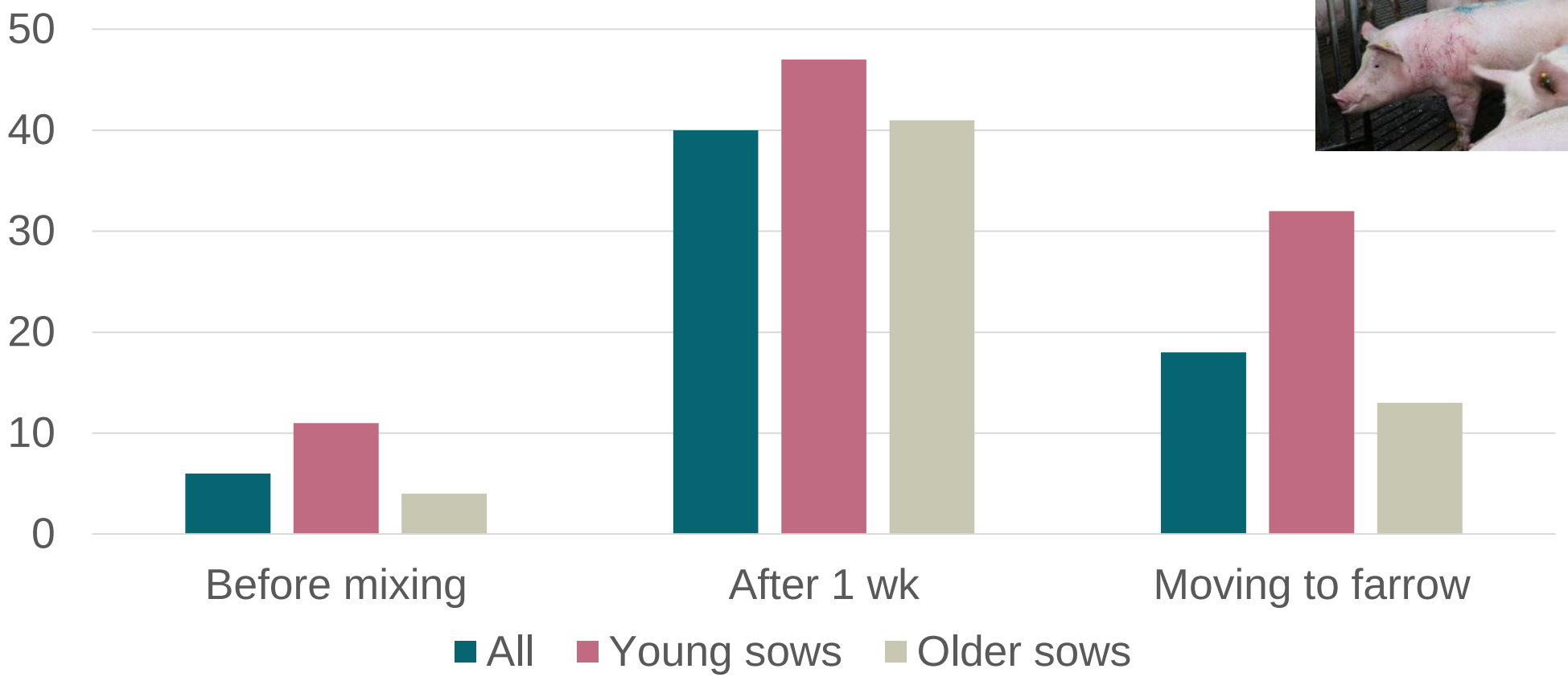
Sows with leg problems – mixing



Hansen, 2020

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Provide extra care to gilts/young sows

Stable groups

Transfer gilts 1-3 days before sows

Good lying areas for all gilts/sows in the pen (low lying walls)

Sick pens play an important part

- 15-20% of all sows receive treatment during gestation
- 90% of all treatments are related to legs/claws
- 8-10% are moved to sick pen
- 80% were able to return to production

Report no. 0803

- Legal requirement: 2.5% sick place units
- Recommendation:
  - Feeding stalls and ESF 3-5% sick place units
  - Competitive feeding approx. 10% sick place units

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Sick pens with drained, straw mat are recommended

- Soft, drained area
- Not necessary to remove straw mat
- Wire-type cleaning under the entire pen

- Soft rubber mat
- Sloping floor
- Fasten the mat

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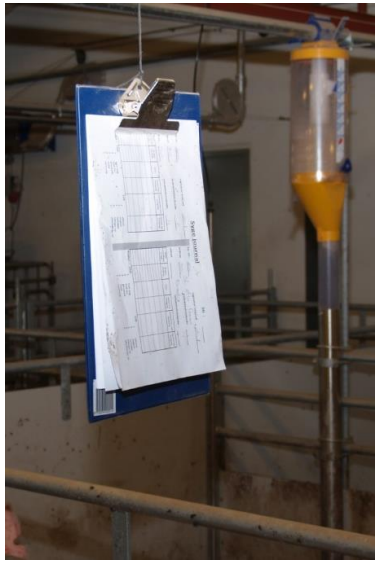
Easy access to sick pens



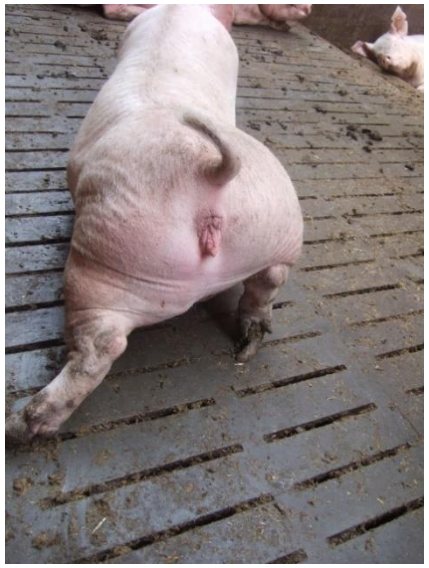
- Short distance from gestation pen to sick pen
- Sick pen may be part of gestation pen area

- Sows are recovered – then what?
- Back to ”own pen” or collection pen with only few sows
  - 1-2% place units

Identify sows in need of a sick pen

- Daily supervision – is daily!
  - Focus on the most important tasks
  - Have enough resources
- Experienced staff trains new colleagues
- Two persons for supervision
- Clear agreements
  - Staff are included
  - Herd vet advises on treatment strategy
- Assess if leg/claw problems can be prevented
- Learn to identify and assess sows with challenges

Prevention of leg and claw injuries during hierarchy fights



Access to feed and good lying areas
Increased tendency to slip and damage to claws

Stable groups
Non-skid bedding
Escape options (area, distance)
Extra feed in the first couple of days
Early intervention
Identify and know signals

Sow in sick pen

OBS sows

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Maintain a flow in the sick pens

Prevention and early intervention

Sick pens and collection pens

Transfer to the farrowing pen

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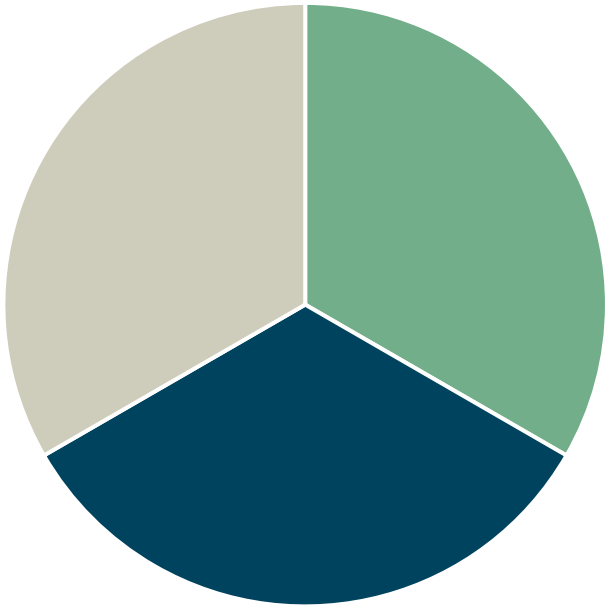
Feeding systems in Denmark

Free access stalls



Electronic sow feeding

Floor feeding

Wet feed in trough

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