



# Hoof care

- the foundation for a long sow life

SUPPORTED BY

**Danish Pig** Levy Fund

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*DVM, SEGES Innovation*

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# The importance of hoof care

- Cattle herds trim hoofs 3-4 times/year  
Hoof disorders make performance drop by 3.5%
- 3.5% of 35 pigs/sow/year = 1.2 pigs/sow/year
- Gain DKK 360 per sow/year
- Trimming 10 sows/hour; 50% in all parities => DKK 24/sow/hour





# Agenda

Hoof anatomy and weak points

How to prevent hoof injuries

Findings in hooves of lame sows

Treatment of hoof injuries and infections

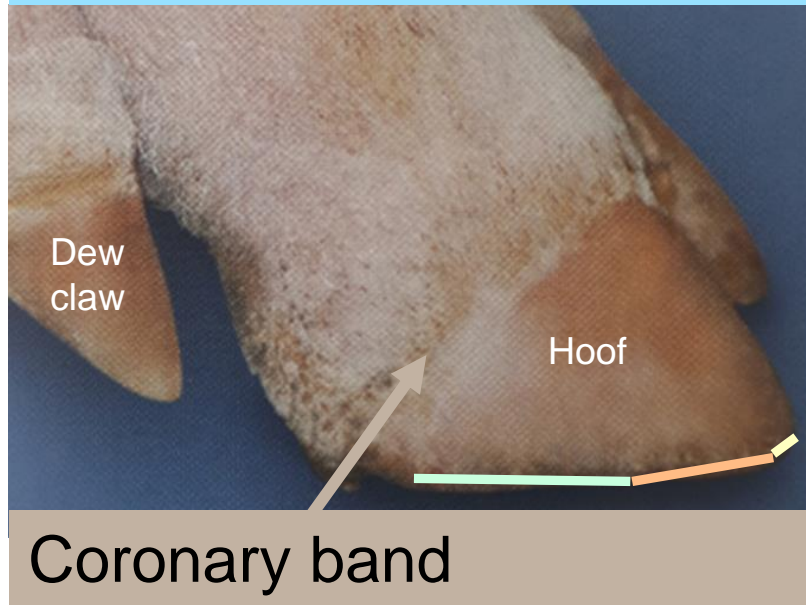
Conclusions



## Losses from hoof injuries

- Lameness
- Infection
- Poor production results
- Euthanasia

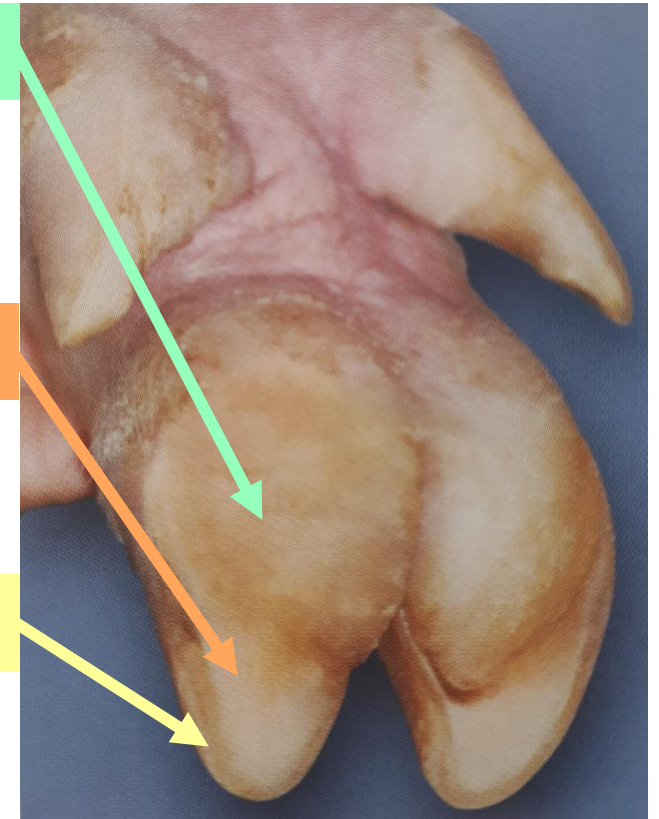
## Hoof wall



## Heel

## Sole

## White line

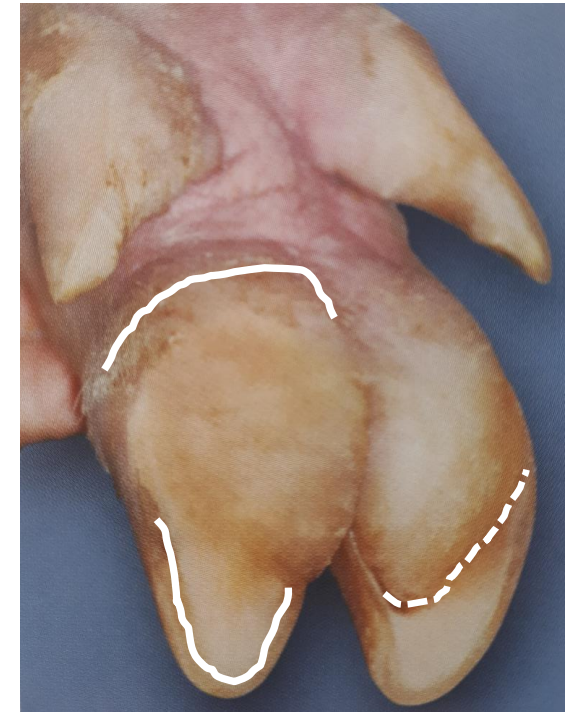
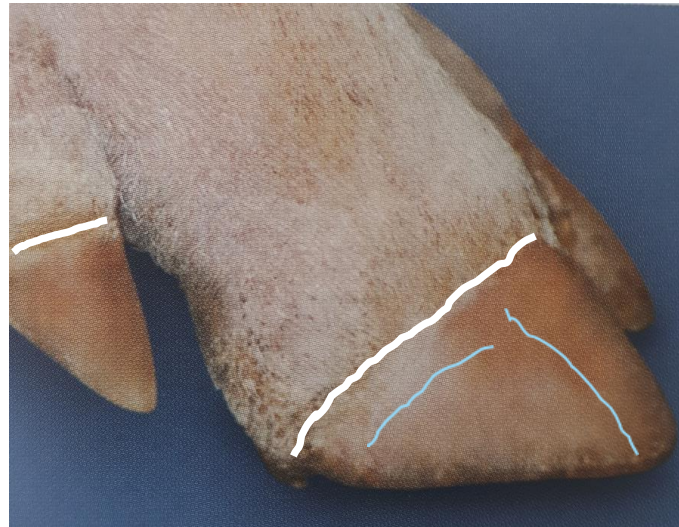


# The "perfect" hooves



# Here do we see hoof injuries?

High risk of injury, when different tissues meet





## "Mechanically" induced lameness



Long dew claw -> injury to heel



Overgrown heel -> hard lump



Long hoof -> crack at coronary band

















# Prevention







## Thoroughly assess legs and hooves in the herd

- ★ Farrowing unit
- ★ Gestation unit
- ★ Gilts

## Where are the challenges on your farm – overview

Vurdering af diegivende søer				
Score	0 = intet	1 = mild	2 = alvorligt	3 = meget alvorligt
Balleforhorn og/eller revne i balle Forhorn	Ingen forhorn	Begyndende forhorn / små revner	Tydelig forhorn / revner	Alvorlig forhorn / dybe revner
				
Revne				
Revner i klov	Ingen revner	Mindre revne i overfladen	Revne i kloven	Dyb revne i klov/hvide linje
Vertikale				
Horizontale				
Sår på kode	Ingen sår	Redme	Lille sår	Stort sår over 2 cm
				

# Assessment of hooves and legs

Vurdering af diegivende søer				
Score	0 = intet	1 = mild	2 = alvorligt	3 = meget alvorligt
Balleforhorni ng og/eller revne i balle	Ingen forhorning	Begyndende forhorning / små revner	Tydelig forhorning / revner	Alvorlig forhorning / dybe revner
Forhorning				
Revne				

# Prevention

## What to avoid

- ★ Very humid conditions
- ★ Remnants of faeces
- ★ Twists
- ★ Blows
- ★ Pressure marks
- ★ Insufficient wear





# Prevention

## Cracks in hooves

- Pen equipment
- Slats
- Edge of trough
- Rough and uneven floor
- Differences in level in the pen
- Long hooves



# Prevention

## White line

- Twists in hoof
- Stocking density too high
- Rough and uneven floor
- Humidity and faeces



# Prevention

## Long dew claws

- Soft pasterns





# Prevention

## Cornification of the heel

- Uneven hooves = uneven distribution of weight
- Humidity and faeces



# Prevention

## Design of gestation unit

- ★ Dry lying area
- ★ Non-skid floor
- ★ Enough room in lying area
- ★ Sprinkling



# Daily care

- ★ **Cleaning the pen**
- ★ **Supervision of sows must be a priority – use straw**
- ★ **Experience is important**
- ★ **2 people for the job 2-3 times a week**
- ★ **Clear agreements – ID and treatment**





# Prevention

## Grouping

- ★ Non-skid floor
- ★ Extra feed
- ★ Straw/wrap
  
- ★ Stable groups
- ★ Sorting according to size



# Prevention

## Selecting slaughter sows in the farrowing unit

### 1st priority

- ★ Legs
- ★ Hooves
- ★ Flux
- ★ Mastitis

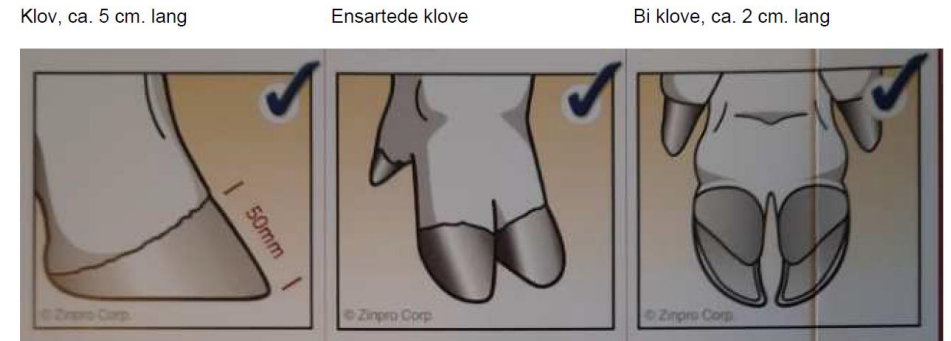
### 2nd priority

- ★ Milking ability
- ★ Liveborn

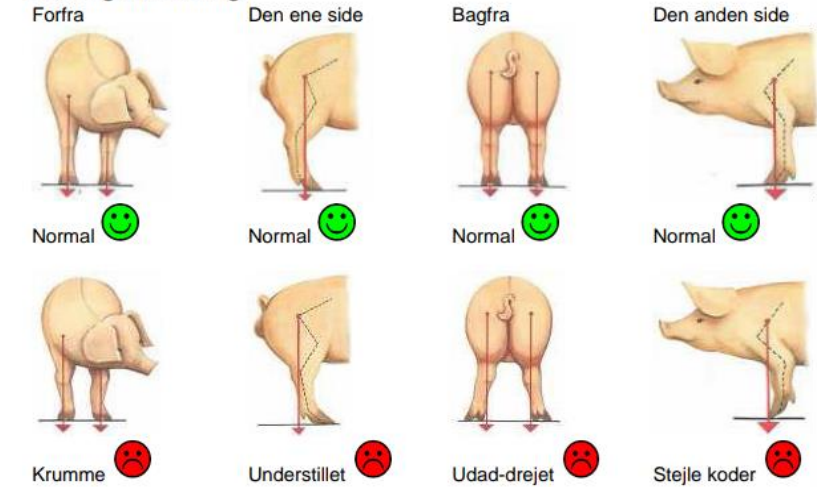


# Gilts – well begun is half done

- ★ Selection must be thorough
- ★ Own gilts sorted more than once
- ★ Purchased gilts examined at delivery and before insemination
- ★ Move away rejected gilts to make room for the rest



## Vurdering af benstilling





## Gilts – well begun is half done

- ★ Room for movement
- ★ Solid/drained floor
- ★ Dry lying area
- ★ Enough feeding places

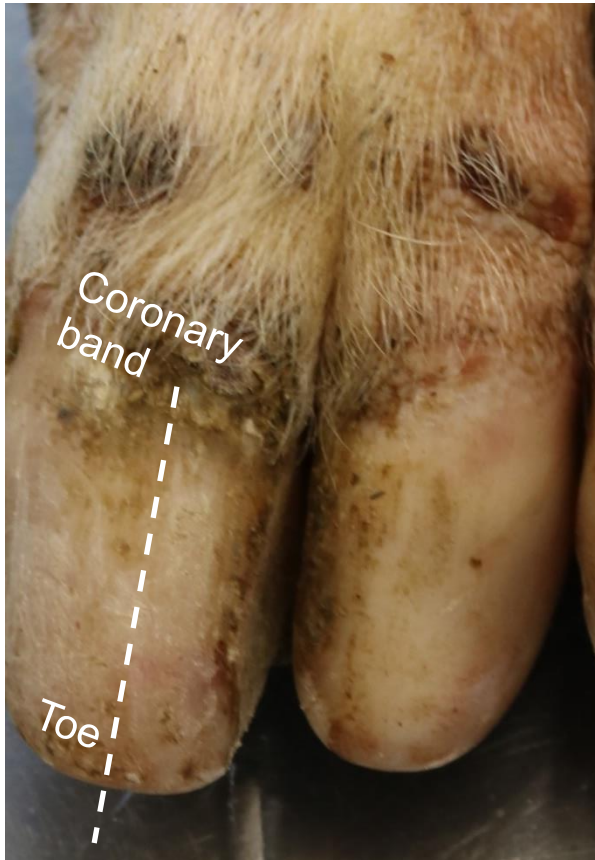


# Hoof *injuries* lead to hoof *diseases*

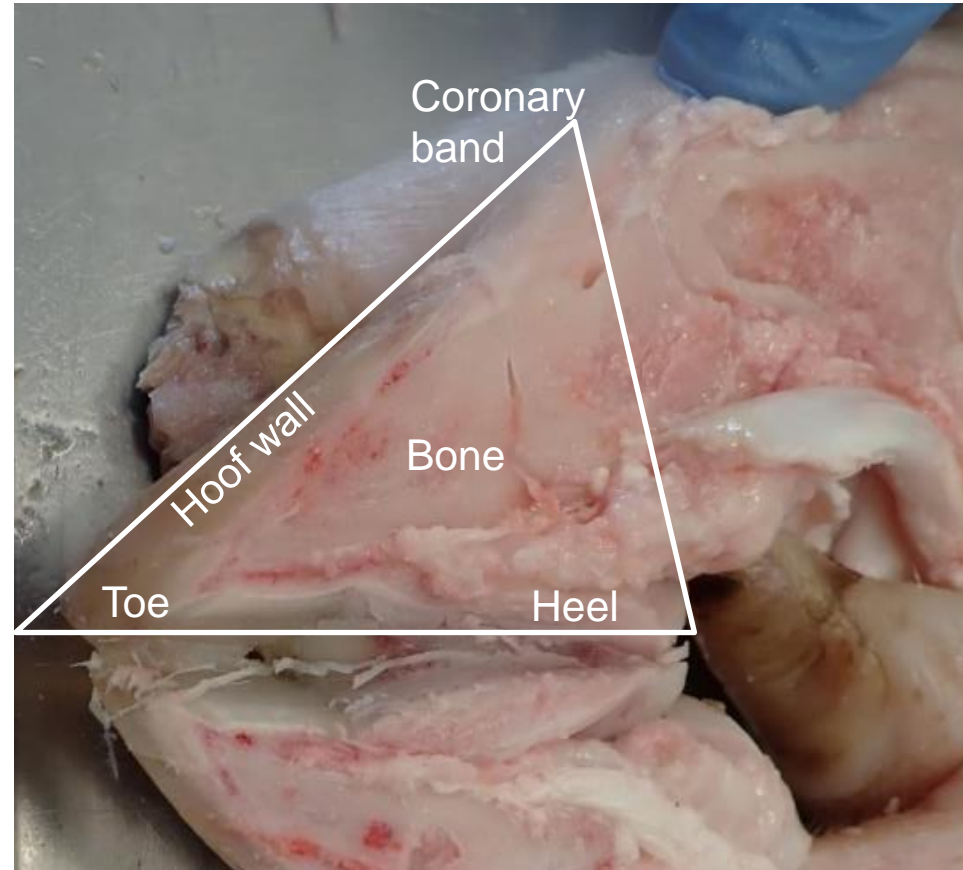


Injury to hoof  
or skin

# Autopsy of hooves

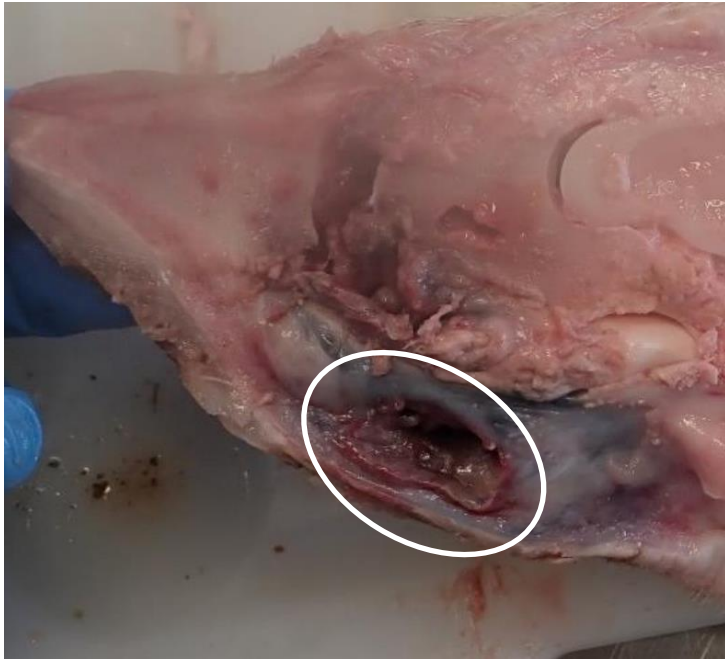


Hoof is cut longitudinally



Cross-section of hoof

# Hoof infections



Abscess in heel



Bone inflammation



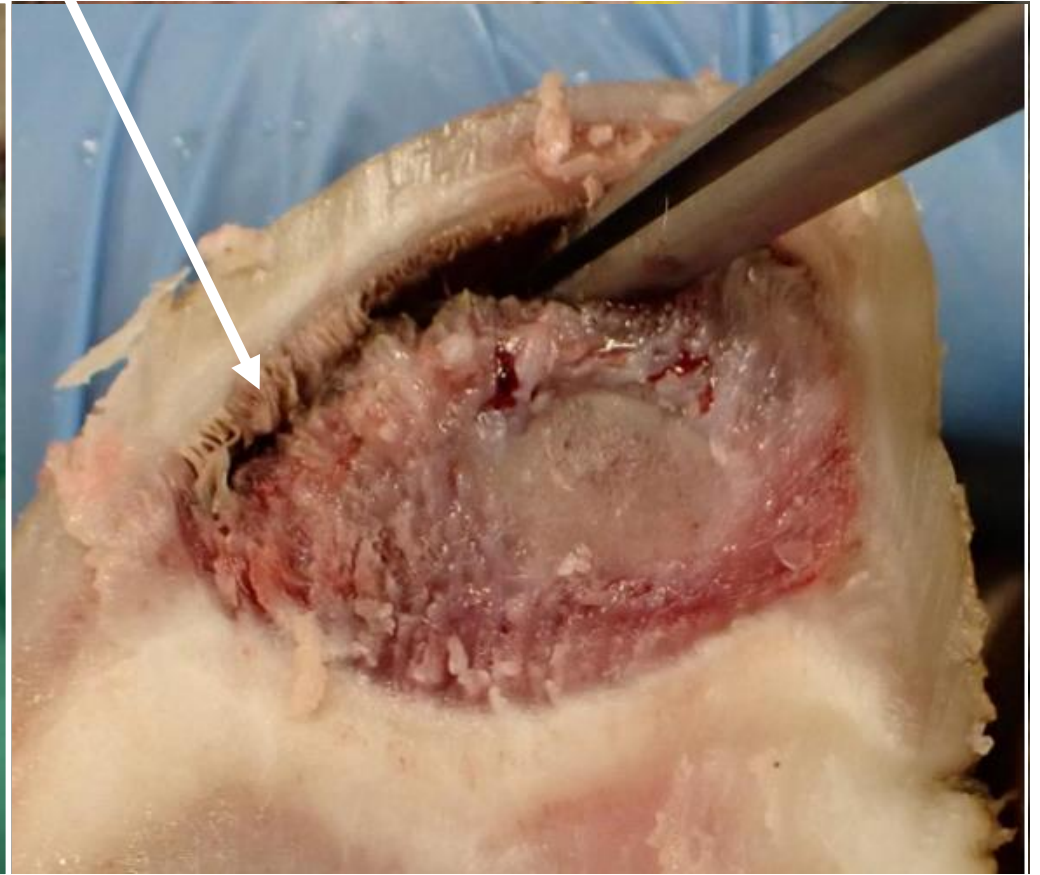
Laminitis



## How to identify sows with hoof infections



## How to identify sows with hoof infections



**Lame sows can be hard to find!**





**Lame sows can be hard to find!**





# Points of special attention



Crack in the white line



Loose hoof wall



Overgrown heel

# Treatment of hoof disorders



## "Medical"

- Hospital pen +/- pain relief
- Antibiotics
- Foot bath

## Mechanical

- Trimming with scissors
- Hoof trimming in special box

# Which sow to treat with antibiotics?

Symptoms of infection:

- (Reduced function )
- ~~Swelling~~
- ~~Red skin~~
- Pain
- Heat



Treatment will often come too late to save the sow

# Hoof baths may relieve hoof abscesses



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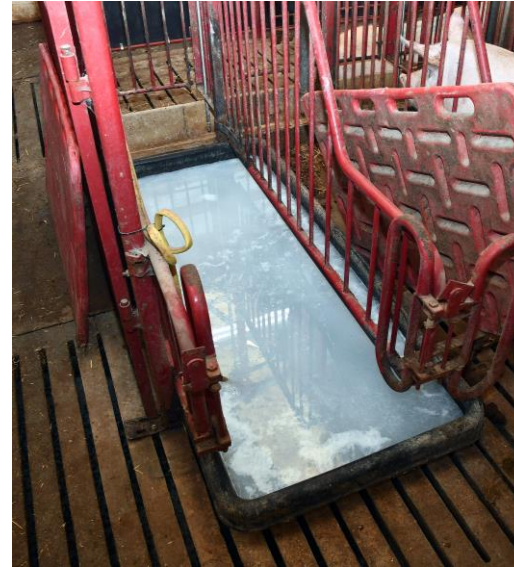


Foto: Morten Thomsen

Use food as a bait to get the sow into the bath



# Hoof baths may relieve hoof abscesses



Foto: Morten Thomsen





# Hospital pens



<b>So nr.:</b>		
<b>Indsat i sygesti nr.:</b>		
<b>Dato:</b>		
<b>Årsag (diagnose):</b>		
<b>Behandling:</b> (Dato, initialer, medikament, sårsalve, klovpleje)	Dag 1	
	Dag 2	
	Dag 3	
	Dag 4	
	Dag 5	
	Dag 6	
	Dag 7	
	Dag 8	
	Dag 9	
	Dag 10	
<b>Vurdering:</b> Der vurderes løbende på om soen er i bedring. Der skal laves en bemærkning herom dag 3 og dag 7. Dette er for at tage stilling til om soen kommer sig, eller skal aflives.  Ved afgang fra sygesti skal der laves en vurdering omkring slagtetidspunkt.  Journalerne fra sygestierne indsamles og diskuteres ved besætningsbesøg. Informationerne kan evt. noteres på so-tavlen/i AgroSoft	<b>Vurdering:</b>   	
	Dag 3:	
	Dag 7:	
	Slagtning:	
	Ved afgang fra sygesti	
	Efter næste faringsrunde	
	Vurderes at kunne fortsætte i besætningen	
	Aflivet, dato:	

## Trimming – dew claw

- ★ 5-10 min a day
- ★ Week after farrowing



It is not enough to trim length





## Hoof trimming – hoof stall

### As treatment

- ★ All sows with injuries 10-15%
- ★ After gestation scanning
- ★ All sows headed for the hospital pen

### As prevention

- ★ Young sows 1-2 parity

**Hoof trimming is not a quick fix**



## Hoof trimming



## Hoof trimming





# Hoof trimming





# Hoof trimming



## Take home messages

### Prevention of hoof injuries in sows

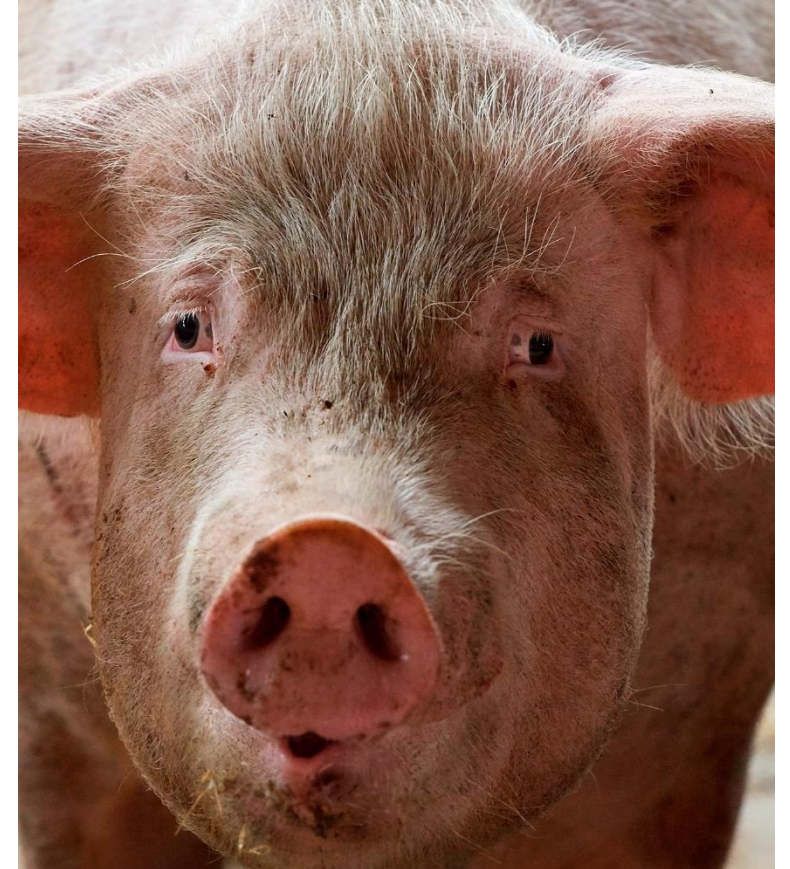
- ★ Gilt upbringing
- ★ Selection of gilts and housing
- ★ All sows must have a dry lying area
- ★ Daily supervision must be a priority!
- ★ Prioritize claws and legs when selecting slaughter sows
- ★ Trim dew claws
- ★ Hoof trimming works – but is not a quick fix



# Take home messages

## Hoof injuries is a problem for many sows!

- Pay attention to the hooves, not only lameness
- Mechanical injuries can be prevented
- Early effort to save sows with hoof infections
- Sows with "black" hooves cannot be saved







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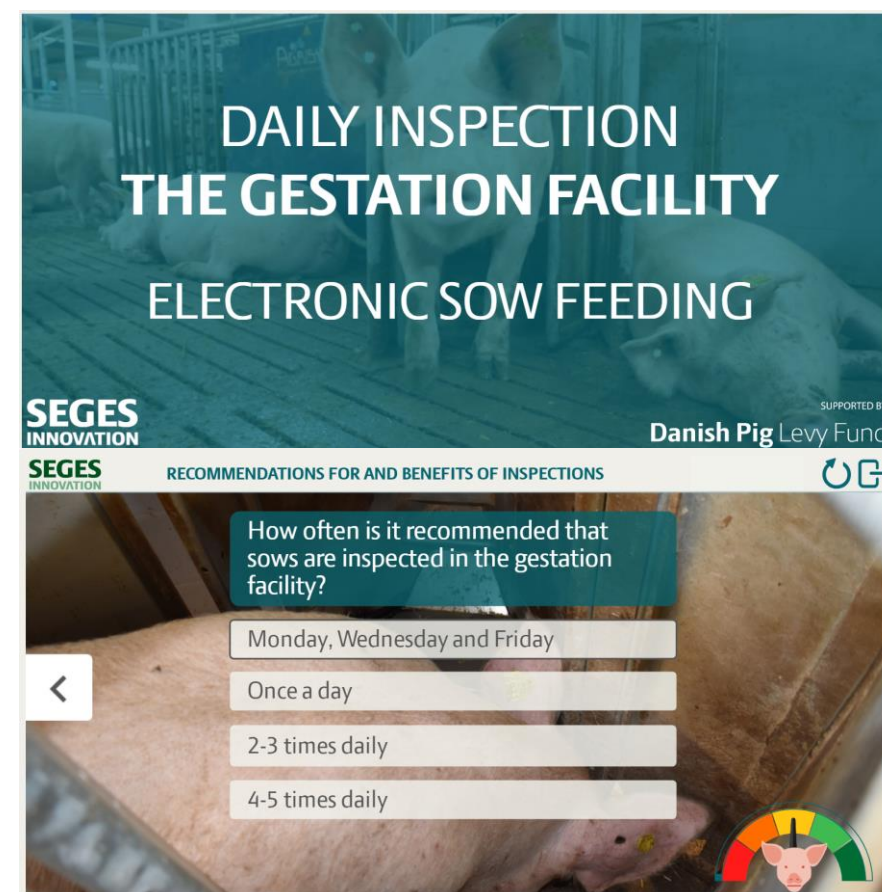
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# DAILY INSPECTION THE GESTATION FACILITY ELECTRONIC SOW FEEDING

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RECOMMENDATIONS FOR AND BENEFITS OF INSPECTIONS

How often is it recommended that sows are inspected in the gestation facility?

Monday, Wednesday and Friday

Once a day

2-3 times daily

4-5 times daily

