FARROWING HOUSE MANAGEMENT: CURRENT SITUATION

The farrowing crates

Legislation in force: COUNCIL DIRECTIVE 2008/120/EC

- Accommodation for pigs must be constructed in such a way to allow the animals to rest and get up normally
- Farrowing pens must have protection systems for piglets
- Farrowing pens must have an unobstructed area behind the sow
- Suitable nesting material available, during the week before expected farrowing time
- Piglets must have sufficient space to be able to be suckled without difficult
- A part of the total floor, sufficient to allow the animals to rest together at the same time, must be solid or covered with a mat, or be littered with straw.

NEAR FUTURE

European Citizen's Initiative "End the Cage Age"

- Farmers begin to ask for free housing system
- Farmers want to know specific requirements of open farrowing system

(minimum square meters, for ex)

Main points to achieve:

- Free movement of the sow
- Ethological behaviour (possibility to nest, rooting behaviour)
- Prevention of piglets-crushing
- More space needed

Look at the farrowing pens of organic farms

- Joint lactation

MAIN POINTS FROM THE DISCUSSION

What are the main requirements for space ?

How should the pens be designed ?

Can joint lactation be used to increase weaning age ?

How can piglet mortality be reduced ?

More questions than answers and solutions

ADVANTAGES OF FULL LOOSE HOUSING:

- No abrupt change in housing from gestation and farrowing
  - reduce stress at farrowing => lower risk of farrowing problems
- Nest building, space for sow movements, space for maternal behaviour
  - facilitate natural behaviour, positive feelings
  - stimulate the farrowing process and maternal hormones
  - improve appetite and milk production
  - increase growth rate of piglets
- Sows can thermo-regulate by behaviour and wallowing
  - avoid heat stress and drop in feed intake during hot periods
  - maintained milk production and growth of piglets

PEN DESIGN CRUCIAL

To get the full potentials of FFL, pens must be well designed...

Facilitate zone division by use of partly solid floor:

- Divide pen into nest and dunging/activity area with slatted floor
- Use of various high quality nest materials in nest area
- Sow thermoregulate by seeking up cooler slatted floor
- Sow farrow in destiganated nest area with nest materials
- Piglets born in destignated nest area with high thermal comfort

FEATURE THAT SUPPORT ZONE DIVISION

We can use knowledge on sow behaviour and motivation to design pens....

Sows prefer to rest on soft and solid surfaces

- A solid floor is prefered over slatted floor for resting
- Soft litter on solid floor even more prefered

Sows prefer to lay down against walls rather than rails

- Position sloping walls in destignated lying area => area used for resting and nesting
- Position rails in desitignated dunging area => area used for activity and dunging

Sows prefer isolation during farrowing

- Solid walls in resting area => visual isolation => attractive resting area

HOW TO KEEP GOOD PEN HYGIEJNE

Sows leave nest for dunging behaviour

- Design a clear zone division with attractive nest

Sow move away from feed when dunging

- Feed trough position guide dunging behaviour:

Pen size matters

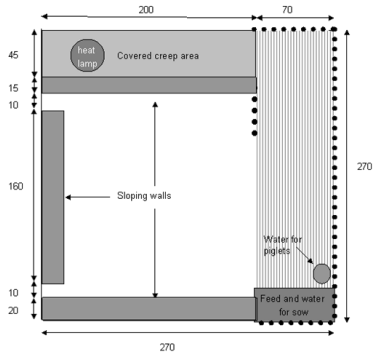
- Width of pen must be sufficient to avoid faeces in trough

Locate slattet floor accordingly: see example

SPACE NEEDED FOR ZONE DIVISION

Initial pen design of 7.3 m^2 =>

Modified Wide T-pen (270*270=7.3 m^2/pen)



Sows mainly defacated on slatted floor with head opposite feed trough

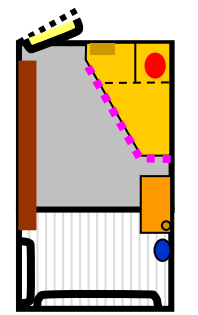
Pens mostly kept clean and dry – except during nest building

>90 % of piglets was born on solid and straw beeded floor

For commercial use pen area squeezed down to 6.3 m^2

well functioning pen used in several countries

Pen size <6 m^2 => zone division not succesfull



2.3 m

3.0 m

VARIOUS LEGISLATION ON PEN SIZE

Sweden:

- 6 m² pen size with certain area for piglets protected from the sow, partly solid floor,
- Straw or similar must be used for nesting
- Highlight problems with pen hygiene, drained areas increaslingly used; Provokes knee/leg problems in pigs
- Suggest separate regulation for space for piglets AND for sow

Austria:

- 5.5 m^2 ; max 5 days of fixation, 20 years of transition period

Germany:

- 6.5 m^2 , max 5 days of fixation, 15 years transition period, usually slatted floor pens

Finland: current initiative for promoting animal welfare through compensatition:

- 7 m^2 , solid floor, crating for 5 days

Denmark: Ministry's voluntary animal welfare label "Better Animal Welfare": loose housing, fixation for max 4d;

WEANING PIGS BY MOVING OUT THE SOWS

Loose housing with larger pen size=>

- Piglets can stay in farrowing pen after weaning
- Reduces weaning stress and growth check at weaning

Birth to slaughter production: DK herd demonstrator

- Pen size of 7,5 sqrm
- No zink, low AB use
- Less time spent moving and cleaning pens
- Cost/benefit analysis on case

An intact litter of 12 pigs can stay in farrowing pen to

- The age of slaughter (100 kg) if pen size is >9 sqrm
- The age 30 kg if pen size is > 6 sqrm

PROLONG WEANING AGE

Standard age is 3-4 weeks

Welfare risk at later weaning:

- Difficult for sows to limit access to teats – particularly in crates
- Large number of suckling piglets => high demand for milk production
- Risk of poor body condition at weaning
- Risk of teat lesion

Welfare benefit for piglets:

- More mature immunesystem and gastro-intestinal tract at later weaning
- Piglets voluntary and gradually start to eat solid feed from 3-4 weeks
- Increased pre-weaning intake of solid feed
- Less risk of weaning stress and weaning diarrhea => less need of AB

NATURAL WEANING IS GRADUAL

- First week after birth sows stay in nest with piglets
  - Sows initiate nursing, piglets terminate nursings, free access to udder
- Sows return to the group af 5-7 days - pigs follow
- Weaning is a gradual process
  - Starts already 1-2 weeks after farrowing
  - Sows no longer initiates nursing
  - Piglets need to initiate nursings, sow terminates, limit acces to udder
  - Nursing frequency reduced

- Natural weaning takes up to 10-14 wks

GRADUAL WEANING IN "JOINT LACTATION PENS"

Loose housing with larger pen size and/or joint lactation=>

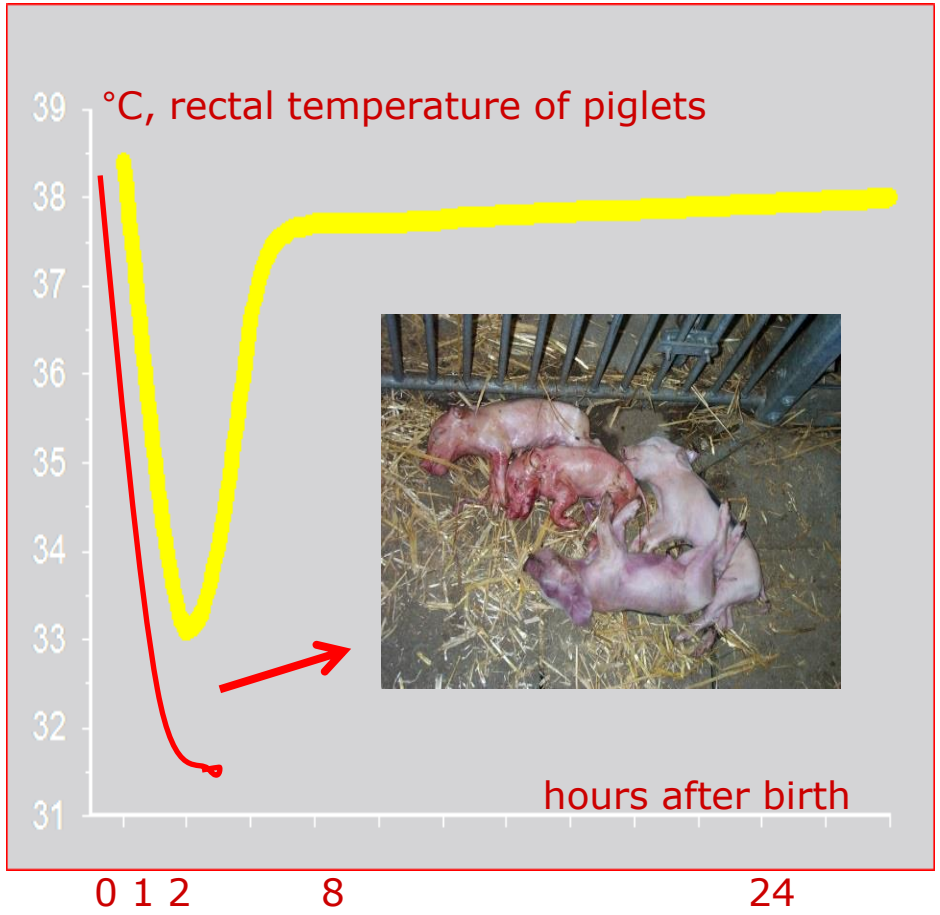
- Possibility for sow to avoid piglets by moving way
- Communal feeding area => stimulate pigs' pre-weaning experience with solid feed "learning by observation"

Intermittent suckling from 4th week in group lactation systems (Nieuwamerongen et al-, 2017)

- Move sows away for eg. 10 hours daily during 6th weeks
- Stimulates gradual weaning, stimulates locational oestrus
- Less diarrhoea, improved growth and less aggression at weaning
- Less abnormal behaviour during entire growing period

HOW TO REDUCE RISK OF CRUSHING?

Hypothermia at birth plays a major role for later piglet crushing and death



Hypothermia at birth:

Increased risk of death

Starvation

Crushing

Diseases

Pedersen et al., 2011

REDUCE RISK OF HYPOTHERMIA AT BIRTH

Deep straw bedding/strategic straw used

- Less hypothermia,
- Reduced carpal lesion,
- Improved growth,

Floor heating at birth site:

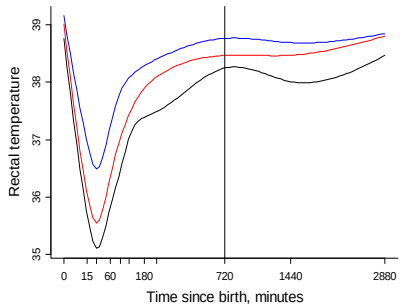
- Mortality reduced from 2.6 to 1.4 dead piglets
- Less hypothermia
- Earlier colostrum intake

Provision of radiant heat at birth site if temporary crated =>

- Reduced hypothermia and increased growth

Short time increase in room temperature at farrowing=>

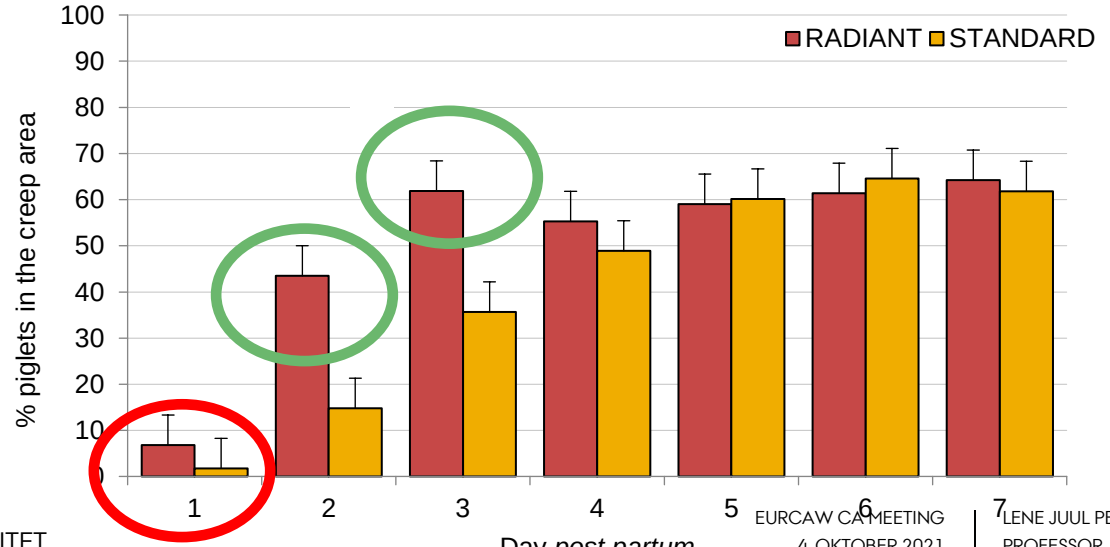
- reduced hypotehmia and increased growth

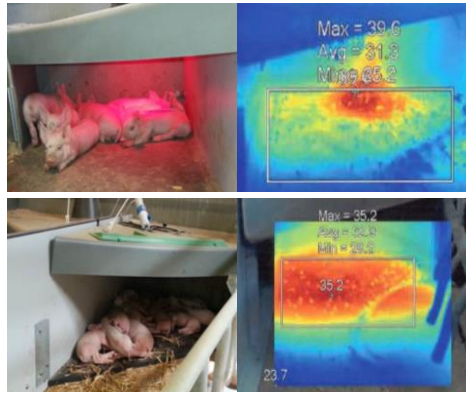


DURING EARLY LACTATION

Attract piglets to a heated creep area =>
Thermal comfort
Less risk of crushing

Radiant heat attract piglet to use creep area earlier than traditional heat bulbs with light
Radiant heat consume less energy
Provide more even heat over larger surface





BREEDING MUST BE (RE-)CONSIDERED

Several participant mentioned that breeding goals must be re-considered

Good maternal behaviour more important in loose housing

Large litter size makes piglets more vulnerable => large within litter weight variation

Low birth weight => higher risk of hypothemia, crushing and starvation

,

MORE INFO

Update on EURCAW-pigs in the spring 2022:

Free farrowing and lactation systems

Knowledge and best practise

www.freefarrowing.org

www.eurcaw.eu