PROMOTING NEONATAL PIGLET SURVIVAL IN ORGANIC PIG PRODUCTION THROUGH IMPROVED MANAGEMENT AND HOUSING

SARAH-LINA AAGAARD SCHILD

A U AARHUS UNIVERSITY

13 MARCH 2015

PRESENTATION AND DISCUSSION

STUDY 1: TEMPERATURE & HUMIDITY

- Indications of variation in piglet mortality (PM) in different seasons
- Quantification of temperature and humidity fluctuations inside farrowing huts and relation to PM – only a few studies
- **Aim**: To quantify the relation between environmental temperature at the time of farrowing for neonatal piglet mortality.
- **Hypotheses**: Temperature ≥25 °C or ≤15 °C day one to seven *pp* → ↑ piglet mortality - The effect of the temperature on piglet mortality may be influenced by the humidity within the hut.

STUDY 2: REDUCING HEAT STRESS OF SOWS

Background

- Temperature within the huts becomes high (+45 °C in uninsulated)[1]
- Tendency towards ↑ PM during summer[1] + Danish producer = 10 % increase in PM
- Hyperthermia → ↓ feed consumption[2], ↓ / halted milk production[2] and behavioural changes
- Common measures to reduce heat stress = access to a wallow + less straw
- Producer initiatives: Access to poplar, shade next to the hut

[1]Randolph et al. (2005), [2] (Mullan et al., 1992; Prunier et al., 1997; Quiniou and Noblet, 1999)

STUDY 2: REDUCING HEAT STRESS OF SOWS

Aim

To test the effects of providing access to a shaded area during farrowing on heat stress and behaviour of importance for piglet morality and growth.

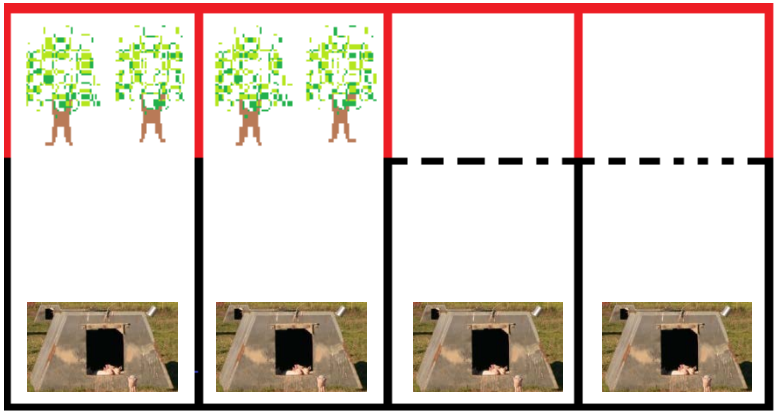
Photo Janne Hansen

METHOD

- Pilot study in May 2015
- Main study in one herd from June 2015 – August/September 2015

- Treatment will be +/- access to poplar
  - Sows may choose to farrow in poplar
- 20 – 30 replicates of each treatment
- All sows will have access to a wallow

- Paddocks will not be of the same size



METHOD – FOCAL RECORDINGS

Behaviour (video)	Other
Time spent inside the hut	Farrowing duration*
Farrowing location	Time of farrowing
Postural changes	Inter birth interval
Nursing frequency	Respiration frequency
Nursing duration	Rectal temperature*
Piglet location within the hut	Farrowing fever*
	Number of live born/ stillborn piglets
	Piglets that die before weaning
	Time and cause of death
	Birth and weaning weight

*only recorded on day one to three *pp*

METHOD – GENERAL RECORDINGS

- Recordings – incl. all sows belonging to the farrowing batch

Behaviour (manual scanning)	Other
Farrowing location	Number of live born/ stillborn piglets
Location on paddock (hut, poplar, wallow)	Piglets that die before weaning
	Time of death

HYPOTHESES

- Access to poplar will:

Behaviour	Other
↑Time spent outside hut	↓ Farrowing duration*
↑Farrowing outside	↓ Inter birth interval
↓ Postural changes	↓ Respiration frequency
↑ Nursing frequency	↓ Rectal temperature*
↑ Nursing duration	↓ Farrowing fever*

* Only recorded day one to three *pp*

STUDY 3: NOT YET DEFINED

- Planned for next year
- So far the plan is: To provide access to a shaded/cooled hut
- Alternatives:
  - Reducing cold stress of piglets during winter
    - E.g. using different quantities (use during winter approx. 40 kg per hut) or lengths of straw
  - Providing access to shaded wallow
  - Providing birth supervision/assistance
    - Obstetric aid, drying of piglets
  - Nursing sows

A U AARHUS
UNIVERSITY