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







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 $pp \rightarrow \uparrow$ 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 \uparrow PM during summer¹ + Danish producer = 10 % increase in PM
- Hyperthermia $\rightarrow \downarrow$ feed consumption², \downarrow /halted milk production² 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

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

STUDY 2: REDUCING HEAT STRESS OF SOWS

Aim

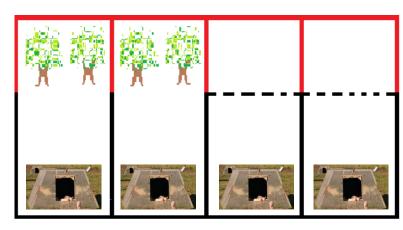
To test the effects of providing access to a shaded area during farrowing on heat stress and behaviour of importance for piglet morality and growth.





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
Postura I 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
*only recorded on day one to three pp	Birth and weaning weight





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
↓ Postura I 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



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