

Report on Workshop 2: Piglet

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Chairman: E. v. Borell

Statements (5-7 minutes)

1. Physical characteristics of surviving piglets born in a loose farrowing system (Christian Fink-Hansen)
2. Behaviour, physiology and vitality of newborn piglets (Beate Bünger)
3. Free farrowing calls for unhurt, attentive and highly mobile piglets (Johannes Baumgartner)

Discussion:

General statements on experience with free farrowing systems in different countries

- Viability is very complex and not only affected by birth weight; other parameters should be taken into account such as body mass index, APGAR score or Ponderal Index.
- Design of functional areas is more important in free farrowing situations than in crate systems
- Total mortality in free farrowing systems is not different to crate systems, stillbirth is even lower (Switzerland). Causes of piglet losses depend on system differences: starvation is highest in crates, crushing highest in loose systems, total loss equal (Germany). Higher piglet losses in loose systems, despite highly motivated farmers; a rapid change to free farrowing systems would lead to frustration amongst farmers (Denmark).
- There seems to be a difference between farmers experience and scientific data concerning piglet mortality.
- Large litters probably increase the problem of piglet losses (general accordance).

Factors influencing viability of piglets pre-farrowing

Nutrition of the sow: not much is known about the influence of nutrition on piglet's viability. Nutrition affects birth weight and litter size; in gestating sows fibre components influence behaviour and faeces composition; a special diet for pre-farrowing sows (fibre type, Arginine, Iodin, L-Carnitine, ...) may be required.

Factors influencing piglet's survival

- Pen size: in large pens newly born piglets can "get lost" when exploring the pen; small pens don't allow a structural separation between lying-, feeding-, and dunging-area.
- Air temperature / floor temperature
- Flooring: no slatted floor (maximum: 5 % slats– for drainage); surface of solid floor is extremely important (joint lesions, slipping, splay leg, ...); rubber mats are used with different results (e.g. abrasions of carpal joints in the first day of life).
- Cleanliness of the pen: location of dunging area is as important as location of feeding trough; sows often defecate right after leaving the trough.
- heated floor for the first days after farrowing,
- Nest building material: less stillborn piglets and faster farrowing was detected in systems with sufficient nest building material; length of straw was discussed (long, cut, straw meal) but not solved conclusively; straw, hay, sawdust or other organic materials are required;

- Social behaviour between sow and piglets in the first hours: not possible in crate systems; temporary crating (after 6-12 hours after farrowing) could be one alternative
- Behaviour of the mother: lying down and rolling over are crucial for piglet mortality – most piglets get crushed in the middle of the pen; a pole in the middle of the pen resulted in lower mortality, but didn't achieve positive results after removing the pole some days after farrowing (Netherlands).
- Observation of farrowing: there is evidence, that drying piglets and placing them at the udder could decrease mortality.
- Colostrum intake right after birth: quality and quantity of colostrum matters; not only to improve immune status but also for sufficient energy intake. Split suckling could be a solution in order to guarantee sufficient colostrum intake for late born piglets of large litters – means extra labour.

Risk factors during farrowing

- Cold, wet floor
- Slatted floor (lesions on carpal joints)
- Low air temperature
- Insufficient colostrum intake
- Nutrition of the sow affects piglets (e.g. MMA – loose sows don't suffer from MMA that much due to more exercise, roughage, fibre, ...)
- Behaviour of the sow around farrowing (lying down, rolling over)
- Large litters with high proportion of under weighed piglets
- Distance from birth location to creep area / teat
- Immune status / health status / nutrition of the mother
- Viability of piglets
- Farrowing environment: stress for the sow during farrowing caused by caretaker yields in longer farrowing duration and higher amount of stillborn piglets

Expected economic benefits on free farrowing systems

- Less stillborn piglets
- More milk production due to higher feed intake
- Increasing litter weight
- Cheaper buildings (less material)
- Less energy input (temperature of the building)

Open and answered questions

1. Should we allow farrowing on slatted floor?
 - Skin lesions, temperature drop → NO
 - Good hygiene, cheap, easy to clean → YES
2. How do nursing sows fit into loose systems?
 - Especially in Denmark nursing sows are a big issue. Question is how to get the loose sow to accept the new piglets.
3. Do we need different types of piglets? Did we select piglets that get along well with crate systems? Do nowadays piglets react properly only to crated sows?
 - Most participants of the workshop negated this.

Concluding remarks

„Free farrowing systems are not as tolerant (robust) as crated systems.“

„The main issue on free farrowing is to improve the welfare of the sow without forgetting the farmer and the piglets. “

„There is a triangle*: sow, piglet and farmers. For the last years researchers focussed mainly on sow welfare and forgot about the piglets and the farmers.“

„The balance in crated systems is a compromise between farmers and piglets. When you bring in animal welfare issues (on the sow side), the balance will change.“

„We might also need a new balance in market. Maybe the fight between food and feed will change a lot in our actual structures. Welfare should get more attention as an issue of the EU, because if changes in systems are made on a national level (for example Sweden) this country will lose the competition against others (for example against Denmark).“

*triangle:

