

The right pre-farrowing feed strategy can potentially increase piglet survival



TRIALS AT AARHUS UNIVERSITY AND SEGES INNOVATION SHOW PROMISING RESULTS FOR PIGLET SURVIVAL BY FOCUSING ON SOW FEEDING IN THE DAYS BEFORE FARROWING.

A new feeding concept for sows has been shown to reduce the number of stillborn pigs. The Born2Live project examines to what extent a change in the feeding strategy up to farrowing can increase piglet survival both in terms of fewer stillborn pigs and a higher survival rate post farrowing. The project is a collaborative project between SEGES Innovation, Aarhus University and Vestjyllands Andel.

3 FU/sow of weaning feed were allocated per day, which was supplemented with 1 FU/sow per day of a feed supplement. This reduced the number of stillborn pigs by 1.7 percentage points among 3-7 litter sows.

"SEGES Innovation previously recommended reducing the feed allocation to 3.0 feed units per day in the days leading up to farrowing. We now recommend giving the sows 3.5-4.0 feed units per day from the time of transfer to the farrowing unit until farrowing. This is to ensure that the sows have enough energy to go through a quick and uncomplicated farrowing," says Camilla Kaae Højgaard, Senior Adviser, SEGES Innovation.

MORE FEED, SHORTER FARROWING
Born2Live is a feeding project that stemmed

from a study carried out at Aarhus University. The study showed that the length of farrowing and the number of stillborn pigs were low when sows started farrowing no later than 3 hours after the last feed. This indicates that the sows run out of energy during farrowing.

The initial trials carried out by the university showed that a higher feed strength should be given to sows from the time of their transfer to the farrowing unit until the end of farrowing in order to reduce the need for farrowing aid and ensure a rapid farrowing.

In addition to feed strength, it was expected that the source of fibre used in the feed prior to farrowing would impact a sow's ability to maintain a stable blood sugar level. Aarhus University, therefore, also examined different fibre sources and found that the length of farrowing was reduced when sugar beet pellets or a fibre mix consisting of mainly beet pellets and oat bran flour were used.

LARGESCALE TRIAL
SEGES Innovation has carried out a largescale trial. The sows in group 3 (fig.1) were fed 4 feed units for a minimum of 3 days before farrowing, of which 1 feed unit was replaced

with specially designed feed supplement. Group 3 was found to have 0.4 fewer stillborn pigs per litter than sows in group 1 fed 3 feed units of nursing feed per day. There was no difference between groups 1 and 2.

The results showed that the number of stillborn pigs out of the total births in the trial groups 1,2 and 3 was 11.8, 10.8 and 10.1 per cent in 3-7 litter sows (fig.1). Converted, this corresponded to 2.6, 2.4 and 2.2 stillborn pigs per litter respectively.

FEED IS NOT ENOUGH
If the stillborn pigs are to be changed into liveborn pigs, it is important to focus on management in early nursing. A new pre-farrowing feeding strategy is not enough. The results show that management is crucial for the additional liveborn piglets to survive post farrowing.

"Farms with a strong focus on the management of newborn pigs will particularly benefit from the new feeding strategy as more live births will result in more weaned pigs per litter. In the trial carried out by SEGES Innovation we monitored the piglets until day 5 and overall piglet mortality, including

stillbirths, was not reduced as some of the pigs that would otherwise have changed from stillborn to liveborn did not survive early nursing," says Camilla Kaae Højgaard.

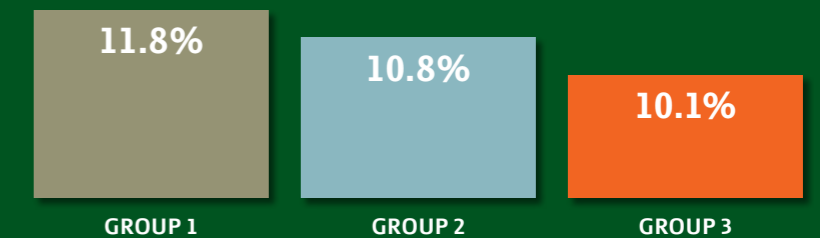
FEEDING CONCEPT FOR EARLY GESTATION DOES NOT INCREASE BIRTH WEIGHT

In another research project, Feed4Life, the aim was to study whether by adding changed concentrations of specific nutrients for the sow in early gestation, the birth weight of the piglets could be increased and thus increase survival.

The project was a collaboration between Copenhagen University, DLG and SEGES Innovation. Initially, Copenhagen University produced interesting results by using large quantities of omega-3 fatty acids and antioxidants in the feed. The developed feeding concept with a practical level of omega-3 fatty acids and antioxidants was tested on a large scale in two production herds. This showed that the selected feeding did not affect the birth weight.

"The feeding concept in Feed4Life was unable to increase the birth weight. Increased focus on the development of follicles even before service is something that will require more research in the future," says Thomas Sønderby Bruun, Chief Adviser, SEGES Innovation.

STILLBORN PIGS, % OF TOTAL BORN



SEGES Innovation has studied how different feeding strategies affected the number of stillborn pigs with 3-7 litter sows. There is a statistically safe difference between Groups 1 and 3, but not between Groups 1 and 2. The trial was not designed to test between Groups 2 and 3. From the time of transfer into the farrowing unit and until the end of farrowing, a minimum of 3 days before farrowing however, the sows were divided into three groups.

Group 1: 3 feed units nursing feed per day
Group 2: 4 feed units nursing feed per day
Group 3: 3 feed units nursing feed and 1 feed unit of a specially designed feed supplement per day. The feed supplement diluted the nursing feed as it did not contain soybean meal, but wheat, beet pellets, oat hulls, and cake mix.

FEEDING STRATEGY FOR REDUCING STILLBORN PIGLETS

- > SEGES Innovation recommends giving sows 3.5-4.0 feed units per day from transfer into the farrowing unit until farrowing, but at least 3 days before farrowing. A dilution of the protein content in nursing feed at the same time as a changed fibre composition reinforced the effect of increased feed strength on the number of stillborn pigs.
- > Beet pellets and fibre mix (mainly beet pellets and oat hulls) minimised the need for farrowing aid.