Good feeding during gestation means healthier and heavier piglets

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With increasing production levels of sold piglets per sow per year, best practices in the different disciplines are now the key to achieving top results.

This article focuses on the importance of feed and feeding during gestation to obtain homogenous, vital and heavy piglets at birth.

Growth during gestation

Most of the feed consumed by sows during gestation is used for maintenance but on top of this, extrauterine growth and intrauterine growth are important.

If sows are not fed properly then their condition will suffer (back fat and body condition score) or the piglet birthweight will fall. This can be checked by weighing the total litter as well as the three smallest piglets.

The target should be at least 17kg litter weight with the three smallest piglets weighing on average at least 1.0kg each.

Sow versus piglet growth

Piglets grow rapidly during the last month of gestation. Sow growth should therefore be ideal at 80 days of gestation. Sows fed to achieve this can use all of the feed during the last part of gestation for maintenance and growth of the piglets. Feeding should focus on producing sows that are fit at farrowing (not too heavy or skinny or too fat or lean).

If 90% of the sows achieve ideal scores then the farm is using appropriate feed composition and feeding schedules.

The current preference for group housing of sows makes this goal more difficult to achieve than in the past.

Parity no.	1	2	3	4	5	6	7
Litter weight at birth (kg)	15.5	18.0	19.0	19.2	19.0	18.6	18.1

Table 1. At the Topigs research farm, many individual piglets are weighed at birth and this table shows the average results of the litter birthweight of Topigs sows at different parities.

Effect of fibre

Several factors can exert a major influence on the maintenance level. Some main factors are:

- Housing temperature (temperature below the lower critical temperature).
- Stress.
- Water consumption (too high).

The intake of fermentable fibres can significantly reduce stress and water consumption. Recent research has clearly demonstrated that increasing the level of fermentable fibres in the diet significantly reduces the movements of gestating sows.

These fibres give the sow a good satiation feeling, which reduces stress levels. This has been demonstrated to increase the number of liveborn piglets per litter.

Fish oil

Research has shown that the relative brain weight of piglets increases if their mothers have received fish oil during gestation.

The effect was a reduced interval between birth and the uptake of the first colostrums. In this trial, the mortality rate was 2.5% lower for the group where the gestating sows received fish oil.

Feed schedule

Studies have shown that the number of secondary muscle fibres is higher when sows receive a high level of nutrients during the middle phase of gestation.

The genetic potential for growth and lean meat production is therefore not only dependent on the genotype but also the feeding schedule of gestating sows.

Conclusion

Litter size and piglet vitality at birth are influenced by many factors. In the future, improved production results will increasingly depend on the optimum management of gestating sows. Therefore feed composition, feeding schedules and individual care of gestating sows will become increasingly important management factors. ■

Table 2. A Topigs field dataset covering 41,130 litters is a good reference for litter weight at birth.

Parity no.	1	2	3	4	5	5+
Litter birthweight (kg)	15.9	18.4	19.2	19.6	19.6	19.0