

**BREEDING***Low birth weight piglets***When should I consider low birth weight to be a problem?**

Many units have litters consisting of varying birth weights and these can become more varied, and on average smaller, the higher the number born alive. However at what point does low birth weight affect viability and become a problem? This document discusses the factors which influence birth weight and what can be done to control it.

Whole litters consisting solely of small piglets are not necessarily a problem as the piglets may still be viable. If piglets weigh less than one kilogram however, their chances of survival are poor.

**The unborn piglets' environment**

Evidence shows that poor foetuses and the reduced growth of runt piglets can be identified as early as day 30 of gestation. This suggests that the problem of low birth weight stems from an inefficiency of the placenta at transferring nutrients to piglets, rather than uterine capacity.

Oxygen deprivation is the ultimate constraint on foetal growth and development, as it not only influences piglet weight but also the central nervous system and ultimately survival.

You can get small but “perfectly formed” piglets that show good vigour and quick postnatal behaviours (eg suckling quickly) which aid their survival, but small and non-vigorous (probably oxygen deprived) piglets are at a great disadvantage.

Even though the potential for growth and size is influenced by the sire line, it is the maternal genotype that influences the placental efficiency and therefore foetal weight.

**Nutrition**

In terms of nutrition, most work has concentrated on the last third of gestation as this is the time when foetuses have a growth spurt and birth weight can still be influenced.

Increasing nutrient intake by sows from day 80 of gestation has been shown to positively affect birth weight, as from day 90-115 piglet growth rate increases substantially.

Getting the feeding regime for young breeding gilts right is crucial as there can be both short and long-term effects on young gilts if you over feed them during the early stages of gestation. The effects are linked to the partitioning of nutrients, as young gilts may partition the extra feed towards their own reserves rather than to the growing foetuses. This can result in small piglets and fat gilts. Once a gilt is fat she may continue to be non-productive.



### Selection

If you have a closed herd select breeding stock from sows and gilts that have produced good viable litters. This indicates that their placental efficiency is good and providing ample oxygen and nutrition exchange between sow and foetuses.

### Summary

- Small pigs are not necessarily a problem as long as they are viable
- Piglets under 1 kg have a poor chance of survival
- Regularly weigh litters and record averages over the year. When averages start to drop review the system with your BPEX KT manager or vet
- Weigh small pigs so you can quantify how many are below 1 kg
- Discuss late stage gestation nutrition with your feed provider if you feel improvements can be made
- Improving nutrition rather than upping the levels of feed may be something to consider

### How can you help the newborn piglet and ensure a good start in life?

- Monitor farrowing: Being present at farrowing is a critical part of good farrowing house management
- Maximise colostrum intake in the first six hours after birth, achieving at least 100 ml intake by 16 hours post farrowing
- Fostering management: It is a great disadvantage for small piglets to have to compete with larger littermates. Litters of small piglets should be created from all the 'smalls' born in a given farrowing day
- Foster-litters of small piglets should be put with low-parity sows; the teat size of a low-parity sow will match the small mouths of the small piglets
- Observe piglet behaviour: Look out for fading piglets and take remedial action by fostering and providing electrolytes or additional milk
- Assisted suckling: Supervise and assist the vulnerable piglets to gain access to teats and suckle. Ensure that they are able to suckle unhindered and then mark each piglet once seen to suckle
- Check for signs of ill health and treat according to unit veterinary protocol
- Ensure piglets are lying either on or under the heat source and not piling together, indicating chilling

