Nutrition and management of the prolific sow

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The modern sow is a highly prolific animal and can be seen as a top athlete and needs to be managed and fed accordingly. Two of the most important phases in a piggery are gilt selection and management, followed by wean to service interval and more specifically mating.

The gilts are the future of the herd and provide the genetic improvement for the future. Gilts being selected on farm, should be fed and managed separately from the growing herd already from 10 weeks of age.

The general targets for first insemination are between 32 and 34 weeks old, with a body weight of 135 to 150 kg and inseminated at 2nd or 3rd heat. This can differ slightly for the different genetic lines.

The reproductive performance of the gilts will be the indicator if all practices are being done correctly and timeously.

Within the sow reproduction system, there are four main phases namely: Wean to service interval, gestation period, transition period and lactation period.

Wean to service interval

By feeding high amounts of glucose during this period a flushing effect can be obtained, resulting in an insulin spike, stimulating better follicle and oocyte development and growth.

The additional glucose can either be fed as a top dress or as component of a dedicated mating ration.

The positive influences of this is a reduction in the wean to service interval, improved heat expression and a potential increase in litter size.

Gestation period

During the gestation period, sows have to recover from body condition and weight loss during lactation and embryonic survival and growth of the fetuses should be maximised. This can be achieved with the correct, farm specific feeding schedule, with focus on body condition and feeding levels.

During the first 30 to 60 days post mating, the losses during lactation should be addressed and corrected. Once this has been done and the sow herd is more uniform, management of the sows becomes easier.

While the sows are in crates they can be managed individually but as soon as they are placed into group housing, they are managed in groups.

Sows should be managed so that they do not become over-conditioned, as fat sows usually have trouble farrowing and do not eat well during lactation. Consequently,

they lose a lot of condition in the farrowing house, resulting in a big "yo-yo" effect in condition.

Transition period

This is the period when sows enter the farrowing house until five days post farrowing. Aspects to be taken into account during this period include:

- Sow changes from a pregnant animal to a milk producing machine
- Diet changes from a high fiber to a low fiber diet – increased risk of constipation
- Production of colostrum is very important
- Prevention of udder problems, such as MMA syndrome.

During this period, the correct timing is very important.

The chance of piglet survival within the first 3 to 5 days is dependent on the following management practices: early colostrum intake, massaging the udder, cross fostering and packing the gilts based on number of functional, milk bearing teats.

Lactation period

The aim during lactation is to maximise piglet growth and to limit body weight loss. Excess body weight loss during lactation has a negative effect on the subsequent litter, as the oocyte's start to develop from two weeks post farrowing. Negative effects include less piglets and more variation in birth weights of the subsequent litter.

Milk production is a "push-pull" effect, with milk yield affected by the number of piglets suckling, as well as nutrient intake. It is important to get the correct balance between too little or too much milk at the beginning, as this will affect milk production later in lactation.

Consequently, it is essential to have the correct feeding curve for the specific herd and try to reach maximum feed intake between 8 and 10 days post farrowing. Do not overfeed sows with small litters (less than 10/11 piglets) as these sows will put on weight during lactation. Ad lib feeding systems do however have advantages, especially in the hot summer months, as sows will eat a lot more during the cooler evening periods. It is always important to monitor sow feed intake.

Nutrition and management of the prolific sow is a combined effort between management, animal nutritionist, veterinarian and genetic supplier.