Gilt nutrition is an area that is still debated, however, for lifetime and good first parity performance it is key to success. This sheet reviews some of the general principles of effective nutrition for the gilt. Use this information to review your own feeding system with your feed supplier and current gilt performance figures.

Up to 50 kg liveweight there is no need to treat the gilt any differently to the rest of the finishers.

From 50-80 kg there is a need to focus on lean tissue deposition to ensure correct body composition. This can be achieved with a good quality grower/finisher ration. Bone strength for lifetime performance is important and mineral packs or a gilt rearer ration can aid bone development.

From 80-140 kg and above, the average specification of the gilt rearer diet to first service is outlined in Table 1.

Table 1: Average gilt rearer diet specification

	Average 80 kg + to 140 kg*
DE intake (MJ/day)	38.93
Total lysine (%)	0.9 – 1.0%*
Total lysine (g/day)	19.50
g lysine/MJ DE	0.50 – 1.00
Feed intake	2.75*
MJ/kg DE	13.80*

** These figures must be manipulated depending on ad-lib or restrict feeding patterns, governed by genotype and feed intakes*

Feeding strategies

Ad lib feeding in prepubescent gilts can produce heavier and fatter gilts than restrict feeding, for the same age. However, although back fat levels are important for lactation performance it is also important not to allow gilts to become too fat (ie P2 >22 mm).

Too high a P2 can have a negative effect on the numbers of gilts reaching puberty and on embryo survival rate. Target a body condition score (BCS) of 3 – 3.5 at serving.

Flushing (ad lib feeding) between the first and second heat increases ovulation rates as it increases concentrations of reproductive hormones. It is possible to buy a specific gilt ration for flushing to aid this.

If progestagens are used, flush feeding can be difficult as gilts are usually restrict fed to ensure the correct levels of progestagen are consumed. If progestagens are administered via drenching, flush feeding is more straightforward.

Feeding post mating is still an area of contradiction. Historically, research has implicated high energy levels post service in embryo deaths. More recent research has found that high or low level feeding post service does not affect embryo deaths.

During the first gestation energy is required for gilt growth and maintenance. These requirements can increase by 40 kg during pregnancy. Energy is also required to support the unborn piglets and placenta, which can total 25 kg.

All of these energy needs add up to a requirement of 32.0 MJ DE per day (2.46 kg feed intake of a diet containing 13.0 MJ DE/kg).

Lysine consumption during gestation is critical and diets should contain at least 0.55%. This can effectively be covered by a good dry sow diet, but feed levels are critical in order to obtain a good P2 and body condition score at farrowing.

Over-fat gilts, with a high feed intake, are more likely to have poor voluntary feed intake during their first lactation, this can be one of the many elements involved in second litter drop syndrome.

The energy requirement for lactating gilts is huge and the number of piglets they are rearing and the body weight of the gilt, need to be considered (Table 2). Gilts are often used as foster mums, so this becomes even more important if extended lactations are common.

Table 2: Energy requirements for lactating sows and gilts

	Calculated feed intke (kg) based on 14 MJ/kg DE	
Body weight post farrowing	**10 piglets**	**12 piglets**
150 kg	5.85	6.72
200 kg	6.21	7.08

Lysine in lactation diets should be between 0.97 to 1.06% inclusion

Common problem areas

Tailoring a feeding strategy to your unit

Assumptions are often made that standard gilt rations and feeding strategies are a one size fits all. Regular communication with breeding and feeding companies will ensure the best from your gilt nutrition.

Actions

- Draw up a weight for age target for your unit and discuss it with your breeding company and feed supplier
- Work out gilt weights using a measuring tape and calculator, it is cheap and simple (see the *Estimating Gilt Weight* factsheet)
- True date of service and average total born are critical for the correct calculation of the specific feed requirements of your gilts

Gilt specific diets

Most units find it hard to dedicate a bin or buy in bagged gilt diets.

Actions

- Review your gilt performance. If it is not on target you may be able to resolve the problem through nutrition

Feeding system and regime

If feeding within a loose housed system, ensure all gilts achieve optimal feed intake.

Actions

- Ensure feed is distributed as evenly as possible
- Feed correct levels for seasonal differences
- Ensure that submissive gilts obtain the correct amount of feed. This will promote satiety and reduce aggression
- Calibrate your feeders/scoops/buckets regularly, especially after any diet reformulation or if you notice a change in the diet's appearance

Achievable P2

In 1975 the average gilt P2 was 22 mm, 25 years later it had halved. In 2010 the results achieved on farm can be variable. With a good feed regime 12 mm upwards should be achievable.

Actions

- Body condition scoring is just as valuable as using a P2 measurer. Target 3–3.5 at service (see *Action for Productivity 20* for more information)
- Purchase a P2 measurer and take interest in your gilt development and optimal condition for lifetime performance
- Feed to optimal BCS at all times

Outdoor gilts

During winter, outdoor gilts can require 25% more feed. In contrast, during the summer, gilts with heat stress may have reduced appetites. Achieving good body condition requires building it up slowly in the earlier stages.

Actions

- Plan ahead and understand the weather patterns outdoor gilts will experience from puberty to weaning

Summary of the ideal feeding strategy

- Feed the same as the rest of the herd up to 50 kg liveweight
- From 50–80 kg maximise lean tissue growth
- From 80 kg to service feed a specific gilt ration and flush prior to service:
  - 13.8 MJ/kg DE
  - >0.9 - 1.0% lysine
- During gestation feed a good dry sow diet on the appropriate curve:
  - 13.5 MJ/kg DE
  - >0.7 - 0.8% lysine
- During lactation feed a good lactating sow diet. Monitor feed intake and react accordingly:
  - >14.5 MJ/kg DE
  - >1% Lysine