How backfat scanning can improve lifetime performance

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**The production director at breeding company ACMC, Malcolm Stead, suggests that routine backfat scanning is the best way to monitor gilt and sow condition and help shape their productivity**

It’s long been recognised that maintaining optimum body condition of gilts and sows is the key to achieving high levels of piglet production. This is even more important today with the genetic improvements made to the modern sow in the past 10 years. The goal of bigger litters born through improved fertility, followed by the need for more milk production in lactation to rear the extra pigs, has put pressure on both the sow and the stockman’s ability to manage her.

So, how can body condition be accurately measured, monitored for best performance and at what stage of the pigs’ cycle should this be done?

For the past three months at ACMC we have been evaluating a new method of scoring body condition by using a scanner to measure body fat as well as visual assessment. This has helped the stockmen to adjust the feed curves more accurately to suit the sows and gilts, and the farrowing house staff are now more aware of condition and loss during lactation.

The basic aim of the producer is to maintain a stable body condition of the females in the breeding herd. Traditionally (and still practised today), body condition scoring was carried out visually using a grading scale of 1 to 5. At first glance this appears to be a sensible option, but it does have some pitfalls. Animals on farms with several different breed types are harder

to assess as there can be a lot of variation between them. For example, a sow that appears to be thin on backfat can actually have an acceptable covering.

The subjective nature of visual scoring puts much emphasis on the experience and skill of the stockman – who can find it hard to judge the condition of the animals when seeing them on a continual day-to-day basis. This herd blindness’ also makes it harder to assess what exactly has affected performance over time as the impact is often only seen many months later or indeed in subsequent litters.

To increase the accuracy of visual condition scoring, the use of a scanning machine can be a great asset.

There are many types of scanners on the market, but one of the most practical ones is the hand-held model. The one we use costs between £400-600.This can be used quickly and easily in a pen of gilts close to service or among a yard of weaned sows without having to restrain the animal while the measurement is taken – very similar to the method used for pregnancy checking sows.

The reading is taken at the tenth rib, 6.5cm from the midline of the back. This is typically referred to as the P2. A metal or strong plastic template can be used to make sure that the readings are taken in the same place each time.

There are three main times when scanning can help the producer to assess his herd and keep the sows and gilts in optimum body condition. These are: at weaning (or service); on entry to the farrowing house; and before service (as a sow or replacement gilt). See Table 1 for typical readings.

The reason for checking both entry to the farrowing house and exit (at weaning) is to help assess if either the gestation condition is the issue or if it’s how the animal lactates and performs in the farrowing house. This is influenced by the environment, quality of the diet, amounts fed and the skill of the stockman of managing the farrowed animal.

A fat animal will have lower feed intake in lactation, lose more bodyweight and also perform less well when producing the next litter. A gilt that is low on bodyweight will have inferior performance after farrowing and have poorer reproductive performance. Typically, an animal should lose between 2-3mm of backfat in lactation. Additionally, the replacement gilt needs to be in good enough condition to start her breeding life, as research shows this influences not only her first litter, but subsequent performance. It’s therefore prudent to scan the gilts a week or two from the intended service date and any exceptionally low-backfat gilts should be grown on and served later.

Sows at weaning show the most variation in backfat measurements. This is not surprising when one considers that animals milk differently, have different feed intakes and suckle different numbers of piglets. The association between the numbers weaned and decrease of backfat shows that sows weaning more piglets have higher fat loss. To combat this, sows that have high numbers weaned can be weaned earlier.

If the gestation feed curve is not corrected to cater for this, then sows that farrow with low backfat measurements in their first or second parity have more stillborn piglets. After the second parity, the sow’s body condition tends to be more stable and backfat is more easily maintained. However, a sow that is over-conditioned will be prone to mastitis, agalactia and, again, prone to producing a higher number of stillborn piglets. This is why taking the backfat readings and then adopting a feed curve is important for productivity.

From the backfat readings (and, of course, using a visual check) the sows can be judged as thin, average or fat. With the popularity of loose-housed sows in social groups, it’s important to feed to the group’s condition. Normally, the herd will fall into one of the three categories as shown in Table 2. The P2 reading will help you to assess which feed curve to operate.

As the highest variation of backfat thickness occurs in first and second parities, it’s important to concentrate on the gilt’s condition before service and through gestation to farrowing. The gilt is the future of the herd, so it’s vitally important to start her breeding cycle correctly at correct age, weight and backfat, and then maintain it through the subsequent cycles so the herd’s performance is maximised.