On farm performance combined with meat quality

Historically, the Koreans had developed a pig with a high intramuscular fat content or marbling, but while this animal delivered on the meat quality front this was paid for by a poorer performance. However, the product attracted a premium price so this was acceptable. JSR saw the challenge was to produce a commercial animal that delivered on both fronts!

An intriguing development was the use of IMF (intramuscular fat) scanning in the selection programme for this new boar – the Geneconverter 800m. This provides a means of scanning live animals rather than looking at their meat to determine the level of marbling.

Higher revenue

Linking the IMF scanner to Biosoft Toolbox IMF scanning software enabled selection to give a gain in marbling without it being accompanied by an adverse increase in backfat which, in turn, should result in a higher revenue per kg of meat produced in markets that appreciate meat quality. The extra cost of marbling +1p/kg per 1% makes the marbling effect insignificant to the cost of production.

Historically, JSR Genetics used CT scanning to assess carcase quality but this had the big disadvantage that the pig had to be taken to the scanner and once it had left the breeding herd it could not return to it because of herd health security issues.

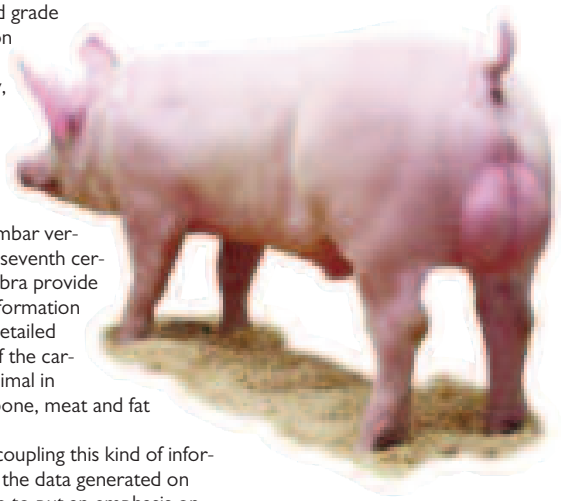
The advent of mobile scanners, therefore, opened up new opportunities for genetic companies. This technology is also the same as that which is just being introduced to screen and grade carcases on line.

In reality, four key scans at the levels of the knee, hip, second lumbar vertebra and seventh cervical vertebra provide enough information to get a detailed makeup of the carcase or animal in terms of bone, meat and fat content.

JSR are coupling this kind of information to the data generated on feed intake to put an emphasis on feed conversion to produce the Geneconverter 800m. This will provide commercial pigs that produce quality meat quicker.

Data on performance at nucleus level is impressive (see Table 1).

At finisher level an FCR of 2.24 can be achieved and, interestingly, this is achieved by many visits to the feeder throughout the day and only eating a little at each visit. Table 2 shows how Geneconverter commercial progeny perform. ■



The Geneconverter 800m.

	Pre-test gain (g/d)	Days to 40kg	Gain on test (g/d)	Rib fat at 91kg (mm)	Days to 91kg	Growth rate wean to 91kg (g)	Muscle depth (mm)
Top 10%	630	63	1320	6.5	111	977	79.0
Top 20%	590	67	1275	7.2	114	944	78.0
Average	490	83	1100	11.3	127	824	68.0

Table 1. Geneconverter 800m nucleus performance.

Table 2. Geneconverter commercial progeny performance.

	Geneconverter 800m	Leading competitors sire line genetics		
Birth weight (kg)	1.81	1.60	1.69	1.72
Weaning weight (kg)	9.32	8.77	8.42	8.83
Weight at slaughter (kg)	106.2	101.9	103.5	104.8
Days to slaughter	151.6	154.8	157.4	155.3
DLWG wean to finish (g/d)	781.4	730.6	734.2	751.2
FCR wean to finish	2.11	2.18	2.08	2.08
P2 (mm)	11.0	11.0	11.0	12.0
Carcase weight (kg)	80.8	77.6	78.6	79.9
Killing out (%)	76.1	75.2	75.9	76.2