

British breeder combines on farm performance with meat quality

One of the world's leading porcine genetics houses, JSR Genetics, has recently launched a new terminal sire which they expect to have a significant effect on meat production and quality.

International Meat Topics recently visited JSR Genetics to find out more about this interesting development in the world of pork.

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 their challenge as being to produce a commercial animal that delivered on both fronts!

An intriguing development was the use of IMF (intramuscular fat) scanning in the selec-

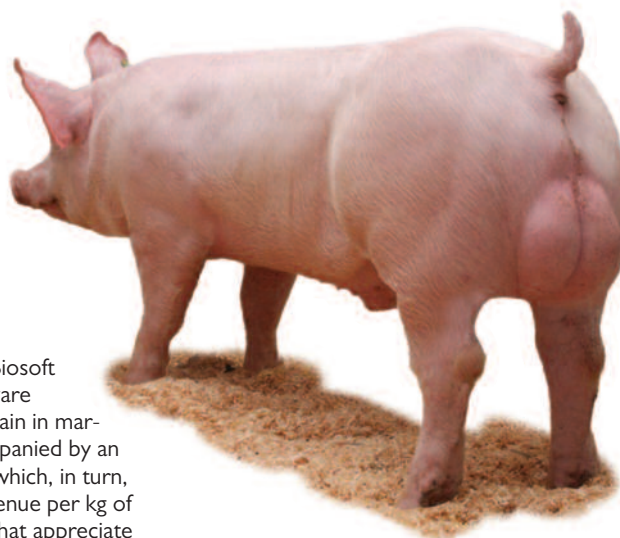
tion programme for this new boar – the Geneconverter 800m. This provides a means of scanning live animals rather than looking at their meat to determine the level of marbling.

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 carcass 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 Geneconverter 800m.

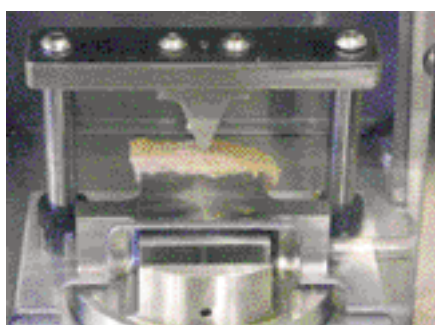
The advent of mobile scanners, therefore, opened up new opportunities for genetic companies. This technology is also the same as that which is just being introduced to screen and grade carcasses on line.

In reality, four key scans at the levels of the knee, hip, second lumbar vertebra and sev-

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The latest technology for testing meat quality.



	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 competitor sire line genetics
Birth weight (kg)	1.81	1.69
Weaning weight (kg)	9.32	8.42
Weight at slaughter (kg)	106.2	103.5
Days to slaughter	151.6	157.4
DLWG wean to finish (g/d)	781.4	734.2
FCR wean to finish	2.11	2.08
P2 (mm)	11.0	11.0
Carcass weight (kg)	80.8	78.6
Killing out (%)	76.1	75.9



Photographs of pork are used for colour scoring (left) and marbling scoring of meat (right).

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enth cervical vertebra provide enough information to get a detailed makeup of the carcass or animal in terms of bone, meat and fat content.

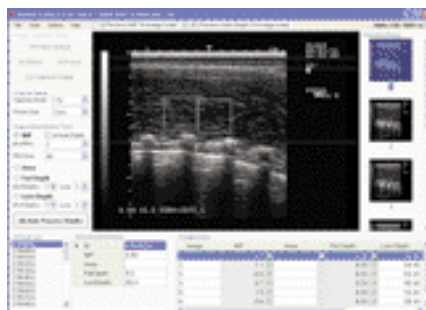
JSR are coupling this kind of information to the data generated on feed intake to put an emphasis on feed conversion to produce the Geneconverter 800m. This will provide commercial pigs that produce quality meat quicker.

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.

When it comes to meat quality, JSR Genetics have invested heavily and now have their own facilities for assessing pre- and post-cooking meat quality. Here they

Interpretation of data using the latest scanning technology.



have a trained taste panel of six men and 10 women and a consumer panel.

The former allows them to assess meat quality both quickly and in detail so that follow up analyses on the farm, on the processing line or in further processing can be quickly initiated,

The panel is able to assess meat in terms of colour, flavour and odour. To date, the taste panel is performing well on internal quality control with assessor variances as low as 3% on firmness on cutting, 5% on moisture and 8% on flavour. All this information is fed into JSR's data base and can be accessed by their geneticists.

Soon the Geneconverter 800m's genes will be in the market place and it will be interesting to see their effects on pork quality. ■