



Making pork more profitable

JSR Genetics Limited

Southburn, Drifffield, East Yorkshire YO25 9ED England
Tel: +44(0) 1377 227799 Fax: +44(0) 1377 229403
Email: info@jsrgenetics.com www.jsrgenetics.com



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AI Newsletter

AI Order & Enquiry Line: 0800 97 98 99

Improving the minimum sperm count per dose



JSR have been using the SP100 nucleo counter at the Thorpe Willoughby AI stud for over 4 years but have only used it for quality control purposes. This has meant testing random samples from all studs to check if they are meeting the minimum standards required. JSR have now taken the decision to raise the minimum standard of semen cells per dose, and have invested in a second SP100 counter.

As we reported in November last year, the second SP100 Nucleo counter for the Lincoln AI stud will run alongside the one already in use at Thorpe Willoughby. The SP100 is a very accurate way of measuring sperm concentration per millilitre of diluted semen. The procedure takes less than a minute to perform and has an accuracy of more than 97%.

More Quality Control

Standard colorimeters and other photometry equipment have an accuracy of between 80-85% so this can lead semen counts to be quite variable. JSR have taken the decision to count all semen sold across all studs to ensure that it meets our new minimum standard.

JSR carry out the procedures routinely and have found it to be very beneficial because of the extra quality control procedure in place, in conjunction with full morphology checks on every collection and full motility checks. In addition, staff feel confident they are selling the best product possible.

Programmed accuracy

The process works by initially taking 1ml of diluted semen and mixing it with 10ml of reagent. The role of the reagent is to kill the sperm, and open up the heads. Then the semen is introduced into the cartridge manually by dipping the end into the reagent and semen mix and pressing down the plunger. The cartridge is then placed into the machine which then continues to press the plunger further down taking the

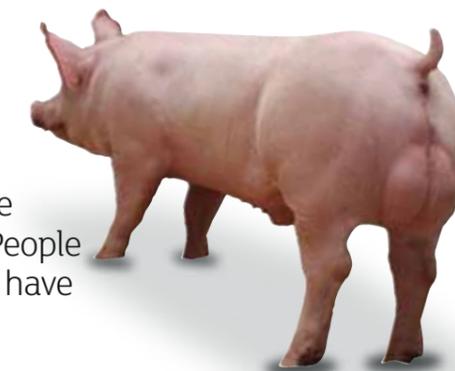
semen through a very thin tube containing a stain which will soak into the sperm head and eventually end up in a chamber where it can be measured. The machine can then take a picture of the sperm in the chamber and count them. The machine is programmed with the area of the chamber and the number of sperm so it can then calculate the number of sperm per millilitre. Due to the staining of the sperm the machine cannot count other particles and assume they are sperm by mistake.

This investment demonstrates JSR's commitment to continually improve the quality standards of our processes in excess of the industry norm.

Steve Cook, AI Production Manager

Introduction

Since we issued the last AI newsletter it's been a busy time for JSR. At the end of 2012 we were awarded Investors in People Gold which is a fantastic achievement and means that we have attained one of our 5 strategic goals.



Geneconverter 800m

The AI business has continued to grow and the studs have been busy meeting the demand for semen from both our UK and International customer base. The Geneconverter 400 and 800m have continued to perform exceptionally well, with outstanding results being delivered on farm for both. The demand for semen from the JSR studs is ever increasing and as the BPEX audits are fast approaching it promises to be busier still in the months to come.

In these challenging times, continued high feed prices are putting pressure on the profitability of businesses so it's more

important than ever to have fast growing, feed efficient pigs.

Since the launch of the Geneconverter 800m, data has been pouring in showing very encouraging performance from the JSR customers now using this line.

Many producers are seeing improved weights and quoting figures of up to 750g heavier at weaning coming out of the farrowing house with a 17% increase in growth rate against previous sire lines, whilst still maintaining the very efficient FCR's that JSR lines are renowned for around the world.

I think it's safe to say that the Geneconverter 800m does exactly what is says on the tin!

If you would like to see the benefits of using the Geneconverter 800m in your production system, the JSR Herd Simulator can demonstrate the positive financial impact of the above attributes. To find out more please contact your area representative for more information, or call the head office on 01377 227799.

Giles Christie, UK Sales Director



JSR Heavy Weight Pig Trial

JSR have recently completed studies into taking pigs to heavy weights.

This trial was carried out on a group of 200 pigs at one of our commercial finishing units. Half of the group were shed off at 104kg the remaining animals were left on site for 3 weeks. When the remaining animals were taken to slaughter their live weight was an average of 120kg, giving a gain of around 12.6kg deadweight as shown in the table below.

There has been a long standing myth that FCR's at this point would be over 4:1, as we can see from our results this is not the case

and the net margin benefit is there for all to see.

JSR's modern pig genotypes are designed to be efficient all throughout the growth period. An FCR of 3.1 between 104-120kg is testament to our hard work towards achieving optimum efficiency.

Stephen Waite, Head of Science

Summary

103.78	Avg Liveweight 1st draw (kg)
120.70	Avg Liveweight 2nd draw (kg)
77.83	Avg Deadweight 1st draw (kg)
90.52	Avg Deadweight 2nd draw (kg)
16.92	Liveweight Gain (kg)
12.69	Dead Weight gain (kg)
53.77	Feed/pig (kg)
238.00	Feed cost/tonne (£)
12.79	Feed cost/pig (£)
1.53	p/kg paid kg/dead
3.18	FCR
12.60	mm P2
19.42	Extra slaughter payment/pig (£)
6.63	Margin over feed/pig (£)
0.60	Cost of pig on unit/week (£)
1.80	Total cost of pig on unit (£)
4.83	Net margin/pig (£)



Biosecurity At The JSR AI Studs

Stud biosecurity is of paramount importance in order to help safeguard the high health status of the animals within that stud. So how do JSR minimise the health risk to our customers?

In order to ensure rapid genetic progress, boars are regularly introduced to the studs, being resident on average for only 11 months. With regular intakes of stock, it is vital that a rigorous screening process is undertaken to avoid the accidental introduction of a significant disease such as PRRS.

The nucleus units which supply boars to the studs are all high-health with regular veterinary visits, blood sampling and abattoir surveillance all providing confidence that the units remain of the best possible health status. Boars are

selected from the nucleus farms (based upon their genetic merit) and placed into a remote isolation facility. Isolation facilities would operate the same level of biosecurity as the nucleus units. Whilst within the isolation facility, the nucleus farms would be 'double-checked' to ensure there were no health concerns and statutory blood samples would be taken from all boars by government vets. These bloods are tested for Classical Swine Fever, Brucellosis and Aujeszky's Disease. All boars must pass these tests before they can proceed to 'proper' pre-stud isolation.

Isolation prior to stud entry is for a minimum of 30 days, during which boars are assessed daily for health and any concerns reported. During the last 2 weeks of this isolation period, boars are again blood sampled. In addition to government required statutory testing ALL the boars are also tested for PRRS. Again, all boars must pass all tests before any can move to the studs. Should any evidence of PRRS infection ever be found, all boars would be slaughtered and an intensive investigation commenced! Thankfully, this has yet to occur.

► Story continued inside....

▶ Every stud gets a weekly veterinary inspection. During this visit, all the boars on site are appraised to ensure they remain in good health and any staff queries regarding the boars addressed. In addition, once per month, approximately 10% of the boar stud resident population is blood sampled.

Boars are selected to ensure a representative cross section of the stud is bled. Bloods are again tested for PRRS plus statutory testing undertaken.

The above is just a snap shot of the care JSR undertake to ensure that the semen delivered to you is of the highest quality

and from a site where a comprehensive screening programme helps ensure the boars are as healthy as possible – after all, it is in the interests of JSR as a major pig producer to ensure the semen is correct!

Adrian Cox BVetMed MRCVS

Optimising Reproductive Performance - It's a Team Effort!

The development of the BPEX AI Standard was the result of a unique collaboration between all 5 of the main breeding companies, along with technical input from the internationally recognised AI consultant, Hanneke Feistma DVM, from IPG based in the Netherlands.



The standard was first introduced in September 2006 to provide assurance for purchasers of AI from approved UK studs. The AI Standard covers more than 80 individual protocols and best practice principles, with each AI centre being audited every year by the BPEX appointed assurance body, SAI Global. There are also random checks on the AI being delivered to the customer, with doses being sent by BPEX to the Dechra Laboratory in Leeds, who operate as the BPEX AI Reference Laboratory and provide an independent

semen quality analysis. You can be confident that the semen delivered to your units from BPEX AI Standard members, will have been produced to a set of protocols and quality control measures that are at least equal to those in operation in the EU.

Using assured AI is only one important factor to helping units optimise their reproductive performance however. Now it is the turn of the producer! Understanding how to store and handle the AI correctly once on farm, and using the AI in

accordance with best practice procedures for heat detection, insemination and post-AI management, are key to achieving good results. Action for Productivity data sheets describing good operating techniques can be found on the BPEX website at <http://edition.pagesuite-professional.co.uk/archives/bpex/>

Angela H Cliff MSc

BPEX AI Programme Manager and Knowledge Transfer Manager Central



JSR are proud to be fully compliant with the BPEX AI Quality Standard

Hints & Tips

When cull sow price is high it can be more cost effective to sell older sows and purchase gilts rather than coping with an ageing herd



JSR Case Study

Dennis Bridgeford, Petley Hybrids

Dennis Bridgeford of Petley Hybrids in Portmahomack, Easter Ross, is JSR Genetics' most northerly customer. Despite his remote location, he made the switch from using semen produced on-farm to semen supplied by JSR and delivered by their Coolink service and hasn't looked back.

Dennis, who is Director of Scottish Pig Producers, currently farms 125 acres and over the 34 years he's been running Petley Hybrids has built the herd up to 550 sows. He breeds and finishes on farm and supplies meat to two of Scotland's most prestigious processors, Munro of Dingwall and Millers of Speyside.

The decision to use semen from his own boars was made purely because of the location of the farm – some 40 miles from Inverness on the Moray Firth. However following the PMWS crisis the farm went over to outsourced semen.

"We used our own semen in the past just because of geography, but after the PMWS crisis it was felt that buying it in was much better. We'd been dealing with JSR for a number of years – they'd always supplied our boars – so we knew we'd get a quality service. The bought-in semen delivers more piglets per litter so there's more profit in it for us."

Because of the remote location of Petley Farm, Dennis relies on the Cool Link service to deliver his semen.

"The Coolink service works very well and I can't recollect a time when products haven't arrived. Even in the harshest weather – snow, rain, whatever, we always get our deliveries. We have a great driver who is extremely reliable. The quality of the semen is never compromised and the whole service works incredibly efficiently."

As well as using semen supplied by JSR, Dennis has also gone over to the company's Geneconverter 400 sire line in a bid to improve productivity.

"I felt the boar line we were on just wasn't robust enough. I really needed the strength of those Hampshires and it's turned out to be the best business decision I've ever made. These boars have improved everything that we measure – days to slaughter, birth weight and weaning weight

– everything and we've created two weeks' of pig spaces since moving over.

"The improvement has been dramatic. Our productivity is consistently up there with the best, but like all pig farmers we have good days and bad days."

As Petley Hybrids is very much a family business – Dennis' sons Andrew and Neil play an active role in the company – he has his eye very much on the future.

"As far as the future is concerned we will always be looking to improve efficiency and reduce costs – particularly in the face of falling prices, but as my sons are very keen I know we can survive it – particularly with productivity as it is."



Did you know?

A sample of all semen is retained at 17°C by JSR for inspection for 1 week after collection