



PIC® Newsletter - December/Christmas 2016



Merry Christmas
Happy Holidays
and all the best
for the New Year



PIC Pork Quality Programme: A Quarter of a Century of Progress

PIC's focus for the past 25 years has been on genetically improving and environmentally optimising factors impacting pork quality. Our goal has been to design, implement, and continuously improve a "Robust Breeding for Pork Quality" programme, focusing on meeting the needs of the entire pork supply chain (pork producers, processors, wholesalers, retailers, the food service industry and the global export markets), while ultimately fulfilling the needs of the end-user, the global consumer.

Some major milestones delineating PIC's programme to improve pork quality of our lines from 1990 - 2016 are summarised in the graphic on the next page.

PIC fully established targets for pork quality for the first time in 1996 (see table 1 on the next page). While closely monitoring all of the traits of practical importance, our main focus has been on measurement and selection of pedigree pigs based on meat ultimate pH (pH is a measure of meat acidity after post-mortem conversion of muscle to meat; pH measured 24-hours post-mortem; typically the loin and/or the large ham muscles are measured). Both PIC and academic research has shown pH₂₄ to be the best predictor of overall pork quality. Aside from the ability to measure it in large scale and in multiple environments as part of PIC's GNX



Table 1: PIC's objectives for pork quality

Trait	Target	Target Range
pH45	6.55	6.8 - 6.3
pH24	5.85	6.1 - 5.7
Minolta L*	42.0	45.5 - 38.5
JCS (1 to 6)	3.0	2.5 - 4.0
Purge Level, %	0.5	0.0 - 2.0
Marbling (1 to 10)	2.0	2.0 - 4.0
IMF, %	2.0	2.0 - 4.0

programme pH is highly correlated (i.e. changes in pHu trigger changes in other traits) with most of the important pork quality characteristics. For instance, ultimate pork pH has a strong correlation with traits like meat colour and meat firmness (i.e. higher pHu within the range of 5.75-5.90 is associated with darker and firmer meat) as well as with meat drip loss (i.e., higher pHu is associated with lower drip loss measured on a cube of meat or on a chop of packaged meat).

While setting the correct genetic improvement targets is strategically necessary, for us, the key is to achieve those strategic outcomes in commercial systems of PIC global customers. Current data shows pork (loin and ham muscles) quality of PIC progeny remains aligned with our targets and continues to meet the needs of the entire pork supply chain.

Graphic:
PIC Pork Quality Achievements: 1990 to today

2015 ongoing	Launched carcass & pork quality improvement programme.
2014	
2013	
2012	Characterised fatty acid profiles of pure lines.
2011	
2010	Implemented EBV for physiological fitness. Identified factors affecting pork fat quality and iodine value.
2009	Began blood lactate testing as stress/fitness indicator.
2008	
2007	Introduced ultrasound to measure IMF
2006	
2005	Evaluation of pork quality on heavy pigs. Analysis of muscle quality and fiber types.
2004	
2003	Sireline GNX programme established
2002	Comprehensive pork sensory and consumer acceptance evaluations.
2001	Removed RN* gene from Hampshire based lines
2000	Removed Halothane gene from all commercial PIC products.
1999	Estimated economic values for pork quality.
1998	Implemented MAS** for pork quality. Included pHu in breeding objectives.
1997	
1996	Developed PIC Pork Quality Blueprint.
1995	
1994	First Pure line carcass dissections and pork evaluations.
1993	
1992	
1991	
1990	Pioneered use of Halothane gene test

* Acid Meat Gene
** Marker Assisted Selection

Simultaneously to developing our robust Breeding for Pork Quality Programme, PIC's technical services have been working with our customers to implement animal handling practices designed to improve the welfare of animals on farm, in transit to the processing plant, and during the pre-slaughter handling and stunning. Furthermore, PIC assists with helping characterise and define optimal carcass chilling practices that help enhance pork quality. One of the first industry standards of animal welfare and pork quality was established by PIC in the 1990's. This Blueprint's initial objective was to identify a combination of practices to ensure that animals are handled and slaughtered in a humane manner, while also resulting in an improvement in meat quality – a target that we still work diligently on today.

In keeping with our motto of "Never Stop Improving", PIC continues to actively contribute to and monitor new scientific

knowledge on the biology and practical implementation of humane handling. One of PIC's latest additions to our Total Profit Selection Objective is a 'fitness test' utilising measurements of blood lactic acid (LA) level after applying a mild exercise to the breeding candidates at the Genetic Nucleus farms during off-testing. The initial scientific knowledge underlying PIC's fitness EBV (Estimated Breeding Value) was developed by a consortium of scientists from Colorado State University, ELANCO, Hormel Foods and PIC. PIC has then developed a proprietary, practical fitness test, developed genetic parameters (heritability of blood LA level and genetic correlations with traits of economic significance such as meat ultimate pH, pig lean deposition, muscling, growth rate, feed conversion, livability), and implemented the trait in PIC's genetic development programme.

PIC has been focused on maximising total value and return to the pork chain for over 50 years. This commitment continues to be driven by initiatives such as the Breeding for Pork Quality Programme established more than 25 years ago. This programme, fully supported by PIC Technical Services working closely with our customers on optimising animal welfare and pork quality environmental standards, ensures that PIC's customers continue to lead the pork supply chain globally in producing a high-quality, sustainable and efficient product for today and tomorrow.

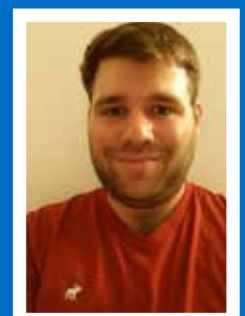


PIC UK welcomes two new team members



In October **Madalin Hincu** joined the PIC UK team as a Key Account Manager (KAM). He will be working with the entire KAM team, customers, prospects, and allied industry members with special focus in the North and East of the UK. Prior to joining Madalin had spent seven years with PIC Romania as a KAM supporting many large producers.

Additionally **Sebastian Casiro** joined the PIC UK team as a Technical Service Manager having recently completed his Masters Degree in Animal Science. Prior to this he had production management responsibilities with Agroceres PIC in Argentina. Sebastian will actively support the KAM team and Genetic Services with technical advice to customers focusing on maximizing the genetic potential and performance of PIC products and progeny.



Award Winners 2016

It's end of the year and again time to celebrate successful farmers across the UK

Pig Farmer of the Year Award: Steve Hart, Norfolk Free Range

The well-known British agriculture magazine Farmers Weekly every year recognises the very best of British farmers to celebrate and reward their hard work and passion for the business.

Now in its 12th year, the Awards night has become a fixed date at farmer's diary and with fifteen award categories it encompass the whole spectrum of modern agriculture.

This year Steve Hart from Norfolk made it to the top of the list for the Award of "Pig Farmer of the Year". Steve has 13,000 outdoor sows and 75,000 growing pigs – With all PIC genetics the Camborough 50 females come from his own closed herd multiplication unit with the PIC327 semen being used as sireline. He started with 300 sows in 1987 reaching around 1800 sows in 1999.

Having worked with PIC for over 20 years Steve likes the security of having his own production system and amongst other things feels he achieves a robust animal suited to his system. Significant consideration is also given to the finished product to ensure that this is attractive to the end customer. So it is not surprising that he supplies companies like Waitrose, McDonald's and Chipotle.

Everything is well controlled. For the transport of pigs and feed Steve runs his own fleet of lorries to keep biosecurity on a high level. Healthy herds are of high priority, not only ensuring high welfare but also keeping antibiotics use to a minimum so avoiding any in-feed antibiotics.

One important factor to develop such business from Steve's point of view: He leaves nothing to chance which means having a clear vision for his business, looking for the next step in innovation, working with people and - last but not least - hard work. "Never Stop Improving" - PIC's claim is a perfect fit to Steve's business as well. Not surprising then that he is looking to further expand his business.

Two other significant Awards ceremonies were the **National Pig Awards and BQPs own Annual Farmer Awards night**. Congratulations need to go to all who were nominated at the NPA, though special note goes to the following PIC Customers:

- > Richard Carless and team at Pear Tree Farm – Winner NPA Outdoor Producer of the Year
- > Elite Pigs, Nigel and Gill Spalding (BQP) – Winner NPA Outdoor Herd Productivity Award
- > Richard and Maggie Lane (BQP) – Runner up in above

NPA nominee Thomas Wright needs mention as over 21 batches of nursery to finisher pigs for BQP he achieved figures of 886g DLWG, 2.16 FCR and 1.61% mortality. Truly outstanding!

The BQP Farmer Awards night demonstrated, as always, exceptional performance from a "High Welfare" outdoor system. While many farms combines to make up to this Globally significant operation it was clear to see the closely aligned local collaboration, co-ordination and team approach which drives this business. With multiple categories from the Organic and Free Range Award through to the Next Generation Award we would like to congratulate all the nominees and the winners who are pictured on the right.

Read more about the Award Winners at gb.picgenus.com

More online at
Farmers Weekly.

Just scan
the QR-code.

