Quick Guide to Coccidiosis

By Dr Andrew Tucker – Charles Street Veterinary Consultancy

What is Coccidiosis?

Coccidiosis in young piglets is caused by *Isospora suis*. The infection happens by ingestion of infected faeces or contaminated equipment or feed. Once ingested, *Isospora suis* infects the epithelial cells in the piglets small intestine and starts multiplying within the next 48 hours. Damage is done to the villi in the intestine, which disrupts digestion and also allows for secondary agents like rotavirus to invade and do further damage. “Eggs” are passed out in the faeces and these can remain infective for more than ten months, under the right conditions.

Sows rarely pass *Isospora suis* in faeces. The main source of infection is from the faeces of other infected piglets which contaminates the farrowing pen. Carrier sows can however be responsible for bringing the disease into clean, uninfected buildings or farms.

How do you know if it’s on your farm?

Coccidiosis is seen mainly in suckling piglets of 5 -15 days old. Diarrhoea and subsequent growth depression and dehydration are the main clinical signs. Mortality of up to 20% is possible if not treated.

The diarrhoea is described as anything from pasty to watery and white to yellow in colour.

How do you treat or prevent it?

The clinical signs are suggestive of the disease, particularly when taking the specific age into consideration. Poor response to antimicrobial treatment increases the suspicion.

Confirmation can be gained by a laboratory, looking for the presence of “eggs” in faeces as well as identifying coccidian in the intestinal tissue.

Medication for prevention and treatment is available and needs to be given at the correct time. Treatment should include not only the clinically ill piglets, but all the exposed littermates as well. Thorough washing and disinfection of farrowing pens is a critically important part of coccidiosis control.

References:

Pig Diseases – D.J. Taylor; Diseases of Swine – Straw, Zimmerman, D’Allaire, Taylor
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The Next Half-Century of Improvement Starts Here!

Fifty years ago, PIC’s founders began improving pigs in every category of health, quality, and productivity. Today, our products represent the Gold Standard of global swine genetics.

From Wallingford to the World

The seeds of progress were planted even before the first meetings of the Wallingford Pig Study Group (WPSG) at a pub called The White Hart, back in 1955.

The WPSG implemented ideas from around the world, such as performance testing and high health herds, to not only benefit the new company, but the English Pig Industry in general. By the time the Pig Improvement Company (PIC) was officially formed in 1962, the foundational concepts already held the promise to revolutionise pork production all over the world.

Throughout the ensuing decades, PIC has diligently worked to bring the advantages of superior swine health, genetics, and production efficiency to countries around the globe - and our reach is still growing.

Diverse local markets and challenging regional climates demand a strong, versatile approach to pork production and marketing. With our 50 years of experience in pig improvement, PIC is ready, willing, and able to help pork producers everywhere make the most of their operations.

Just as we vow to never stop improving pigs, we also pledge to continue our quest to provide more and more countries, customers, and consumers the benefits of our latest innovations and integrated services.

Never stop improving!

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Technology

PICtraq™ is the industry’s largest genetic database. In this vast collection of data compiled from nucleus and multiplier herds on every continent, PIC stores the information that is crucial to selecting and propagating the most desirable traits.

The database includes:
- Performance information collected throughout the production pyramid
- Carcass and meat-quality performance from nucleus animals
- 50-year tradition of on feed efficiency, by monitoring intake during growth
- Genetic markers acquired through PICmarq® Technology
- Commercial performance data from the GN Crossbred Program

PICtraq™ links all ancestors to account for performance and pedigree information, as well as the global movement of genetics - invaluable knowledge in a breeding program designed to serve the global pork chain.

Of course, now we also use CBV™, or Crossbred Breeding Value, to calculate the breeding values of PIC boars. This innovative system takes a boar’s own test performance and PICmarq® genotypes and adds additional information from the commercial level, creating a comprehensive and detailed understanding of performance potential.

Because we believe we must never stop improving, we are committed to continual research and development - with our customers and in our own projects - in our perpetual quest to take the next step toward better pig performance.

Quality Products - Quality Experiences

Beyond the superior characteristics of the pork products ultimately delivered to consumers, “quality” means much more to PIC and our customers. While different local markets demand different measures of meat quality, every customer in every region benefits from the less tangible aspects of our commitment.

Along with strong, healthy pigs selected by the most stringent criteria for predictably strong production performance, we provide our customers a predictably positive overall experience with our company - from experienced account service to technical assistance and R&D that support their herds’ health, their operations’ efficiency, and the profitability of their marketing decisions.

Because we are the Pig Improvement Company, PIC will never be completely satisfied with the state of the industry or its stock. Still, in fifty years of genetic improvement, we’ve developed the world’s finest lines of gilts and boars to place into service for our customers.

Health

Diseases represent one of the most important factors limiting the expression of animals’ genetic potential. Aside from the productivity and financial benefits of keeping diseases out of pork production systems, superior health practices provide humane protection for the animals against suffering from disease.

PIC Camborough females consistently provide the highest rates of pigs weaned per litter, and produce fast-growing, lean pigs that lead the industry in feed efficiency.

Never stop improving!
Building A Better Future
The company that revolutionized swine genetics and has spent five decades improving the industry and its products naturally has no intention of slowing down now. The future of pig improvement includes big opportunities that PIC will pursue with all the strength of our hard-earned position of leadership, allowing us to:

- Use the experience we've won in our established markets to maximize the vast potential in the developing markets of Central Europe and Asia, where pork consumption is high and modern pig breeding technologies are still relatively unsophisticated.
- Supply the breeding-stock requirements of the largest pig producers in the world.
- Offer a variety of pig lines tailored to local market production systems, consumers’ meat preferences, and climates.
- Invest significantly more than our competitors in research and development, to further enhance genetic lines and reinforce our competitive advantage.

From concept to Camborough to global leadership and beyond, all in just in fifty years. With our commitment to Never Stop Improving, imagine what we can do in fifty more.

Better Pigs. Bigger Potential
All the way from post-war pigs that grew too slowly and required too much feed, PIC has led the industry to a standard of animals that today are vastly healthier, leaner, more prolific, and more efficient.

While PIC has been busy building the world a better pig, we've also been building a bigger and better company. For fifty years, our success has been constructed on a foundation of key principles:

- Leadership in genetic improvement
- Priority emphasis on animal health
- Service integrated into customer partnerships
- Selection of stock for production efficiency
- Advanced data-compiling technology
- Versatility in performance to meet the quality criteria of different local markets

Genetic Improvement
PIC fields a premier group of 17 line populations around the world, providing the potential for superior performance in pigs and the products derived from them. This potential is measured with the information collected in Genus's proprietary genetic database, PICtraq™.

These lines allow our company to satisfy the local market requirements of pig producers and pork consumers - so our customers can realize genetic value in their operations faster than ever before.

Integrated Service
PIC’s partnerships with our customers, and our comprehensive engagement with their operations, are designed to maximize herd health, production efficiency, and competitive differentiation for their pork products.

Through relationships built over years or even decades, PIC personnel from account managers to service technicians accumulate first-hand knowledge of each customer’s operation and its particular needs. By working on site with farmers and production managers over the long term, we develop the understanding required to help them focus on the most important ways they can be more productive.

Wherever they operate around the globe, whatever their local markets demand, however big their challenges, PIC customers know we speak their language.

Production Efficiency
Many pig breeders have made use of genetic improvement over the years. The difference in PIC’s approach is that rather than selecting for single traits, we select for a comprehensive range of traits with one goal in mind: improving productivity. Our customers can realize the potential of these traits in all of the most critical measures of performance:

- Robustness of the sow and her offspring
- Female reproductive performance
- Grower-finisher pig performance
- Meat quality Carcass composition

By incorporating commercial cross-bred performance data into the analysis, PIC’s GN Crossbred program allows breeding for productivity to be more accurate than has ever before been possible.
Our First Half-Century of Improvement

1957 - Wokingford Pig Study Group formed
1962 - PIC is formed
1964 - Minimal-disease concept established
1966 - Daughter Nucleus Herd started
1969 - "PIC Health Scheme" Introduced
1973 - PIC USA
1973 - PIC Australia
1977 - JV Agroceres PIC in Brazil
1980 - Inelali Camboorugh Company est. in Japan
1981 - Camborugh (Blue) launched
1982 - Camborugh 15 launched
1983 - PIC wins RAST Technology Award
1985 - 1,839 pigs from USA by air to China in one shipment
1988 - Cuba Contract
1989 - Ukrainian Contract
1991 - PIC implements BLUP for breeding value estimation
1993 - PIC Colombia & PIC Argentina
1995 - Camborugh 22 launched
1996 - PIC China
1998 - PIC Spain
1999 - Oklahoma Multi-Site Production Pyramid established
2000 - Development of new Canadian Genetic Nucleus (Aurora)
2004 - PIC acquires Cottswood Swine Genetics
2006 - Sitzline GNK® X introduced
2007 - Damien GNK® X introduced
2009 - Development of new Genetic Nucleus (APX)
2011 - Thailand Distributor Contract
2012 - 50th Anniversary Celebration

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References:
5. Blomefield G. ImpranFLEX® component improves efficacy and economic benefits of controlling sub-clinical PCVAD with vaccination. AASV. 2005. 2, 138-139

A new way to control boar taint

Improving meat quality

Enabling PRODUCERS to provide a premium product to CONSUMERS
Alliance Genetics SA to provide top quality genetics

“The vision of Alliance Genetics South Africa (AGSA) is to provide top quality South African pig genetics and services to the pig producers of South Africa and its neighboring countries, while also collaborating with international partners to ensure up to date product development, keeping in step with international markets and long-term demands,” said Phillip Spencer at the information day.

He said the current members of the company are Mockford Farms and Leanside Stud (Limpopo Province), Chrismar Stoet (North West) and Sweetwell Stud (Western Cape).

The following pure bred sows are currently available:
- 700 Large White
- 200 Duroc
- 150 Landrace

As far as products and services are concerned, the following are available:
- F1 gilts (including pregnant sows/gilts)
- Terminal boars and semen
- National delivery of all products
- A state of the art computer software program currently nearing completion
- Information days and technical back-up
- After sales service.

AGSA has the following plans for development:
- A central high health AI stud
- A central high health stud sow nucleus of >1 000 pure-bred sows
- Sale of high health genetics developed in South Africa for South African producers
- An active electronic communication path linking performance information and information on genetics
- International partnerships and collaboration providing exposure to and participation with cutting edge research and development.

“AGSA is an alliance of a pro-active, future-orientated team of pig stud breeders,” said Dr Danie Visser, Agricultural Advisor and Strategic Analyst.

He said AGSA is a breeders company, and not a breeding company. It consolidates the pig breeders as well as the other segment of the market that supplies genetics.

“AGSA do not say it is the biggest or the best in the world, but we can compete proudly with the best in the world. AGSA does not want to be the best breeders company in South Africa, but the best for South Africa,” Dr Visser said.

He pointed out that the past, with all its shortcomings, can be used as a fundamental genetic building block for the future. He referred to the impact that the PIG GEN AI Station made over the years and also to the first real national BLUP for pigs which is currently being developed in South Africa.

“AGSA realised the bigger international picture, because isolation could be dangerous. The real test for competitiveness is not strong local competition, but fierce and ferocious international competitiveness,” Dr Visser said.

“In Canada, we do the testing, but our customers prove its worth,” said Jim Donaldson of Alliance Genetics Canada and the president of the Canadian Pig Breeders Society.

He said the philosophy of the company is to produce an all-round structurally sound pig with outstanding performance. The foundation of a good pig begins with strong feet, legs and toes. The BLUP figures of the pig are equally important. Breeding animals from Alliance Genetics Canada are capable of high production over the long term.

“We feel it is better to consistently work to perfect the genetic base we already have, rather than starting from a new line. Our Yorkshire line are the product of over 100 years of continuous breeding improvements,” he said.

The company has been exporting top quality swine genetics to more than 50

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References:
3. Boehringer Ingelheim. Data on file