

Exclusive to: *Pig International*

EXPERIENCES WITH IMPROVAC AS A PRODUCER AND VETERINARIAN IN THE AUSTRALIAN PORK INDUSTRY

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Describes how the focus on the domestic fresh pork industry has resulted in the increased focus on quality, and technologies to assist quality enhancement in Australia.

The Australian pork industry, like many other global pork industries, has been facing severe price pressures in recent times. Various factors, including; increasing feed costs (in conjunction with severe drought), increasing levels of frozen pork imports, the strengthening Australian dollar, and competition for labour from the booming Australian mining sector have all contributed to a reduction in the competitiveness of Australian pork production.

Background to the Australian Pork industry

Most Australian pork producer's ceased castration during the 1970's due to our comparatively low sale weights, and the feed conversion inefficiencies associated with castrated animals.

This strategy proved effective until the drive to increase slaughter weight occurred in the 1990's. As slaughter weight increased, local consumption of fresh pork remained static at ~8kg per capita. Average slaughter weight is now 103kg live weight at 22-23 weeks of age

Many consumers reported unsatisfactory eating experiences with pork, and therefore were not encouraged to repeat purchase.

At the same time as the impetus was growing for increasing slaughter weight, Australia was also in the early stages of exporting carcasses to the Singaporean market due to the Nipah virus outbreak in Malaysia. As the

requirement in Singapore was only for female pigs, this then placed a relative increase in the level of males onto the Australian fresh pork market. With that came the greater risk of providing Australian customers with 'tainted' meat from non-castrated boars.

Historically, boar taint has been an evolving problem in Australia resulting in a very limited increase in fresh pork consumption over time. Eliminating boar taint enables superior pork quality compared to the meat from entire males, and is equivalent to the quality of pork from castrates or females.

From 2000, when the level of imported product escalated significantly, the local smallgoods sector became more selective regarding the specification of the raw material that they required, as they could "cherry pick" their specific needs from high volume exporting countries.

Demand for local product by the smallgoods sector subsequently reduced, and consequently, Australian pork producers had to quickly reassess their marketing strategy and place a renewed focus on enhancing the quality of fresh pork.

Portec Australia is a veterinary consultancy practice of four vets, of which I and another partner are also involved in pork production. Together we made a decision to adopt new technologies to position our product at the premium end of the market and avoid competing on the same terms with the ever growing tide of imports. We were not alone in looking for alternative ways of operating in a changing environment.

We are glad that we made those decisions when we did, as they have provided us with a cushion which has kept our business operational in times of significant pressures on our industry. Since then volumes of imported pork products have increased substantially. During 2007, volumes of imported pork increased by 30%, whereby now approximately 75% of the raw material that is used in local bacon and smallgoods production is imported largely from Denmark, Canada and the USA.

We realised that to improve eating quality we had to ensure our customers were supplied fresh pork with no boar taint.

Vaccinating against 'Boar taint'

The shift in the marketplace coincided with the registration of the immunocastration vaccine, Improvac. We did our research and decided that Improvac would have significant benefits to our business.

Improvac is a unique vaccine in that it stimulates the pig's immune system to produce natural antibodies against the pig's endogenous gonadotrophin releasing factor (GnRF) released by the hypothalamus. These antibodies neutralize the GnRF, which in turn, blocks the release of sex hormones that cause a temporary cessation of testicular function, as well as the production of compounds associated with boar taint.

The vaccine requires two doses, at least 4 weeks apart, with the second dose being given ideally 3-4 weeks before slaughter. The initial dose is a "priming" dose and will not result in any effect on antibody production unless followed with the second dose. When used correctly, virtually 100% of animals will have minimal levels of boar taint compounds 2-3 weeks after the second dose. These results have been confirmed repeatedly via taste panel tests in various countries.

Producer benefits

Today I am a partner in two production enterprises encompassing 900 sows in Western Australia. We run a straw based housing system for gestating sows and the growing pigs and have a high health status with no EP, PRRS, PMWS or SD. Our pigs are initially vaccinated ~12 weeks of age while transfer weighing from weaner to finisher housing and the second dose is at ~18 weeks of age. 12 days after the second vaccination our boars can be sold without any concerns that they have levels of skatole which would taint the carcass.

The producer can benefit on farm from the use of Improvac in many ways. In our production system, we have seen:

- a) Increase in growth performance of Improvac males compared to entire males by 100-200 g/day during the “active” vaccination period. This is equivalent to 3-5 kg liveweight at sale.
- b) Improved animal welfare due to a marked reduction in mounting behaviour and aggression of the Improvac males. This has resulted in less mortality due to lameness, downer pigs and fighting, and lower slaughterhouse rejections (a reduction in death loss and culls in males of 3 – 5%)
- c) No difference in weaning to sale feed conversion between entire males and Improvac males
- d) Better and safer work environment for staff due to calmer, more predictable pigs, and less noise and odour.

Although most of my experiences have been based on comparing Improvac males with entire males, I have also had experience with surgically castrated males.

We saw a significant improvement in FCR of ~15% from weaning to sale (up to 20% in winter), and a reduction in P2 of Improvac treated males of greater than 2mm when compared with surgical castrates.

Additional to this was the “welfare enhancement” to the piglet due to not being subjected to surgical castration. This is becoming a significant global issue as individual countries begin to legislate against surgical castration of piglets. As a vet and a producer, the chance to improve animal welfare standards while improving eating quality and production efficiency at the same time, is an option which can't be ignored..

To create a point of difference in the local fresh pork market, we initiated a branded line (Select Pork) in conjunction with other pork producers, a processor and a supermarket chain.

Apart from the use of Improvac in males, participating growers were required to use a specific genotype, grow their animals in straw-based housing systems, and be audited members of the industry quality assurance program. This was a successful campaign which improved returns for growers, and increased sales in the participating supermarket by 30%.

When consumers are guaranteed a quality eating experience, they are prepared to pay slightly more, but just as importantly, will purchase the product more frequently. Until Select Pork was launched, the local industry had “trained” our customer base to anticipate a less than optimum meal experience, and therefore, competed directly with other meats solely on price.

Through the use of technologies such as Improvac, and a targeted industry marketing campaign, the per capita fresh pork intake in Australia has increased by 1kg annually per year between 2004 and 2007, and now sits at a level of 11kg per head. We are on the right track.

On my farms, and in conjunction with our clients, Improvac has been a profitable way to control boar taint and actively encourage fresh pork consumption and enhanced animal welfare. For us, the benefits of embracing change, by targeting markets with high quality products are obvious.

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