A newsletter for pork producers

PigBytes

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What is the value of pork compared to bacon?

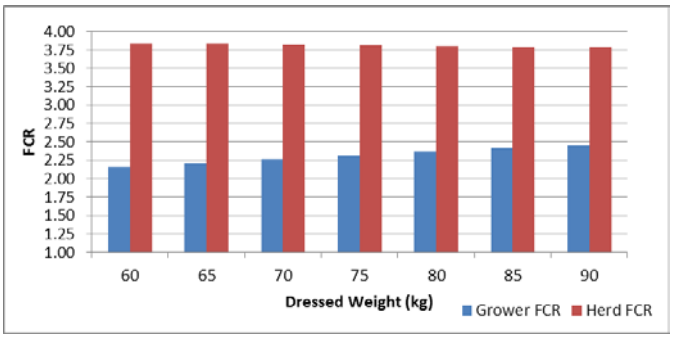
Sara Willis

Marketing pigs is an important aspect to profitable pig production. The decision whether to sell pigs at a lower weight will depend on a number of factors including:

- The availability of accommodation to grow all pigs through to bacon weight
- The decision to sell the faster growing pigs in the pen to meet the space requirement stated in the Model Code of Practice
- The need to sell slow growing pigs to empty pens
- The need to sell lighter and therefore leaner females to avoid price penalties later
- A clear marketing price advantage

Before making decisions in your business, it is worth considering a few basic facts. One fact is that as slaughter weight is reduced, the feed conversion ratio (FCR) of the grower herd improves (Fig1). The rate of improvement is approximately 0.05 for every 5kg that dressed weight is reduced. However, when sale weight is reduced herd FCR changes only marginally. FCR is a key efficiency measure as feed represents approximately 60% of the total cost of production.

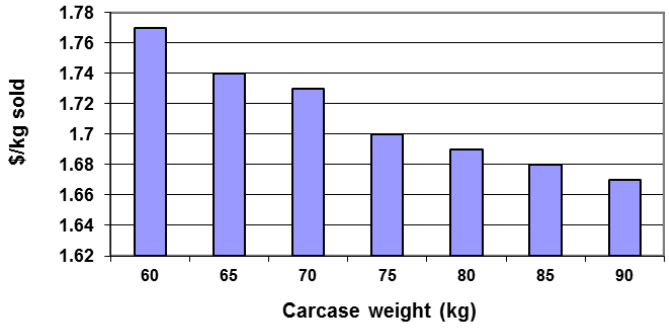
Figure 1: Effect of sale weight on FCR (feed conversion ratio)



As sale weight is reduced the feed cost/kg of pig meat sold increases (Fig 2) due to:

- The 'fixed' cost of the sows feed
- The higher (in most circumstances) average feed cost for the lighter pig.

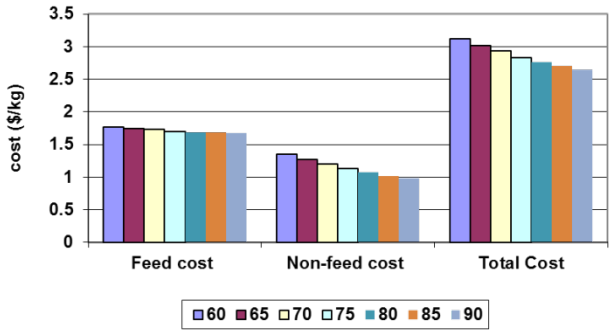
Figure 2: The effect of sale weight on feed cost/kg.



The decision to sell a lighter pig increases the non-feed costs per kg sold significantly and therefore the total costs of producing a kilogram of carcass meat as breeding herd overheads are spread over a lower total carcass weight (Fig 3).

To justify the sale of the lighter pig the producer must achieve a significantly higher price for the product and or reduce the non-feed costs incurred by the business. The major non- feed costs include labour, health, electricity, breeding fees and in some instances contract growing fees. In the majority of businesses there would be no opportunity to reduce non-feed costs.

Figure 3: Effect of sale weight on cost of production



The information given below in Table 1 provides some guidance to assist producers in making marketing decisions to achieve the same margin over feed from selling pork compared to the heavier bacon pig.

In the following analysis (Table 1), the additional housing requirements of bacon production as compared to pork production have not been taken into account. No allowance is made for a change in non-feed costs (electricity, labour etc).

The basis of the table is the calculation of the value of feed saved by selling a pork pig rather than a bacon pig.

The price needed/head for the lighter pig after the value of the feed saved is deducted is then divided by the sale weight to determine the price needed/kg for the porker.

The key information used in Table 1 includes:

Finisher feed cost	$0.38/kg
Bacon price	$3.55/kg
FCR – 80 to 110kg	3.0:1
FCR – 80 to 100kg	2.95:1

A few key points:

- As the weight of the bacon pig increases, the price needed/kg for the pork pig increases.
- If the price of feed increases, the difference between the pork and bacon price falls.
- If the FCR of the finisher herd widens, then the difference between the pork and bacon price falls.
- Conversely, if the price of feed decreases the difference between pork and bacon price increases.
- If the FCR of the finisher herd improves then the difference between pork and bacon increases.

Table 1: The price needed to achieve the same margin over feed from selling pork compared to the heavier bacon pig

DW (kg)	Dressing %	LW (kg)	Feed saved (kg)	Value of feed saved ($)	Price received/pig	Price received – cost saved feed /pig	Price needed for pork ($/kg)
50	73	68.5	125.72	47.77			
85	76.5	111.1			301.75	253.98	**5.08**

DW (kg)	Dressing %	LW (kg)	Feed saved (kg)	Value of feed saved ($)	Price received/pig	Price received – cost saved feed /pig	Price needed for pork ($/kg)
60	74	81.1	90.09	34.23			
85	76.5	111.1			301.75	267.52	**4.46**

DW (kg)	Dressing %	LW (kg)	Feed saved (kg)	Value of feed saved ($)	Price received/pig	Price received – cost saved feed /pig	Price needed for pork ($/kg)
60	74	81.1	53.86	20.47			
75	76.5	99.3			266.25	245.78	**4.10**

The figures used are average figures for the industry. Before you make a decision regarding **your** marketing strategy, it is necessary to know the figures for **your** individual business.

If you would like a copy of the spreadsheet to evaluate your marketing options, please contact Sara Willis by email: sara.willis@daf.qld.gov.au or phone 0423 027 053.

Toowoomba conference highlights future industry opportunities

Sara Willis

Mining Boom to Dining Boom

An impressive array of pork industry identities covered a range of topics for more than 150 delegates at the industry conference "Preparing for Future challenges – where will your business be in 2025?" held in Toowoomba last October. The event was organised by the Queensland Pig Consultancy Group with support and sponsorship from DAF and Australian Pork Limited.

During the morning session, delegates heard about a number of topics including airfreight opportunities from the Wellcamp airport, opportunities in Asia, future food requirements and food production systems.

Key note speaker John Wagner, Chairman Wagner Global Services introduced the catch phrase "Mining Boom to Dining Boom" and described the opportunities for the region's agriculture resulting from his family's development of the Toowoomba Wellcamp airport.

John Wagner explained how airfreight tonnage had increased significantly in the last 20 years and that at the current time demand had outstripped capacity. From November 2016, Cathay Pacific 747s will use Wellcamp's 2.7km runway to provide a weekly cargo freight service to China increasing to 15-18 flights per month by 2025.

The completion of the second Toowoomba Range crossing and the proposed inland rail system will improve access to Asia and in particular China for agricultural products produced in the region.

The facilities at Wellcamp include cold rooms for fresh products and also a quarantine area for the transport of live animals. The speaker indicated that international flights into Toowoomba are a reality with several carriers expressing interest.

The Asia theme continued with Chief Executive Officer, Toowoomba and Surat Basin Enterprise (TSBE) and Food Leaders Australia (FLA) Dr Ben Lyons who highlighted the opportunities in Asia for Australian produce. TSBE has 450 members and the organisation aims to build a regional brand and act as a catalyst for exports to Asia and China in particular.

Dr Lyons with 20 years' experience working in China, with the last eight years in Beijing, highlighted key changes in the Chinese policy of food demand. These include a shift from starch to protein products; increased demand for high value safe sources of food; a realisation that domestic food production is expensive and that the mantra of self-sufficiency was a thing of the past. Dr Lyons believes there are export opportunities for pork provided the regional product can be differentiated by production system, quality and product safety.

APL Initiatives

General Manager Marketing, Australian Pork Ltd (APL) Peter Haydon continued the Asia theme while discussing future food requirements and food production systems. He indicated that within 30 years the world's population would require up to 70% more food and China's food demands would double. He recognised that currently demand for pork was out stripping supply but that investment leading to an increase in sow numbers could see an oversupply of pork in the not too distant future.

Mr Haydon outlined the plans APL were putting in place to minimise the effect of the predicted oversupply on producer returns (Interestingly, pig price has fallen by $0.20 – $0.30 since the conference). The program will continue to promote the health advantages and ease of cooking of pork. New initiatives will include targeting social media, casual dining and emphasising taste and product differentiation. A major project will involve next generation consumer research.

Dr Pat Mitchell, Production-Stewardship Manager, Australian Pork Limited, discussed the world wide concern regarding the use of antibiotics. The increased resistance to antibiotics due to genetic mutation, the impact of heavy metals and immune bacteria coupled with limited investment in product development dictates that pork producers need to review their management programs. Bio-security to keep disease out, high herd health and staff training should be addressed to develop an integrated management plan using antibiotics in a responsible and effective way.

Factors impinging on bio-security include hobby farmers lacking technical knowledge, pork imports, the growth of free range production which now accounts for 10% of the national herd, international visitors and feral pigs. The speaker stated that feral

pigs are present in all states with the population ranging from 3 to 23 million depending on the year.

Dr Mitchell's advice was to minimise live pig and semen introductions, use one genetic supplier, control four legged, two legged and feathered rodents and pests, train staff and use a knowledgeable consultant.

The speaker referred to the work of APL on risk management and the Pork CRC on Enhancing health and the development of the world first Antimicrobial Stewardship plan.

Help – My sow is eating her piglets!

Jayce Morgan

From time to time I get calls from outdoor producers who are anxious because they have seen their sows eating piglets. So what is going on here?

Many animals will clean the birth site by consuming the afterbirth and/or dead newborns.

Sometimes gilts will savage their piglets if the gilt has had a rough time during the birthing process or if they are agitated by the newness of the situation in which they find themselves. They could also have a tender udder and react to the piglets' suckling attempts.

Generally though if the sows are older animals and are eating live born piglets they could be suffering from dietary deficiencies; or they have just developed a taste for piglet.

There is an article on the PigSite referring to piglet cannibalism although the reference pertains to indoor pigs.

If you do have concerns about sow behaviour around farrowing talk to your veterinarian – they can suggest strategies to prevent the reoccurrence.

Also get your pig diets checked by a nutritionist – if the sows are lacking in amino acids especially lysine – fresh piglet is a good source. Get a good diet formulation if you are mixing your own feed; or make sure you purchase a lactating sow diet for your sows if you are buying premixed feed.

If you are using by-products for feed it is still worthwhile to talk to the nutrition experts. You can also purchase vitamin mineral premixes or other admixes to provide the right nutrients for your pigs.

Swill feeding regulations within Australia mean that it is illegal to feed meat or products that have been in contact with meat to pigs. However with the right combination of feed ingredients you can adequately cater to the nutritional needs of your pigs.

Remember that pigs are omnivores and they eat just about everything. But because they are also monogastric they have specific dietary needs which are not covered adequately in high pasture diets unless you provide the needed nutrients.

Pigs in the wild are very opportunistic feeders and will kill other small animals to supply their needs.

Pigs are known predators of baby lambs and have been found to find baby turtles quite tasty too as the pictures show.

Figure 4: Feral pigs are known predators of baby lambs.

Source: NSW DPI

Figure 5: An examination of the stomach contents of this feral pig revealed a whole nest of baby turtles.

Source: Invasive Species CRC

Foot and Mouth Disease – free on-line awareness course

Robyn Grob – Principal Training Co-ordinator, Biosecurity Queensland

The Queensland Department of Agriculture and Fisheries (DAF) have recently produced the online course *FMD awareness – Protecting your livelihood and community*.

The most likely pathway for FMD to be introduced to Australian livestock is through illegally imported FMD-contaminated meat and dairy products and the subsequent feeding to pigs. This is why feeding swill (or "prohibited feed for pigs and poultry", as defined in the Queensland *Biosecurity Act 2014*) is illegal.

This online course helps producers understand the risks of FMD to Australia, what can be done to help prevent the virus reaching and infecting susceptible livestock, possible clinical signs to look out for, what to do if the disease is suspected and what would happen if we had an emergency response. The course emphasises the importance of prevention measures, early detection and reporting.

The course is relevant to anyone who works in the livestock industries, as well as the wider community. It includes videos by industry leaders, activities and a short scenario-based quiz.

The course takes between 30 and 60 minutes to complete. You can complete it in short, easy stages, and log in and out without losing your progress.

Anyone can access the course via the DAF website.

Once you have finished the course, you can download a certificate of completion.

Vegetative Filter Strips

Jayce Morgan

A vegetative filter strip (VFS) is an area of vegetation that acts a filter or strainer to reduce the likelihood of effluent or soil from flowing off the piggery site after a rain event. They are also a type of buffer between a sensitive area (neighbours farm, waterway) and your piggery.

Vegetative filter strips are a useful management tool for all piggeries but especially for outdoor piggeries. Properly incorporated into a paddock plan their use is indicative of a farmer's commitment to managing their piggeries environmental impact.

Some information about VFS can be found in the National Environmental Guidelines for Rotational Outdoor Piggeries (revised) 2013 (NEGROP) in Section 8 p22 and Section 12 p41; and there are further references at the end of the article.

For the VFS to work as it is intended:

- It needs to be placed across the flow as it needs to intercept the flow of water and sediment coming down the slope;
- and the correct vegetation must be used

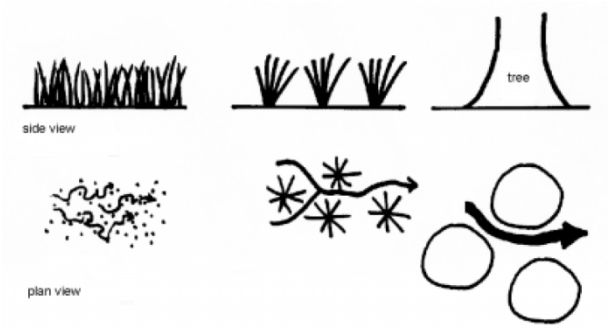
The recommendation is for "runner developing, non-clumping grasses". The VFS works by reducing the velocity of the flow of the water and allowing time for soil and nutrient contained to settle out of the water before the water moves off-site.

Trees are not suitable for a "filter strip" because often there is no grass growth under trees; and they have limited effects on flow.

The other important point regarding VFS is that they should be within your farm boundaries. You need to be able to manage the growth and the type of vegetation contained in them.

Mowing the VFS maybe necessary from time-to-time to reduce the fire hazard or to control weeds; however this needs to be carefully managed as there needs to be density in the sward for it to act as a filter for any paddock runoff.

Figure 6: The vegetation density at ground level and the way it can diffuse and slow down the flow are the main properties for filter strip vegetation. Dense stoloniferous grass has the best properties for sediment trapping. (Thickness of the arrow indicates flow velocity)



Source: Karssies LE and Prosser IP 1999

It is recommended that the grass density is high and the grass height is over 15cm. Uniform shallow flow is needed for filter strips to be effective. VFS

are ineffective in areas of convergence where the amount of water and water velocity increases.

VFS are often referred to as secondary or tertiary forms of mitigation for control of nutrient runoff. They should be used in addition to other well-planned on-site erosion and nutrient controls.

The most important mitigation strategy to reduce the risk of polluting runoff is site selection. If you choose the correct site, management is much easier.

Site selection is covered in the NEGROP in Section 7 Page 16. Perhaps the most important aspects of site selection are land slope and soil type. Slope is important because the greater the slope the greater the risk for runoff.

Soil type will determine the water infiltration rate, the holding capacity for nutrients such as phosphorus and susceptibility to compaction and pugging.

Depending on the site, it may be better to have a series of VFS on the contour rather than just one down slope from the piggery.

Slope, susceptibility of the soil for erosion and ground cover will determine how wide the VFS need to be but 2m would be a minimum even on flat ground. Usually the VFS is incorporated into the buffer distance from other important landscape elements such as waterways or houses.

Trees and shrubs are important components of buffer areas because they can improve amenity by hiding sheds and silos from view. They may also be useful to filter nutrients out of shallow groundwater flows; but the purpose of the VFS is to reduce the risk of surface water flows and their pollution and erosion potential.

References:

National Environmental Guidelines for Rotational Outdoor Piggeries Revised 2013 APL website

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Technical Report 32/99 CSIRO Land and Water “Guidelines for Riparian Filter Strips for Queensland Irrigators” by Linda E Karssies and Ian P Prosser 1999
http://www.hort360.com.au/wordpress/wp-content/uploads/2015/03/Riparian-filter-strips-for-QLD-irrigators.pdf

Cervical mucus patterns as an oestrus detection test

Dannielle Glencorse – PhD candidate Sydney University

Oestrus detection is an essential part of production for pork producers but it is also a time consuming and difficult task.

Traditionally, finding the best time to mate a sow has been based on identifying changes in behaviour. What you cannot see using this method is the internal changes to the reproductive tract.

Cervical mucus patterns have been linked to the correct time for mating and it is possible that this could be used as an alternative oestrus detection method.

If you would like to help test the effectiveness of this method for predicting the time to mate your sows, you can complete the survey at the link https://www.surveymonkey.com/r/sowoestrusdetection

If you would like any information on this study or would like to hear about the results following the survey, please contact Dannielle Glencorse via phone (0427 183 547) or email (dannielle.glencorse@sydney.edu.au).

Range of nutrients in animal manure slurries

Jayce Morgan

In PigWorld (December 13), an e-newsletter from the United Kingdom was an article describing the range of nutrient content of animal manure slurries and the suggestion that farmers should be testing for N, P, K rather than relying on “averaged” test information.

NRM laboratories reported “that nitrogen contents in cattle farm yard manure (FYM) ranged from 1.3kg/t to 32.6kg/t, phosphate contents from 0.5kg/t to 21.9kg/t and potash from 0.2kg/t to 35.0kg/t”.

Financially the range in value reported was from A$0.74c to A$47.00 per ton (converted from UK £).

The range in broiler and turkey litter was reported to be greater than for cattle manure with value differences up to $91 per ton between highest and lowest samples.

Perhaps this is a timely reminder that if you are using or selling effluent for crop production regular testing of the product and the soil can have real

economic benefits to you and the crop producer as you might be under or over valuing the product.

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