

Lot feeding, its role now and into the new millennium

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Introduction

Commercial lot feeding in Australia commenced in the late sixties, early seventies and remained at a capacity level of below 200,000 head for more than 10 years. Those were very difficult years with the closure of the Japanese market and a reluctance of the domestic market to accept grain feeding as a viable alternative to grass feeding, other than in times of drought. The industry was consequently very seasonal and profitability was at best marginal.

Today, the industry has a capacity of 900,000 head and is turning off around 2 million head of cattle per year (Fig 1a-1). Grain fed beef represents some 16% of Australia's total beef exports and 40% of our exports to Japan, up 4% over the last two years.

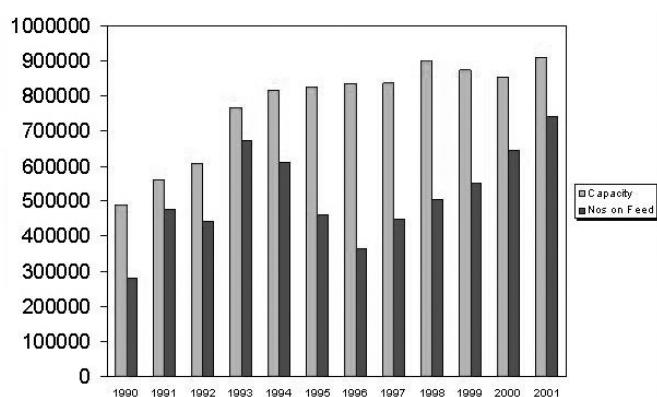


Figure 1. Feedlot capacity and numbers on feed

The spectacular growth in the lot feeding industry has not been without its setbacks. In the last 10 years, there have been two major incidents that caused significant reductions in the numbers of cattle on feed, and both of them relate to the Japanese market. I believe that we are currently experiencing a third such incident following the discovery of BSE in the Japanese cattle herd in September last year.

Firstly in 1995, Australia's competitive position against the USA was eroded by high grain prices due to the drought of 1994. Our grain fed beef exports fell by nearly 10% and these were replaced by US exports. The lot feeding industry is still working to resolve the security of grain supply for our industry. And good progress was made last year in negotiations with the grain industry. The grains industry has at last come to recognise that the feedlot industry is a major customer and keeping them competitive is actually in their best interests.

The second incident came in 1996, when Japanese demand for beef dropped, firstly due to strong consumer

reaction to the BSE issue and then due to further health concerns raised by an outbreak of E-coli poisoning. Australia's exports of grain fed beef fell by 17% and by the end of 1996, there were only 366,000 cattle on feed in Australia, which was 44% of the then available capacity.

The industry recovered well following 1996, and despite the Asian economic crisis, numbers on feed rose to nearly 750,000 head in September last year.

The recent downturn in Japan as a result of the BSE issue is indeed serious and will undoubtedly affect the Australian feedlot industry once again. Interestingly, although the downturn in beef consumption in Japan is significantly worse than 1996, the impact on the Australian feedlot industry may not be as severe due to the increased diversity in markets now serviced by Australian feedlots. The industry learnt some good lessons in 1996 and is no longer as dependent on Japan as was the case at that time. Nevertheless Japan is still the major market for Australian grain fed beef.

One of the highlights of the lot feeding industry over the past five years has been the growth in the number of cattle being fed for the domestic market (Figure 2).

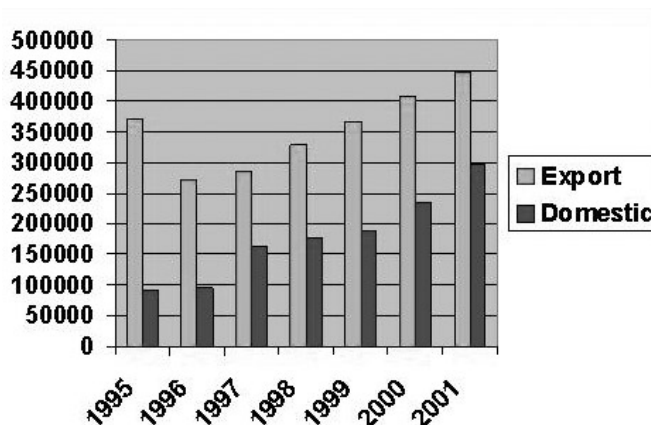


Figure 2. Numbers of cattle on feed - export and domestic

Numbers on feed for this market have tripled over the last five years and now represent 40% all cattle being fed. When you consider the shorter days on feed for domestic cattle, the annual turn off in terms of numbers of head is almost the same as for export.

Against this background, what is the future for the Australian lot feeding industry and how will this shape the future demand for feeder cattle?

Demand Outlook

Japan

The single most important feature in the rapid expansion of the Australian lot feeding industry was the liberalisation of the Japanese beef market in 1991. Japanese domestic production is virtually all grain fed and from the start of the SBS system in 1988, the Japanese preference for imported grain fed beef started to become evident.

Grain fed beef imports first exceeded grass fed beef imports in 1989 and the gap has been widening ever since (Figure 3).

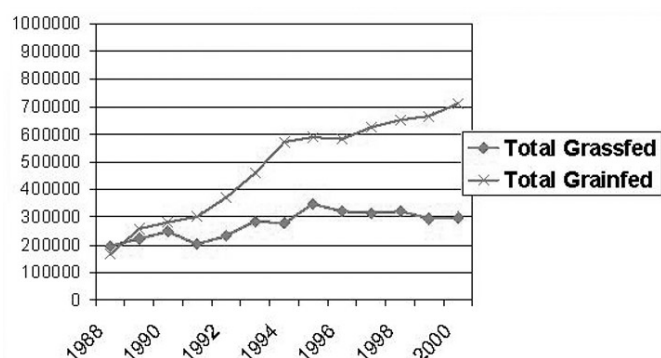


Figure 3. Total grassfed and total grainfed beef imports

In 1999, grain fed beef imports, (USA and Australia) were two and one half times those of grass fed beef on a carcase weight equivalent basis. Coupled with Japanese production which is virtually all grain fed, this would show Japanese consumers eating four times as much grain fed as grass fed beef, compared to only twice as much in 1988.

The often proclaimed premise that the Japanese would gradually move away from grain fed beef to leaner grass fed beef, as the younger generation became more Westernised, is clearly a fallacy, and this has being demonstrated by their purchasing preferences over the last 11 years.

Beef production in Japan is declining slowly as competition from imports intensifies (Figure 4). This decline is in both the Wagyu and dairy beef area. A deregulation of the processed dairy food market could reduce milk demand by up to 30%, putting further pressure on dairy beef production.

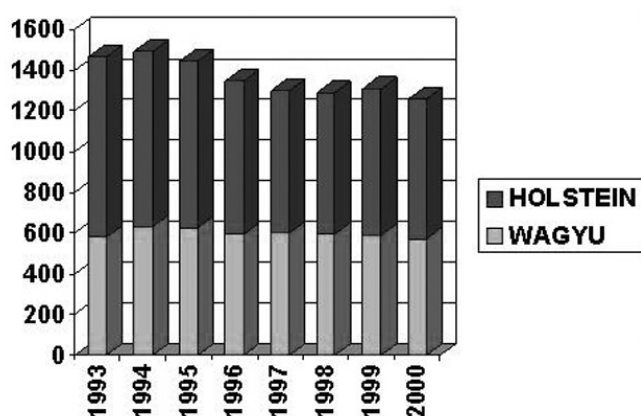


Figure 4. Japanese domestic beef production ('000' head)

The outbreak of foot and mouth disease experienced by Japan in 2000 damaged the pristine image of Japanese beef in the eyes of the trade. This has caused an increase in interest in imported beef that is of equivalent quality to domestic production. In this regard Australian long fed grain fed beef is a strong competitor and is now recognised as a superior product to US grain fed beef both in terms of taste and safety image. Sales of Australian grain fed beef boomed during 2001 with Australia taking 6% market share off the US in the first six months.

The discovery of BSE in Japanese cattle in September last year has had a catastrophic impact on consumer demand. Consumption has fallen around 50%, with no sign of recovery despite significant price discounting and large expenditure promotion campaigns by exporters and end users alike.

Sales of Australian beef have been affected less than those of Japanese domestic beef. Surveys conducted by Japanese ALIC officials suggest that retail sales of Australian beef have fallen around 20% compared to sales of USA and Japanese beef that are down around 70% - 80%. Sales are however still affected and it looks as though there will be no quick recovery.

Coupled with the BSE issue is the situation of the Japanese economy, which has further deteriorated due largely to inaction over the past 3 - 4 years. The Government now needs to take some harsh decisions to reverse the trend and this will undoubtedly lead to increased levels of unemployment and keep the brakes on consumer spending.

Korea

The Korean market has become an increasingly important market for Australia since the trade reopened in 1988. Initially considered a market primarily for lower quality beef compared to Japan, there is strong evidence now that the demand for grain fed product is increasing as the market becomes more sophisticated. Korean domestic beef is primarily grain fed and their Hanwoo cattle were in fact one of the early breeds used in the development of the Wagyu cattle in Japan. Koreans appreciate well-marbled beef similar to the Japanese and are now moving in this direction with their importing preferences.

The market was liberalised in January 2001 and the implementation of the recent WTO decision has assisted in removing some of the discriminatory practices previously associated with imported beef. Under the previous regulations of the 45,000 beef retailers in Korea only 5000 were licensed to sell imported beef. From September last year all retailers will have access to imported beef. Domestic beef prices are now at an all time high with the domestic cattle herd having shrunk from 3 million in 1997 to less than 1.5 million head in June last year. This has lead to an increased interest in good quality imported beef as a replacement for the highly priced domestic product. Imported beef accounted for 56% of total consumption for last year to September and this compares with 46% for the same period in 2000. Australia's share of these imports is only 32%, whereas in Japan our market share is 48%.

Stocks of imported frozen beef that stood at 50,000 tonnes at the beginning of last year are virtually gone and the LPMO, the government agency controlling imported beef prior to liberalisation, has now been wound up. This year sees the Soccer World Cup held in Korea and this will add to the increasing demand for imported quality grain fed beef. This market offers significant promise for the future. As with Japan, our major competition in Korea is the USA.

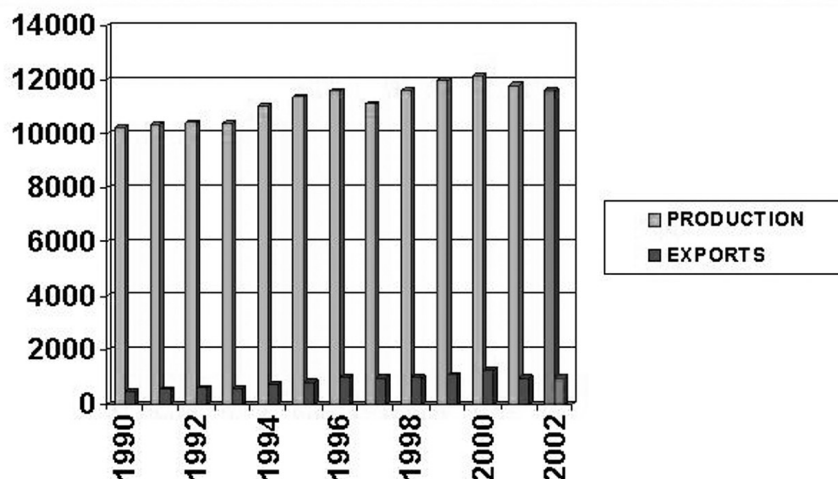


Figure 5. US beef production and exports ('000' Mt)

Domestic Market

The use of grain fed beef in the Australian domestic market has increased dramatically over the past five years with the numbers of cattle on feed doubling since 1995. In the seventies and early eighties, grain fed beef was considered only in times of drought or short supply of grass fed product. Today it is estimated that grain fed beef occupies around 50% - 75% of the domestic market and its market share is growing.

This change has been initiated primarily by supermarkets and the food service area, looking to provide their customers with a more consistent product. The market share of grain fed beef in the supermarket sector is now estimated to be over 80% - 90%, on a year round basis. Recently, more highly marbled product has been winning increasing acceptance in the food service area of the domestic market.

The role out of MSA is strengthening the demand for grain fed beef now that the importance of growth rate and marbling to eating quality are better understood.

Competing Supply

The real threat to Australian grain fed beef is coming from the USA. USA beef production has expanded 20% over the past decade and with a stagnant if not falling domestic demand over most of that period, this increase has been largely directed to exports. Japan has been the major target for this increase, although other countries in the Pacific Rim have also been impacted. We have even seen USA beef on our own domestic market from time to time.

USA beef production last year was 11.8 million tonnes. This is six times the size of Australia's production. Whilst their domestic market consumes the majority

of this production, America exported 970,000 tonnes of beef last year (Fig 1a-5). 45% of these exports found their way to Japan. USA has lost market share in both Japan and Korea over the past 12 months due to the strength of the US dollar. Australia has been the beneficiary of most of this lost share.

The big positive news about the USA is that since 1999, the real domestic demand for beef has actually increased and this is after some 20 years of steady decline. Per capita consumption fell slightly last year to 68.3 lbs per head, matching the fall in production, but the average expenditure on beef was a record high of \$204 per head.

The USA are forecasting their production to continue to decline until 2004 and if this in fact does occur and domestic demand is maintained then this will have a major positive influence on World beef supplies and price.

Future Requirements for Feeder Cattle

The demand prospects for grain fed beef, whilst dampened by the situation in Japan, look good on other export markets and at home in the domestic market. Whether the Australian feedlot industry can capture the opportunities presented will depend solely on its ability to supply a competitively priced product.

Looking at the inputs necessary for the feedlot industry, the one that stands out as being the singly most important and having the greatest potential for improvement is the supply of feeder cattle.

The Australian lot feeding industry is currently feeding for five distinct market segments. In order of days on feed these are:

- The domestic butcher shop and supermarket
- The Korean and Japanese shortfed market
- The domestic food service trade
- The Japanese and Korean middle fed market
- The Japanese and Korean long fed market

Each of these markets requires different feeder cattle and different feeding management to achieve the desired carcass composition and meat quality.

Feeder Cattle Genetics and Background

Our industry is in the business of producing beef to individual customer requirements and while feeding management strategies are very important, they are at best only half of the answer. The other half comes with the feeder cattle, in its genetics and in the environment it has experienced from conception to entering the feedlot.

Genetics determine the potential of an animal to develop particular carcass characteristics and meat quality. The background factors can also influence animal performance in the feedlot and ultimate carcass

characteristics. At the feedlot we can only manage the animal within the limitations laid down by the genetics and the background experience.

To use a very old expression, “you can’t make a silk purse out of a sow’s ear.”

As clever as we are in the lot feeding industry, and we are clever, - no other country feeds cattle for as many different markets as Australia - we can’t produce beef outside the potential of the feeder cattle that we buy.

Feeder Cattle Variability

Over the next three days you are going to learn about the requirements for feeder cattle for each of the markets that Australia currently serves and how to use genetics and environment to best meet those requirements. Let me give you some real life examples of the potential there is for improving the ability of feeder cattle to meet market requirements from my own experiences at Rangers Valley.

Rangers Valley feeds for only one of the five markets targeted by Australian feedlots, the long fed Japanese and Korean market. Our aim is to produce beef of quality equal or superior to Japanese domestic Holstein beef. We are very selective on the feeder cattle that we buy, as those of you who sell to us will know. We individually identify every animal and have done so for the 11 years that we have been in operation. We were in fact one of the first feedlots in Australia to introduce individual animal identification.

All data related to the purchase of the animal, its feedlot performance, both in terms of growth and animal health are recorded on our database. When cattle are slaughtered we record all the Aus-Meat chiller assessment data as well as slaughter yields. This individual identification has enabled us to understand the true value of genetics and the variability that exists within just the Angus and Murray Grey breeds that we exclusively buy.

We slaughter cattle weekly and we have found variations in daily gain from 0.7 kg/day to 1.3 kg/day, P8 fat depths ranging from 15mm to 50 mm and marbling ranging from MBS 0 to MBS 6 or higher. There is even substantial variation within the cattle from any one breeder. This variability comes from cattle that arrived at the feedlot at the same time, experienced the same feeding management, the same climatic conditions and the same time on feed. There is only one explanation for this variability and that is the potential that the feeder cattle bring with them to the feedlot. This variability is worth more than the total price we pay for the feeder cattle in the first place.

Every year we have our database analysed by the University of Adelaide to rank breeders in terms of the relative value of the feeder cattle they have supplied. We use this information to target breeders with superior genetics. Those breeders invariably receive a premium for their cattle because of our determination to buy them.

Ability to Marble

Of course, ability to marble is one of the more important factors for the market we are supplying. It is the long feeding of cattle for Japan that started the push for Angus and Murray Grey cattle in Australia and generated the premiums that currently exist over other breeds. Cattle with superior genetics for marbling was the issue then and in this market is still the issue today, and the interest in Wagyu cattle.

As I mentioned earlier, we now know, through the work by MSA, that marbling is not just important for the long feeding market. Marbling has a significant impact on overall level of eating satisfaction as recorded by Australian consumers. With the exception of very young and small animals, it won’t be possible to get cattle into the higher MSA grades without marbling.

Now that the MSA scheme has moved to a cuts-based system, marbling will enable more cuts from a carcass to get better grades. The points given for marbling under the MSA system make it equivalent to ossification and weight for age in importance for eating satisfaction. The bottom line for grown cattle is, if your cattle have the genetics to marble, then you’ve got a walk up start to get premiums in both the domestic and the export market.

Feeding Efficiency

We know from the work at Trangie and the Beef CRC, that feeding efficiency does vary amongst cattle of the same breed. This is a very important trait for lot feeders as our business is all about converting feed to meat. Feeding efficiency is something that we cannot measure in a commercial feedlot environment. We can measure individual daily gain but we don’t know how much feed individual cattle have eaten to achieve that performance. We welcome the introduction of BREEDPLAN Feed Efficiency EBVs this year, and hope that studstock industry will embrace this important EBV in future. I would hope that they will become a part of the progressive stud breeder’s information when marketing bulls and that purchasers take suitable notice of them. This is a factor that is equally important to both the grass and the grain fed beef sectors.

Balanced Breeding

We hear a lot these days about balanced breeding. The importance of taking account of all genetic traits in the areas of reproduction, as well as carcass composition and ultimate meat quality. We are warned against pursuing meat quality traits at the expense of breeding and calf raising abilities. A lot of dire predictions are made about the pursuit of marbling and the negative impact that this may have over other carcass traits.

From our analysis of well over 150,000 steers fed at Rangers Valley and supplied from over 7,000 different tail tags, we have found that there is virtually no correlation between all the performance and meat quality aspects of interest to us at Rangers Valley. In other words, it is possible to have animals that have superior daily gain, superior marbling, good slaughter yields, good eye muscle areas and low levels of sub-cutaneous

fat. It is not necessary to deliberately limit breeding in any of these areas. You should be pursuing all of these attributes including marbling to the maximum extent possible.

We lot feeders are greedy. We want you to supply feeder cattle that have all the positive attributes and none of the negative ones and we want the positive attributes to be at the upper limit possible. That's your target if you want to be a regular supplier to the lot feeding industry and receive the premiums that are being paid for superior feeder cattle. Many feedlots are now following Rangers Valley in individual cattle identification and analysis of performance. The cattle producers who can best use the genetics available, keep accurate records, follow their cattle through to slaughter and use the data to adapt their cattle, will be the winners.

Performance Payments For Feeder Cattle

Several feedlots have introduced premiums for feeder cattle based on actual performance or past performance. To date this has been more the case in the longer fed categories where carcass and meat quality characteristics have a significant bearing on final value. However once MSA grading becomes more accepted, this practice may well be extended to the shorter fed categories.

Finished cattle being purchased on a grid made up of weight, MSA grade and red meat yield based on Viascan assessment is a strong possibility for the future. If the price movements across the grid are significant, then lot feeders are very likely to pass them on to feeder cattle suppliers.

The major problem with payments based on actual performance is the time between the initial purchase of the feeder cattle and when the final value of the carcass is known. The ideal circumstance would be for lot feeders to be able to identify the value of individual feeder cattle on arrival at the feedlot and reward or penalise the supplier at that point.

Some work has been done to correlate physical characteristics of feeder cattle with feedlot performance and meat quality but the correlations, particularly with meat quality aren't strong. Hopefully the continuing efforts of the Beef CRC will bring us closer to this becoming a reality.

Summary

The Australian lot feeding industry has experienced a period of strong growth following the downturn of 1996. The current situation in Japan is likely to have a negative impact on the numbers of cattle on feed and feeder cattle demand, particularly for feedlots that are concentrating on the Japanese market. However, the overall industry is much more diversified than it was in 1996 and this will help to cushion the slow down in Japanese demand. Korean demand for high quality beef is growing quickly and domestic demand is continuing to expand.

The situation in the US with falling production levels and strong consumer demand should limit any sustained push by the US into export markets and maintain a positive influence on the World price of beef. This will

also help to counter balance the downturn in Japan.

The opportunity for the Australian industry to ride out the Japanese downturn and capture a share of the increasing demand in other markets will depend on its ability to continue to supply competitively priced beef of a quality that consistently meets consumers' requirements. A cattle-producing sector concentrating on the supply of quality feeder cattle that will consistently meet end market specifications will play the most significant part in achieving that aim.

In my view, we will see a further downturn in the cattle market during this year although not to the same degree as we saw in 1996/1997. Those producers, who produce quality cattle that have a proven track record of consistently meeting market requirements, will be the ones that will fair best. The feedlot industry will survive the downturn and probably end up stronger than before, just as we did after 1996, so don't lose your focus on producing superior feeder steers. Use the information you gain over the next three days to make yourself a preferred supplier to the feedlot industry.

