

# Lotfeeding, the dominant force in the Australian Beef Industry

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## Session 1a

### Introduction

Commercial lotfeeding in Australia is now an integral part of the Australian beef production industry. Gone are the days of feeding cattle for niche markets in Australia and overseas or when weather conditions resulted in a lower turnoff of finished cattle from grass. Beef from feedlots now represents the majority of all table beef consumed on the Australian domestic market. In the order of 90% of all Australian beef retained in Japan is grainfed. 12% of all Australian beef sold in Korea is grainfed, and this number is growing, with grainfed beef exports in 2002 up 133% compared to 2001. Chilled Australian grainfed beef is now being sold in increasing quantities to the USA.

If any more justification was needed, then you just have to look at the role the lotfeeding industry has played in the current drought. Cattle prices would have dropped well below current levels if we hadn't had feedlots to relieve the pressure from the dwindling grass reserves. The quality and quantity of Australian beef going into Australian and World markets would have taken a nose dive and customers would have been lost. This could have undone all the gains that have recently been made in increasing beef consumption and damaged consumers' perceptions of Australian beef for some time to come. The feedlot industry has enabled Australia to continue to supply local and overseas markets with consistent quality beef, removing most of the impact of the drought from our valuable customers, maintaining both those markets and the growing reputation of Australian beef around the World.

Today, the industry has a capacity of over 900,000 head and is turning off over 2 million head of cattle per year. It has retained similar numbers on feed over

the past 12 months despite the devastating impact that the discovery of BSE in Japan had on consumption in that country.

The spectacular growth in the lotfeeding industry has not been without its setbacks. In the last 10 years, there have been two major incidents that caused significant reduction in the numbers of cattle on feed, and both of them relate to the Japanese market.

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 to Japan fell by nearly 10% and these were replaced by US exports. The lotfeeding industry is still working to resolve the security of grain supply for our industry and this year we have seen grain prices again move to record levels. This time, however, prices have been pegged at import parity with large volumes of grain being imported by the chicken industry. We are still unable to move unprocessed grain to country feedlots, but we are now starting to see the importation of processed meals from Asia and the USA that are able to be used by feedlots. Gradually the market is being freed up but more needs to be done. There is little doubt that cattle prices would not have fallen as far as they have if grain prices had been more reasonable and it is the same high grain prices that will hold cattle prices from returning to previous levels once the drought breaks. The size of the lotfeeding industry means that there is now

a direct link between cattle and grain prices in this country. It is therefore in every cattle producers interest to make sure that the feedlot industry always has supplies of competitively priced grain.

The second incident followed almost immediately after the first, in 1996, when Japanese demand for

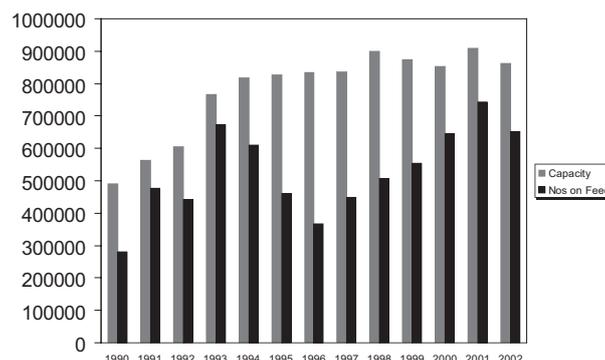


Figure 1a-1. Feedlot capacity and numbers on feed

beef dropped, firstly due to strong consumer reaction to the BSE issue in the UK 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 740,000 head in September 2001.

The recent downturn in Japan, as a result of the BSE issue, saw beef consumption drop much more than the 1996 incident but the impact on the Australian feedlot industry has been far less severe. Numbers on feed fell from 740,000 head in September 2001 to 637,000 head in December of that year. This still represented 69% of capacity utilisation, which is by no means a low figure historically. Numbers climbed back to 735,000 head in September of last year and this represented 76% of capacity utilisation. The reason for the lesser impact is 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. In 1996, the numbers of cattle on feed for Japan were 71% of total numbers but by 2001 this had fallen to 56% and today the number has fallen further to around 50%.

One of the highlights of the lotfeeding industry since the middle 90's has been the growth in the number of cattle being fed for the domestic market.

Numbers on feed for this market have tripled over the last 6 years and now represent 40% of 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 now higher than that for export. In terms of weight of beef produced the numbers are now about the same.

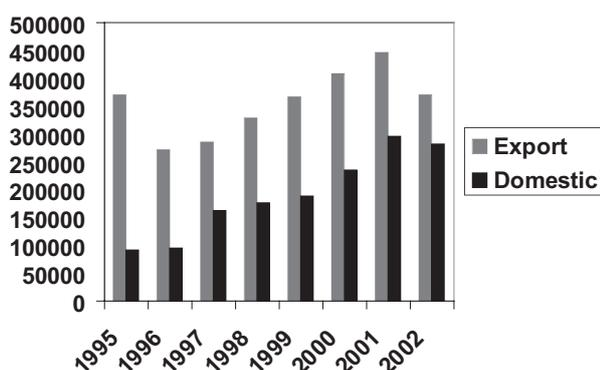


Figure 1a-2. Numbers of cattle on feed, export and domestic

Against this background, what is the future direction of the Australian lotfeeding industry and how can you best adapt your operations to meet the growing demand for feeder cattle?

## Demand Outlook

### Japan

The single most important feature in the expansion of the Australian lotfeeding industry during the 1990s 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. In 2001, grain-fed beef imports, (USA and Australia) were two and one half times those of grass-fed beef on a carcass 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.

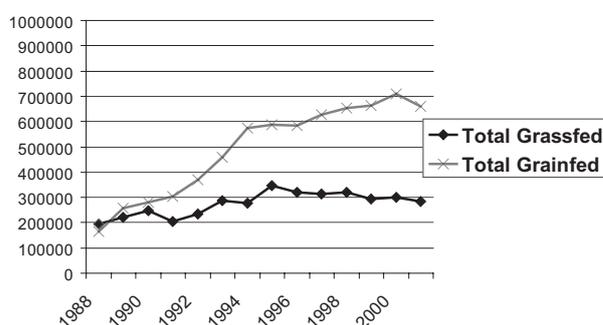


Figure 1a-3. Total grass-fed and total grain-fed beef imports

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 been demonstrated by their purchasing preferences over the last 14 years.

Beef production in Japan has been declining slowly as competition from imports intensifies. 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.

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 led to 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 the first 9 months of 2001 with Australia taking 3% market share off the US. However, this situation was reversed immediately following the discovery of BSE, with the US initially winning a larger share of the reduced market due to long term contacts and their ability to supply large volumes of individual cuts. However, since April Australia has been clawing the loss back and for the full year of 2002, the US and Australia had equal shares of the market.

The discovery of BSE in Japanese cattle in September last year had a catastrophic impact on consumer demand. Consumption initially fell around 50% and recovery has been slow during most of last year. Surprisingly the recovery occurred first with domestic beef as large government subsidies saw domestic beef selling at lower prices than imported beef. The Japanese government was able to convince consumers that the testing program that it put in place was protecting them from risk and they were happy to buy Japanese beef at such low prices. This price situation is now reversed, with imported beef now being more competitive than Japanese beef and the demand for imported beef has grown strongly over the past 3 months.

In order to rid the country of the BSE situation, the government has heavily subsidised the slaughter of older cattle, particularly Holstein females. This has led to an increase in slaughter in the past 9 months and this will have a negative impact on breeding numbers and beef production in years to come. This should further increase the demand for imported beef, again particularly in the longer grain-fed category.

On the negative side, the Japanese economy continues to be sluggish and any significant price rises could depress demand for beef. Japanese consumers have been provided with beef at very low prices in the past 12 months and retailers are concerned about any current price rises.

The second factor that is likely to negatively

impact the Japanese market in 2003 will be the likely increase in import duty from 38.5% to 50%. This will result from the so called “snap back” provision where the government can increase duties if imports exceed the same period last year by more than 17%. Given the depressed conditions for imports in the April to June quarter of 2002 and the more buoyant conditions now, it is very possible that the 17% trigger could be reached. If this is the case the duty will rise to 50% and remain at that level until April 2004. This will impact negatively on the price of all imported beef, but there is little room for domestic producers to increase production, so we will either see an increase in prices in the retail market or a drop in beef consumption or more likely a combination of both.

### 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 a number of the discriminatory practices previously associated with the sale of imported beef have been removed. Domestic beef prices are historically high with the domestic cattle herd having shrunk from 3 million in 1997 to around 1.4 million head today. This has led to an increased interest in good quality imported beef

as a replacement for the highly priced domestic product. Imported beef accounted for 68% of total consumption for last year to July and this compares with 59% for the same period in 2001. Australia’s share of these imports is only 26%, whereas in Japan, which is a much larger market, our market share is 46%.

A by-product of the downturn of consumption in Japan last year was an increase

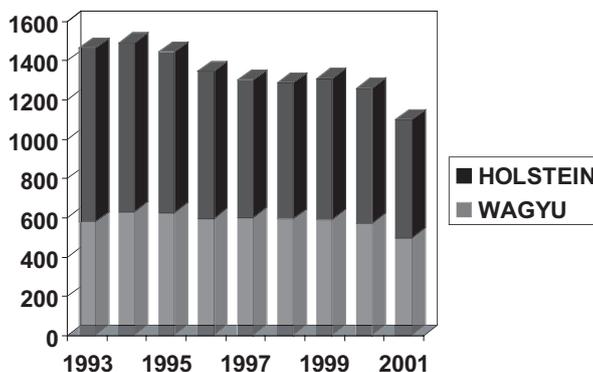


Figure 1a-4. Japanese domestic beef production (000's head)

in sales of Australian grain-fed beef to the Korean market. This was particularly the case for longer grain-fed beef and Wagyu product which was previously almost exclusively sold in Japan. As a result of this, the Koreans have gained a better appreciation of the quality of beef that Australia can supply and are now looking for more of this type of product. The image of Australian beef in Korea has been substantially lifted over the past 9 months and we have gone some way to overcoming the previous image as the supplier of the lowest priced, lowest quality beef.

## Domestic Market

The use of grain-fed beef in the domestic market has increased dramatically over the past 6 years with the numbers of cattle on feed tripling since 1996. In the 1970s and early 1980s, 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 over 80% 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 more consistent product. The market share of grain-fed beef in the supermarket sector is now estimated to be around 90%, on a year round basis. The experiences of retailers in the current drought will undoubtedly strengthen this trend. Increasingly, more highly marbled product has been winning acceptance in the food service area of the domestic market as the marketing of beef takes on a higher degree of sophistication. The roll out of MSA is also 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 comes 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. Export volumes have grown 250% over the same period. Japan has been the major target for this increase, although other countries in the Pacific Rim are also being impacted.

USA beef production last year was 12.3 million tonnes. This is 6 times the size of Australia's production. Whilst their domestic market consumes the majority of this production, America exported 1,134,000 tonnes of beef last year, an all time record. 31% of these exports found their way to Japan and 27% to Korea.

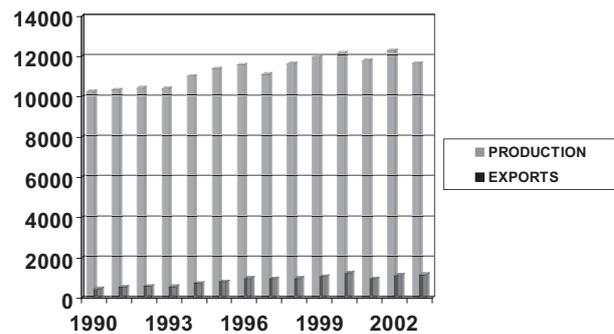


Figure 1a-5. US beef production and exports (000's Mt)

USA has picked up market share in both Japan and Korea over the past 12 months due to their ability to supply large quantities of individual cuts. Their exports to Korea actually doubled as they diverted product from Japan as a result of the BSE issue.

The 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. Production fell in 2001 as predicted, but rose again last year contrary to predictions. The USA is forecasting their production to decline in 2003 and for that decline to continue for the next 2 – 3 years as a herd rebuilding takes place. Interestingly though, although they are predicting a decline in production they are also forecasting a small rise in exports over last year. So they are not going away as our major competitor.

## 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 lotfeeding industry is currently feeding for 6 distinct market segments. In order of days on feed these are:

- The domestic butcher shop and supermarket
- The Korean and Japanese short-fed market
- The domestic food service trade
- The Japanese and Korean middle fed market
- The Japanese and Korean long fed market
- The Japanese and Korean Wagyu F1 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 lotfeeding 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 3 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 two of the 6 markets targeted by Australian feedlots, the long fed market and the Wagyu F1 market for Japan and Korea. Our aim is to produce beef of quality equal or superior to Japanese domestic Holstein and Wagyu F1 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, Murray Grey and Wagyu breeds that we buy.

We slaughter cattle weekly and we have found variations for the long-fed cattle 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.

We regularly 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. The growing

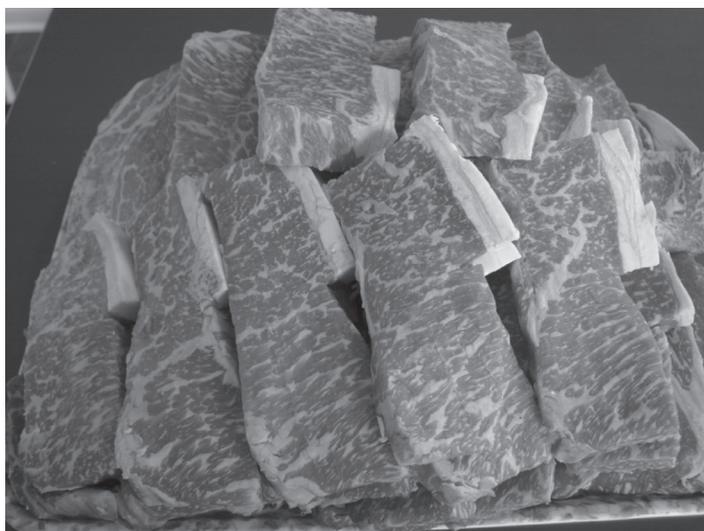


Figure 1a-6. An example of marbled meat

production of Wagyu cross cattle is a further example of this trend. Whilst the interest was primarily in Japan, we are now seeing this spread to Korea and other Asian markets as well as our own domestic market.

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 carcase 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 lotfeeders 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, and hope the seedstock 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 the 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 carcase 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 carcase traits.

From our analysis of well over 150,000 steers fed at Rangers Valley and supplied from over 7000 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 lotfeeders 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.

*"...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."*

### **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 carcase 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 lotfeeders 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 carcase is known. The ideal circumstance would be for lotfeeders 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.

The outcomes of the genetic research by the CRC in identifying genes for particular meat quality traits is bringing this closer to becoming a reality.

## Summary

The Australian lotfeeding industry has experienced a period of strong growth following the downturn of 1996. The BSE situation in Japan has had only a minimal effect on the industry and this will only serve to further drive market diversification in the future. I believe that we have turned the corner in Japan after the BSE downturn and the growth in demand will depend largely on economic factors. Korean demand for high quality beef is growing quickly and domestic demand continues to grow. Once the drought is over, it is unlikely that the importance of lotfeeding will be diminished. In my view, the lessons from the drought will see further growth in the lotfeeding sector with the industry looking to be better drought proofed for the future. This is after all the driest continent on Earth. The Australian beef industry has a limited future without a strong and viable feedlot sector.

Whether production will fall in the USA is anybody's guess but it is clear that they are not going away as a strong competitor in every export market where Australia wants to sell product. The opportunity for the Australian industry to capture a growing 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. That is the only way that we will beat the Americans. We have proved that we can do it in Japan, we have to continue the same approach in aggressively marketing our beef in other Asian markets.

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.

Once the drought breaks, we all expect to see a tightening of feeder cattle supplies as producers look to rebuild numbers. That reduced supply could realistically last for several years particularly where breeder numbers have been reduced. It will be disappointing from Australia's point of view, if we miss out on the potential market growth in Asian markets over the next few years because of inability to supply. A strong feedlot sector will assist in minimising any drop in supply by accelerating the finishing process, leaving valuable grass reserves to run more breeders.

It is possible that you could get some mixed signals from the market over the next few years with feedlots and processors being less selective in their cattle requirements, firstly just to get numbers to supply their customers but secondly because the high grain prices will limit the prices they can pay for feeder cattle. If this does happen, please don't mistake this for a long term trend. Just remember the experience of the last 12 – 18 months where those producers, who produced quality cattle, that have a proven track record of consistently meeting market requirements, were the ones that got the best prices. If you are in the situation of having reduced your breeding herd, then once the drought breaks you will be in the ideal position to improve your cattle in line with the feeder cattle market you wish to follow. Use the information you gain over the next 3 days to make yourself a preferred supplier to the feedlot industry.



Figure 1a-7. Rangers Valley Feedlot, Glen Innes