

Feeder steer specifications ~ export requirements

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Session 1c

Introduction

In order to supply the right product to a market, I believe it is vitally important that you understand where and how your product is going to be utilised by its purchaser/s. To put this into perspective and use an example that is close to OUR hearts we can look at the beef industry. We as cattle producers need to know how the feedlot sector is going to use our animals and what it needs to produce to satisfy their consumers' requirements. This is very important as feedlots supply different markets, each requiring certain specifications. Supplying stock to a feedlot is all about satisfying their client's needs.

The beef industry is no different to any manufacturing process. Beef production has become a sectorial industry. By this, I mean that specialised producers perform only a certain section of the chain. Figure 1c-1 shows a simplified version of how the beef industry is broken up. The Australian industry has a long way to go before we are as segmented or entrenched in the segmentation process as the US beef production system.

This paper will provide some insight of what is required to meet the requirements of the lotfeeder that provides finished stock to the Export marketplaces.

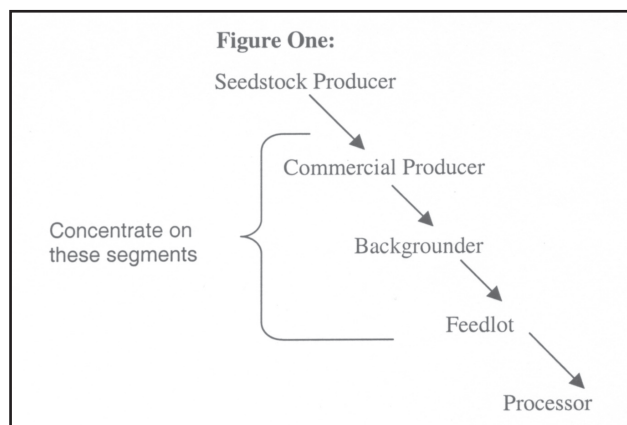


Figure 1c-1.

Intake specifications

Calculation of intake weights

As stated in the introduction, by understanding what the feedlot supplies to their customer/s, we as producers can calculate what to supply the feedlot. Each feedlot completes similar calculations to determine buy-in specifications as a part of its routine operations. This information is then made available to feedlot suppliers through buyers, media etc. For example, Table 1c-1 below shows how to undertake these calculations.

Pay careful attention to Dressing Percentage (DP%), Average Daily Gain (ADG) and Days on Feed (DOF) because when these are varied,

Table 1c-1.

Calculation of Intake Weights (Export)	
Required carcase weight range (kg)	366 -420
Liveweight at 55% Dress Percentage (kg)	665 - 765
Less weight gain of animal on feed (kg)	
{Daily gain (kg) x Days on feed}	1.0 x 300 = 300
Liveweight range (kg)	365 - 465
Safe entry weight range (kg)	380 - 450

the final live weight range will change, this is important to note when doing these calculations. When performing these calculations be conservative, it is best to use average figures, as there is a great variance in the performance of animals on feed due to genetics, rations being fed, and environmental constraints.

Purchase requirements

When purchasing stock for the feedlot there are three very important areas for consideration, these I term the "market factors". These are the maturity pattern of the animal, the fat score and the weight on entry. Supporting the "market factors" are the "quality factors". The "quality factors" include age (measured crudely by dentition), history, temperament, breed and sex. In addition to these are the "value-adding" factors like dehorned, structural soundness,

prior treatments (eg HGP treatment, vaccination) and muscling. Depending on the market, these factors have either a large or small emphasis placed on them. This is highly dependent on consumer issues such as chemical treatments, animal welfare, breed preference and meat quality issues.

Market Factors

These include those attributes that dictate the market the animal should be destined for. The first and probably the most important is that of maturity. The maturity of the animal dictates whether the animal will be fed for the domestic supermarket trade or the longfed export market (to take the two extremes). Many feedlots will specify what type of maturity pattern they want to feed. In order for you as a producer to target this, you need to measure your herds' frame score. This will assist you in breeding decisions (which bull to use) as well as marketing decisions (which market to aim for).

Frame score is the measurement from the ground to the hip (in centimetres) compared to the animals age (in months). Generally the larger the frame size, the more muscle will be laid down and the longer it will take to place a cover of fat over the animal (finish), resulting in a heavy finished weight. A small framed animal lays down less meat and is easy to finish in a short time-period, resulting in a light finished weight. Table 1c-2 shows the relationship between maturity and frame score.

Table 1c-2.

Maturity Status	Frame Score
Early Maturing	1
Early - Mid Maturing	2-3
Mid Maturing	3-5
Mid - Late Maturing	5-6
Late Maturing	7+

The fat or fatness of the animal when going onto feed will affect the way the animal will grow out and finish. Cattle going onto feed in a low fat score (1 or 2, < 6 mm) will have compensatory growth and grow extremely quickly, laying down muscle first with fat being laid down later (resulting in a higher carcase weight). Cattle going onto feed with higher levels of fat will put on less meat and lay down more fat, resulting in a lower carcase weight.

The fat score of the animal has a direct relationship to its stage along its growth path. The fatter the animal the further along its

growth path and the closer to being finished.

The entry weight of the animal provides the feedlot with the knowledge that they have the ability to manipulate the growth path and therefore the end weight. This is achieved through dietary manipulation. The first two factors need to be supported by the correct weight range for the lot feeder to have a satisfactory result.

Quality Factors

These factors have a direct influence on the quality of meat being produced. Age (weight for age), temperament and on occasions breed all provide a feel for how tough or tender the meat will be. The sex of the animal and its previous history can also impact on meat and fat colour, as well as moisture content.

Value-adding Factors

Once producers have bred their stock to satisfy the basic purchase requirements, only half the battle has been fought. The rest is won by adding value to the stock. There are many ways this can be achieved. Some are:

- Accreditation with a Quality Assurance scheme. CATTLECARE® provides the purchaser with the confidence that the cattle have been raised under strict management guidelines.
- Vendor Declarations are truthfully and totally completed.
- Yard weaning for 7 to 10 days enhances performance in the feedlot.
- Vaccinations against a range of illnesses (Anthrax, IBR/BRD, 7 in 1) provide assurance of health to the lotfeeder.
- Known genetics of the individual animal provides an assurance to the lotfeeder that meat quality and/or feed conversion is acceptable.
- Preparation for transport will ensure good performance in the feedlot.
- Others, such as weight history, dehorning, individual identification, and past performance all provide for good decision making in the feedlot.
- Structural soundness is also important for long fed cattle but of little concern for short fed cattle.

It must be noted that some of these are already expected by some feedlots and as time progresses, these issues will be seen as the norm. All of these steps are vital to the formation of a good relationship with the feedlot. A good relationship is developed over time and is vital to both businesses.

Export specifications

As mentioned earlier, there are common traits for both domestic and export destined feeder cattle. At the same time, there are some traits that are only specific to those destined for the export market.

The export feeder cattle market can be divided into two main categories:

1. Cattle destined for feedlots in Australia, and
2. Live export trade.

Cattle destined for feedlots in Australia

Cattle fed for export markets have traditionally been segregated by the number of days on feed. In general, the longer the time on feed, the better the meat quality and more importantly the tighter the feeder specifications. The market type can be split into the following segments:

Short 70 – 150 days
Medium 150 – 220 days
Long 220 – 350 days
Extra long 350 – 450 days

These feeding periods cover the full range of cattle destined to any of our export markets. There are four markets in which Australia concentrates its efforts. These are Japan, Korea, EU and the US. The later two are small markets and are supplied by specialist feeders. Due to the stringent EU requirements, only accredited feedlots are able to feed cattle for this market. Cattle are not fed for their meat quality attributes but simply to ensure consistency of supply.

The US market is still in its antenatal stage and is at the time being very much a niche market.

Japan

Australia has been supplying Japan for close to 30 years. Japan has three distinct market segments that Australian exporters supply into. These are the B3, B2, and B1 segments. Over the last five years, Australians have been attempting to supply into the 'A' grade segment as well. The grading system (A, B, C) relates to what the Japanese term the 'quality catalogue' with;

A Wagyu,
B High quality grain-fed,
C Cow meat and equivalent.

The numbers following the quality catalogue refer to the meat quality attributes, in particular the marbling level. Other attributes include, colour, fat texture, meat lustre, and moisture content.

Korea

This market is presently in a state of flux. The market was liberalised in January of this year and combined with the economic downturn of 98/99 and the BSE scares throughout Europe, beef consumption has dropped by anywhere up to 65% (MLA, 2001 figures). However, with all the doom and gloom surrounding Korea, this market has the ability to out-demand Japan, (if only they would pay for it). There are two very distinct market segments. These are the

Table 1c-3.

	Jindalee Feedlot (NSW)	Killara Feedlot (NSW)	Prime City Feedlot (NSW)#	Rockdale Feedlot (NSW)#	Muanu Feedlot (SA)	Charlton Feedlot (VIC)#	Peechelba Feedlot (VIC)#
Market segment	Japan B1/2	Japan B2/3	Japan Korea	Japan B2/3	-	Japan B2/3	-
Entry weight	330-340	380-450	400-500	380-480	400-480	420-520	420-500
Dentition	0-2	0-2	0-4	0-2	0-4	0	2-4
Sex	Steers	Steers	Steers	Steers	Steers	Steers	Steers
Muscle score	C	C + , B	C & D	B - C			C +
Fat score	2	1-2	< 10mm	< 10mm	2-3		Store
Frame score	Medium	Medium	-	4-5	Med-Large	-	Med-Large
Days on feed	100-120	120-240	150	120-240	120-200	120 +	120 +
Preferred Breeds	British & British X	British & British X	British & British X	Angus, M.Grey, Hereford & crosses	Angus, M.Grey, S'horn & Hereford	British & British X	British

NB: these feedlots have a number of different markets they supply into. These specifications are an amalgamation for all markets.

low grade (B1 equivalent – but can be grass-fed as well) commodity type market and the high quality B3 equivalent market. There is very little in between, although there is very little difference for feeder cattle requirements for this market compared to Japan.

Feeder cattle specifications

Table 1c-3 lists the feeder cattle specifications for a number of feedlots on the east coast of Australia. These are indicative specifications only and need to be confirmed with the company.

Live export trade

The live export trade is based on supplying predominantly feeder cattle to feedlots in other countries. There are some finished stock sent, but this varies according to religious ceremonies and time of year. Australia presently supplies cattle to Indonesia, Philippines, Middle East/Northern Africa, Mexico and relatively small markets under development such as South Korea and Vietnam. Japan used to be a major importer of feeder cattle. This market has dwindled to almost nothing over the last few years.

Weights for these markets vary considerably, ranging from 280 kg to 550 kg depending on destination. Weights are taken at the wharf prior to boarding the vessel. South East Asia prefer *Bos Indicus* breeds as they are more suitable for the tropical conditions, whilst the Middle East prefer the British and European breeds and their crosses.

Summary

As discussed through the paper, selection of cattle for feedlots requires a number of simple selection techniques. Remembering the market specifications of the ultimate destination for the carcass, we need to consider in advance what type of animal that will fulfil these specifications.

The greatest cost to the feedlot industry is feeding cattle that at the end of the feeding period do not fit the desired specifications. To reduce the incidence, we as producers need to provide the right cattle.

There are many factors to consider in “getting it right” and for different markets the importance of these traits will change. We need to build that relationship, understand our purchasers requirements and aim to meet them all the time.

Table 1c-4.

	Short	Medium	Long	Extra Long
Age	H	H	H	H
Weight	H	H	H	H
Growth	H	M	M	M
Maturity Pattern	L	M	H	VH
Muscling	H	M	M	M
Fat	M	M	H	H
Structural Soundness	L	H	VH	VH
Past feedlot performance	L	H	VH	VH
Marbling genetics	L	M	VH	VH
EBV (growth & carcass)	L	M	VH	VH
Breed	L	H	VH	VH
Breed combination	L	MH	VH	VH

Note: L = low emphasis; M = medium emphasis; H = high emphasis; VH = very high emphasis

Source: Modified from Gahan and Johnston 2001)