

Pastures for prosperity — Beef coastal forum.

3. Future of the Atherton Tableland beef industry

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Background

The Tableland is an area of approximately 2000 km², situated 50 km inland from the tropical coast of far north Queensland. Because of its elevation (650–950 m) the climate is subtropical. Frosts do occur in winter mainly on the higher southern end of the Tableland. Average rainfall varies from 1100 mm in the north to 3000 mm on the southern and eastern Tableland. Most rain falls between November and April, with showers often extending to July in the wetter southern and eastern areas (Figure 1).

Soil types fall into 4 main groups with the basalt soils to the north and west of the Barron River being the most fertile, followed by the medium fertility of the basalt soil to the east and south of the Barron River. Granite soils which are low–medium fertility occur on the eastern Tableland. Acid volcanic soils of low fertility occur on the higher end of the Tableland and metamorphic soils of low fertility occur on the eastern side (Figure 2).

The original vegetation was rainforest in the wetter areas thinning to eucalypt forest in the drier northern and western Tableland. A wide range of crops and animal products can be produced on the Tableland because of the wide difference in rainfall from south to north plus the availability of irrigation from Tinaroo Dam, rivers and underground water. Dairying and beef production are concentrated in the higher rainfall southern and eastern Tableland, with crops such as maize, peanuts, potatoes, pasture seed, hay, sugarcane and tobacco being grown on the drier, gently undulating northern and western Tableland. Extensive areas of steep, infertile or stony

country remain under natural vegetation, and serve as rough grazing where not heavily timbered.

Present situation

The beef industry on the Tableland is based on grazing improved tropical pastures. The area is suitable for a wide range of pure grass and grass-legume mixtures (Table 1). Fertiliser must be used regularly to maintain a healthy weed-free pasture, that will fatten cattle. Phosphorus and potassium are the main fertilisers needed for good pastures and need constant replenishment in wet areas. Legume benefits from molybdenum application on the southern end of the Tableland and pasture sulphur levels need to be watched on the drier northern Tableland. Nitrogen fertiliser is used during the growing season to boost growth in pure grass swards. Maintenance fertiliser costs of \$60/ha/yr are common and will be higher if nitrogen and higher stocking rates are used.

Some producers still run breeders on their Tableland properties, but most use their land for fattening bought-in cattle for a wide spectrum of markets from yearling to Jap Ox. Profits to cattle producers have been diminishing, resulting in beef enterprises returning the lowest gross margins per ha of all Tableland farming systems. On the Atherton Tableland, this has been coupled with rising land prices. Table 2 presents data on gross margins and land prices for different forms of enterprise on the Tableland.

I fatten cattle on a 40 ha block at Malanda. The stocking rate varies depending on the season and time of the year, but averages 1.33 head/ha. The farm is split into five 8 ha paddocks which are rotationally grazed, 2 weeks on-8 weeks spell. The main pasture species used are signal grass, Nandi setaria, Tinaroo and Malawi glycine. Guinea grass, kikuyu and greenleaf desmodium grow in patches in most paddocks. Phosphorus fertiliser (Tropical Pasture P) is used every year and potash is applied when the soil test indicates

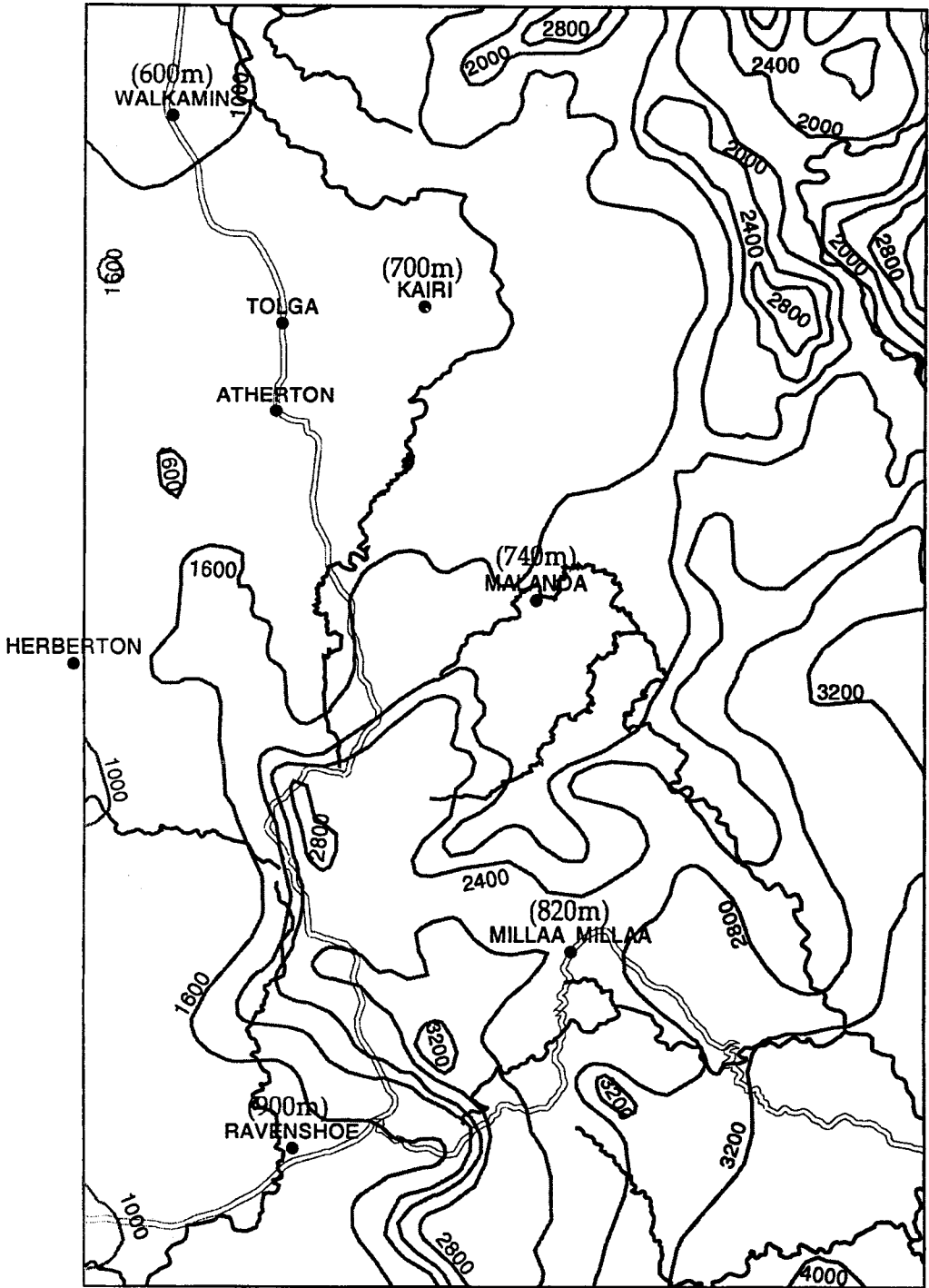


Figure 1. Map of the Atherton Tableland showing rainfall isohyets and altitude at key centres.

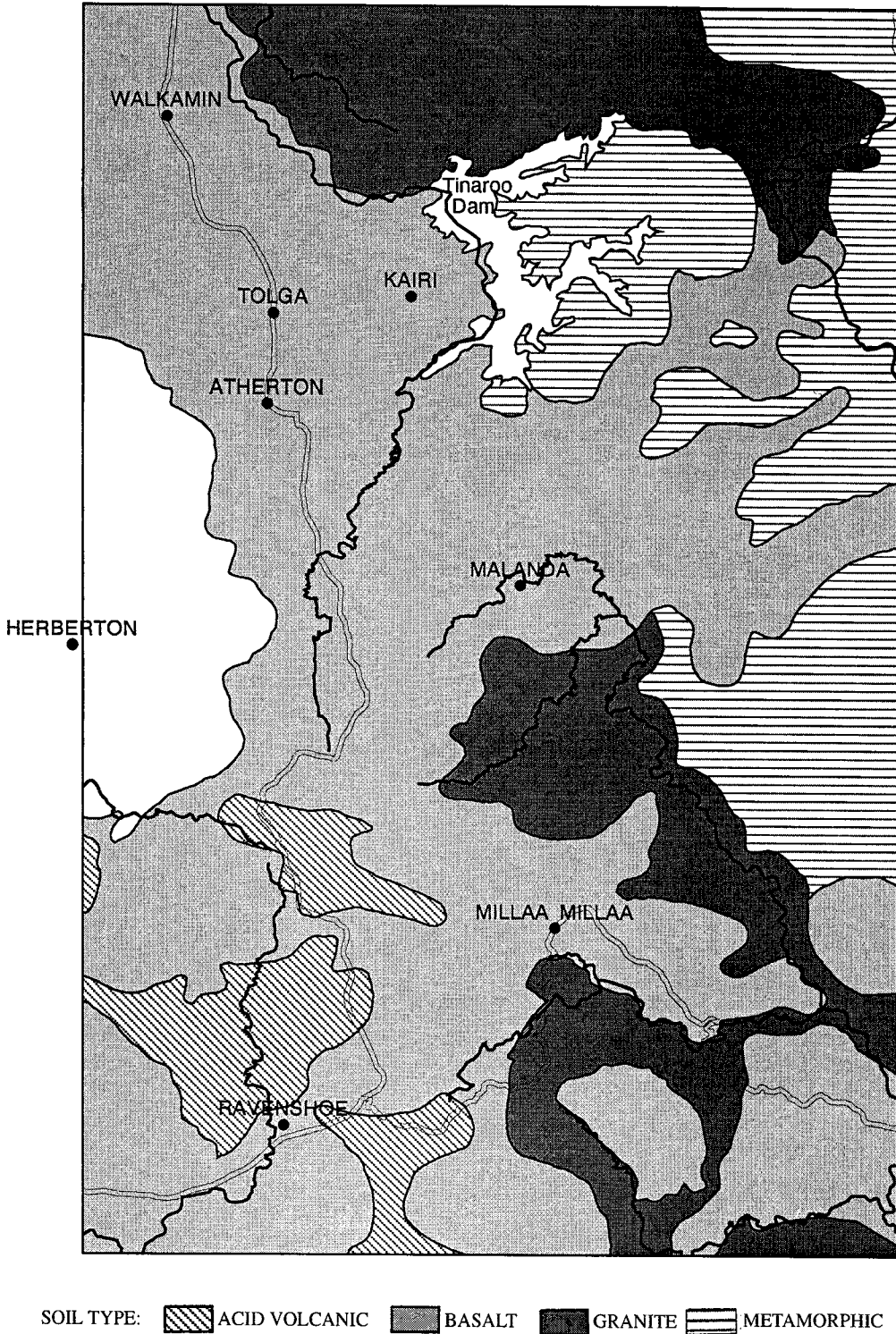


Figure 2. Map of the Atherton Tableland, showing key soil groups.

Table 1. Recommended pasture species for different ecological areas on the Atherton Tableland.

Tropical pasture recommendations				
AAR ¹ Location	<1100 mm Mareeba/Walkamin	1100–1500 mm Tolga/Atherton	1500–2500 mm Malanda/Butchers Creek	1300–3000 mm Millaa/Ravenshoe
Grasses	Signal grass Guinea grass Dawson Indian blue Bisset creeping blue Gatton panic Rhodes grass Urochloa Kazungula setaria	Signal grass Guinea grass Gatton panic Rhodes grass Solander setaria Nandi setaria	Signal grass Nandi setaria Solander setaria Guinea grass Kikuyu Gatton panic Kazungula setaria	Kikuyu Solander setaria Narok setaria Nandi setaria Signal grass Rhodes grass
Legumes	Tinaroo glycine Seca stylo Verano stylo Wynn cassia	Tinaroo glycine	Greenleaf desmodium Malawi glycine Tinaroo glycine Shaw vigna Pinto's peanut	Greenleaf desmodium Haifa white clover Safari Kenya clover Shaw vigna

¹Average annual rainfall.

it is getting low. Sodium molybdate is boom sprayed on every 3 years to benefit the legume. Woody weed control is a small but constant job, with wild tobacco and lantana being the main problems. Salt is fed *ad lib* and molasses is used to keep animals quiet and as a dry season supplement.

Table 2. Gross margins and land prices for a range of agricultural enterprises on the Atherton Tableland.

	Gross margin (\$/ha)	Land prices (\$/ha)
Beef	260	2400–5000
Hay	400	4800+
Maize	580	4800+
Pasture seed	680	4800+
Dairying	740	4500+
Peanuts	1000	5500–9000
Potatoes	3000	5500–9000

The main target market is the local trade, with cattle being sold to a local butcher and a meat wholesaler. Most animals are sold before March or after August to avoid the western and northern flush of cattle onto the market and lower prices (April–July). Most cattle are inspected after slaughter to observe fat cover, colour and depth, which helps my live assessment skills. Slaughter animals are weighed at tail tagging to enable dressing percentage to be calculated and kill-weights are close to what the butcher requires.

Suitable store steers and heifers are difficult to source from the saleyards, so about 12 years ago, I rented some land near Mareeba to run about 60 cows. This gave a good supply of the right type of animal, but with increasing costs, I sold the cows and now purchase weaners over the scales from selected local cattle breeders. The young cattle do well during the wet season but need supplementary feeding during the dry season. Molasses is the main energy source used, and I have varied the protein using cottonseed, cottonseed meal and meatmeal and now use a urea-mineral supplement in the molasses. The live-weight scales are used to monitor liveweight gains so the cost-benefit ratio can be watched. Growing cattle are taken back to Malanda as required or depending on seasonal conditions. If the spring–early summer is very dry at Malanda, fat cattle being sold are not replaced to allow other cattle close to slaughter the opportunity to top up and be sold.

Future

For the Tableland beef industry to become more important to the local economy, and to become a viable pursuit, profitability needs to improve. Buying store cattle, getting them fat and sending them to the saleyard or meatworks to get the price of the day, is a sure recipe for low returns.

You need to identify which class of animal brings the best price at what time of the year, or to target a market. Animals needs to be purchased with age, breed and weight in mind, so that the finished product will satisfy the identified best option (Figure 3).

A possible profit improving opportunity for Tableland beef producers is to get a slice of the expanding domestic and tourist trade in the Cairns to Townsville region. At present, most of the top hotels, resorts, restaurants and supermarkets import their beef from the south. They demand consistent, top quality beef and are prepared to pay if the product is right. Many are

using grain-fed beef from southern feedlots, but one of the largest users of primal cuts in Cairns uses southern grass-fed beef and is happy with the product.

With no local meat wholesale company actively trying to supply Tableland meat and compete in this premium market, or offering a premium to attract local cattle so that a top quality local product is available, forward-thinking local producers are endeavouring to set up a local marketing group, to hopefully gain a toehold in this growing quality market. In the short term, profits may not improve, but ideally as confidence grows in the local product, forward

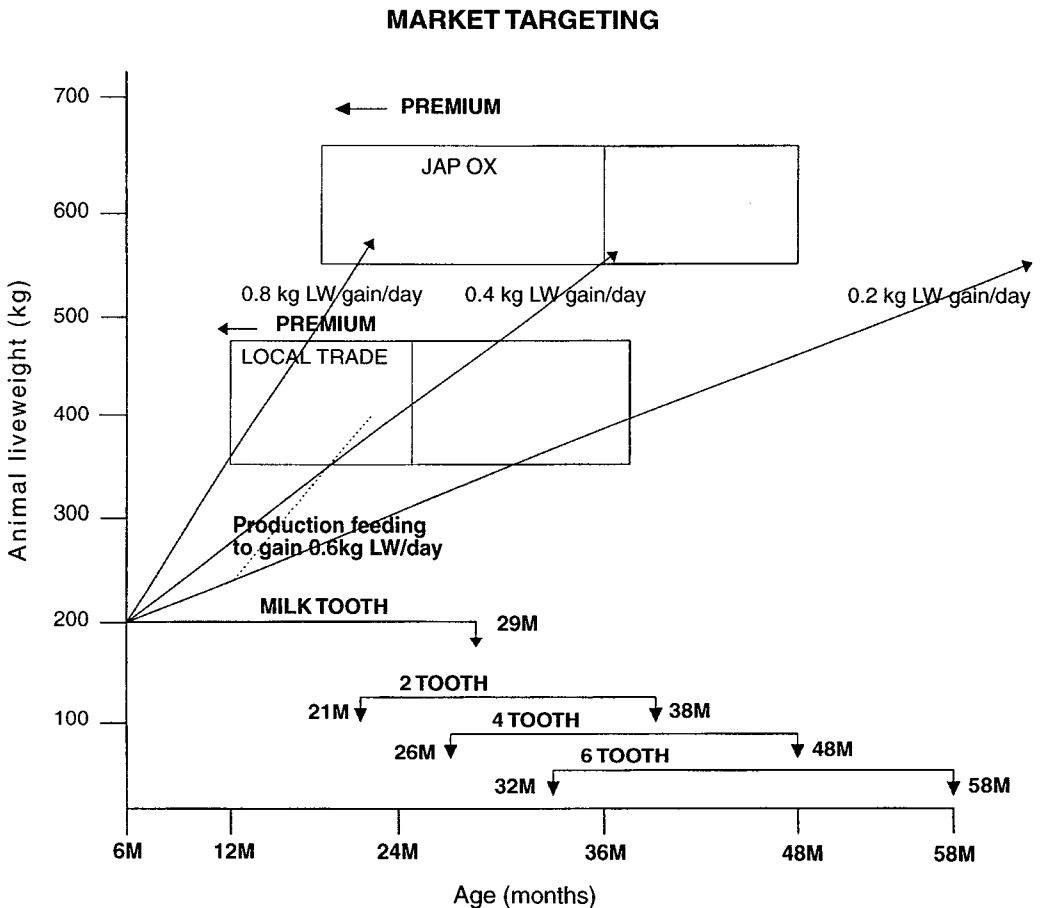


Figure 3. Targeting of animals to markets depending on age, liveweight gains and final carcass weight.

contracts can be negotiated. Firm forward contracts on price and supply, are an important step in enabling producers to supply meat all year that meets the agreed specifications.

The end users are not concerned with tough seasonal conditions; they want consistent quality with every delivery. Producers will have to fill any feed gaps, which can last on the Atherton Tableland from winter frosts to the summer storms, often up to 6 months. If a producer knows his forward kill contract price, and the only variable is individual animal performance, seasonal supplementary feeding becomes less of a financial risk. Molasses plus additives is being used already to fill the feed gap or to permit increased stocking rates. The technology of supplementation to ensure continued weight gain on pastures on the Tableland needs to be improved. With forward price contracts, other feeding options may become more attractive such as maize silage, irrigated pastures and grain feeding. See Tables 3, 4 and 5.

Table 3. Supplement to be fed on good pasture to achieve a target gain of 0.7 kg/hd/d.

Ingredient	Quantity
	(kg)
Molasses	1200 (200 l)
Meatmeal	50
Salt	5
Sulphate of ammonia	10

Table 4. Possible supplement for feeding on low quality pasture during the dry season to achieve a target gain of 0.8 kg/hd/d.

Ingredient	Quantity		Cost	
	(kg)	(\$/t)	(c/hd/d)	
Silage	15	40	60	
Molasses	2	84	16.8	
Meatmeal	0.5	460	23	
Urea	0.1	430	4.3	
			Total	104.1

Table 5. Possible supplement for feeding on low quality pasture during the dry season to achieve a target gain of 1.0 kg/hd/d.

Ingredient	Quantity		Cost	
	(kg)	(\$/t)	(c/hd/d)	
Silage	10	40	40	
Molasses	2	84	16.8	
Meatmeal	0.5	460	23	
Urea	0.1	430	4.3	
Cracked maize	2	230	46	
			Total	130.1

New technology such as the Video Image Analysis (VIA) equipment, which gives yield of meat on a carcass, hopefully will enable producers to identify the animals best suited to different markets, and thus improve the genetic potential of their purchased livestock.

Feedlotter are already assessing their animals' performance in regard to weight gain, feed conversion rates, market suitability and now saleable meat yield using VIA technology. They are then approaching store cattle breeders whose cattle possess the right specifications to arrange long-term supply contracts. I think our local industry on a smaller scale will have to do the same to stay competitive.

If trading beef swings away from cents/kg carcass to cents/kg saleable beef, the swing to identify good yielding cattle will be critical to maximise profits.

On-farm quality assurance will be the next hurdle for producers to cross, as the industry strives to keep a 'clean green healthy product' image. Knowledge of withholding periods on chemicals, safe chemical use and keeping records on farm, will all be important.

The cattle industry is becoming complex and I can see a percentage of producers trying to keep up with the latest trends and technology, hoping to maximise returns. The Tableland consists of many small producers who need to band together and establish a good name for their product to increase local market share and to receive premium prices.