Manchee Ag

Yamburgan Shorthorns

MA Durham Tropicals

2018 News

The land of drought and flooding rains

Welcome to this years Manchee Agriculture newsletter.

2017/18 has been dry but productive for Manchee Agriculture, with a great win in the RAS Beef Challenge 100 day Competition, where proven sires Y Sparta F149, Y Ossie E65 and Y Tobermorey F90 featured heavily.

The combination of carcase performance and fertility are two of the most difficult traits to balance in a beef cattle herd, which has never been more evident than now. The fertility records of the Shorthorn female is unsurpassed throughout Australia.

Our cattle entered in the 2017 RAS Beef Challenge were awarded 1st, 2nd & 3rd for Profitability $, and all the MA cattle were 230% above the trial average. Combine this with this year's pregnancy test result of 92% across the herd, which indicates profitability and sustainability every year. We strive for profitability at both ends of the spectrum to get a balanced return overall.

The Cattle market this year has been affected by the dry environment, wide spread rain will see the EYCI rise again quite quickly, an article later in the newsletter by CattleFax, USA, will give some insight to the future market conditions. In a recent conversation with Craig Price, Kilcoy Meats, he said "the limited supply caused by the current dry conditions will dictate price more than anything during 2018".

This year we have continued our focus on the end product, our genetics and how premiums can be delivered to our clients. Pens were entered in the ANZ Beef Australia Carcase Competition to defend our 2015 Champion Carcase Title, with 1077 steers entered in the competition from every state of Australia. MA steers placed in every class entered. The steers were again fed at the Deepwater feedlot, Meandarra and killed at Kilcoy Meats, Kilcoy. We'd like to thank all the Brownlie family and Craig Price for their dedication and assistance with this competition.

In April, Manchee Agriculture sent the first DNA samples to New Zealand to test for the slick gene, which is currently unavailable in Australia, with the help of Shorthorn Beef's Graham Winnell and Neogen Australia. These results will be available for this years bull sale. The Durham Tropical bulls will also be tested using the Neogen GGP TropBeef DNA chip. The GGP TropBeef chip is powered by the custom GGP Indicus platform delivering 35,090 SNP's, testing for parentage, poll, feed efficiency & marbling. If we can identify these traits and the slick gene, this will move the breed forward greatly in northern Australia.

This years bull sale will see the introduction of new sires, Y General H188, Y Kookaburra J214, Y Spartan K442, The Grove F915, Sherlock J0110 & Gigabytes J837. We are very impressed with the line of calves by General H188, he has blended very well with our existing sires. 2018 will also see another impressive line of bulls by Y Zeus H140, with some of the top sire prospects by him.

Manchee Agriculture strongly believes data accuracy and performance are the keys to moving our genetics forward, therefore the entire 2016/17 drop of bulls, heifers and steers have been scanned and carcase data submitted to Breedplan. This enables you to have access the breed's highest indexing genetics.

Mathew Guest, Manchee Agriculture being presented with the 2017 RAS 100 Day Export Class Champion Pen by Craig Price, Kilcoy Meats.

2018 SALE BULLS....

88 Bulls	Below breed ave Birth Weight
77 Bulls	Top 20% Scrotal Size
91 Bulls	Top 20% EMA

CattleFax Outlook: Cattle profitability remains for 2018

An extract downloaded from CattleFax , USA.

"We think 2018 will be a profitable year for most," said Randy Blach, CattleFax CEO, at that organisation's 2018 Industry Outlook during the Cattle Industry Convention in Phoenix, Arizona, USA. "Demand means calf prices might not fall below the cost of production for average-cost and low-cost producers."

Although cyclical risk remains, Blach added that the majority of the price break is already in the books. Keep in mind that industry profit last year was the second highest in history, according to CattleFax.

CattleFax projects the price for a 550-pound steer calf this year at $135-$180 per cwt; an average of $158, which is $7 less than last year. The price for a 750-pound steer is estimated at $135-$160; an average of $145, which is $1 less than last year. The fed steer price is projected at $110-$130; an average of $115, which is $6 less than 2017.

That's all the more impressive when you consider anticipated record large total red meat and poultry production for the next several years.
We'll peak at about 3 million more beef cows than the last low, growing harvest numbers through the rest of the decade, Blash says.
More specifically, CattleFax projects beef production this year 3% more than last year at 27.5 billion pounds (US), ultimately peaking at more than 29 billion pounds for the cycle. This year's estimate is based on projections of fed slaughter of 26.6 million head (US), which would be 3% more than last year. CattleFax estimates the average cold carcase weight this year at 822 pounds, which would be 10 pounds more than last year.

Price strength stems from robust domestic demand and growing international demand for beef.
CattleFax expects the Annual US Retail Beef Demand Index to be stable this year at 121 (it was 123 in 2016). Analysts there note that recent tax reform and expected GDP growth of 2-4% provides demand support. At the same time, they expect interest rates to increase 1.00-1.25% this year (US).

Globally, CattleFax looks for US beef exports to increase 6% this year to 3 billion pounds. "The balance of trade improved by 1 billion pounds between 2015 and 2017, offsetting 40% of the production growth," says Kevin Good, CattleFax Senior analyst. He adds the balance of trade should remain positive this year, though likely not as strong as last year.

"We have to see these exports grow," Blach says. "We'll need to see record export numbers through the balance of the decade to keep supplies from overwhelming the market."

For the love of the land, Thurloo Downs

In July 2017 we travelled to Birdsville to attend the Big Red Bash, held at the Big Red sand dune. On our return we called in and stayed with Peter & Wendy Hughes, Thurloo Downs, Wanaaring, NSW.

Peter owns around 1 million acres, spaning all the way to the Queensland boarder and half way to Tippaburra. Presently carrying approximately 30,000 merino sheep and 3000 Santa Gertrudis x Shorthorn cattle.

The Thurloo Downs herd are mainly run on Bulloo River floodplain, with the sheep utilising most of the red western plains country, doing well on all the different types of edible fodder available.

Peter has a great love of the land and the environment, the trees and fodder that tell you so much about what the soil underneath can do. A day with Peter Hughes and you will learn more than a week with most others. Peter's knowledge and experience of the country is invaluable to future generations.

The cattle are mainly Santa Gertrudis with a dash of Shorthorn. They are well-grown, soft, feminine breeders of a very even type. Efficiency is the key in this country; they need versatility to adapt with the seasons. Peter purchased a lot of Santa bulls from us during the 2000's until the dispersal, and last year purchased his first 14 Durham Tropical bulls to go into the Thurloo Downs herd.

A beautiful part of the world and I will always remember its not always grass that is the best edible feed in the paddock!!

Peter Hughes with Nick, Sophia & Liz Manchee.

RAS Beef Challenge 2017

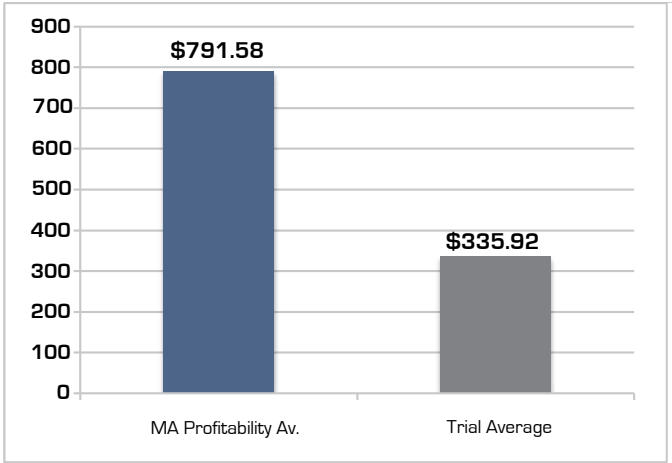
2017 was again a very successful year for our benchmarking carcase trials; these independent feedlot trials are so valuable to our breeding program and genetic selection process. All entries are fed in the same location on the same diet and for the same amount of time.

The RAS Beef Challenge competition cattle are fed at the Wilga Feedlot, Bellata in northern NSW. Thanks must go to the MacCue family and all the RAS Councillors for running such an industry relevant competition.

Manchee Agriculture won:
Champion Pen 100 day
Champion Individual
Res Champion Individual
1st, 2nd & 3rd Pens for Profitability
1st & 3rd Pens for Feedlot Performance
2nd Pen Carcase grid

It's interesting to note the winning pen wasn't placed in the visual assessment stage of the competition. A lot of people get carried away by butt shape and breed content with visual appraisal and forget the most expensive meat is along the spine of an animal. Most of the meat showing butt shape in the hindquarter is topside, silverside and round, which are lower priced cuts of beef. Relatively, the same amount of beef is on the hindquarter as the forequarter, therefore it makes it difficult to balance female femininity and profitability. As you can see from the photos these heifers had beautiful top lines, stacked with meat, but still remain feminine through the shoulders, versatility is the key for any beef-breeding program.

Profitability $$ Graph



236% above the trial average

Champion Pen Averages for 100 days:	
HGP:	Free
Dent:	0
Live Weight:	667kg
ADG:	2.303kg/day
Dress %:	54.91%
HDCW:	366kg
P8:	22mm
RIB:	15mm
Marbling:	2.5
EMA:	88 sq cm
MSA Index:	63.36
Gross Value:	$2,171.53

Craig Price, Kilcoy Meats and John Manchee at the RAS 2017 Beef Challenge held at Wilga Feedlot, Bellata.

The Champion Pen of Yamburgan heifers in the 100 day Carcase competition.

This years draft of 147 Shorthorn bulls, of which 115 will be catalogued, **averaged in the top 15% of the breed for all $ indexes,** with some of the breeds highest $ indexing bulls being catalogued. All bulls in this group have averaged a whopping 0.7mm higher for rump fat and 0.2mm for rib fat than last years draft. Birth weight has also been reduced, EMA has been maintained at 5.6 sq/cm and an increase of calving ease direct by 29% across 147 bulls.
This year will see an increased number of Durham Tropical bulls, with 30 bulls to be catalogued.

147 SHORTHORN BULLS....

Domestic Maternal Index **65 Bulls in TOP 10%**
Export Maternal Index **42 Bulls in TOP 10%**
Northern Maternal Index **60 Bulls in TOP 10%**

2017 Results: 119 bulls averaged $10,354, Top of $42,000 to Futurity Shorthorns, Baradine, NSW.

Main Sires represented:

Yamburgan Zeus H140 -	27 sons
Yamburgan General H188 -	14 sons
Yamburgan Grissom G31-	13 sons
The Grove F915 -	10 sons
Yamburgan Kookaburra J214 -	9 sons
The Grove Sherlock J0110 -	9 sons
The Grove Gigabytes J0837 -	8 sons
Yamburgan Spartan K442 -	6 sons
Yamburgan Zeus K62 -	5 sons
Yamburgan Ossie E65 -	5 sons

YAMBURGAN MONKIRA M267(P)
Sire: Yamburgan Tobermorey F90
Dam: Yamburgan Rose J392

SELECTION INDEXES	$Value	Ave
Dom Maternal Index ($)	+$43	+$31
Export Maternal Index ($)	+$48	+$34
Nth Maternal Index ($)	+$68	+$40

	CE Dir	CE Dtr	GL	BW	200	400	600	MCW	Milk	SS	CWT	EMA	Rib	Rump	RBW	IMF
EBV	+0.2	+2.3	-0.9	+5.5	+43	+59	+98	+81	+8	+3.2	+54	+6.2	-0.8	-1.8	+1.6	+0.4
Acc	47%	42%	52%	74%	71%	69%	75%	61%	48%	72%	59%	59%	65%	64%	59%	51%

YAMBURGAN GENERAL M264 (P)
Sire: Yamburgan General H188
Dam: Yamburgan Highness J193

SELECTION INDEXES	$Value	Ave
Dom Maternal Index ($)	+$50	+$31
Export Maternal Index ($)	+$52	+$34
Nth Maternal Index ($)	+$67	+$40

	CE Dir	CE Dtr	GL	BW	200	400	600	MCW	Milk	SS	CWT	EMA	Rib	Rump	RBW	IMF
EBV	+5.5	+3.0	-2.3	+1.3	+25	+39	+60	+49	+6	+1.3	+42	+6.2	+1.1	+2.8	+0.8	+0.7
Acc	41%	34%	49%	73%	67%	65%	71%	57%	38%	68%	53%	53%	60%	60%	55%	45%

YAMBURGAN GENERAL M285 (P)
Sire: Yamburgan General H188
Dam: Yamburgan Fidget H424

SELECTION INDEXES	$Value	Ave
Dom Maternal Index ($)	+$41	+$31
Export Maternal Index ($)	+$41	+$34
Nth Maternal Index ($)	+$57	+$40

	CE Dir	CE Dtr	GL	BW	200	400	600	MCW	Milk	SS	CWT	EMA	Rib	Rump	RBW	IMF
EBV	+0.5	-0.4	-2.3	+3.8	+33	+51	+73	+65	+7	+1.5	+43	+5.9	+0.2	+1.1	+0.9	+0.6
Acc	41%	33%	44%	73%	67%	66%	72%	57%	38%	68%	53%	53%	60%	60%	54%	44%

YAMBURGAN GANDALF M777 (P)
Sire: Yamburgan Kookaburra J214
Dam: Yamburgan Mayflower H1359

SELECTION INDEXES	$Value	Ave
Dom Maternal Index ($)	+$53	+$31
Export Maternal Index ($)	+$51	+$34
Nth Maternal Index ($)	+$70	+$40

	CE Dir	CE Dtr	GL	BW	200	400	600	MCW	Milk	SS	CWT	EMA	Rib	Rump	RBW	IMF
EBV	+4.6	+4.2	-1.3	+2.9	+32	+47	+71	+71	+7	+2.1	+47	+5.1	+0.4	+1.9	+0.9	+0.6
Acc	37%	32%	40%	58%	60%	60%	68%	52%	34%	67%	51%	49%	57%	57%	51%	42%

Durham Tropical Sale Preview

This year's drop of Durham Tropical bulls is by far the best we have presented, with more numbers and higher selection pressure, as well as new sires Manchee Lancelot J307, Lancelot J306 & Jester J128 who have produced and extremely even draft of sale bulls. The yearling weights and scans are very impressive, with these genetics showing a big increase in EMA, Scrotal and IMF.

40 DURHAM TROPICAL BULLS....

Scanned & weighed 4/4/18

Average weight: **650kg**
Average EMA: **103 sq cm**
Average Scrotal: **37cm**
Average IMF%: **4.64**

The steer trial competions we have entered over the last 5 years, against all other breeds, have highlighted this crop of sires as some of the best carcase sires in Australia. These trials have set great relationships with the major processors for Yamburgan blood progeny. **Our aim is to breed cattle that produce economic value at all stages of the production system, and hit market specifications with consumer satisfaction.**

YAMBURGAN NORMANDY M350 (P)
Sire: Yamburgan Grissom G31
Dam: Yamburgan Jill J580

SELECTION INDEXES	$Value	Ave
Dom Maternal Index ($)	+$34	+$31
Export Maternal Index ($)	+$32	+$34
Nth Maternal Index ($)	+$48	+$40

	CE Dir	CE Dtr	GL	BW	200	400	600	MCW	Milk	SS	CWT	EMA	Rib	Rump	RBW	IMF
EBV	-4.8	+0.6	-0.5	+5.6	+38	+57	+80	+73	+7	+2.1	+46	+6.7	+0.1	+0.5	+1.0	+0.5
Acc	47%	39%	52%	74%	70%	68%	74%	59%	42%	45%	57%	58%	64%	63%	58%	49%

YAMBURGAN ANZAC M490 (P) (SFA)
Sire: Yamburgan Ossie E65
Dam: Yamburgan Abbey E258

SELECTION INDEXES	$Value	Ave
Dom Maternal Index ($)	+$49	+$31
Export Maternal Index ($)	+$36	+$34
Nth Maternal Index ($)	+$61	+$40

	CE Dir	CE Dtr	GL	BW	200	400	600	MCW	Milk	SS	CWT	EMA	Rib	Rump	RBW	IMF
EBV	+0.3	+1.3	-2.6	+2.7	+28	+47	+66	+75	+6	+1.7	+43	+5.2	+1.1	+3.5	+0.5	+0.3
Acc	46%	40%	46%	75%	71%	69%	75%	62%	51%	72%	59%	59%	65%	65%	60%	51%

YAMBURGAN ZEUS N43 (P)
Sire: Yamburgan Zeus H140
Dam: Yamburgan Matilda J168

SELECTION INDEXES	$Value	Ave
Dom Maternal Index ($)	+$64	+$31
Export Maternal Index ($)	+$55	+$34
Nth Maternal Index ($)	+$70	+$40

	CE Dir	CE Dtr	GL	BW	200	400	600	MCW	Milk	SS	CWT	EMA	Rib	Rump	RBW	IMF
EBV	+9.0	+2.3	-4.6	+0.5	+29	+49	+59	+50	+6	+3.0	+44	+6.8	+0.6	+0.9	+1.1	+0.5
Acc	50%	44%	55%	74%	70%	72%	68%	60%	45%	73%	56%	60%	65%	65%	60%	51%

MANCHEE DUNKIRK M1004 (P)

Weight	EMA	Rib	Rump	SS	IMF
692kg	108 sq/cm	6mm	10mm	41cm	5.3

MANCHEE LANCELOT M1031 (S)

Weight	EMA	Rib	Rump	SS	IMF
700kg	114 sq/cm	3mm	5mm	35cm	4.4

Impacts of soil carbon sequestration on the life cycle GCH emissions.

Science Direct: May 2018, Midwestern USA beef finishing systems.

Paige.L.Stanley, Jason.E.Rowntree, David.K.Beede, Marcia.S.DeLonge, Michael.W.Hamm

Highlights

Adaptive multi-paddock grazing can sequester large amounts of soil C.
Emissions from the grazing system were offset completely by soil C sequestration.
Feedlot production produces lower emissions than adaptive multi-paddock grazing.
On farm beef production and emissions data are combined with 4-year soil C analysis.
Soil C sequestration from well-managed grazing may help to mitigate climate change.

Beef cattle have been identified as the largest livestock-sector contributor to greenhouse gas (GHG) emissions. Using life cycle analysis (LCA), several studies have concluded that grass-finished beef systems have greater GHG intensities than feedlot-finished (FL) beef systems.

These studies have evaluated only one grazing management system – continuous grazing – and assumed steady-state soil soil carbon (C), to model the grass-finishing environmental impact. However, by managing for more optimal forage growth and recovery, adaptive multi-paddock (AMP) grazing can improve animal and forage productivity, potentially sequestering more soil organic carbon (SOC) than continuous grazing.

To examine impacts of AMP grazing and related SOC sequestration on net GHG emissions, a comparative LCA was performed on two different beef finishing systems in the Upper Midwest, USA:
1. adaptive multi-paddock (AMP) grazing and
2. feedlot-finished (FL) beef systems.

We used on-farm data collected from the Michigan State University Lake City Ag Bio Research Centre for AMP grazing. Impact scope included GHG emissions from enteric methane, feed production and mineral supplement manufacture, manure and on-farm energy use and transportation, as well as the potential C sink arising from SOC sequestration.

Across farm SOC data showed a 4-year C sequestration rate of 3.59 MgCha -1 yr -1 in AMP grazed pastures. After including SOC in the GHG footprint estimates, finishing emissions from the AMP system were reduced from 9.62 to –6.65kg CO2 –e kg carcase weight (CW)-1, whereas FL emissions increased slightly from 6.09 to 6.12kg CO2 –ekgCW-1 due to soil erosion.

This indicates that AMP grazing has the potential to offset GHG emissions through soil C sequestration, and therefore the finishing phase could be a net C sink.

However, FL production required only half as much land as AMP grazing. While the SOC sequestration rates measured here were relatively high, lower rates would still reduce the AMP emissions relative to the FL emissions. This research suggests that AMP grazing can contribute to climate change mitigation through SOC sequestration and challenges existing conclusions that only feedlot-intensification reduces the overall beef GHG footprint through greater productivity.

For more information: www.sciencedirect.com/science/article/pii/S0308521X17310338

Yamburgan Kookaburra J214, 9 sons catalogued.

	CE DIR	CE DTR	GL	BW	200	400	600	MCW	MILK	SS	CWT	EMA	RIB	RUMP	RBW	IMF	DMI	EMI	NMI
EBV	+7.7	+6.7	-0.7	+1.8	+31	+44	+62	+66	+8	+2.0	+49	+6.0	0.0	+0.8	+1.5	+0.8	+$57	+$60	+$69
ACC	65%	55%	72%	88%	80%	79%	83%	73%	58%	81%	69%	70%	74%	74%	69%	62%			

Yamburgan General H188, 14 sons catalogued.

	CE DIR	CE DTR	GL	BW	200	400	600	MCW	MILK	SS	CWT	EMA	RIB	RUMP	RBW	IMF	DMI	EMI	NMI
EBV	+1.7	-0.5	-1.9	+2.9	+34	+50	+73	+72	+9	+2.2	+48	+5.7	+0.3	+1.6	+1.0	+0.6	+$48	+$45	+$63
ACC	64%	52%	69%	91%	84%	83%	86%	72%	54%	85%	70%	71%	76%	76%	71%	62%			

100% Durham Tropical at Begonia Station

I recently travelled to Begonia Station, 70km north of St George, QLD to see the new owners, Bill & Belinda Gordon who 2 years ago took over ownership, after a family succession plan of their country at Condobolin, NSW.

The Gordon's had been buying shorthorn bulls for many years and have now switched to the Durham Tropical for Begonia.

The 5700ha station is situated on the Maranoa river with a beautiful mix of river loams, curly Mitchell grass and buffel country. Presently Begonia is having a magic season, with Bill receiving about eight calls a week from mates looking for agistment!!

Bill estimates the property can conservatively run 600 breeders and with future cluster fencing, possibly 800 breeders. With Roma only 120km north and feedlots at Mungindi, Condamine and Dalby, the Gordon's will continue to market their progeny into the feeder steer and export market.

Bill Gordon at the entrance to Begonia Station.

Calves on Begonia Station soon to be weaned.

"We want to go 100% Durham Tropical", Bill said. "They hit the MSA specifications, have weight for age and fertility, they're perfect for us".

Bill and Belinda and their three children, Abbey, William & Charlie have a new lease on life, with a love of campdrafting and their well established Gordon Family Stockhorse Stud, "we are very happy here," Belinda said.

The General performs at Little Ampi

Late last year I travelled to the small township of Allendale East, south of Mt Gambier, SA to visit Peter Caskey's property Little Ampi. Peter has a beautiful herd of purebred shorthorn cattle, built up over many years when he lived at Big Ampi, Menindee, NSW.

A beautiful season was being had a this time of the year, with clover everywhere, and cattle in great order. The calves by Y General H188 were again a standout, a beautiful line of soft, muscular, mid maturity calves.

Pictured are calves sired by Yamburgan General H188, on Little Ampi.

Peter was also joining Y Emperor K28, who he's leased from Brian Mann for a season, a very impressive bull who we are all very eager to see his calves. A bull with tremendous width, softness and growth for age. Emperor K28 will have 300 natural calves on the ground before he's 3 1/2 years old! I would like to thank Pete for his great hospitality and beautiful South Australian reds.

Manchee Agriculture steers have placed in all three classes entered in the 2018 Beef Australia ANZ National Carcase Competition. This year saw the largest number of entries with 1077 steers representing all breeds and states of Australia. The MA entries were in three grainfed classes and fed at Deepwater feedlot and killed at Kilcoy Meats.

Placing were:
2nd in Class 5 (260 – 340 kg dressed, 100 day)
4th in Class 6 (300 – 420 kg dressed, 100 day)
3rd and 4th in Class 7 (260 – 340 kg dressed, unrestricted)

Overall the sires that performed well were Yamburgan Grissom G31, Yamburgan Tobermorey F90 and The Grove Sherlock J0110; with outstanding individual carcases by Yamburgan Normanby J70 and Yamburgan Kookaburra J214.

We have found this competition a great way to benchmark our genetics and our current sires.

Interestingly, we have high rib and rump fat EBV's on most of our current sires; we lost points in some pens because of this. Sires such as Yamburgan Grissom G31 and Yamburgan Normanby J70 who have below average fat EBV's were ideal for this competition. Again it comes back to a balanced program of performance, fertility and efficient constitution.

2ND PLACED PEN IN CLASS 5		4TH PLACED PEN IN CLASS 6		3RD PLACED PEN IN CLASS 7	
Sired by: Yamburgan Tobermorey F90 & Yamburgan Sparta F149		Sired by: Yamburgan General H188, Yamburgan Grissom G31 & The Grove Sherlock J0110		Sired by: Yamburgan Kookaburra J214, Yamburgan Zeus H140 & Yamburgan Normanby J70	
HSCW	310 kg	HSCW	341 kg	HSCW	317 kg
HGP	Free	HGP	Free	HGP	Free
MSA MB	327	MSA MB	350	MSA MB	333
MSA Index	64.66	MSA Index	63.26	MSA Index	62.50
Rib Fat	9 mm	Rib Fat	11 mm	Rib Fat	12 mm
P8 Fat	10 mm	P8 Fat	12 mm	P8 Fat	10 mm
EMA	91 sq/cm	EMA	93 sq/cm	EMA	88 sq/cm
LMY%	58.53%	LMY%	56.45%	LMY%	56.18%

147 BULLS AVERAGE....

Low Birth Weight	**+2.7**	*Below breed average*
Weight for Age	**+61**	*Top 20% for 600 day weight*
High Constitution	**+0.2**	*Top 20% for rib and rump fat*
High EMA	**+5.6**	*Top 20%*
Fertility	**+2.0**	*Top 20% for scrotal size*

YY
Lionel & Rania Manchee
02 6794 4540

Publication of
Manchee Agriculture

MA
Manchee Agriculture
John & Liz Manchee
"Wallah" Narrabri NSW
02 6794 4825
John 0427 944 825
Liz 0427 936 213

WW
Email:
liz@manchee.com.au
john@manchee.com.au

Web Site: www.manchee.com.au