Focusing on the consumer for Australian Livestock breeding

Dr Alex Ball

People and Practices

- The red meat industry is becoming a series of highly integrated value chains
- Producers need to operate within sophisticated value chains
- Production will be driven by branded products and potentially more locked into the "BRAND"
- "Brand" = Consumer requirements
- Successful producers will:
  - Manage and utilise information to make informed decisions
  - Embrace technology changes
  - Have to supply more information/compliance to be part of the value chain
  - This will challenge the traditions of livestock production and the basis of value chain competition

RURAL ANALYTICS

What changes are ahead for breed groups/societies

- ❖ Changing consumer preferences is placing a different value on breed

- ❖ Evolving disruptive technologies will shift the value of registries and associated information and also who collects what information

- ❖ BigDATA information moving balance of "power" throughout the value chain

- ❖ Value chain demanding that each participant contributes and only gets paid for the contribution they make!   What contribution does the seedstock breeder make!

Sires of the future

Much more focus on the genes the animal actually carry ~ breed less of a description of potential

Much more focus on what an individuals potential is at any point in the supply chain

More focus on non compliance and what animals that don't perform cost

More focus on sires for brands rather than sires for markets

- Note that the weakest part of the brand is the lowest value of the sires selected

Rate of genetic gain (theory vs practice)

▶ $Rate\ of\ genetic\ gain = \dfrac{\Delta\ Selection\ Intensity\ x\ Selection\ Accuracy}{\Delta Generation\ Interval}$

▶ $Rate\ of\ genetic\ gain = \dfrac{Consumer\ requirements\ (Brands\ requirements)}{Client\ perceptions\ x\ disconnect\ of\ market\ signals}$

RURAL
ANALYTICS

Current Dilemmas of breeding

Brand Focused breeding

- 280-340 kg HSCW
- Rib fat 5-20mm
- LMY Yield 58.5-64.5
- MC 1b-4
- Marbling 2+
- MSA Index 61.5+

Preceptive breeding

- This bull is just big, he is packed full of muscle with no wastage. He is loose in the skin with a true sires head. He has a great topline and walks true. His mother is an excellent cow and has produced 3 bull previously that have sold to $15,000. He is highly recommended for the commercial cattle man who wants to breed front paddock cattle.
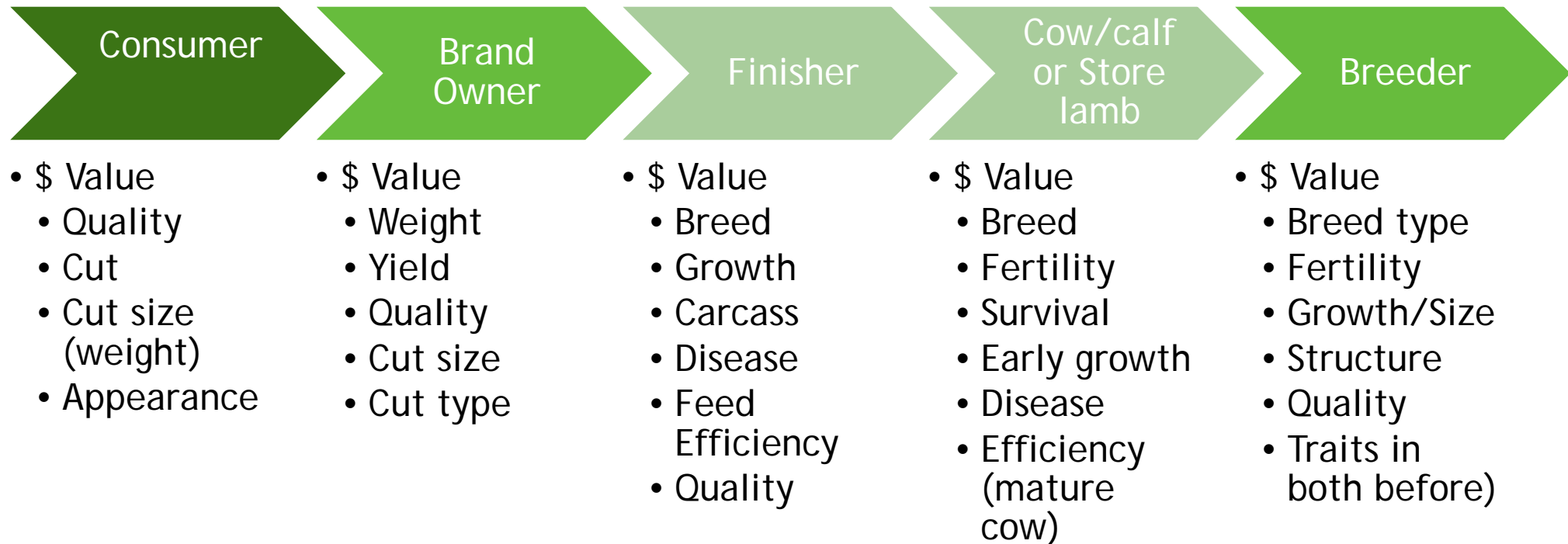
What traits are valued and where!
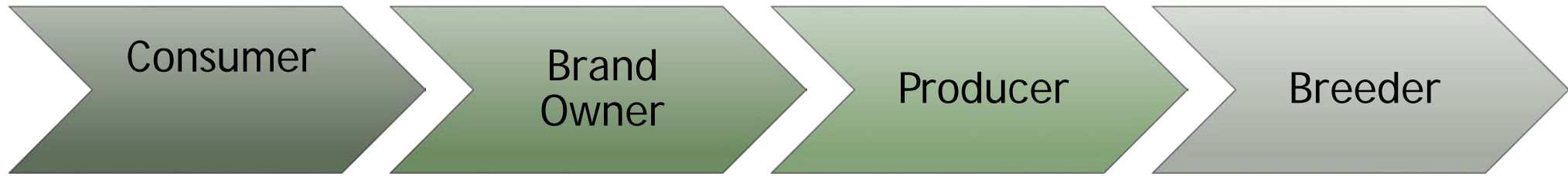
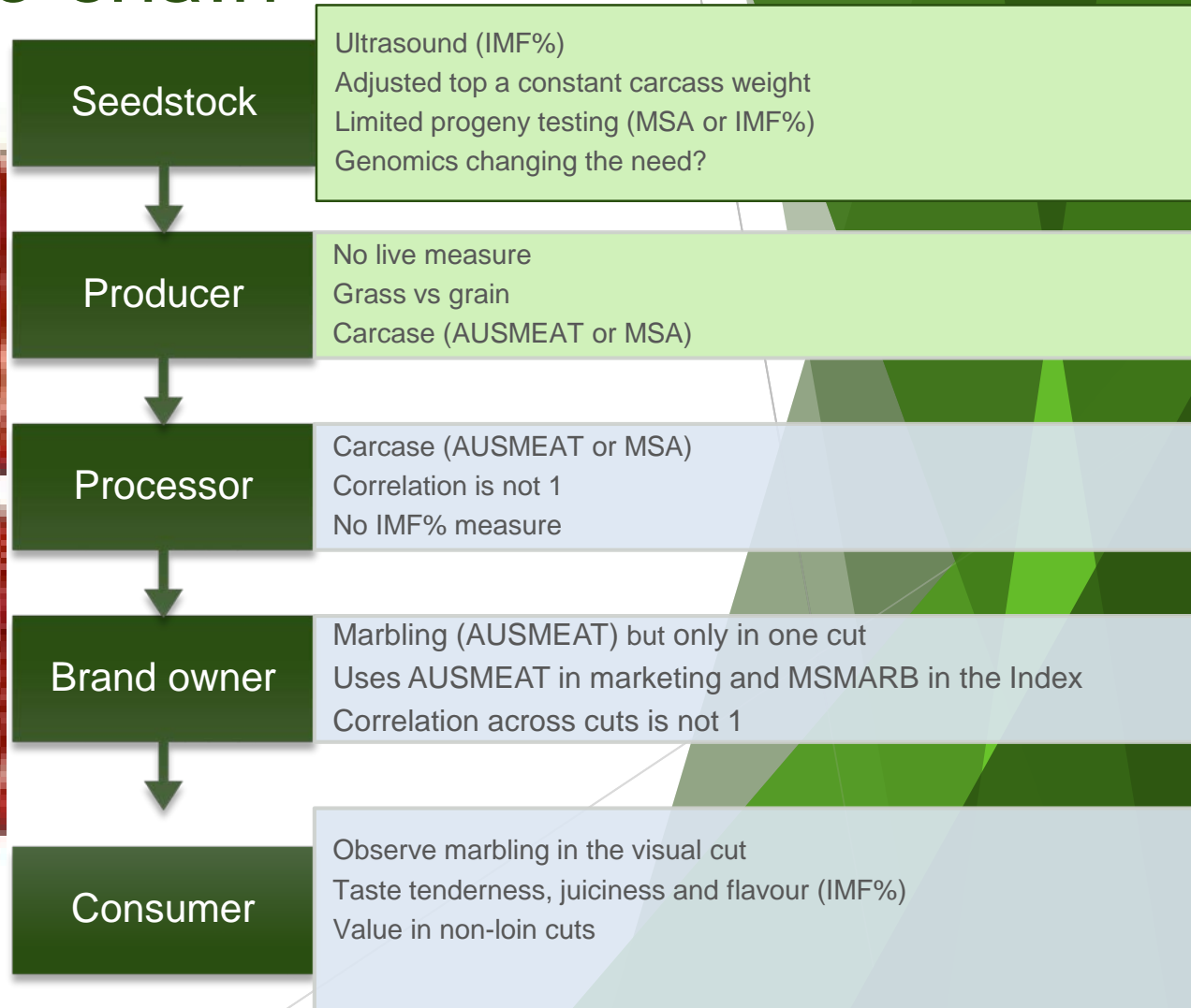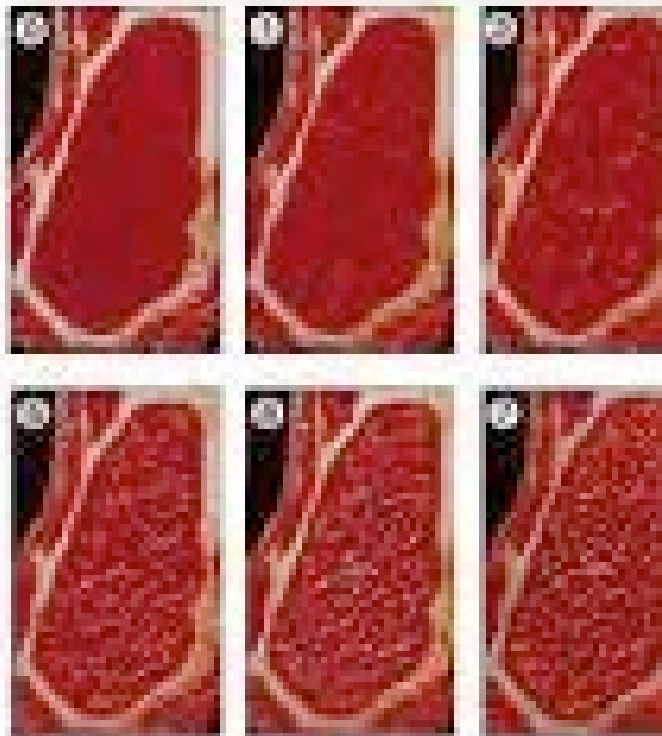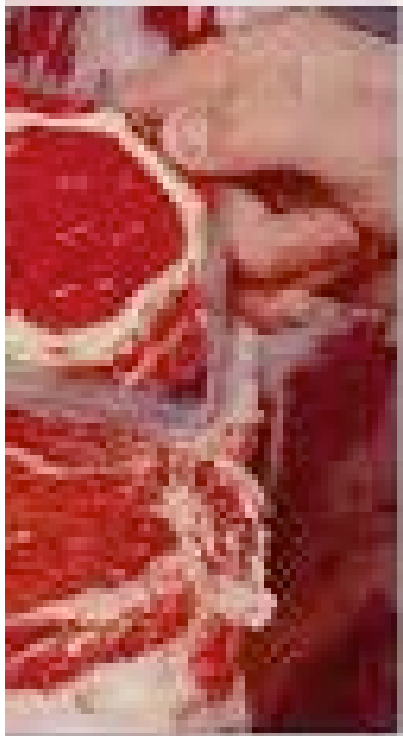| Consumer	Brand Owner	Producer	Breeder
• $ Value • Quality • Cut • Cut size (weight) • Appearance	• $ Value • Weight • Yield • Quality • Cut type	• $ Value • Breed • Fertility • Survival • Growth • Carcass • Disease • Efficiency • Quality	• $ Value • Breed type • Fertility • Growth/Size • Structure • Quality • Traits as before)

What traits are valued and where are the disconnects!

Consumer	Brand Owner	Finisher	Cow/calf or Store lamb	Breeder
• $ Value	• $ Value	• $ Value	• $ Value	• $ Value
• Quality	• Weight	• Breed	• Breed	• Breed type
• Cut	• Yield	• Growth	• Fertility	• Fertility
• Cut size (weight)	• Quality	• Carcass	• Survival	• Growth/Size
• Appearance	• Cut size	• Disease	• Early growth	• Structure
	• Cut type	• Feed Efficiency	• Disease	• Quality
		• Quality	• Efficiency (mature cow)	• Traits in both before)

Challenges of Consumer focus – Marbling through the value chain

Seedstock
- Ultrasound (IMF%)
- Adjusted top a constant carcass weight
- Limited progeny testing (MSA or IMF%)
- Genomics changing the need?

Producer
- No live measure
- Grass vs grain
- Carcase (AUSMEAT or MSA)

Processor
- Carcase (AUSMEAT or MSA)
- Correlation is not 1
- No IMF% measure

Brand owner
- Marbling (AUSMEAT) but only in one cut
- Uses AUSMEAT in marketing and MSMARB in the Index
- Correlation across cuts is not 1

Consumer
- Observe marbling in the visual cut
- Taste tenderness, juiciness and flavour (IMF%)
- Value in non-loin cuts

Simple example of ram value current (grid) vs value chain

Ram	Bwt	PWT	PFAT	PEMD	PWEC	IMF	SF	Index	Price
A	0	11	0	2.6	-58	0	-1.1	144	1100
B	0.37	17.5	-0.6	1.9	-36	-1.1	4	130	1850

Value of the Ram (Value chain Index)

        = $14 x 0.5 x 50 x 4

        = $1400 advantage ram A over ram B

Value of the Ram (Current Grid)

        = 6.5 x 0.5 x 50 x 4 x 1.2 x 0.48 x $5.5

        =$2059.2 Ram b over ram A

The consumer loses value as the market doesn't reflect their perferences

Consumer vs client within a value chain
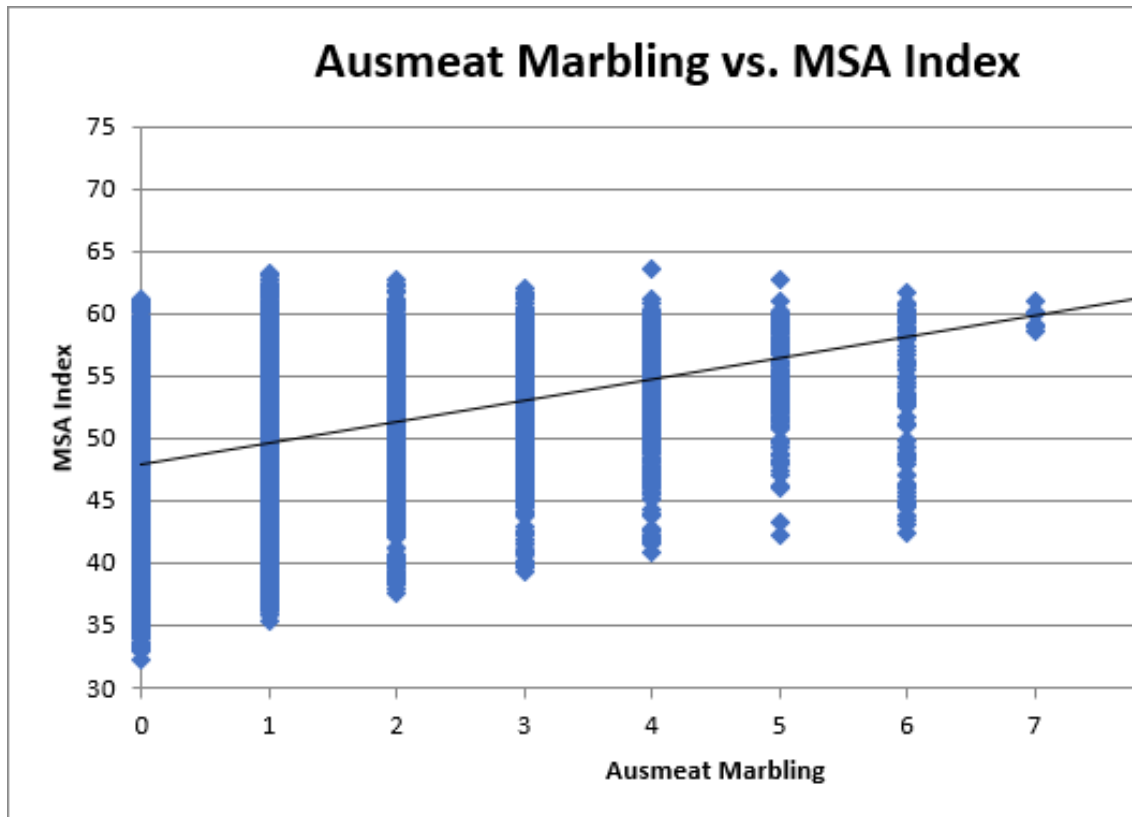
- A key processor in Eastern Australia
- 6 months kill data
- Wanted a top end brand that was above 60 on MSA index and the client wanted above a marbling score 2
- 8% of animals were above 60 and below marbling score 2 Risk to the client?????
- 32% of animals were above 2 but less than 60 Risk to the consumer?????
- Should the genetic program focus on index or marbling score or client vs consumer

Are market forces working ~ Breed vs Value Chain approach to selection

Breed vs Value Chain	
Number of Bulls	8500
Number of Sires Selected	285
Selection %	3%
Top 5%	$117
Average of Sires Selected	$ 79
Differential	$ 38
Difference in $ per cow	$ 19
Number of Commercial Bulls	3078
Number of commercial steers (direct and daughters)	574817
$ difference	$ 5,460,757
$ difference per bull sold	$ 1,774.13

RURAL
ANALYTICS

Who pays the $5,460,757 in lost profitability from the value chain

Are market forces working

Example of dynamic change ~ moving measurements from seedstock to commercial

Sheep breed X has 15,000 ewes.

- 17500 lambs
- 8,750 ram and ewe lambs
- Scan 70% of the rams and 50% of the ewes
- 10,500 lambs scanned
- Cost of scanning @ $5 per head = $52,500

Value chain model for data collected

- 500 ewes mated to 33 sires (15 progeny per sire)
- 500 lambs through to slaughter (full carcass traits, some eating quality)
- 500 x $35 for genotyping + $50 for eating quality sampling= $42,500
- Based on correlations 500 lambs equivalent of 50,000 scans for yield + eating quality included .

Red meat profit equation!

Simply
- $$ return = yield x value

At present
- Yield is determined by HSCW and Fat (Fat score or P8)
- Value is determined by dentition (still used in many grids today as a primary price determinant)

Future
- Yield = Lean Meat Yield (DEXA)
- Value = Meeting brand quality requirements (MSA and EQG cypher)

Data Management and Analytics are fundamental to the designing genetics of future

BREEDPLAN / Sheep Genetics

On-farm software

Breed societies databases

NLIS

Meat Standards Australia

Livestock Data Link

NLRS

Research databases

Processors

Consumers

Data Management and Analytics are fundamental to the designing animal selection in the future

BREEDPLAN / Sheep Genetics

On-farm softwar

Breed societies

Virtual Red Meat Data Hub

ch databases

ssors

sumers

In summary

Brand specifications will change the requirements from genetics. Much more focus on those whole of chain traits

The disconnect of market between the end user and the intermediaries on the value chain results in either the wrong genetics being selected or a loss in value across the industry

Whole is paying for that loss varies between the stud breeder right through the consumer