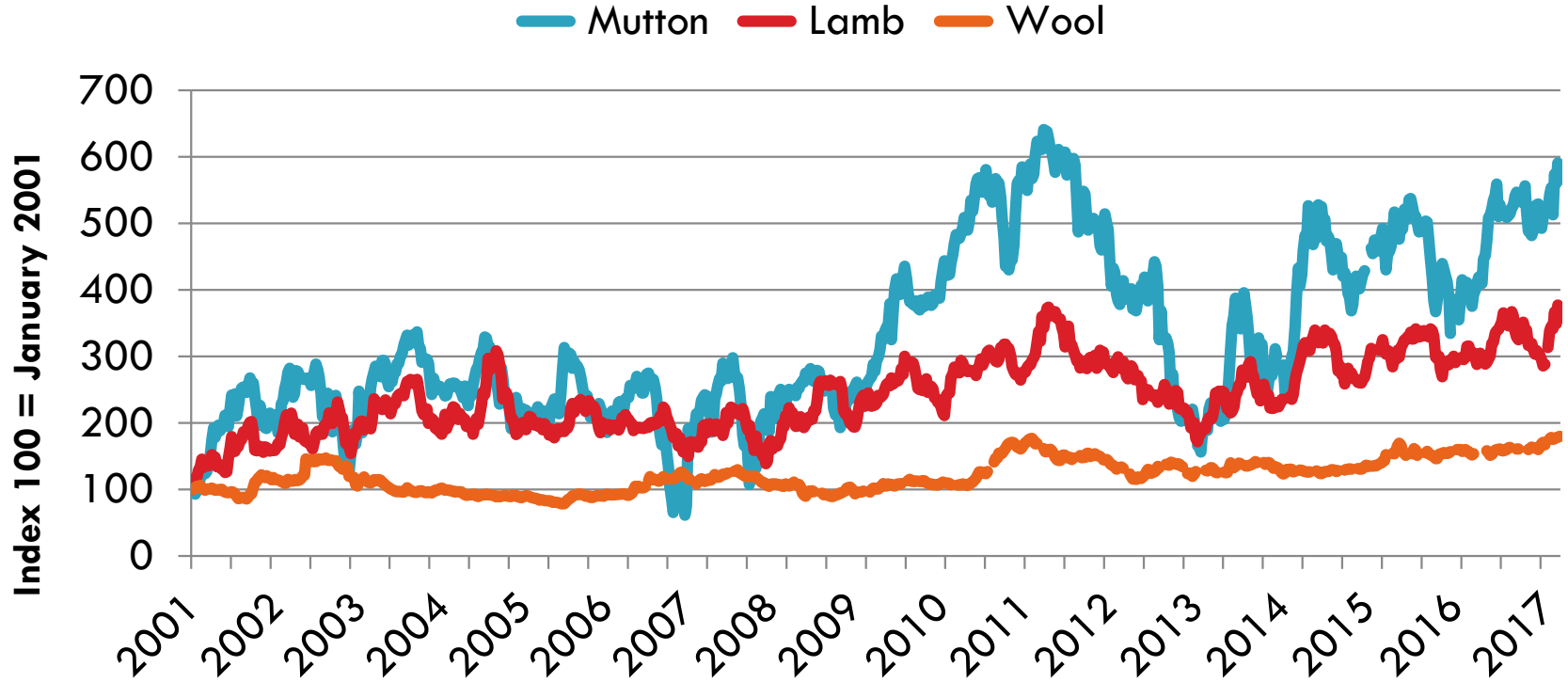# Lamb – Meating Consumer Expectations

Sarah Stewart

Key Points

- ❑ Industry Projections

- ❑ Major Markets

- ❑ Lean Meat Yield

- ❑ Livestock Data Link

- ❑ Eating quality

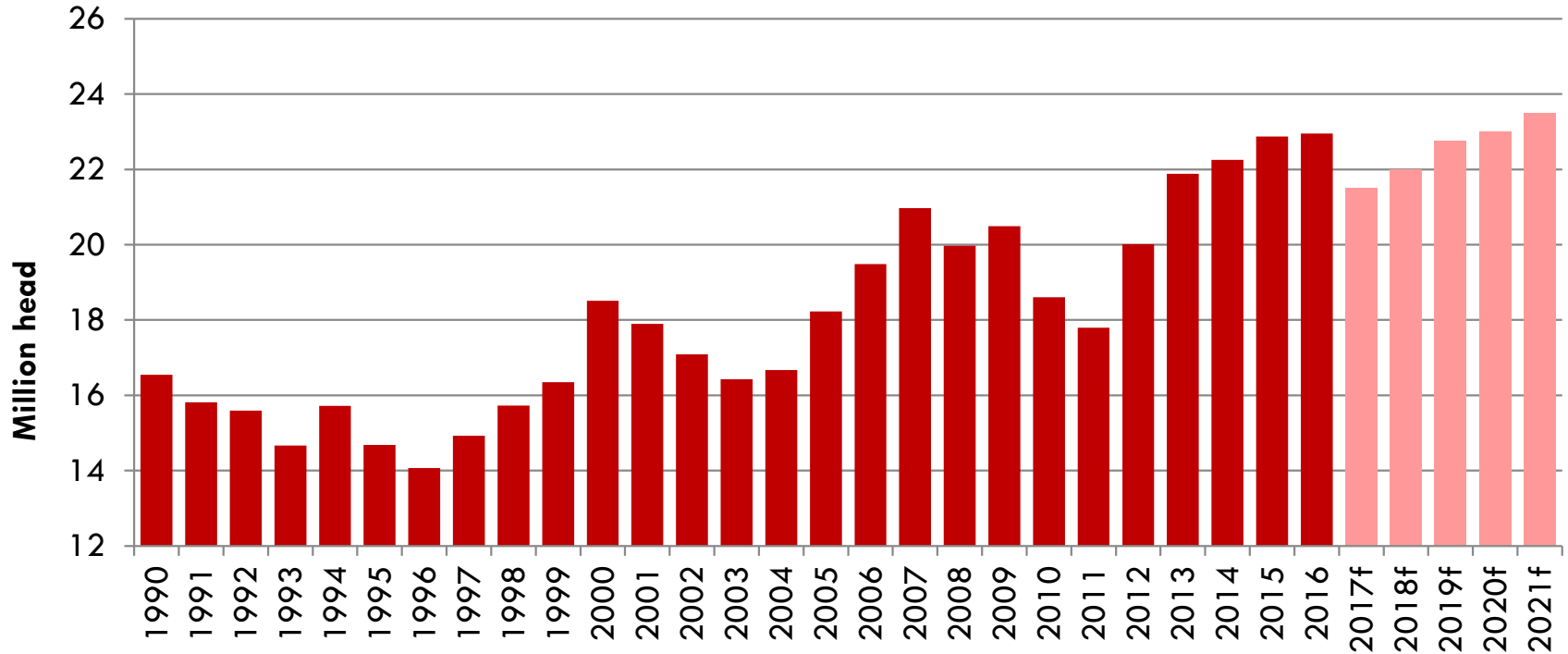- ❑ Future grids – based on objective measurement of the carcase

Australian sheep and wool markets

Source: MLA, AWI

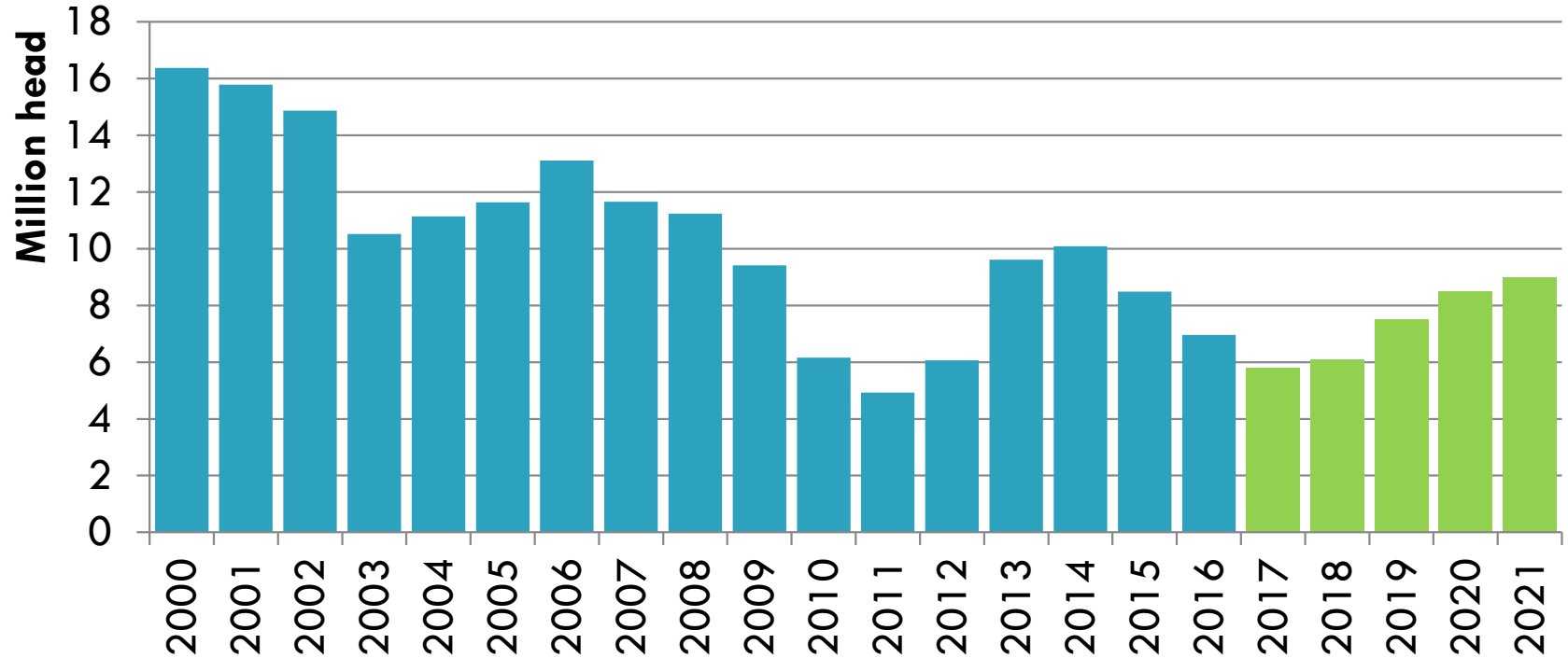# 21.5 million lambs to slaughter in 2017

Source: ABS, MLA forecasts

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Annual sheep slaughter – 5.8 million

Source: ABS, MLA forecasts

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Similar pattern in WA

Source: ABS, PIRSA data, DPIRD analysis
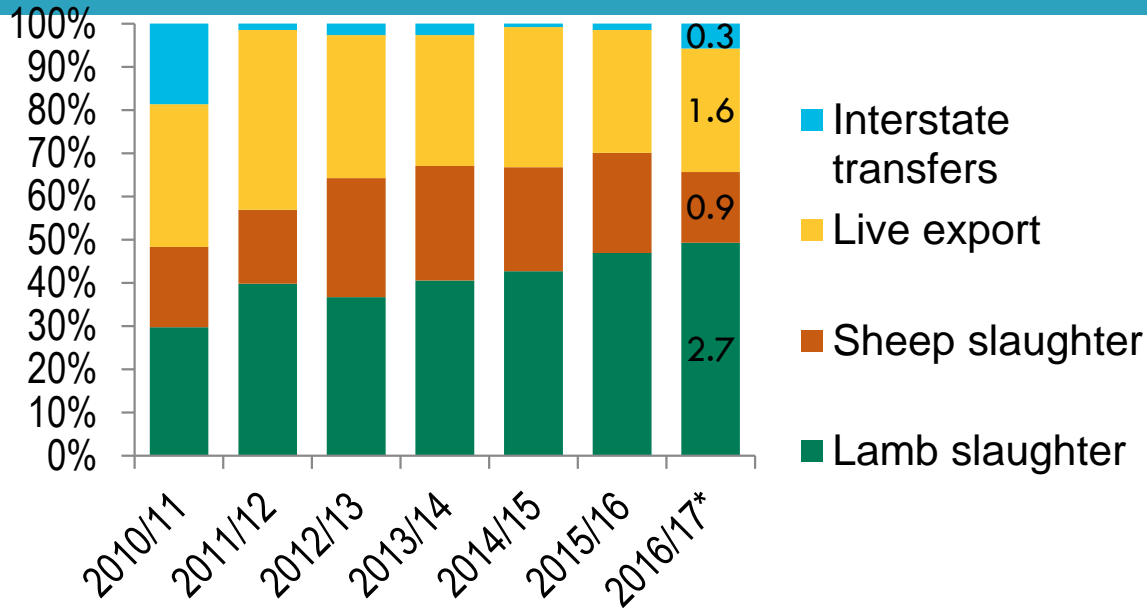
Enticing time to retain ewes
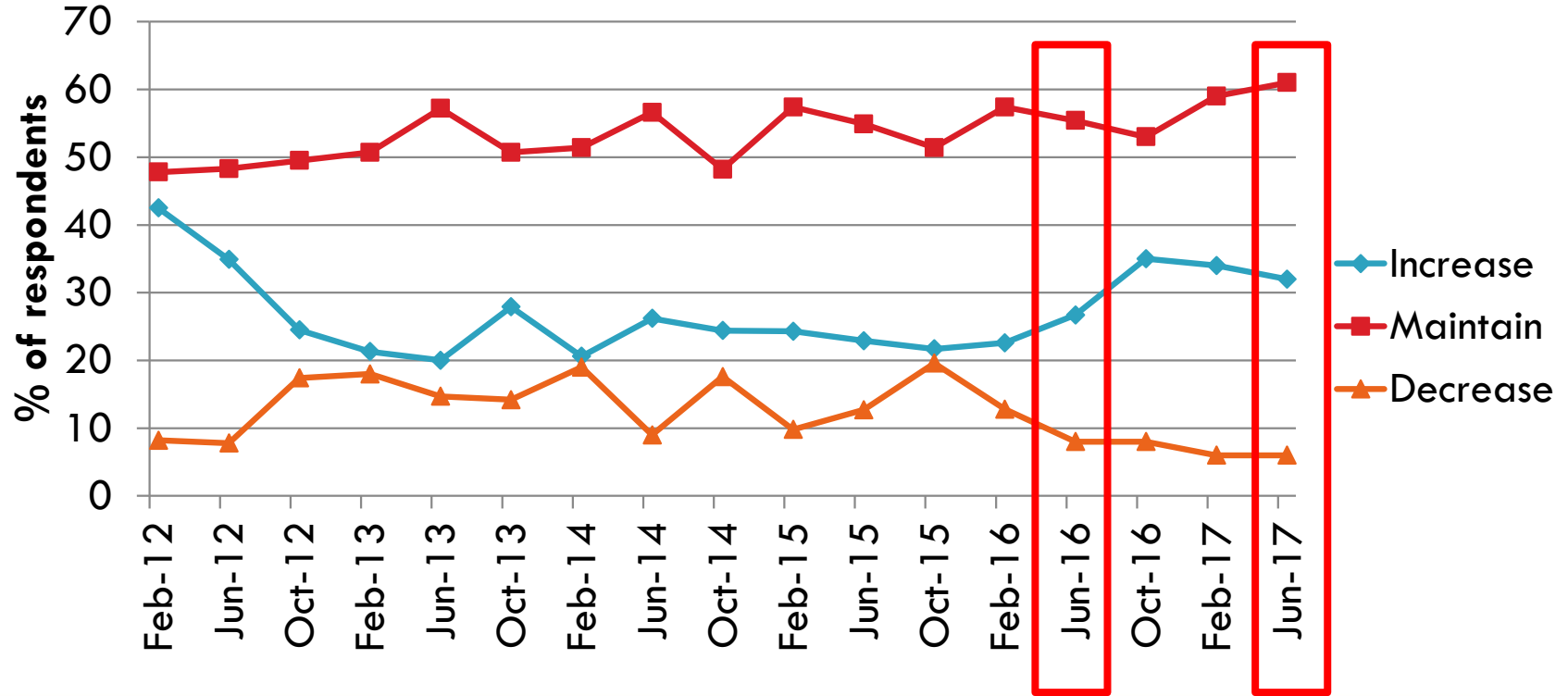
Major Markets

❑ USA still strong and total export up

❑ Very valuable chilled lamb market

❑ Encouraging building of this market in last 4 years

Sheepmeat in the US
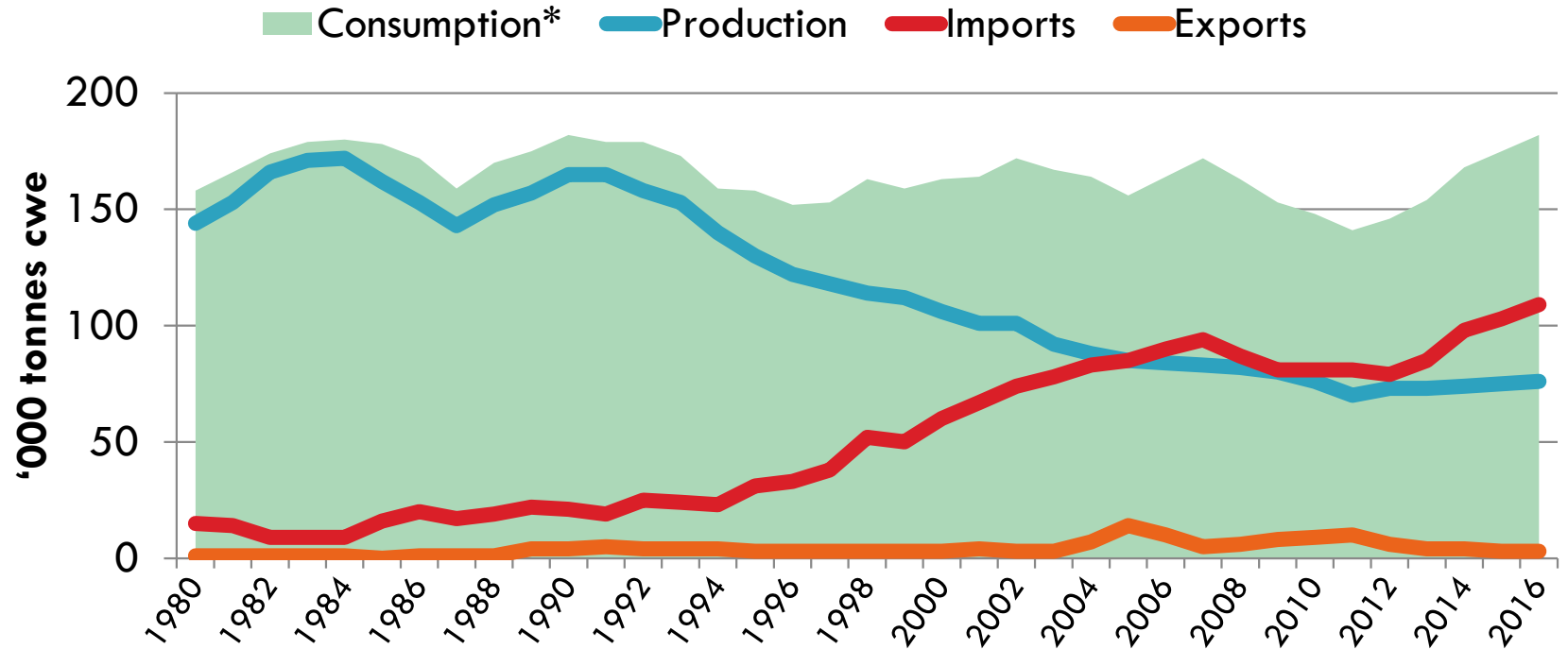
Source: FAO

* Estimated Consumption = (Production + Imports) - Exports

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Major Markets

❑ China has become a significant importer since 2012

❑ They cannot meet the needs of their market – this trend is forecast not to change

❑ Same tonnage as USA but less value (frozen, cheaper cuts, mutton)

❑ Will the value of this market increase ?

Sheepmeat in China

Legend: Consumption* · Production · Imports · Exports
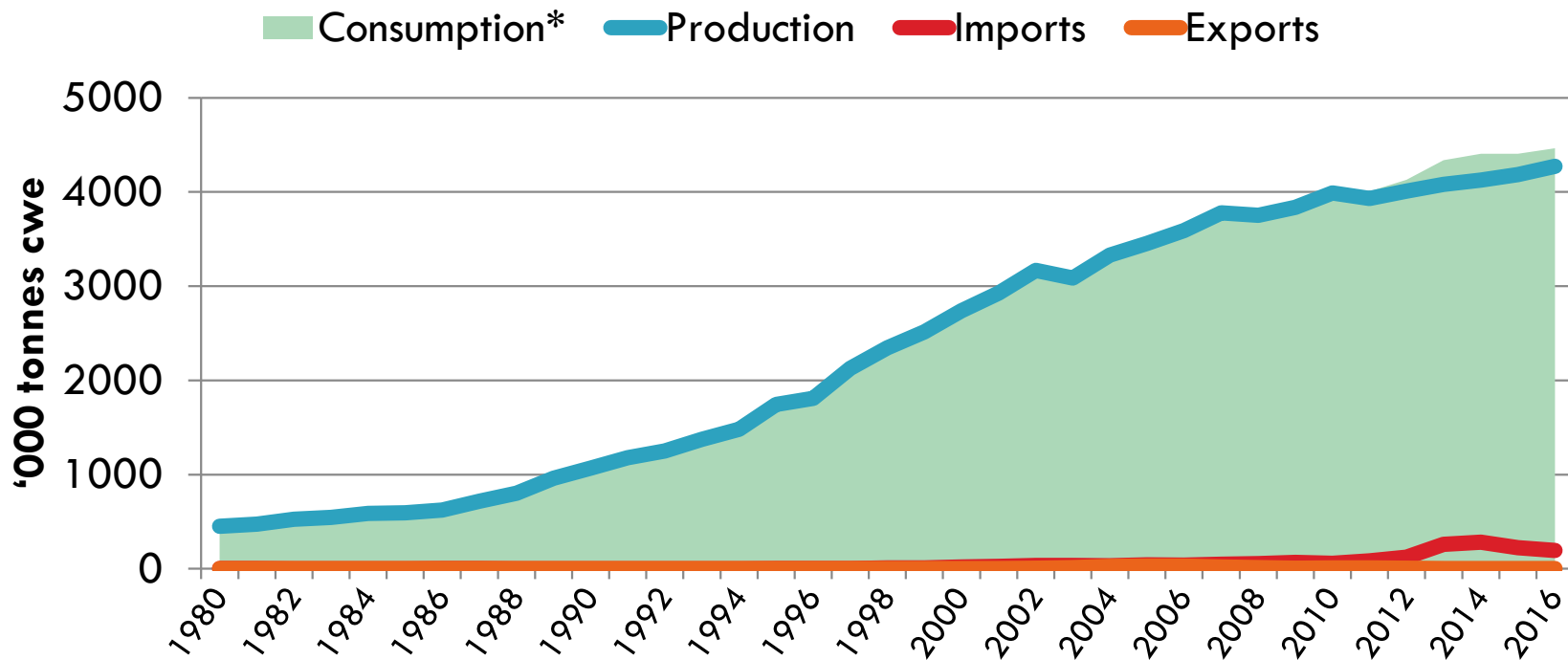
Y-axis: '000 tonnes cwe (0, 1000, 2000, 3000, 4000, 5000)

X-axis: 1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016

Source: FAO

* Estimated Consumption = (Production + Imports) - Exports

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In WA = Middle east, China and USA are the biggest
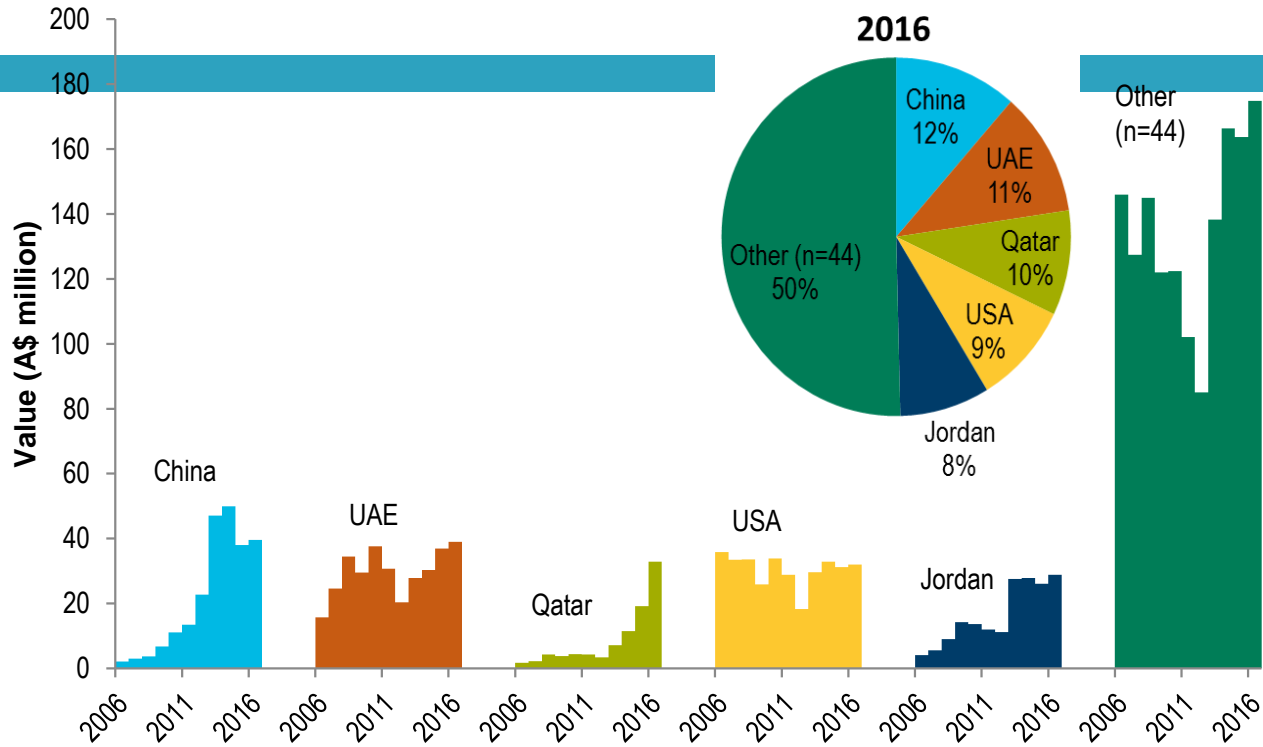
Market outlook – note of caution in the short term

❑ There has been a near on 40% decrease in processing capacity on Eastern sea board

❑ Seasons in Southern Australia have been tight in many regions

❑ The timing of lamb turn off is very season dependent

❑ Given all this, at some point killing space will be at a premium in the eastern states

❑ MESSAGE: This might have a flow on effect to WA ?????

Lean Meat Yield

LMY is <u>especially</u> important in lamb:

$30/kg (44% fat trim) → $54/kg (36% bone)

$84/kg for lean !!

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Value lean meat yield - Lamb example

Score 5

Carcase Wt   23.0 kg

GR   22.0 mm

CT lean   55%
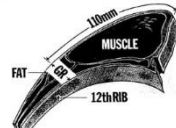
Score 2

Carcase Wt   23.0 kg

GR   8.0 mm

CT lean   63%
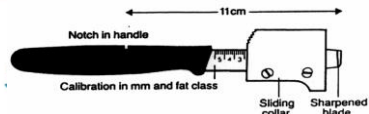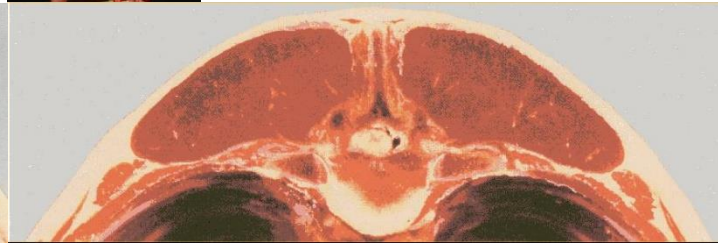
Lean and fat weights

Score 5
Fat: 7.36kg
Lean: 12.65kg

Retail Value: $316

Score 2
Fat: 5.06kg
Lean: 14.49kg

Retail Value: $362

Lean Meat Yield

- ❑ Genetic gain

- ❑ Efficiency
  - ❑ On farm/feedlot – lean or muscle cheaper to grow than fat
  - ❑ Processing – too much fat = trim
- ❑ Consumers
  - ❑ Little fat in retail cabinets these days
  - ❑ 80%+ consumers remove fat before or after cooking
  - ❑ 'Fatty' still a significant complaint for lamb

Palpated GR and HCWT

$R^2 = 0.1\text{-}0.2$; RMSE=3.0

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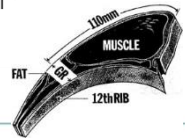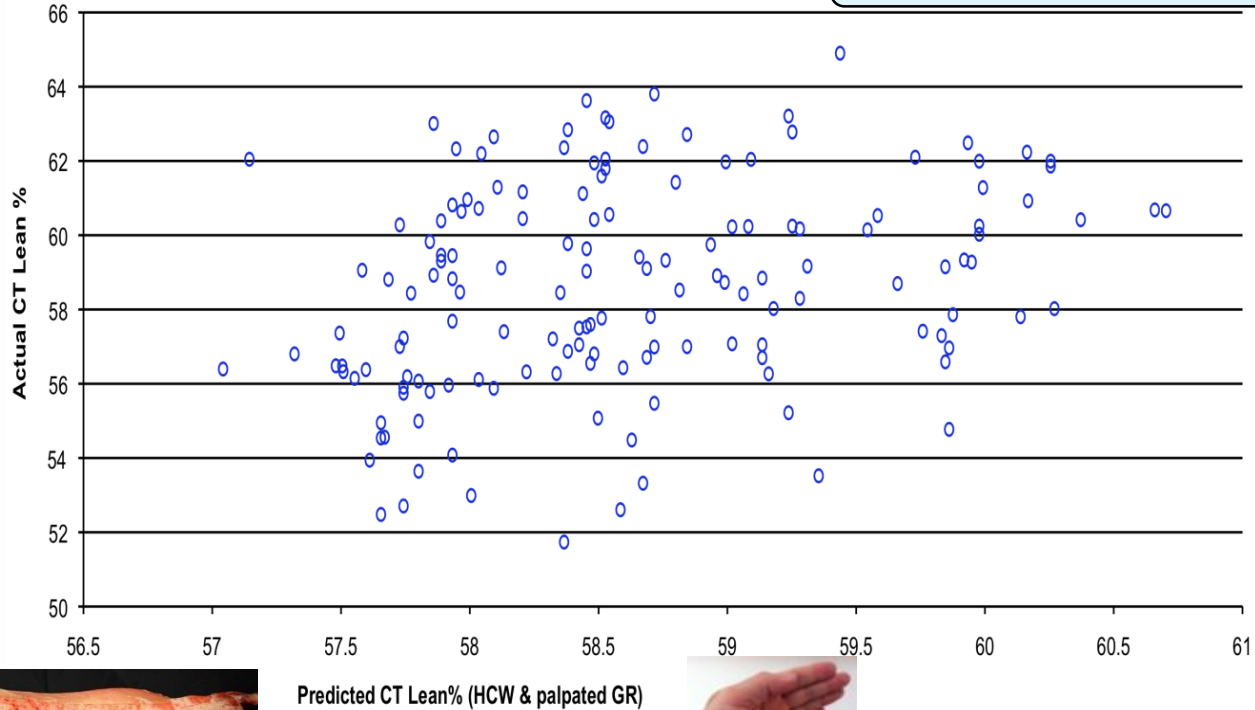
DEXA

- ❑ Dual energy x-ray
- ❑ Initially to drive robots
- ❑ Whole carcase and region yield
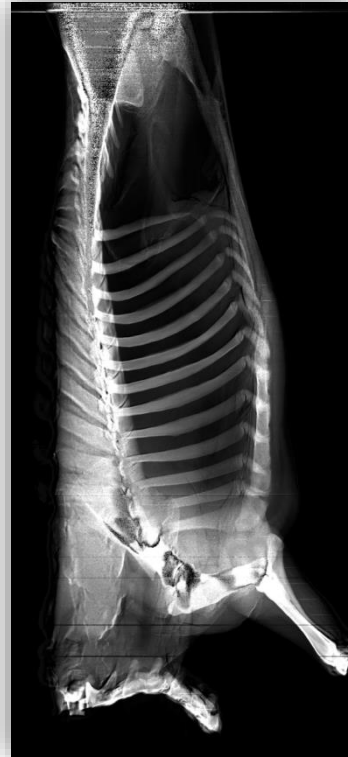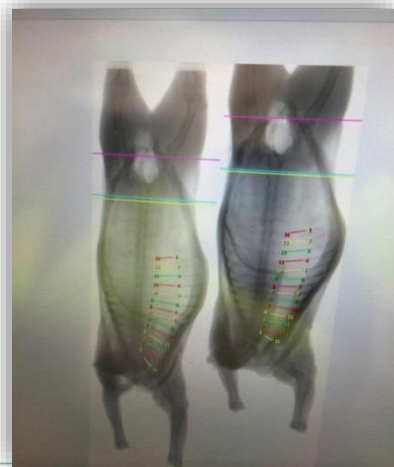
DEXA predicting CT Fat%
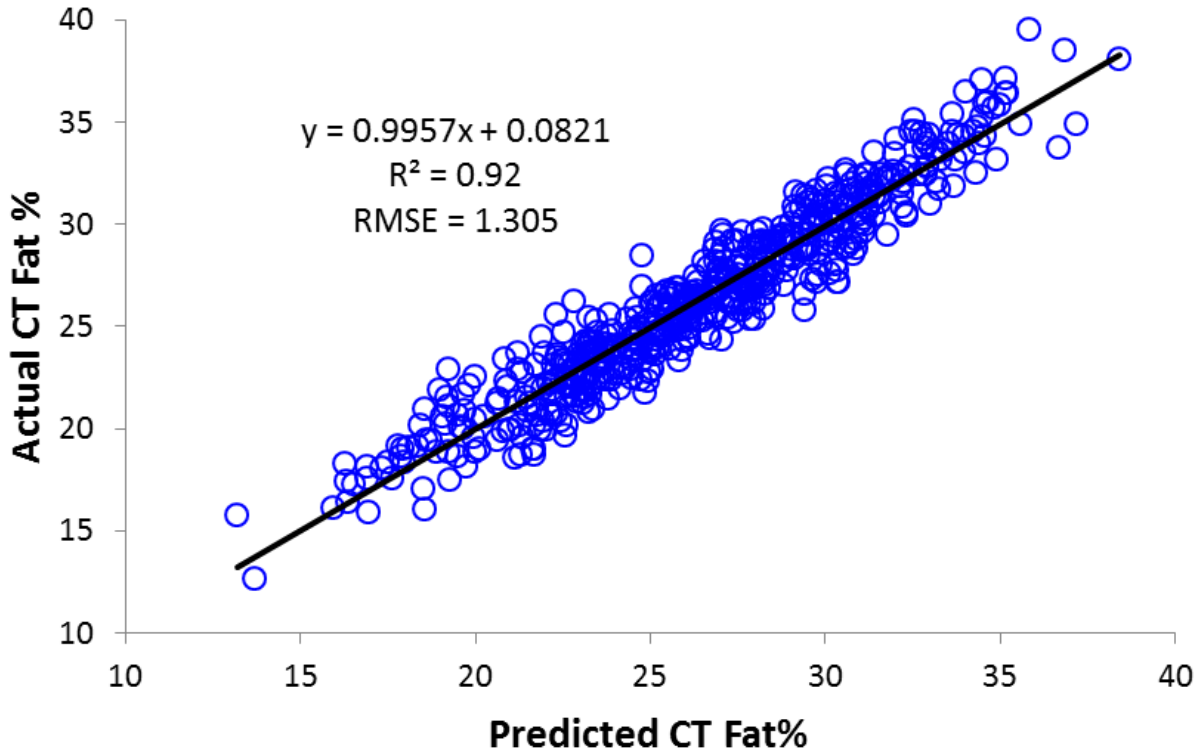
DEXA predicting CT Fat%
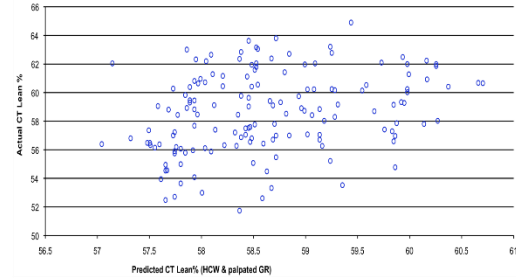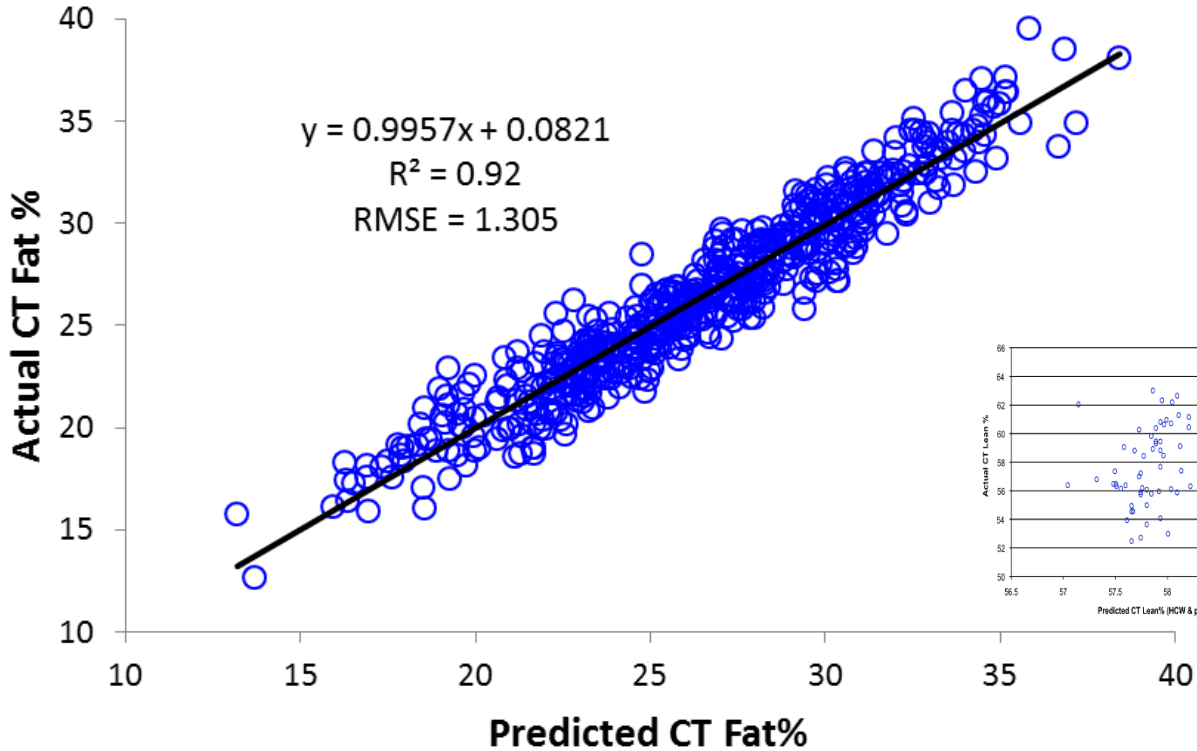
What market do you produce lambs for?
What carcass spec are you aiming for?

<u>Domestic 45%</u>   **18 – 22 kg, fat 2-3**
- 🟥 White Tablecloth
- 🟥 Butcher
- 🟥 Supermarket

<u>Export   55%</u>
- 🔲 *Middle East*   **16 – 18 kg, Fat 1-2**
    - 🟧 Bagger airfreight Lambs
    - 🟧 Middle East Restaurant
- 🔲 *American Market*   **18 – 26kg, Fat 2-4**
    - 🟧 Supermarket
    - 🟧 White table cloth
- 🔲 *EU*   **18 – 24kg, Fat 2-3**
    - 🟧 Supermarket

What market do you produce lambs for?
What carcass spec are you aiming for?

Domestic 45%   **18 – 22 kg, fat 2-3**
- ■ White Tablecloth

Expor
- ▫
- ▫

■ White Table cloth

▫ *EU*   **18 – 24kg, Fat 2-3**
- ■ Supermarket

Do you know your market destination or just let the saleyards decide ?

What is Livestock Data Link (LDL)

- Centralised on-line feedback system

- Identifies compliance rates of carcases and animal health issues

- Allows performance benchmarking

- Includes NLIS and MSA information

- Allows complex information to be used for simple decision making

Compliance and Non-Compliance Percentage for Traits

Legend: Underspec, Overspec, Compliant
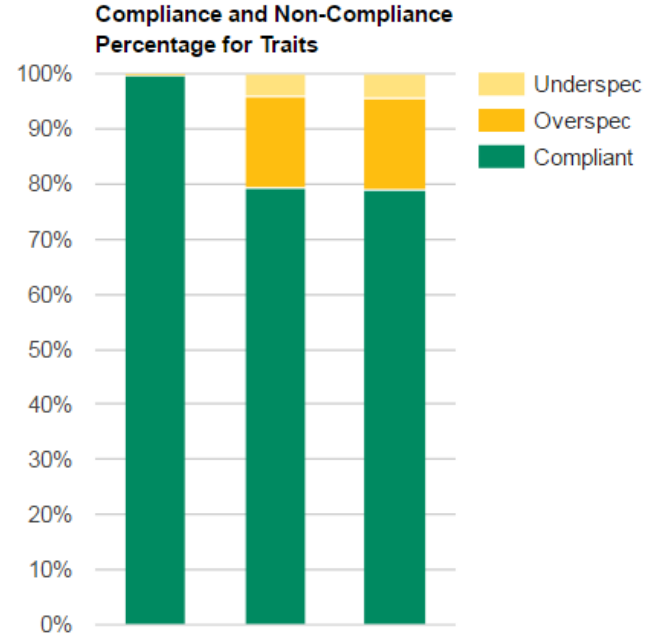
	Fat Class	HSCW (kg)	Overall
Number of head	972	972	972
Number compliant	970	770	768
Percent compliant	99.8 %	79.2 %	79.0 %
Number non-compliant	2	202	204
Percent non-compliant	0.2 %	20.8 %	21.0 %

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How does LDL Work?

Cycle diagram (clockwise):
- Allocated target market
- Individual carcase information
- NLIS
- LDL
- Producer feedback
- Address non-compliant issue

How does LDL Work?

KNOW MARKET
=
MAXIMUM BENEFIT

Cycle diagram:
- Allocated target market
- Individual carcase information
- NLIS
- LDL
- Producer feedback
- Address non-compliant issue

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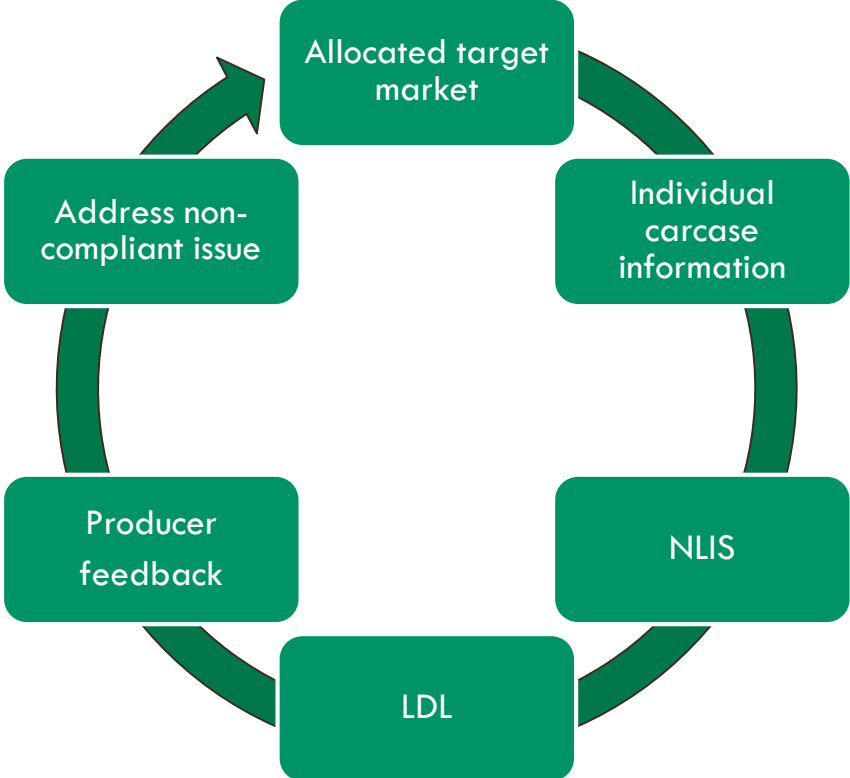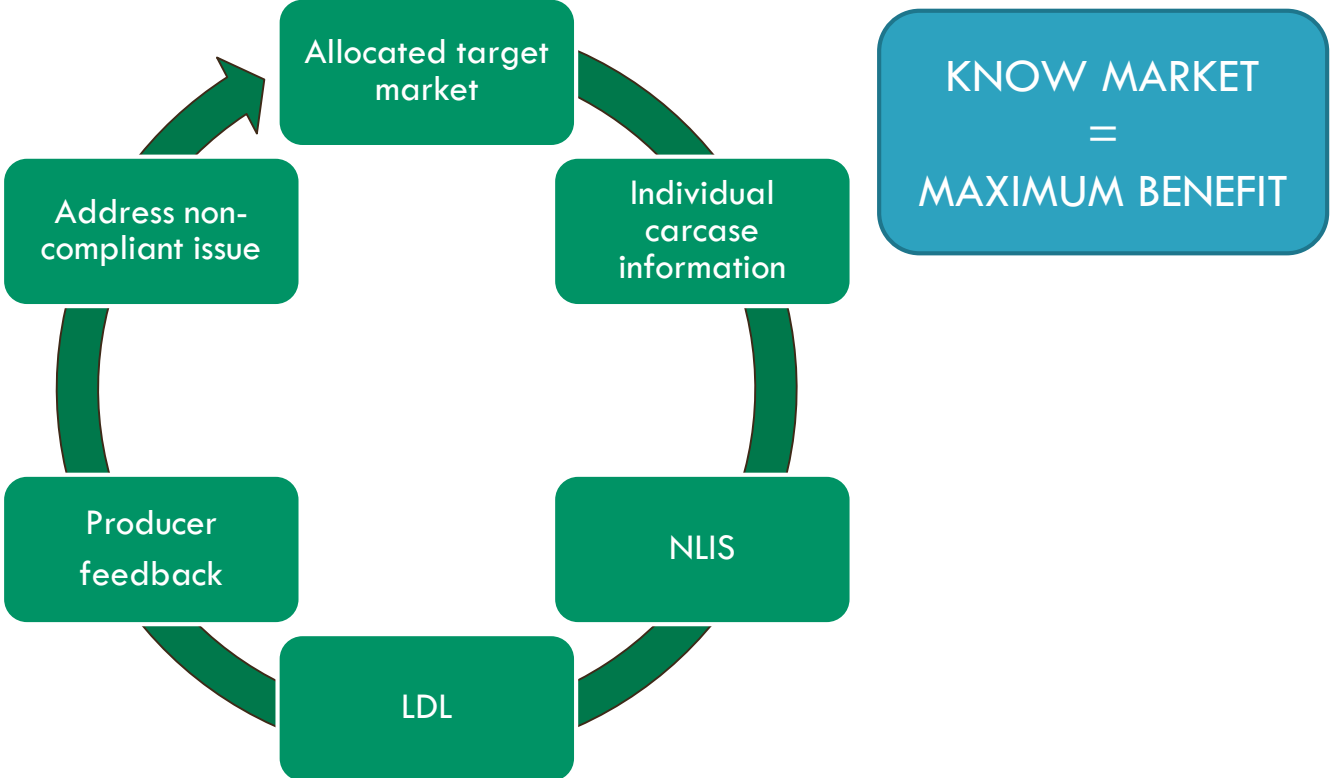
Eating quality

❑ Consumer is King

❑ Unfavourable association with Lean Meat Yield

❑ Important for willingness to pay – especially long term

❑ Across country comparisons

❑ Vision for a new Mark II MSA

Key trait is intramuscular fat

- Juiciness, flavour, tenderness

- 4.2 ± 0.04% (Xbred mean)

- Ideal 5% or more

- Mod/high heritability (0.47)

- Called marbling in beef

IMF vs MSA consumer score

IMF nails juicy and flavour
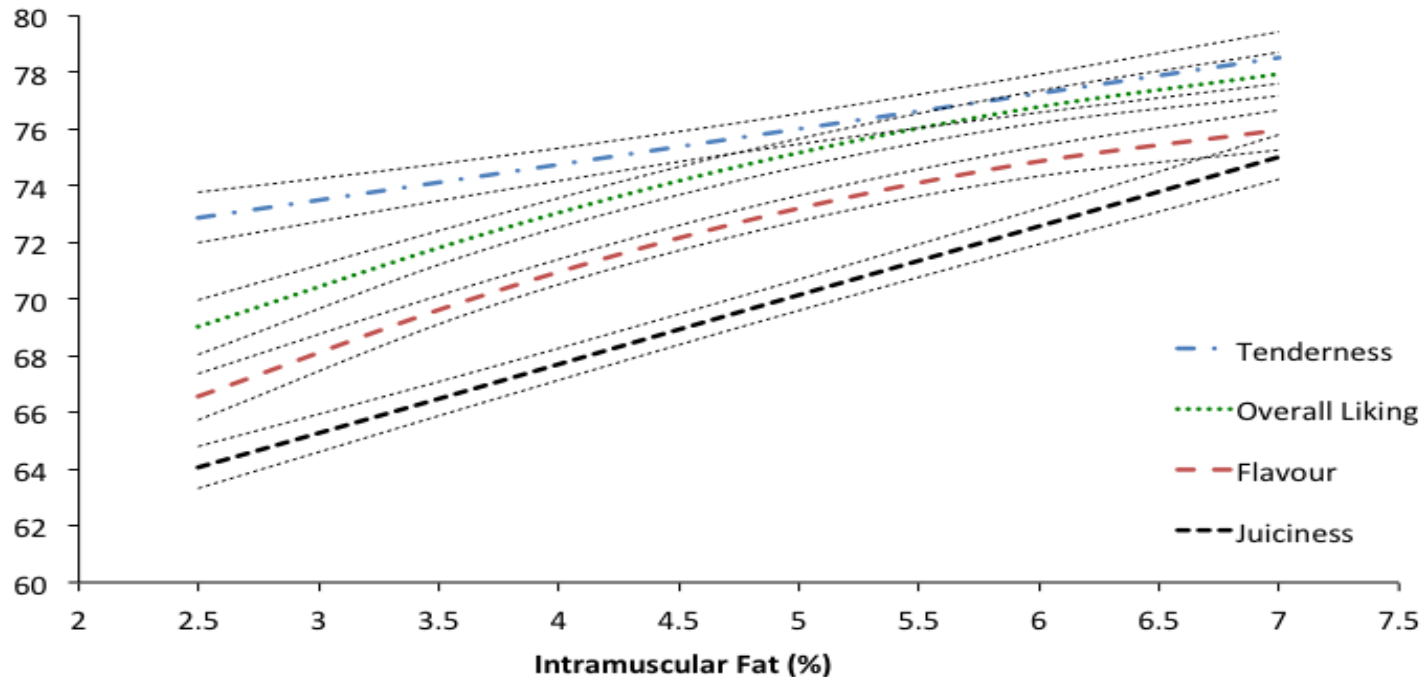
LAMBPLAN Genetic Trends (April 2017)
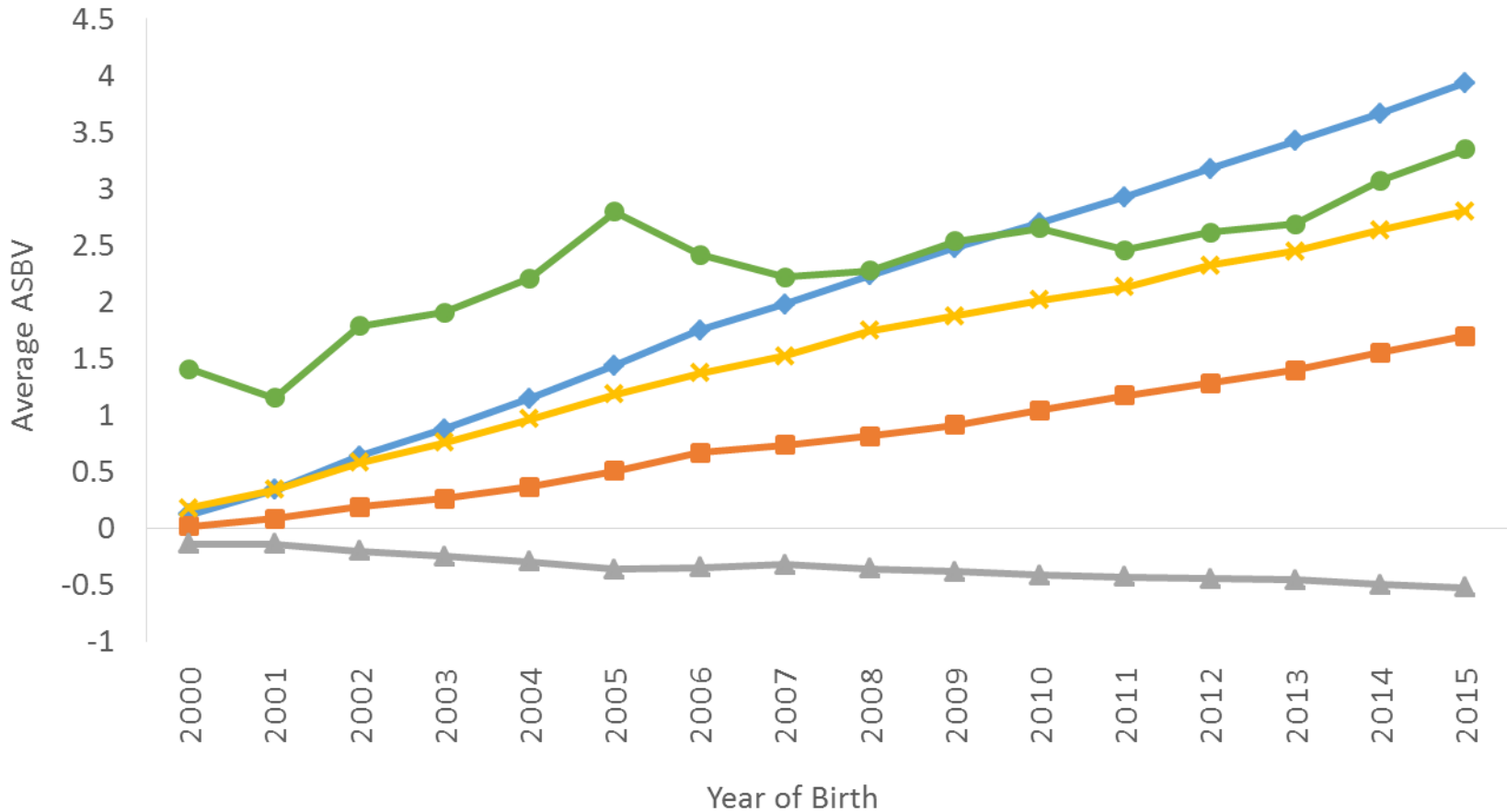
New Yield and Eating Quality ASBVs

	LAMBPLAN Average	Top 10%
Quality		
☐ **IMF** – Intra-muscular Fat ⬆	-0.5	-0.1
☐ **SF5** – Shear Force ⬇	2.7	0.2
Quantity		
☐ **LMY** – Lean Meat Yield ⬆	2.8	4.1
☐ **DP%** - Dressing Percentage ⬆	1.7	2.4

Trait	IMF %	SF5 kg	LMY %	DP% %
ASBV	-0.1	-0.5	2.4	2.0
Acc	50	45	62	52

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Terminal Sire Indexes

☐ Two new eating quality indexes

Trait	Carcase +	EQ	Lamb 2020	LEQ
bwt	0.15	0.06	0.07	0.07
wwt	2.85	1.55	1.85	1.28
pwt	4.4	3.15	2.8	2.6
pemd	1.46	1.07	1.44	1.17
pfat	0.14	0.04	0.59	0.33
pfec	0.06	0.16	-52.24	-35.83
cemd	1.5	1.15	1.42	1.25
ccfat	-0.5	-0.4	0.07	-0.12
dress	1.31	1.09	1.1	1.03
lmy	1.66	0.91	1.14	0.87
sf5	0.77	-2.41	0.62	-2.06
imf	-0.27	0.09	-0.14	0.1
tlike	-1.21	1.42	-1.12	1.27

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Willingness to pay x eating quality
O'Reilly, Pannier et al 2016

	Fail	**Pass (3*)**	**Credit (4*)**	**Distinction (5*)**
USA	46%	100%	150%	209%
China	57%	100%	147%	212%
AUS	53%	100%	141%	189%

Grilled lamb, hot pot in progress right now

MSA model

Use carcase variables to predict Sheepmeat Eating Quality score

- ☐ Hot Carcase Weight
- ☐ Lean Meat Yield
    - ◼ Direct = DEXA
    - ◼ Indirect = GR x eye muscle depth
- ☐ Intramuscular Fat

- ☐ All are significant predictors

So grids will evolve based on lean meat yield and eating quality

- They will be more complex

- They will represent objective measures of the carcase

- They will include
  - HCWT
  - Lean Meat Yield (& fat score)
  - Eating quality index

What might future grids look like?

Will include weight.
Will include LMY (broken up into forequarter middle and hindquarter)
Will include EQ index
Possibly compliance bonus

		Weight (kgs)										
LMY	FS	0-10	12-16	16-18	18-19	20-22	22-24	24-26	26-28	28-30	30-32	32+
54-56	5											
56-57	4											
57-58	3											
58-60	2											
60+	1											
					MSA loin index= 72							

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54-56	5											
56-57	4											
57-58	3											
58-60	2											
60+	1											
					MSA loin index= 72							

The market sweet spot
(18 – 26kg FS 2,3)

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What might future grids look like?

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Will include LMY (broken up into forequarter middle and hindquarter)
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Possibly compliance bonus

		Weight (kgs)										
LMY	FS	0-10	12-16	16-18	18-19	20-22	22-24	24-26	26-28	28-30	30-32	32+
54-56	5											
56-57	4											
57-58	3											
58-60	2											
60+	1											
					MSA loin index= 72							

4* or above loin (0% failure rate !)

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True value of the carcase

Carcase value ($) = Wt retail cuts (kg) X Value of the cuts ($/kg)

Key Points

- ❑ Markets outlook (domestic and export) generally positive

- ❑ Know your carcass market and talk to your processor

- ❑ Lean Meat Yield

  - Important to producers, processors and consumers. Be aware of impact on EQ.

- ❑ Livestock Data Link

  - Delivering better feedback, enables more informed decisions

- ❑ Eating quality

  - Key to consumers. Utilise new ASBVS and indexes

- ❑ Future grids – based on objective measurement of the carcase

  - Likely to start including LMY and EQ