

**SHEEP INDUSTRY TECHNOLOGY DAY**



# ADVANCES IN NUTRITION

**MARCH 10, 2016**

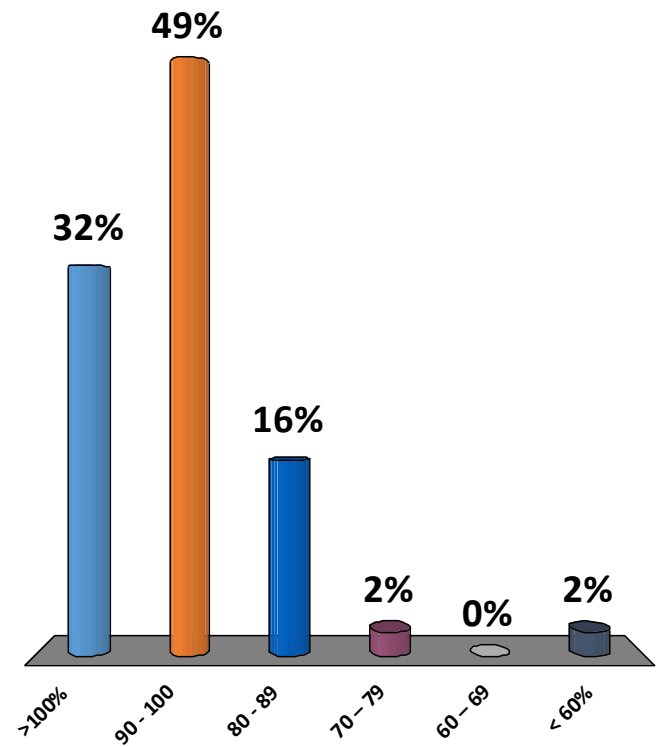
**PRESENTED BY: HAMISH DICKSON – AGRIPARTNER CONSULTING**

**P: 0427 446 499 W: [www.agripartner.com.au](http://www.agripartner.com.au)**



What is your average lambing %  
(from ewes mated)?

1. >100%
2. 90 - 100
3. 80 - 89
4. 70 - 79
5. 60 - 69
6. < 60%



# THE PROBLEM...

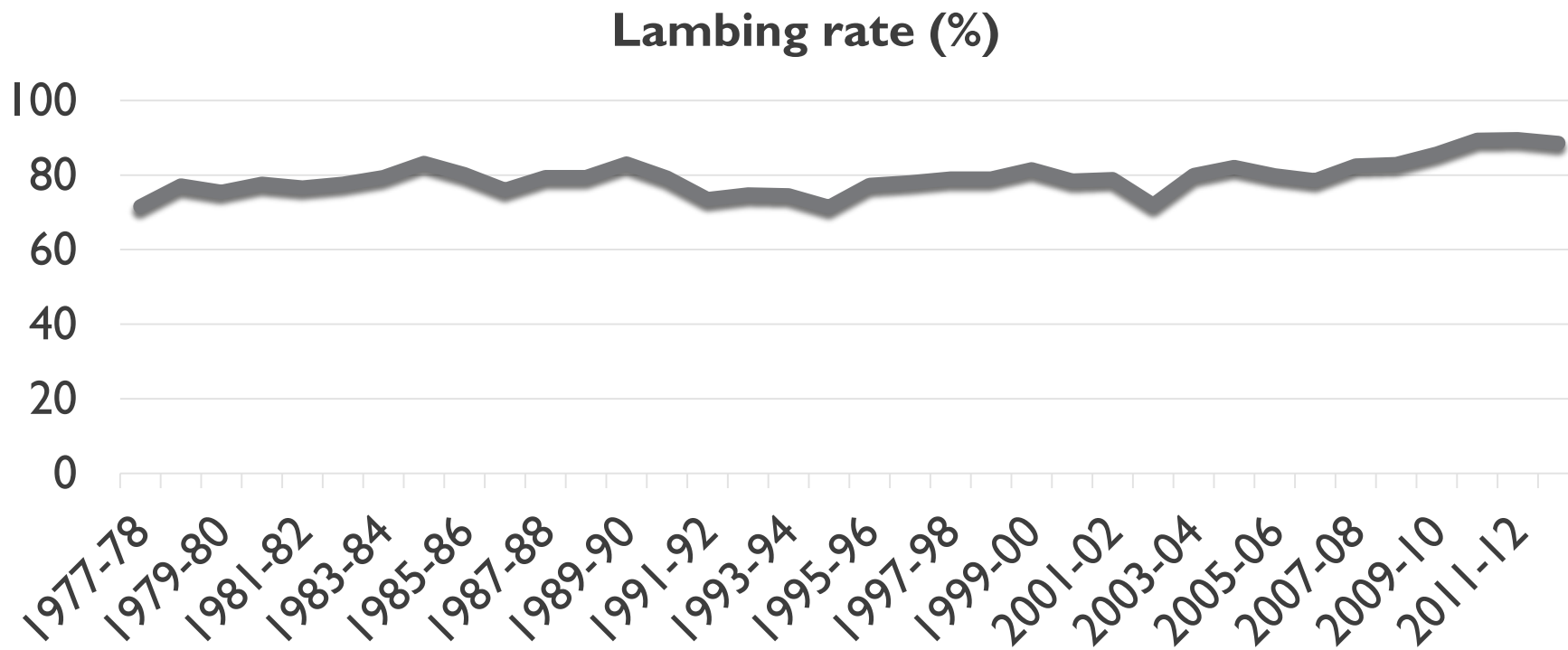
■ Are we seeing genetic potential?

Year	Lamb Growth Rate (g/hd/d)
1971	301
1974	409
1976	243
2000	359
2001	350
Now?	

Source: Jolly & Wallace (2007)

# THE PROBLEM...

■ Are we seeing genetic potential?

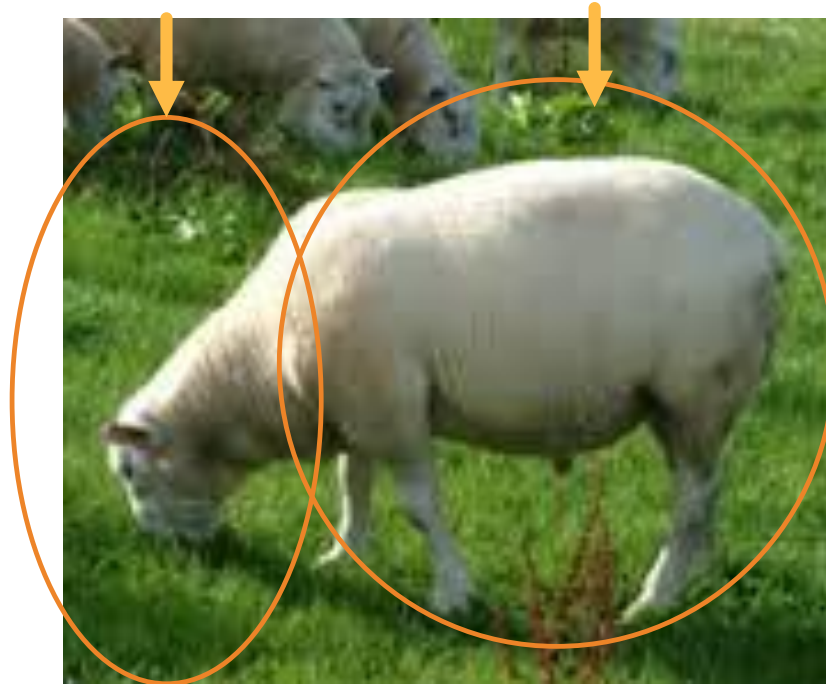


Sources: ABARES

# WHY?

## Phenotype = Genetics + Environment

How the animal  
looks and performs



# ENVIRONMENT...

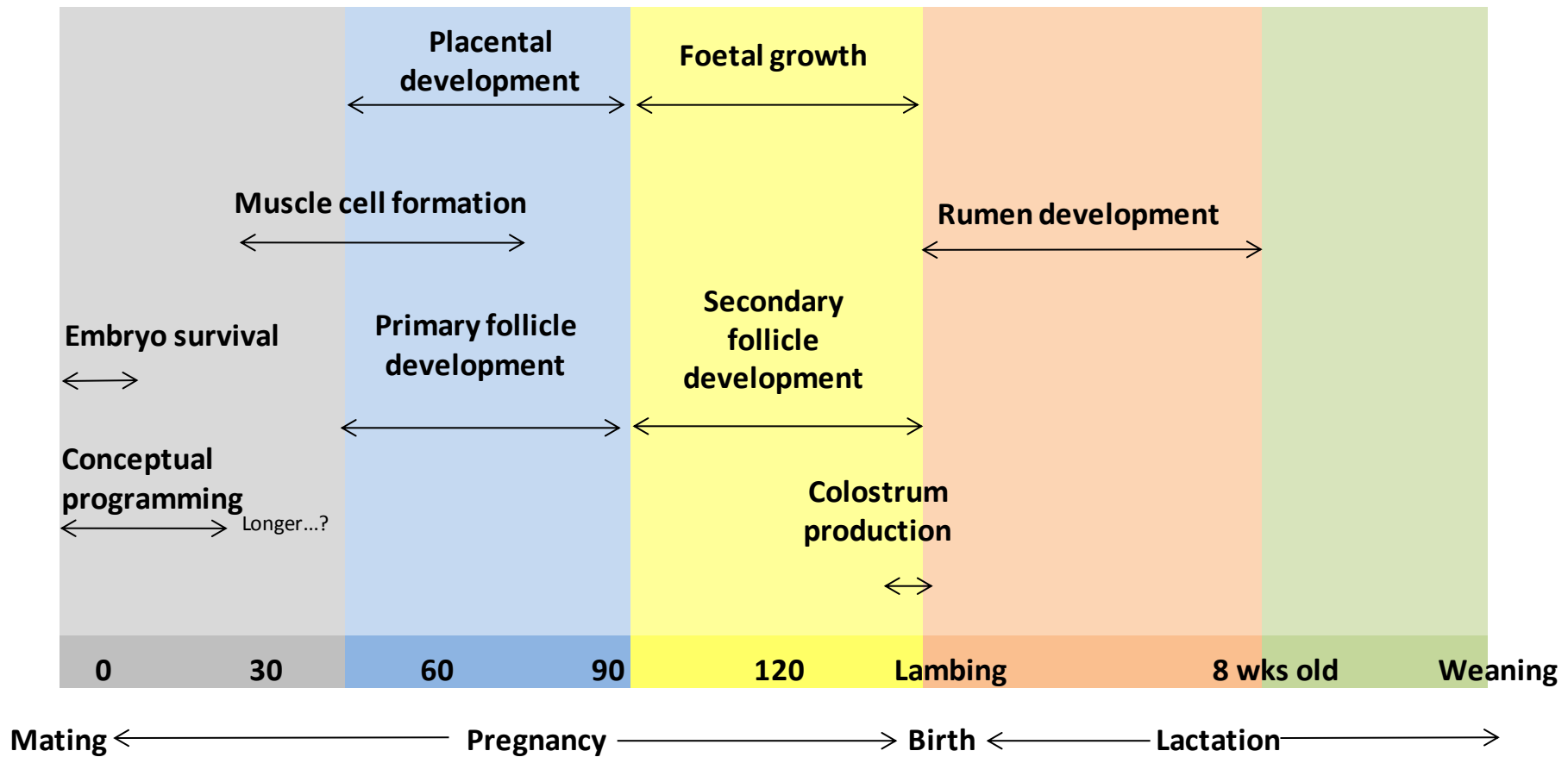
- Weather
- Health
- Season
- Management
- Pasture
- Age
- NUTRITION





# PLAN AND HIT YOUR TARGET!







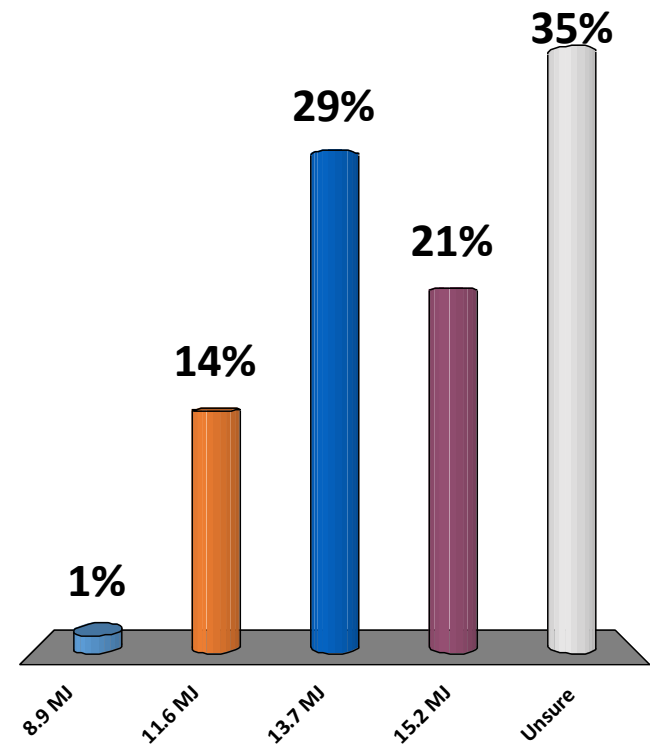
# ADVANCED NUTRITION

- Minerals
- Improved rumen development
- Grain conditioning
- Flushing
- Colostrum boosting



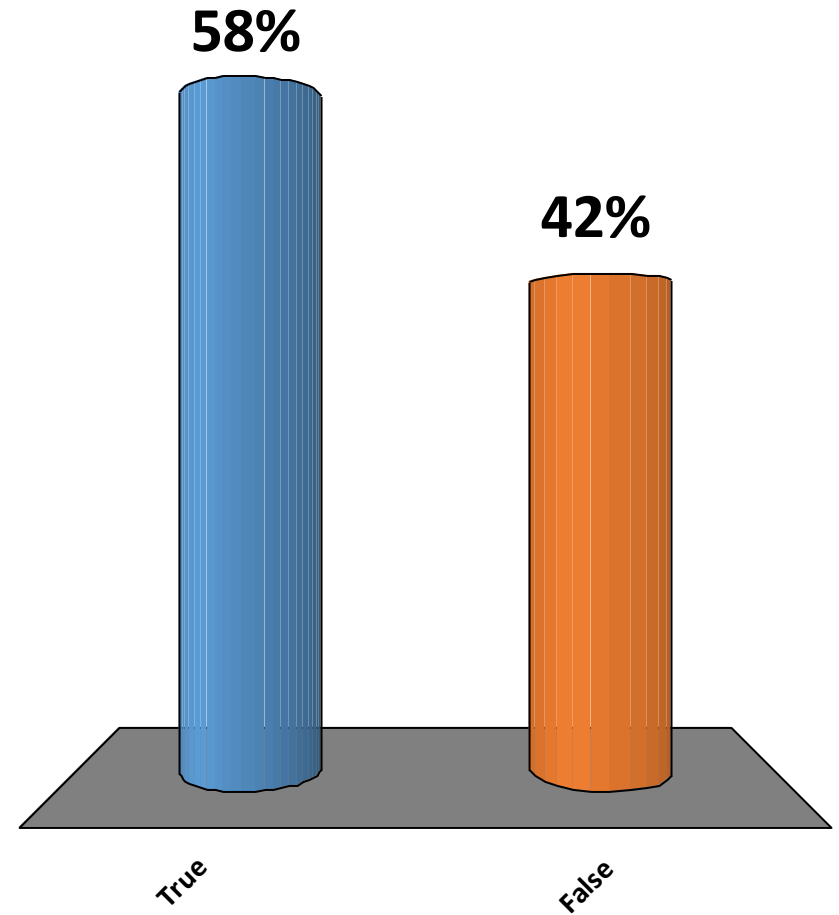
How much energy (MJ ME/day) does a single ewe in late pregnancy require each day?

1. 8.9 MJ
2. 11.6 MJ
3. 13.7 MJ
4. 15.2 MJ
5. Unsure



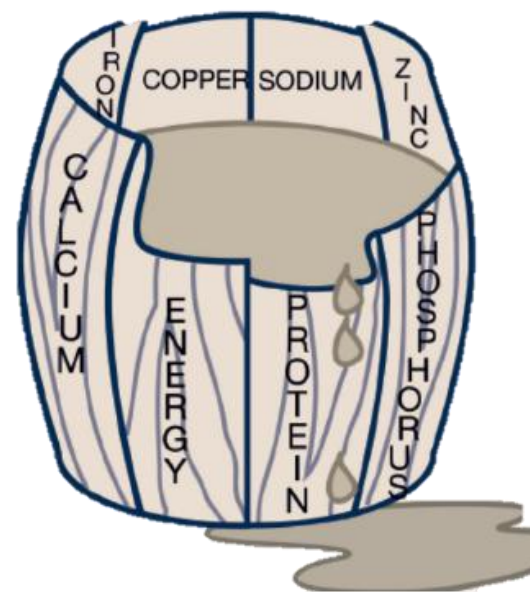
If unsure, would you know where to find that information immediately?

1. True
2. False



# PRIMARY LIMITING NUTRIENT

- Animal requirements
- Available feed
- Surplus/deficit



# SHEEP NUTRITIONAL REQUIREMENTS

- What determines dry matter intake?
- Why do we need to consider NDF?
- What does metabolisable energy (ME) influence?
- Why is protein important?



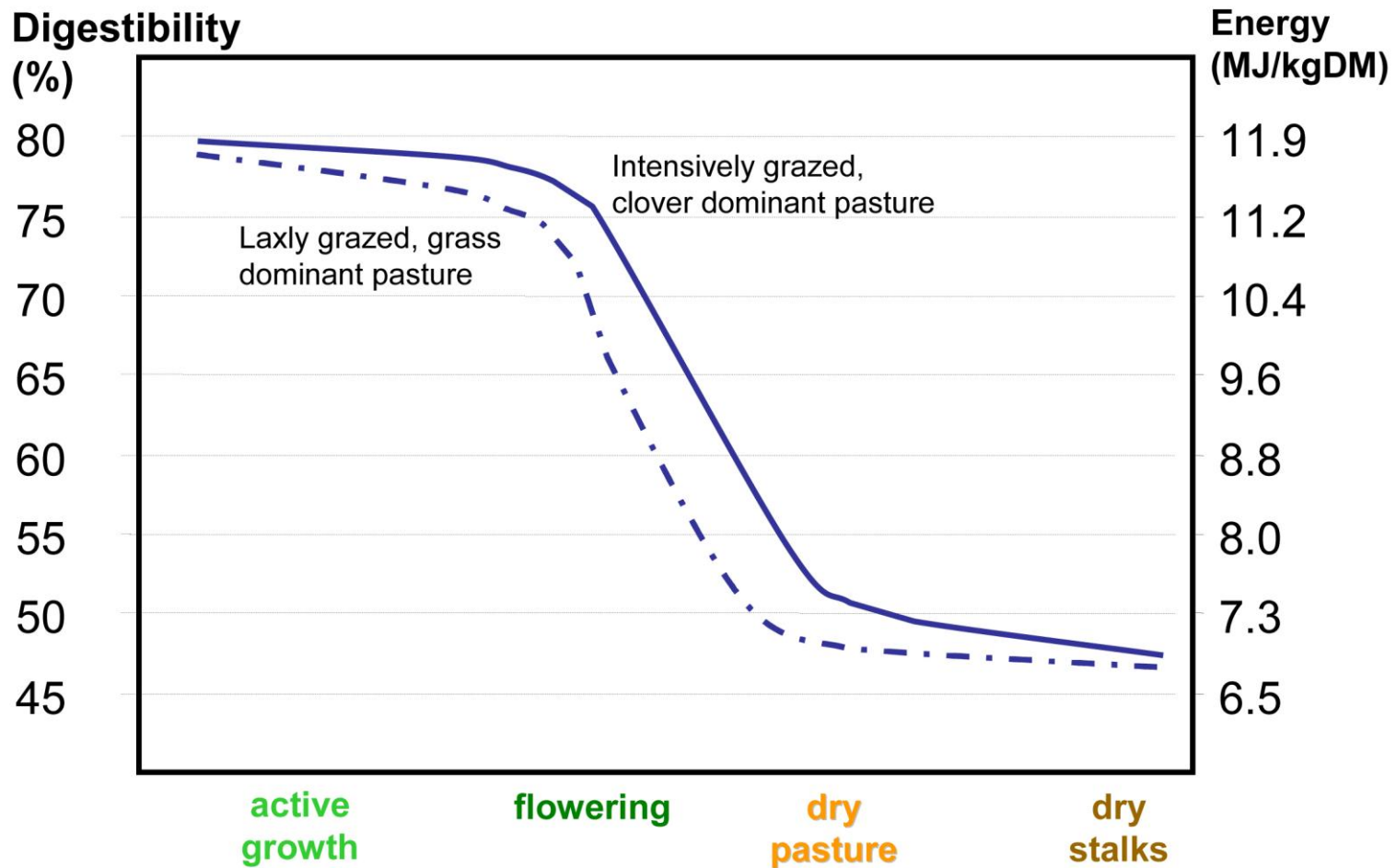
Source: Evergraze

# SHEEP REQUIREMENTS

	DMI		ME		CP	
	(%)	(kg/day)	(MJ/kg DM)	(MJ/day)	(%)	(g/day)
Maintenance	1.72	1.12	8.0	<b>8.91</b>	7.5	<b>84</b>
Late pregnancy (Single)	2.65	1.72	8.0	<b>13.73</b>	8.7	<b>149</b>
Late pregnancy (Twin)	2.68	1.74	10.0	<b>17.39</b>	10.5	<b>183</b>
Early lactation (Single)	2.88	1.87	8.0	<b>14.94</b>	11.8	<b>220</b>
Early lactation (Twin)	2.92	1.89	10.0	<b>18.92</b>	15.5	<b>294</b>
Weaner lambs	4	1.40	11	<b>15.4</b>	16	<b>224</b>
Replacement ewe lambs	3	1.35	10	<b>13.5</b>	14	<b>189</b>

Ewes – 65kg, Weaners – 35kg, Replacement ewe lambs – 45kg  
 Adapted from NRC 1985 & 2007

# PASTURE QUALITY





# ALIGNING FEED AND REQUIREMENTS

- Stubble (grazed) – 7.0ME, 6% CP, 70% NDF, 75% DM
- Single bearing ewe mid preg (twin) requirements
  - DMI – 2.5% x 65kg = 1.6 kg DM
  - NDF – 70% = 1.7% of LW = 1.1kg DM (1.46kg as fed)

	ME	CP
Ewe requirements	12.8 MJ/day	137g/day
Stubble supply	7.7 MJ/day	66g/day
Deficit / surplus	-5.1 MJ/day	-71g/day
<b>Balance (0.4kg cereal)</b>	<b>+0MJ/day (5.1)</b>	<b>-27g/day (+44)</b>

# ADVANCES IN SHEEP NUTRITION

- Nutrition is critical for all classes of sheep to achieve genetic potential.
- Focus on primary limiting nutrient
- Supplementary feeds should address quality NOT quantity
- Consider short term & long term benefits
- Will we hit our targets now...?

# PLAN AND HIT YOUR TARGET!



# QUESTIONS...?

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