



CRC

for

Premium

Quality

Wool

# Whole Body Differences that affect Wool Production

Produced for the CRC for Premium Quality Wool undergraduate program by;  
Dr. Janelle Hocking Edwards , The University of Western Australia.



# Variation between merino strains

	<i>Fine- wool</i>	<i>Medium- wool</i>	<i>Strong- wool</i>	<i>%</i>
<i>GFW (kg)</i>	4.4	4.5	5.4	28
<i>CFW (kg)</i>	2.6	3.0	3.7	28
<i>Yield (%)</i>	59.7	66.2	69.0	29
<i>Density (fibres/m<sup>2</sup>m)</i>	37.1	36.8	30.4	27
<i>Crimps per 25mm</i>	15.8	12.3	8.0	74
<i>Fibre diameter (μm)</i>	19.8	20.5	24.1	43
<i>Staple length (mm)</i>	83	97	112	50

CRC

for

Premium

Quality

Wool

Janelle Hocking Edwards  
Source: Dunlop (1962)



# Genetically superior sheep for wool production do not:

- tend to be bigger sheep
- eat more feed per unit live weight
- have a more effective digestion system
- have a different metabolic rate

**They tend to be more efficient converters of feed to wool**

CRC

for

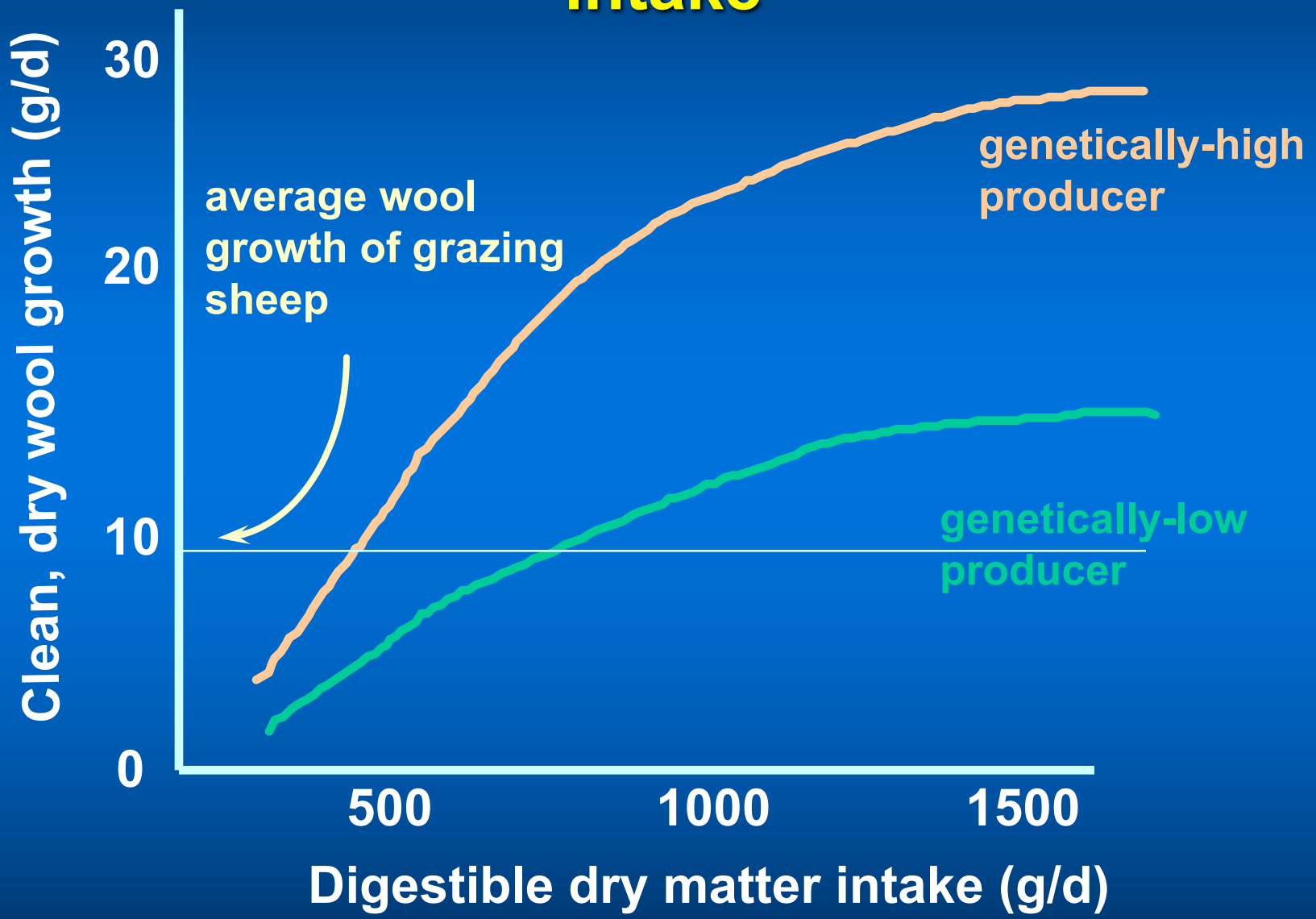
Premium

Quality

Wool



# Wool growth is directly related to feed intake



CRC  
for  
Premium  
Quality  
Wool



# Whole body metabolism

- **cystine**
  - Fleece Plus < Fleece minus
- **endocrinology**
  - Thyroxine
- **metabolites**
  - urea, acetate, lactate, glutathione, K

CRC

for

Premium

Quality

Wool