

*Lessons from the*

**Angus Sire  
Benchmarking Program**

**CAPITALISING ON THE GENETIC  
VARIATION BETWEEN ANGUS  
ANIMALS**





# How much genetic variation exists between Angus Animals?





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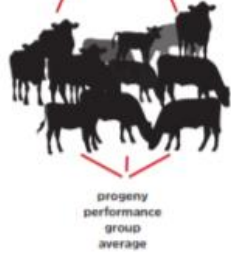
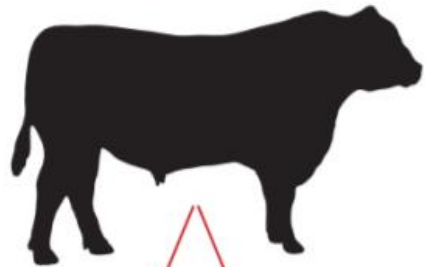
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## STEP 1

#1

CALCULATE AVERAGE PROGENY PERFORMANCE FOR EACH SIRE



## STEP 2

HIGHEST 5



#2

RANK EACH COHORT OF SIRES ON PROGENY PERFORMANCE

(Highest to Lowest on each trait)

LOWEST 5



## STEP 3

#3

CALCULATE DIFFERENCE IN PROGENY PERFORMANCE BETWEEN 5 HIGHEST AND 5 LOWEST PERFORMING SIRES IN EACH COHORT



AVERAGE PROGENY PERFORMANCE OF 5 HIGHEST SIRES

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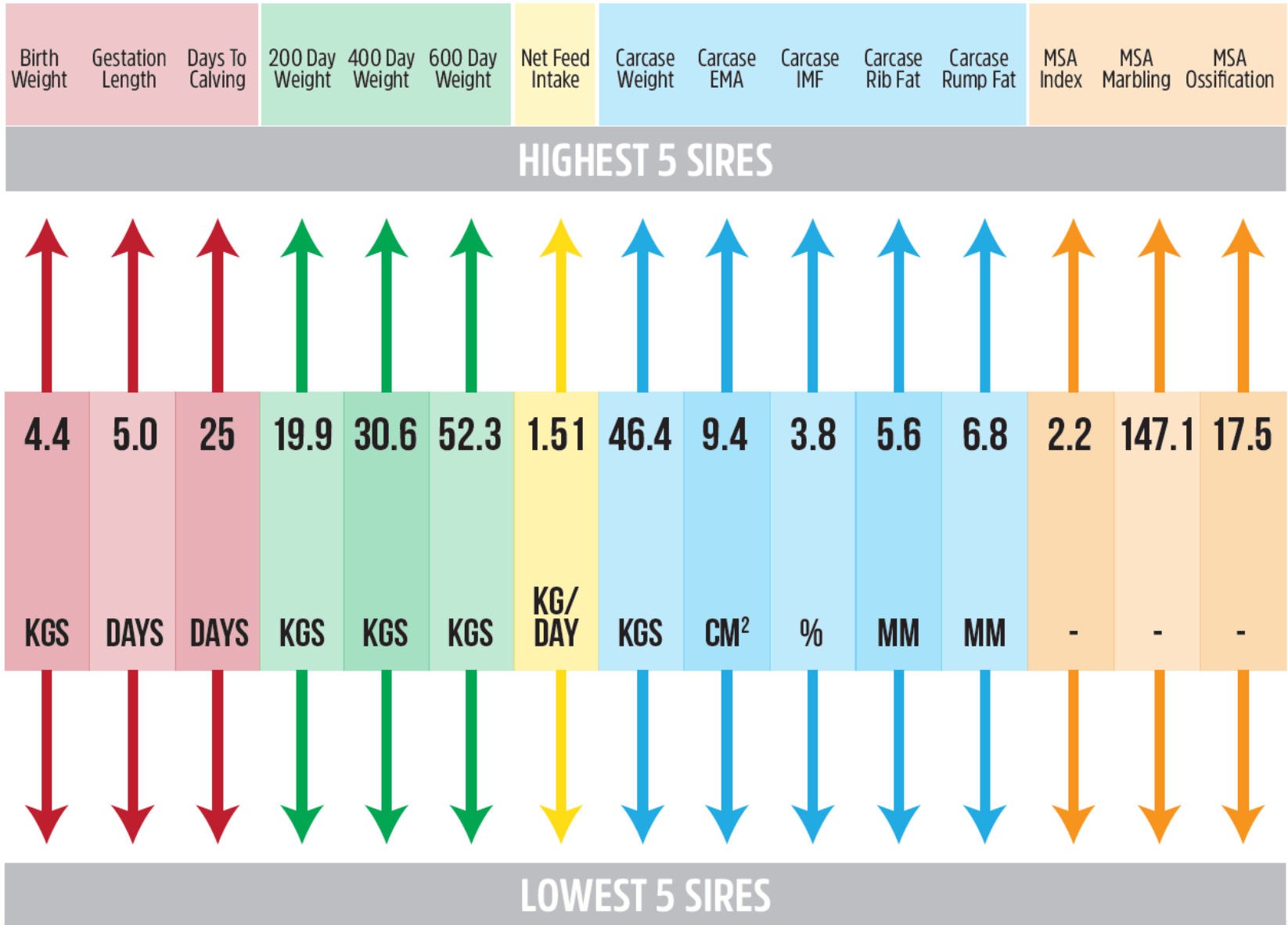


AVERAGE PROGENY PERFORMANCE OF 5 LOWEST SIRES

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DIFFERENCE IN AVERAGE PROGENY PERFORMANCE



There is a significant amount of genetic variation between animals within the Angus population



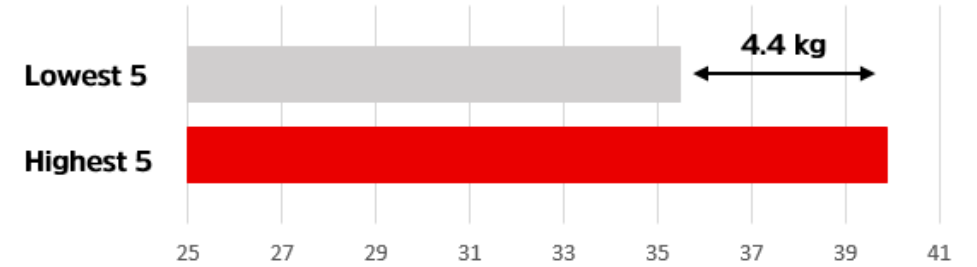
# Variation in Fertility Traits

**Table 1 : Difference between average progeny performance of highest five and lowest five performing sires for birth and maternal traits**

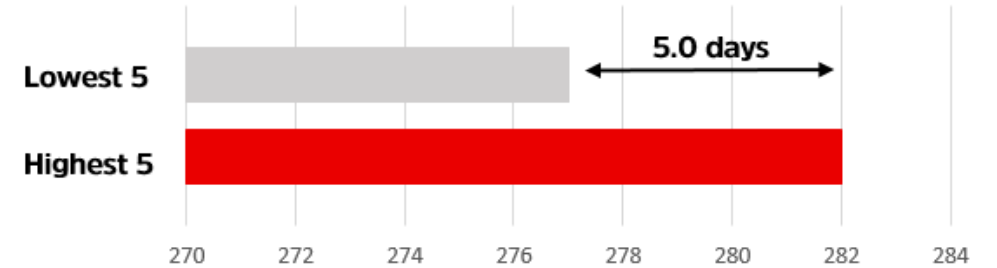
	Birth Weight	Gestation Length	Days to Calving
Cohort 5	4.9 kg	5.7 days	21 days
Cohort 6	4.6 kg	5.3 days	18 days
Cohort 7	3.8 kg	4.0 days	37 days
Average	4.4 kg	5.0 days	25 days



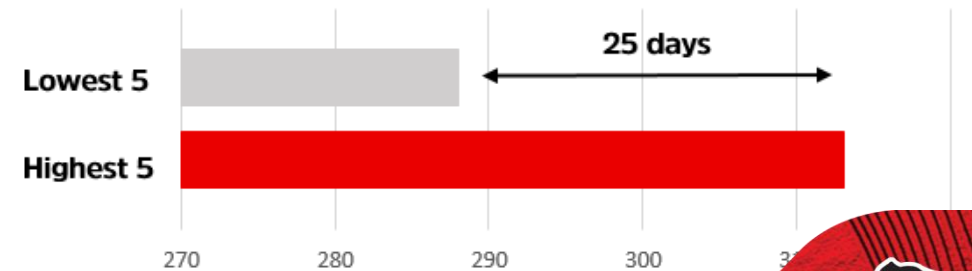
**Difference in Birth Weight**



**Difference in Gestation Length**



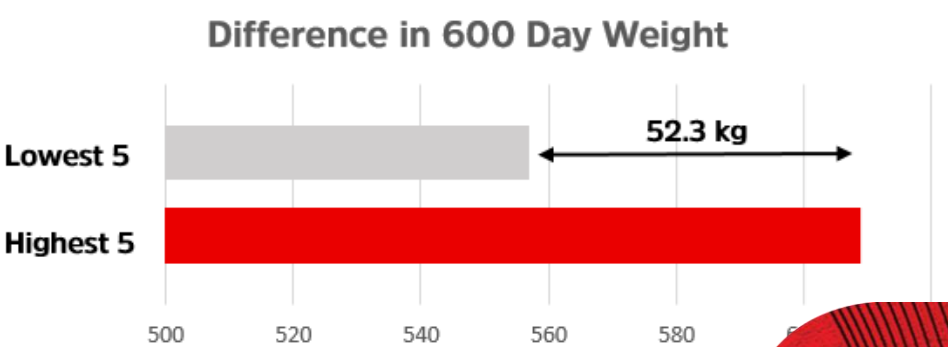
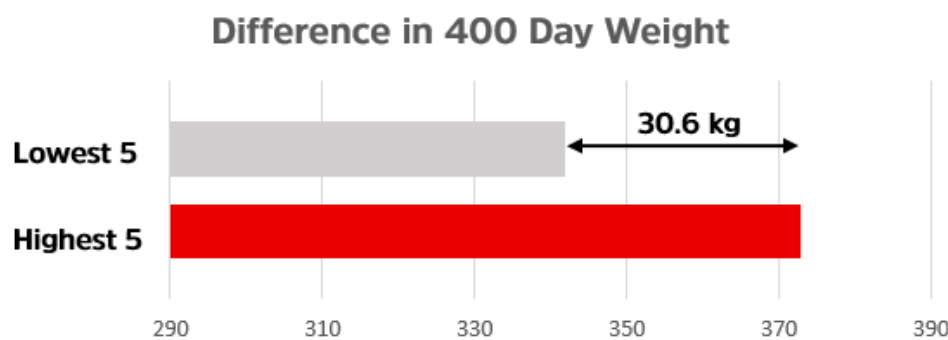
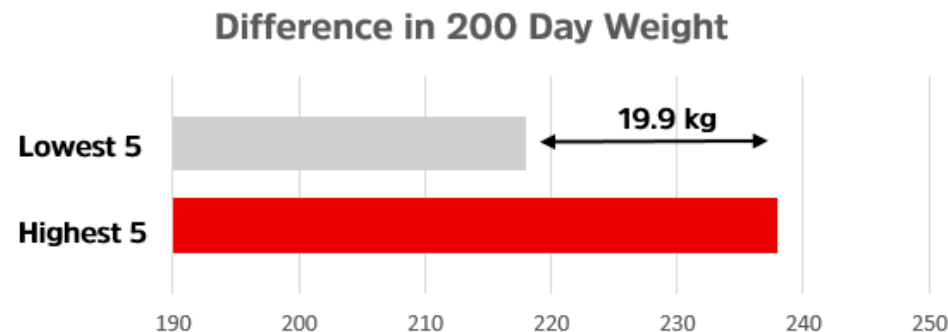
**Difference in Days to Calving**



# Variation in Growth Traits

**Table 2 : Difference between average progeny performance of highest five and lowest five performing sires for growth traits (200, 400 and 600 days)**

	200 Day Weight	400 Day Weight	600 Day Weight
Cohort 5	22.8 kg	32.7 kg	61.1 kg
Cohort 6	18.0 kg	28.4 kg	49.8 kg
Cohort 7	19.0 kg	30.8 kg	46.2 kg
Average	19.9 kg	30.6 kg	52.3 kg

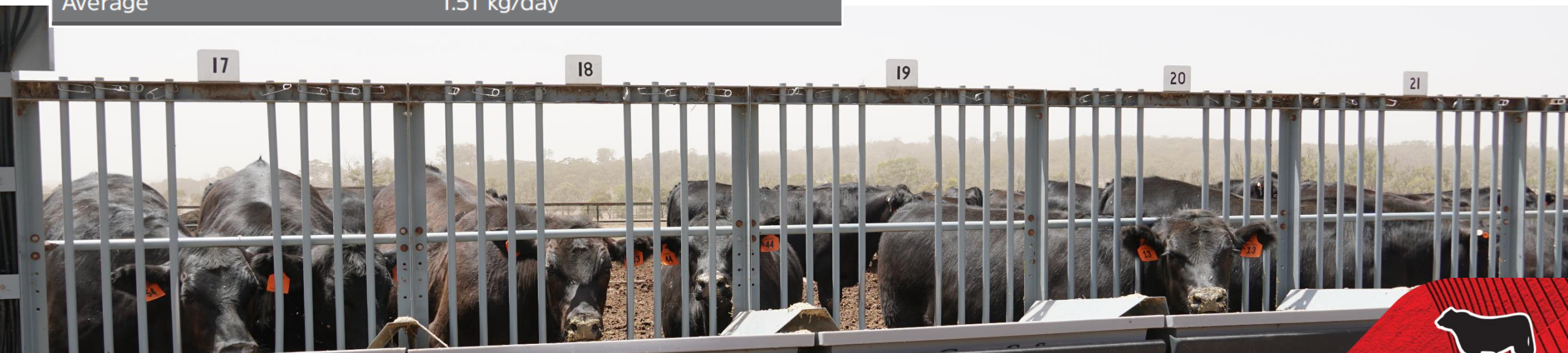
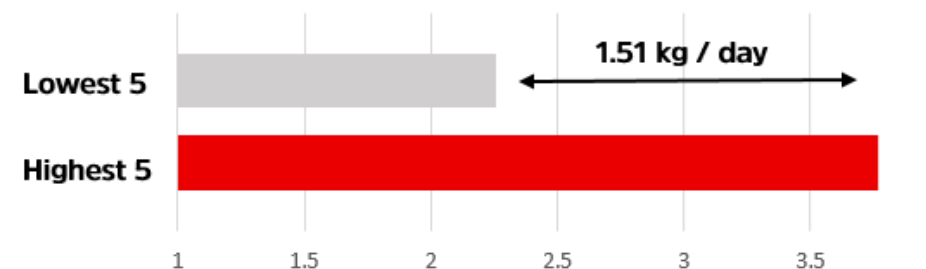


# Variation in Net Feed Intake

**Table 3 : Difference between average progeny performance of highest five and lowest five performing sires for Net Feed Intake - Feedlot**

	Net Feed Intake - Feedlot
Cohort 5	1.56 kg/day
Cohort 6	1.72 kg/day
Cohort 7	1.24 kg/day
Average	1.51 kg/day

Difference in Net Feed Intake - Feedlot



# Variation in Carcase Composition

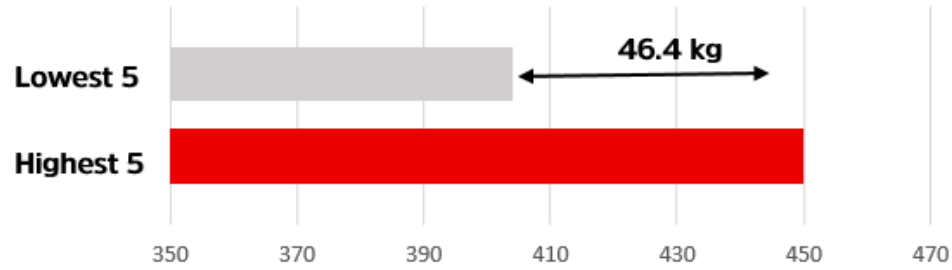
**Table 4 : Difference between average progeny performance of highest five and lowest five performing sires for Carcase Composition Traits (Carcase Weight, Eye Muscle Area, Intramuscular Fat, Rib Fat, Rump Fat)**

	Carcase Weight	Carcase EMA	Carcase IMF	Carcase Rib Fat	Carcase Rump
Cohort 5	48.3 kg	10.9 cm <sup>2</sup>	3.8 %	7.8 mm	7.4 mm
Cohort 6	50.5 kg	10.6 cm <sup>2</sup>	4.2 %	4.4 mm	5.7 mm
Cohort 7	40.4 kg	6.7 cm <sup>2</sup>	3.5 %	4.6 mm	7.3 mm
Average	46.4 kg	9.4 cm <sup>2</sup>	3.8 %	5.6 mm	6.8 mm

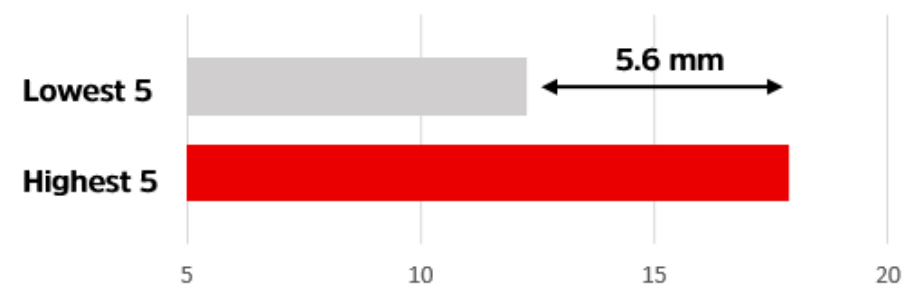




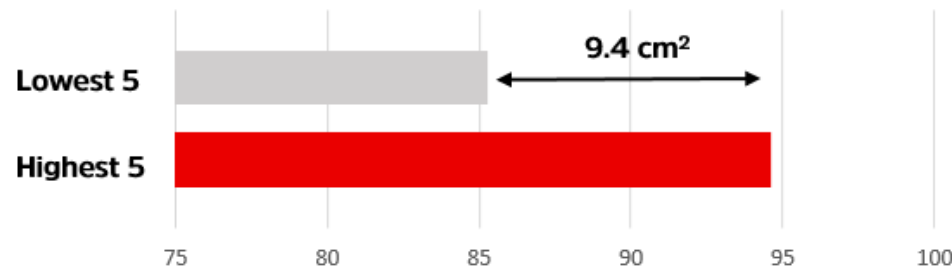
### Difference in Carcase Weight



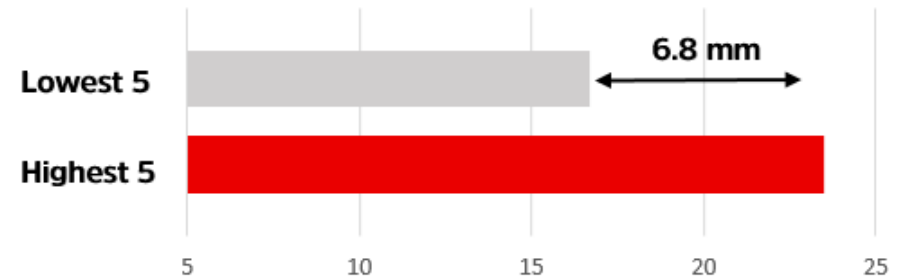
### Difference in Carcase Rib Fat



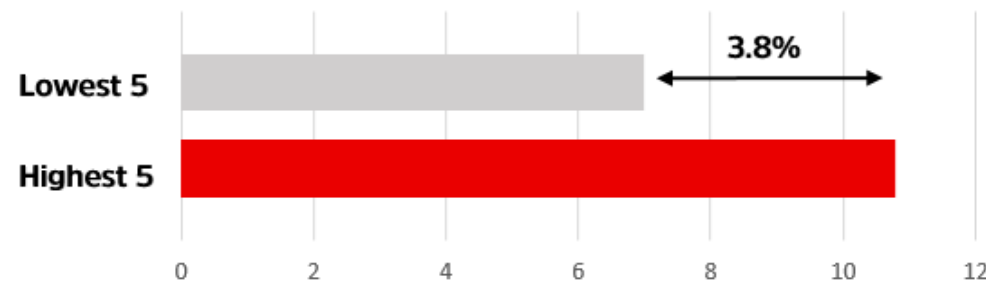
### Difference in Eye Muscle Area



### Difference in Carcase Rump Fat



### Difference in Intramuscular Fat



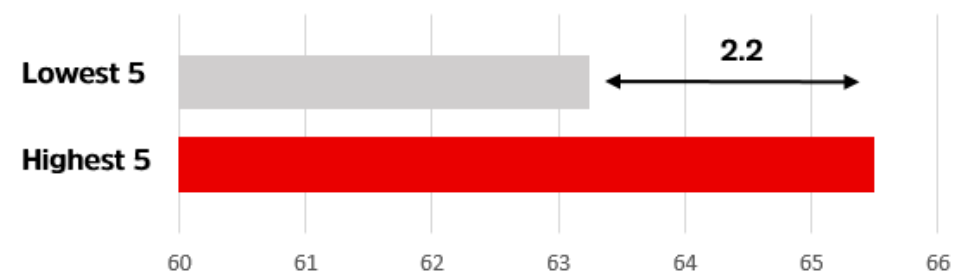
# Variation in Carcase Quality

**Table 5 : Difference between average progeny performance of highest five and lowest five performing sires for Carcase Quality traits**

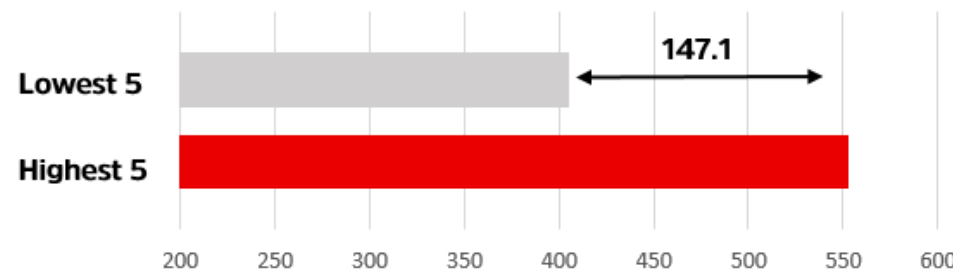
	MSA Index	MSA Marbling	MSA Ossification
Cohort 5	2.5	154.6	20.8
Cohort 6	2.2	148.2	16.4
Cohort 7	2.0	138.5	15.4
Average	2.2	147.1	17.5



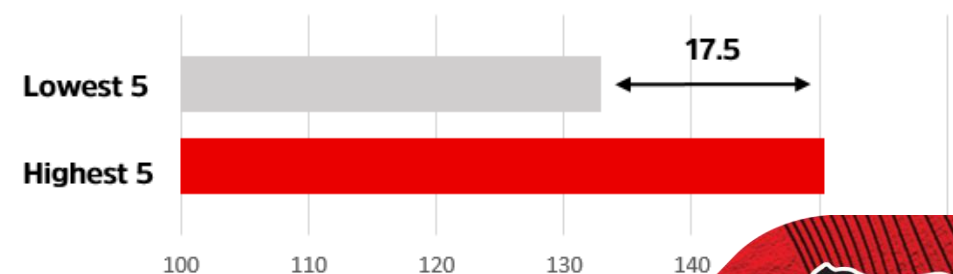
**Difference in MSA Index**



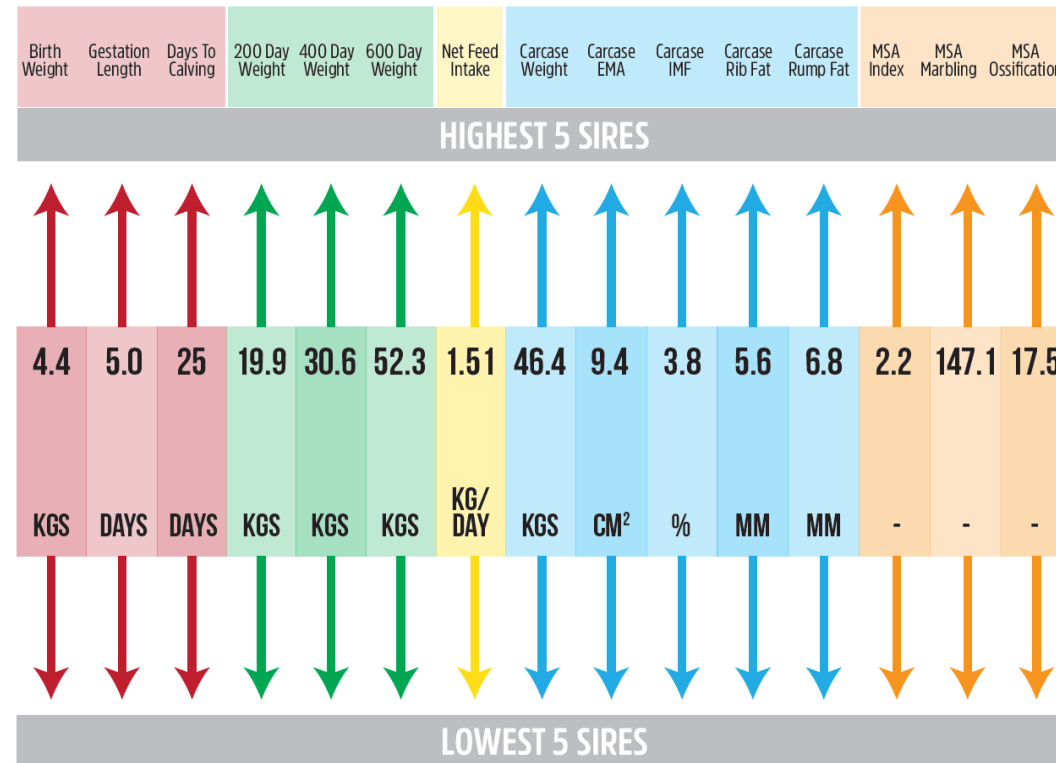
**Difference in MSA Marbling**



**Difference in MSA Ossification**



# There is a significant amount of genetic variation between animals within the Angus population



This variation presents an opportunity to improve the productivity and profitability of Angus enterprises by utilising better genetics



Enhancing & Promoting  
the value of Angus

Search for an animal by ID

e.g. ABCZ123

SUBMIT

HOW DO YOU  
REALLY KNOW  
IT'S ANGUS



ABOUT

- General Information
- Consultative Committee
- Bull Nominations

SIRE COHORTS

- First Cohort
- Second Cohort
- Third Cohort
- Fourth Cohort
- Fifth Cohort
- Sixth Cohort
- Seventh Cohort
- Eighth Cohort
- Ninth Cohort

LESSONS FROM THE ASBP

- Project Overview
- Capitalising on genetic variation
- EBVs reliably predict progeny performance
- Starting vs. Finishing EBVs
- Individual Sire EBV Changes







**Angus Australia gratefully acknowledges the co-funding contribution  
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