



# Wagyu Beef Genomics Program

2 November 2018

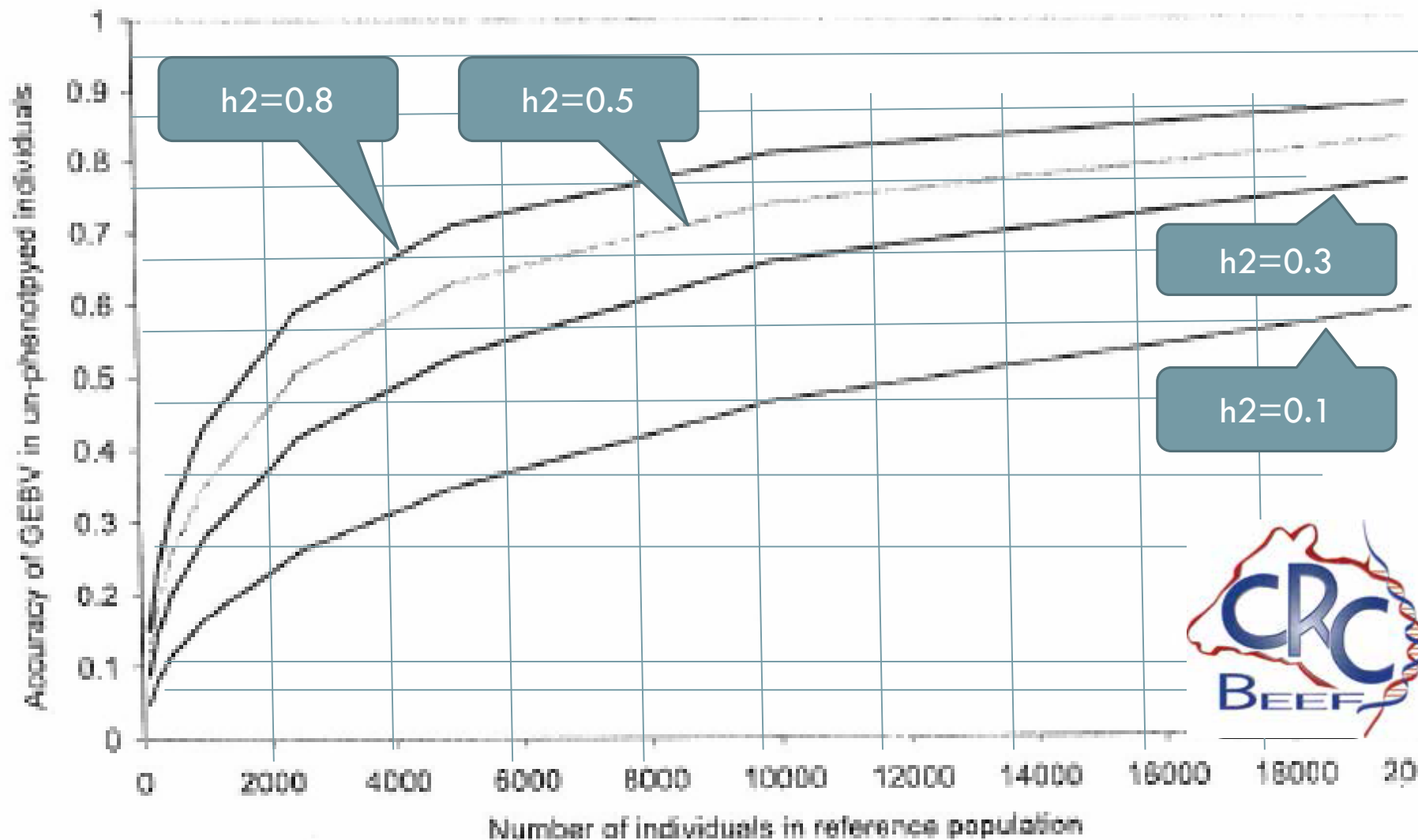


# BGP Impact assessment

Summary of Impact Measures	
Total Benefits (PV)	R2 651 240 385
Total Input Costs (PV)	(R834 141 765)
Total Usage Costs (PV)	(R27 246 756)
<b>Economic Net Present Value (ENPV)</b>	<b>R1 789 851 863</b>
<b>Economic Internal Rate of Return (EIRR)</b>	<b>18.70%</b>
<b>Benefit Cost Ratio (BCR)</b>	<b>3.08</b>



# Effect of number of individuals on accuracy of prediction equation





# US ANGUS Progeny Equivalents with SS EPD

## Genotyped non-parent animals

	heritability	SS Prog Equivalents	Ave SS Accuracy
<b>CED</b>	<b>0.19</b>	<b>28</b>	<b>0.36</b>
<b>Milk</b>	<b>0.12</b>	<b>33</b>	<b>0.30</b>
<b>SC</b>	<b>0.48</b>	<b>13</b>	<b>0.40</b>
<b>MARB</b>	<b>0.48</b>	<b>9</b>	<b>0.34</b>
<b>Cwt</b>	<b>0.44</b>	<b>9</b>	<b>0.32</b>

Trait	data gathered to date (30-Sept-2017)		Minimum target # data required for phenotypic reference population	Minimum target # data required for genomic reference population
	BGP	BREED		
Birth weight		4500	3000	3000
200 days / wean weight		1400	3000	3000
400 days / year weight		1200	3000	3000
600 days / 18-month weight		700	3000	3000
MCW (mature cow weight)		100	3000	3000
Individual Feed Intake			1500	1500
Ultrasound scan data		4	1000	1000
Scrotal Data		15	1500	1500
Carcass data		0	1500	1500
Genotypes (50k)			3000	3000
Genotypes (150k)			0	
Genotype (+700k)			300	300
DTC (days to calving) or mating list data	0	0	3000	3000

Data	Rollover	18/19	19/20	20/21	21/22	22/23	Total
Feed Efficiency	50	150	200	300	400	500	1600
Carcass data on <u>fullblood</u> , purebred and F1 animals (if possible, using digital carcass camera)	0	1000	1000	1000	3000	5000	11000
Genotypes (50K)	390	800	800	800	1000	2000	5790

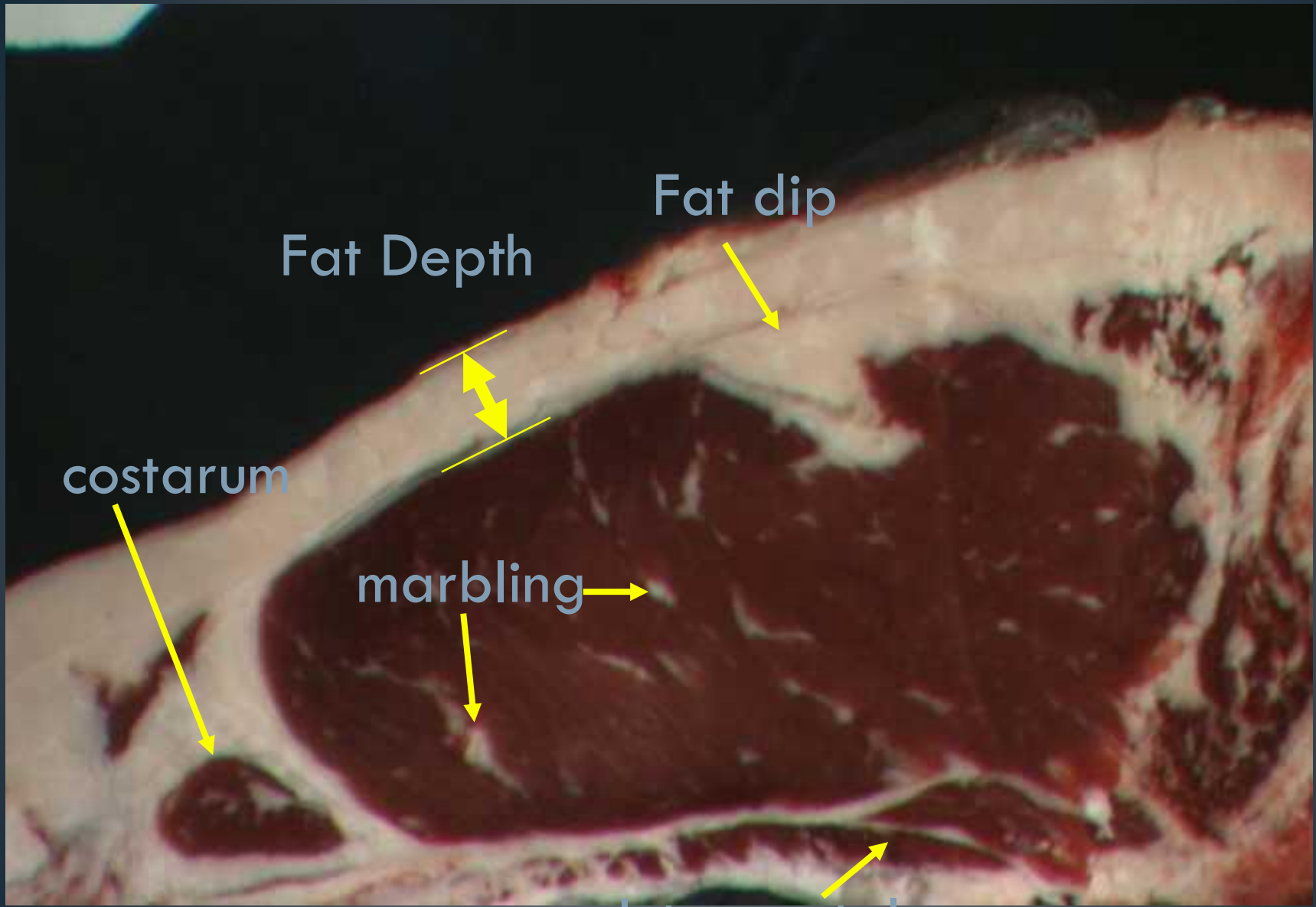
	Cost	2018 Roll	BGP Contribution 18/19	Producer contribution 18/19	Subsidy per test
Feed Intake #		98			
Feed Intake ( R ) Exc Vat	R6 000.00	R588 000.00	R98 000.00	R490 000.00	R1 000.00
Feed Intake ( R ) Inc Vat	R6 900.00	R676 200.00	R112 700.00	R563 500.00	R1 150.00
Carcass quality #					
Carcass quality ( R )	R150.00	R0.00			
50k SNP #		98			
50k SNP ( R )	R495.00	R48 510.00	R16 685.80	R31 824.20	R180.00
50k SNP ( R ) + Vat	R569.25	R55 786.50	R19 188.68	R36 597.82	R207.00
	Excl Vat	R131 888.68	R114 685.80	R521 824.20	
	Inc Vat		R131 888.68	R600 097.82	R1 357.00
			R131 888.68		

	Cost	18/19	BGP Contribution 18/19	Producer contribution 18/19	Subsidy per test
Feed Intake #		150			
Feed Intake ( R )	<b>R6 000.00</b>	R900 000.00	R163 400.00	R736 600.00	<b>R1 089.00</b>
Carcass quality #		R1 000.00			
Carcass quality ( R )	<b>R150.00</b>	R150 000.00	R25 000.00	R125 000.00	<b>R25.00</b>
50k SNP #		R800.00			
50k SNP ( R )	<b>R495.00</b>	R396 000.00	R160 000.00	R236 000.00	<b>R200.00</b>
	<b>Excl Vat</b>	<b>R348 400.00</b>	<b>R302 956.52</b>	<b>R1 097 600.00</b>	



# Ultrasound scanning for Carcase traits





Fat Depth

Fat dip

costarum

marbling

Inter-costals

# Cross sectional RTUS image for Fat depth and EMA measures

