GENETIC BENCHMARKING REPORT

Angus Australia

JUNE 2022

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Date: May 31, 2022

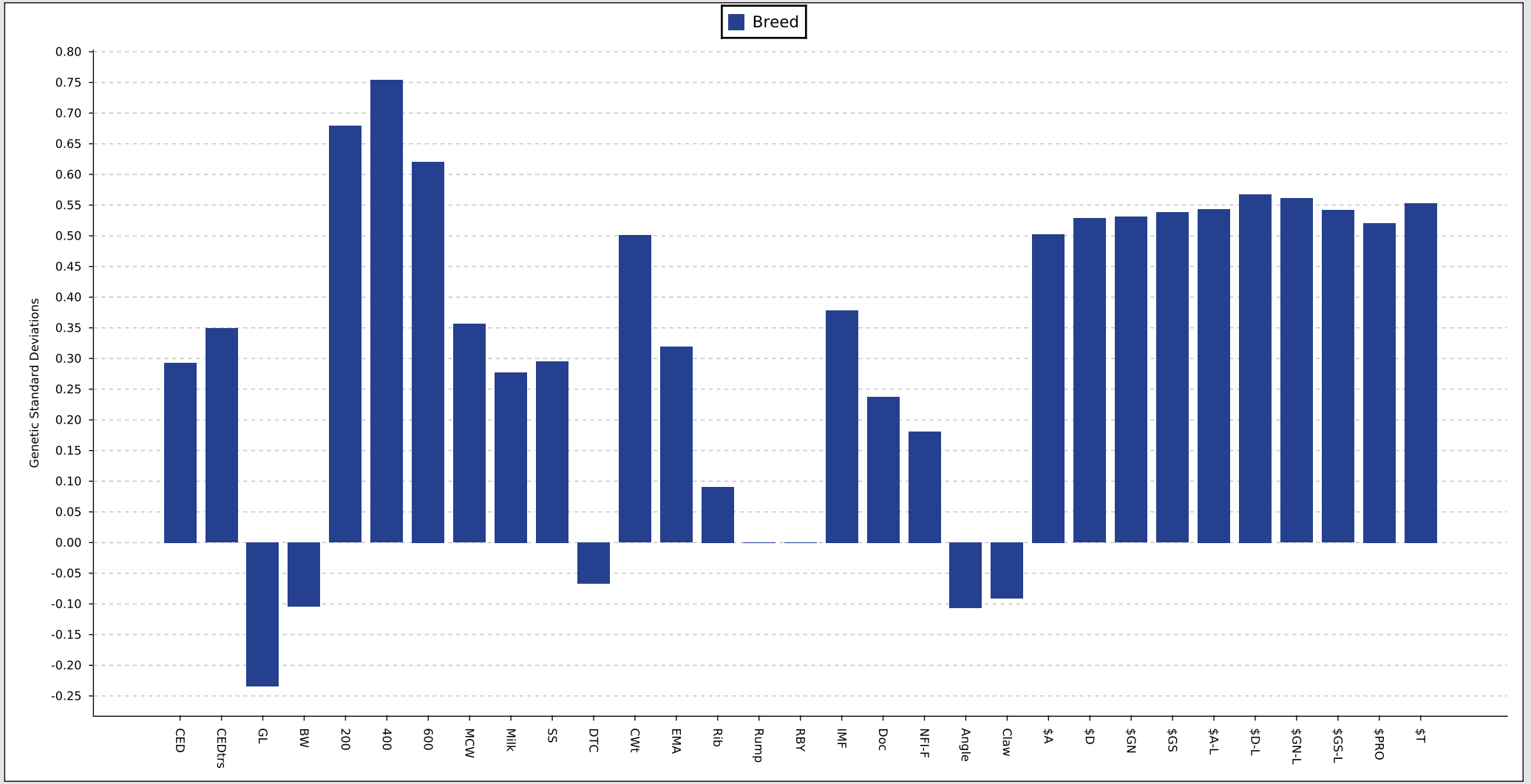
Genetic Progress Summary
2015 to 2020

Date: May 31, 2022

This report assesses the change in the average EBVs of Australian Angus seedstock animals across the nominated five year period.

Trait	Units	Breed	
		Change	Av. Change / Yr
Calving Ease Direct	%	+1.6	+0.3
Calving Ease Daughters	%	+1.5	+0.3
Gestation Length	days	-0.8	-0.2
Birth Weight	kg	-0.2	+0.0
200 Day Growth	kg	+5.8	+1.2
400 Day Weight	kg	+10.8	+2.2
600 Day Weight	kg	+13.6	+2.7
Mature Cow Weight	kg	+10.4	+2.1
Milk	kg	+2.2	+0.4
Scrotal Size	cm	+0.4	+0.1
Days to Calving	days	-0.4	-0.1
Carcase Weight	kg	+8.1	+1.6
Carcase EMA	cm.sq	+1.1	+0.2
Carcase Rib Fat	mm	+0.2	+0.0
Carcase Rump Fat	mm	+0.0	+0.0
Retail Beef Yield	%	+0.0	+0.0
Carcase IMF	%	+0.4	+0.1
Docility	%	+2.6	+0.5
NFI-F	%	+0.1	+0.0
Foot Angle	score	+0.0	+0.0
Claw Set	score	+0.0	+0.0
Angus Breeding ($A)	$	+31.7	+6.3
Domestic ($D)	$	+25.5	+5.1
Heavy Grain ($GN)	$	+43.9	+8.8
Heavy Grass($GS)	$	+32.2	+6.4
Angus Breeding Low Feed Cost ($A-L)	$	+52.6	+10.5
Domestic Low Feed Cost ($D-L)	$	+44.9	+9.0
Heavy Grain Low Feed Cost ($GN-L)	$	+65.6	+13.1
Heavy Grass Low Feed Cost ($GS-L)	$	+59.5	+11.9
AngusPRO ($PRO)	$	+27.2	+5.4
Angus Terminal Sire ($T)	$	+29.1	+5.8

This report assesses the change in the average EBVs of Australian Angus seedstock animals across the nominated five year period in standard deviation units (rather than the units of measurement), enabling comparison of the relative change that has occurred in individual traits.



Genetic Progress By Trait

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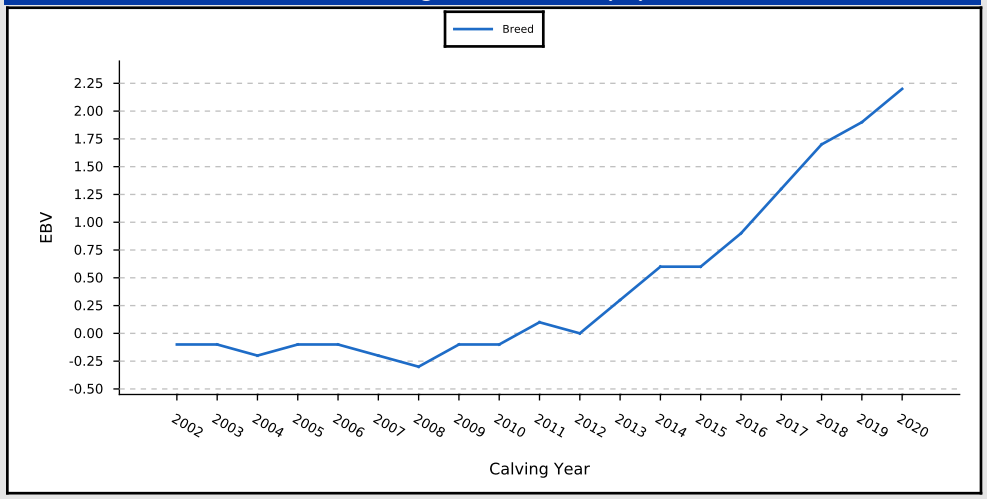
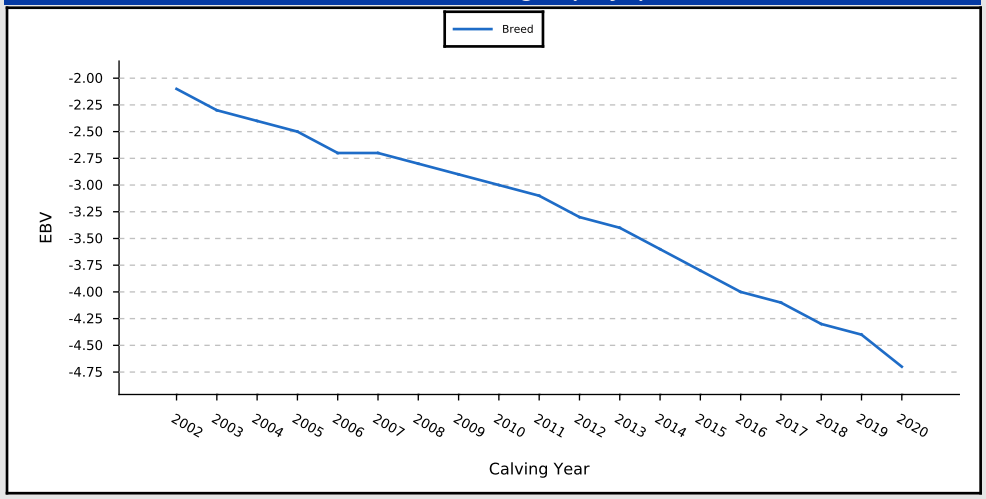
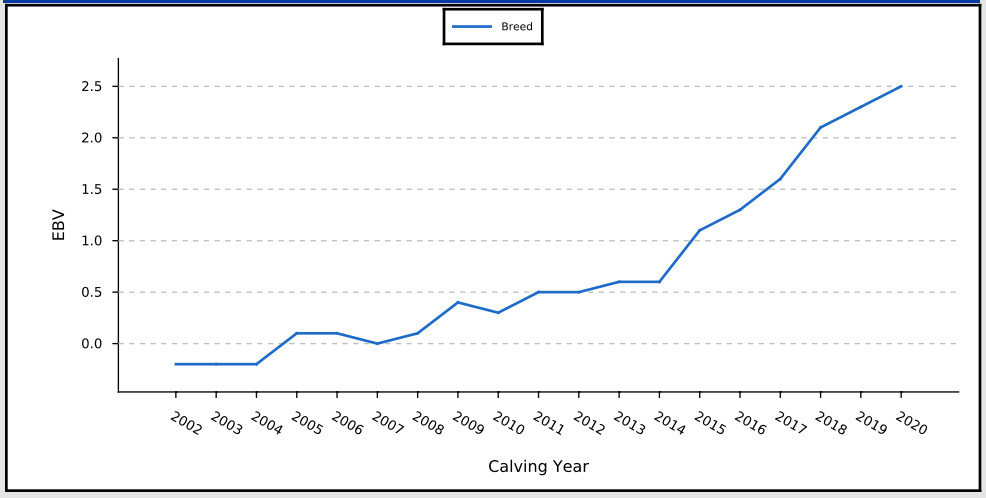
Calving Ease Direct (%)



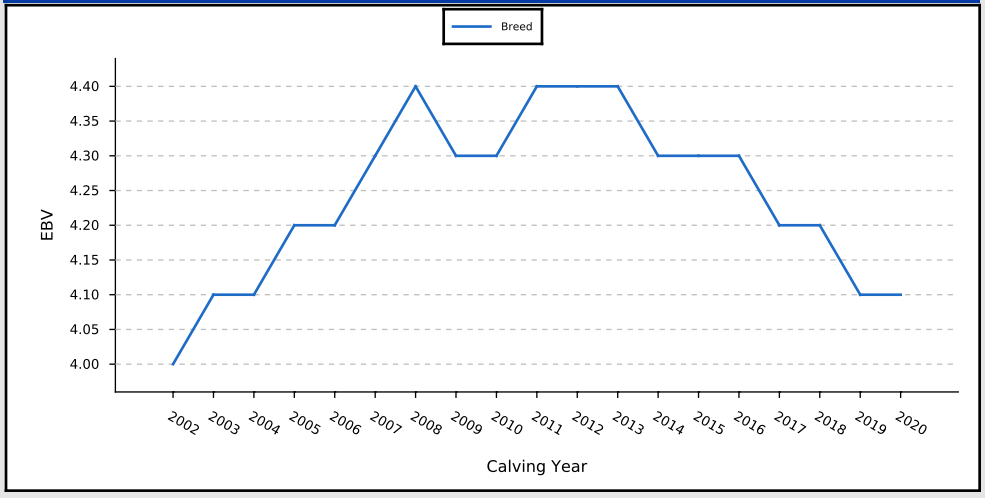
Gestation Length (days)



Calving Ease Daughters (%)



Birth Weight (kg)



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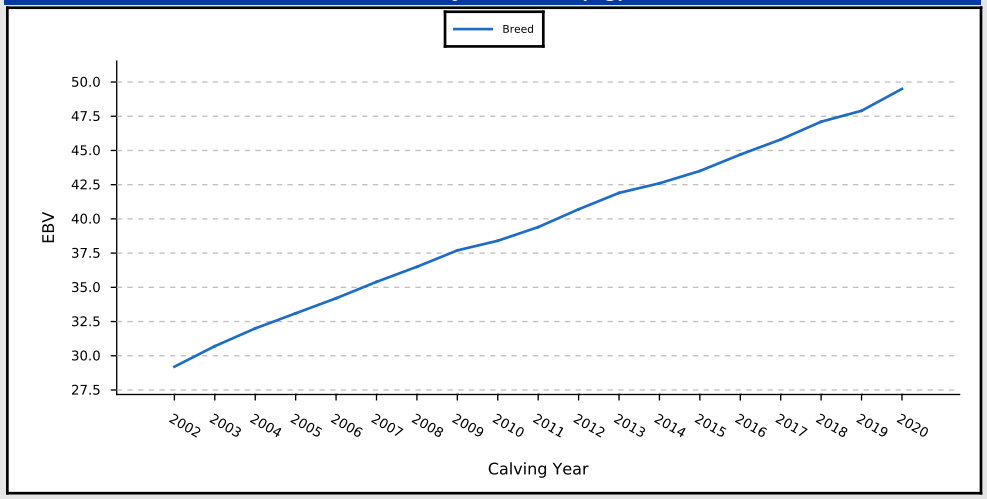
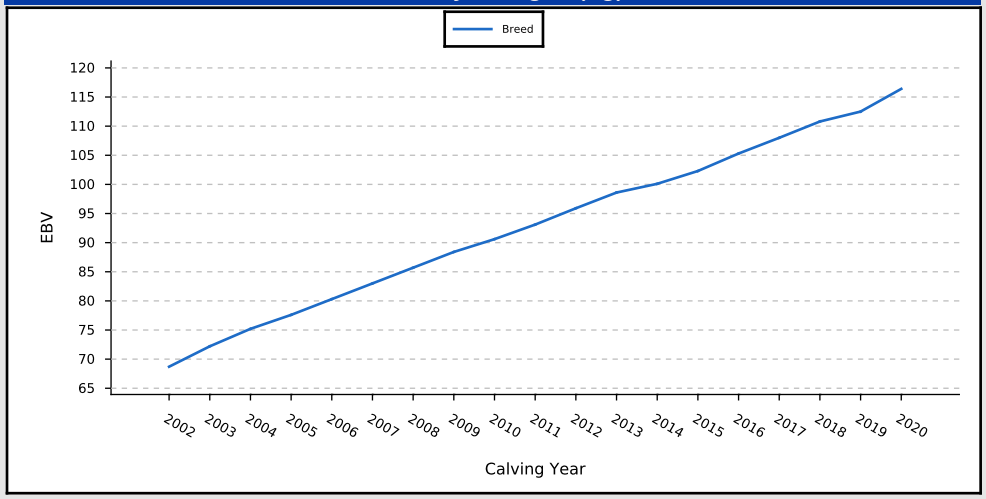
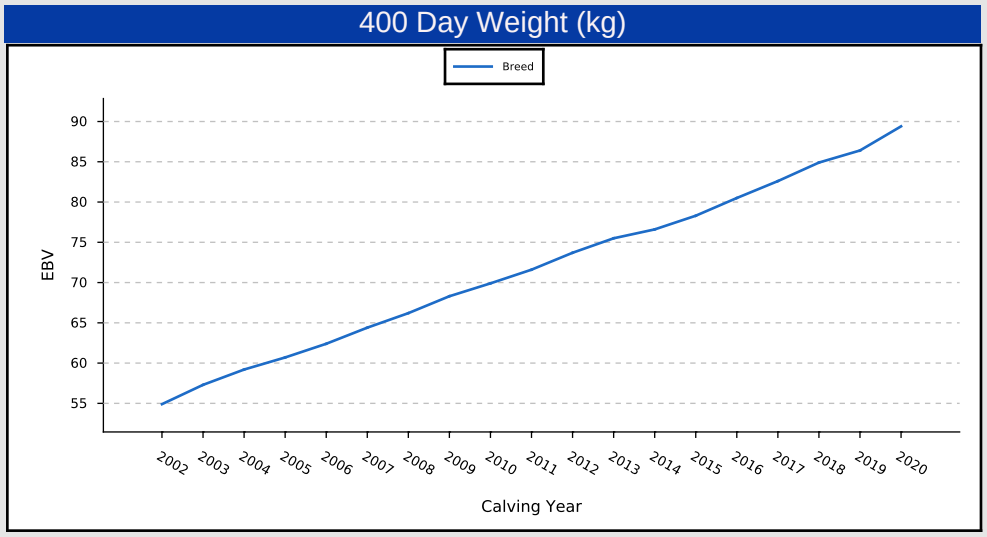
200 Day Growth (kg)



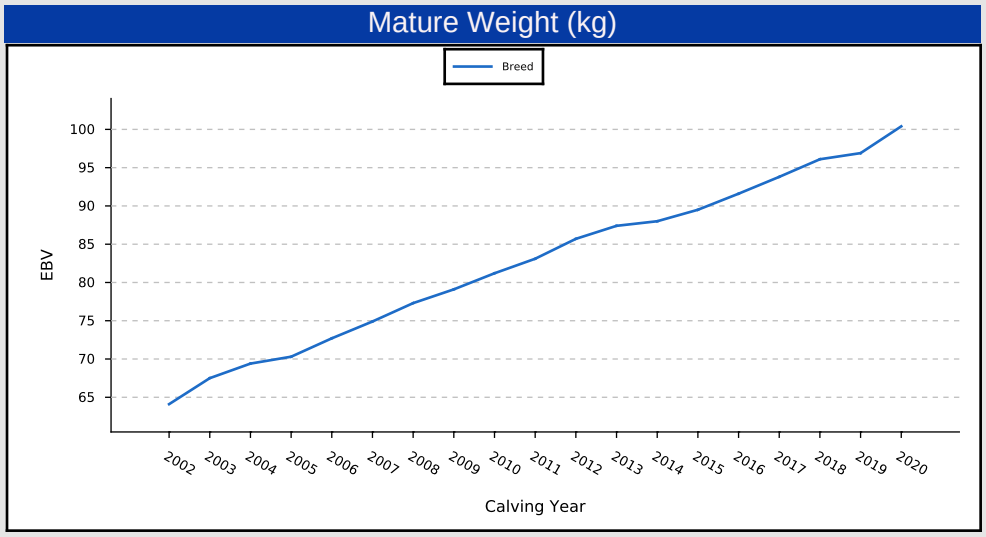
600 Day Weight (kg)



400 Day Weight (kg)



Mature Weight (kg)



Genetic Progress By Trait

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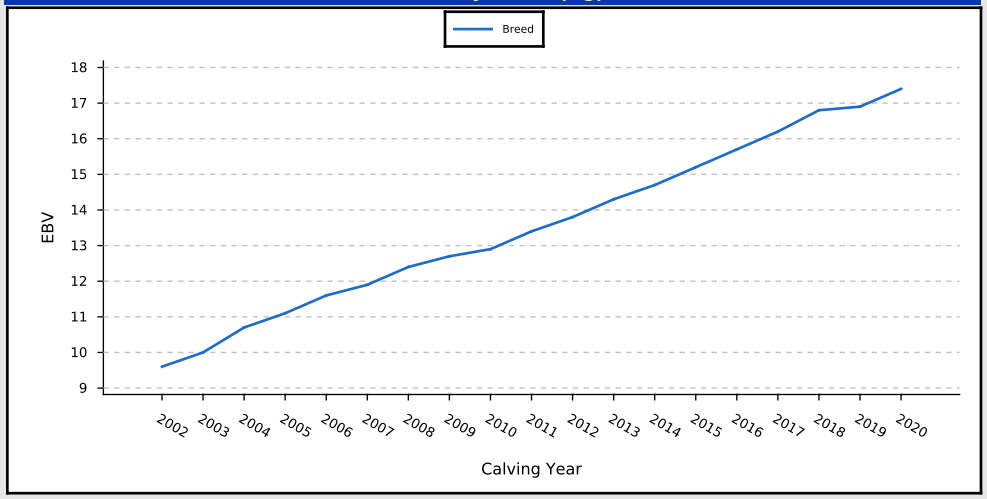
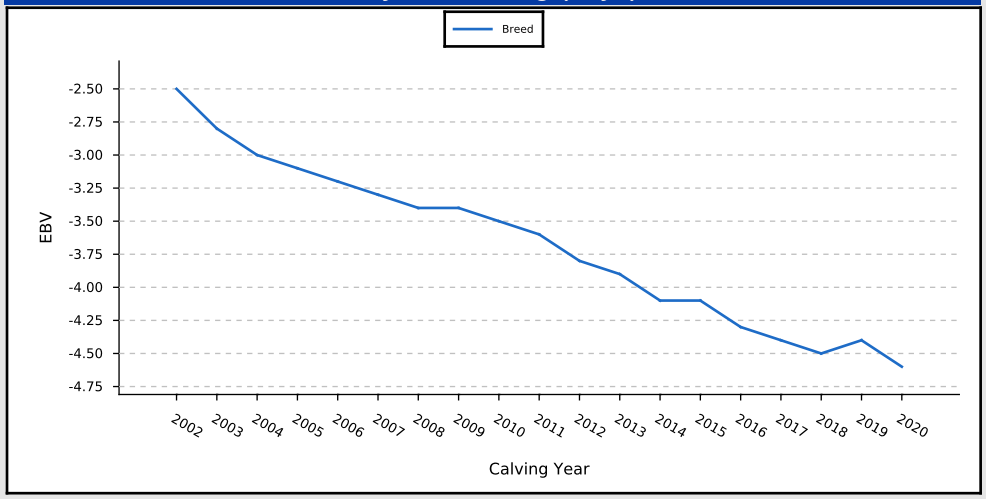
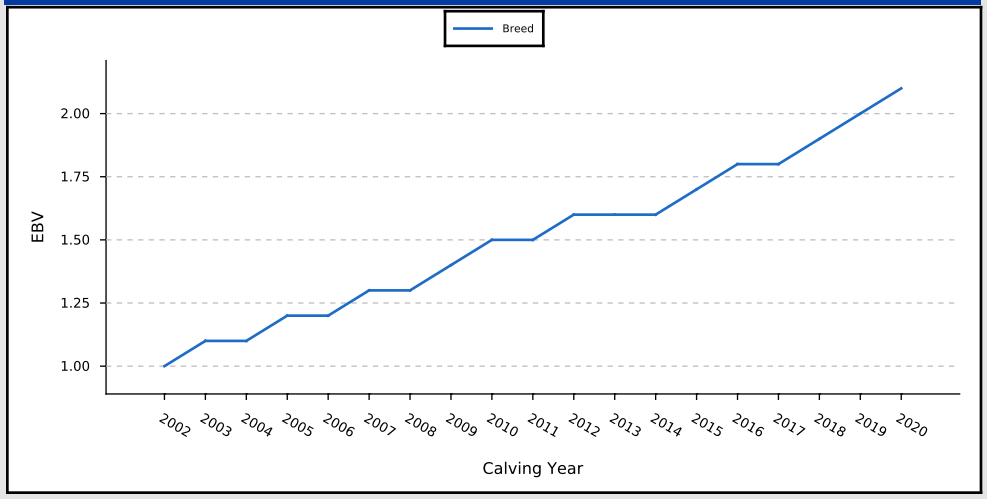
200 Day Milk (kg)



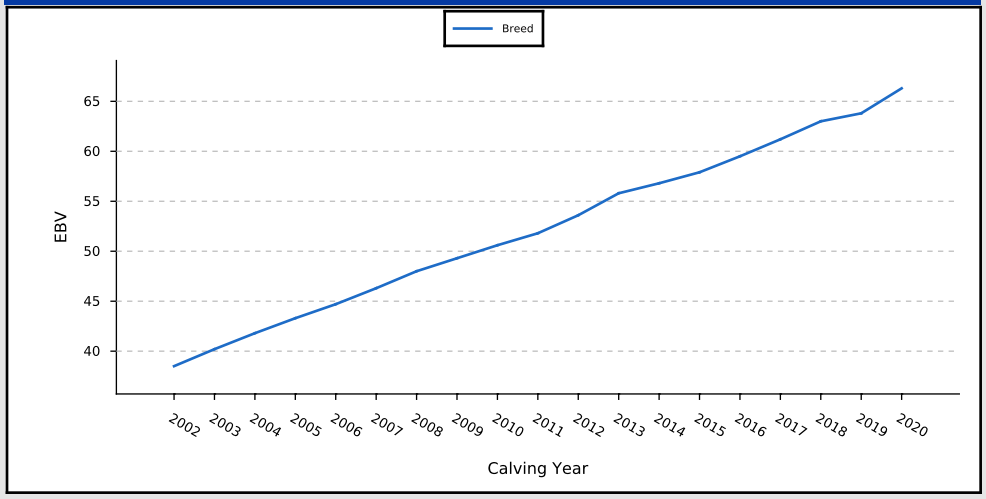
Days to Calving (days)



Scrotal Size (cm)



Carcase Weight (kg)



Genetic Progress By Trait

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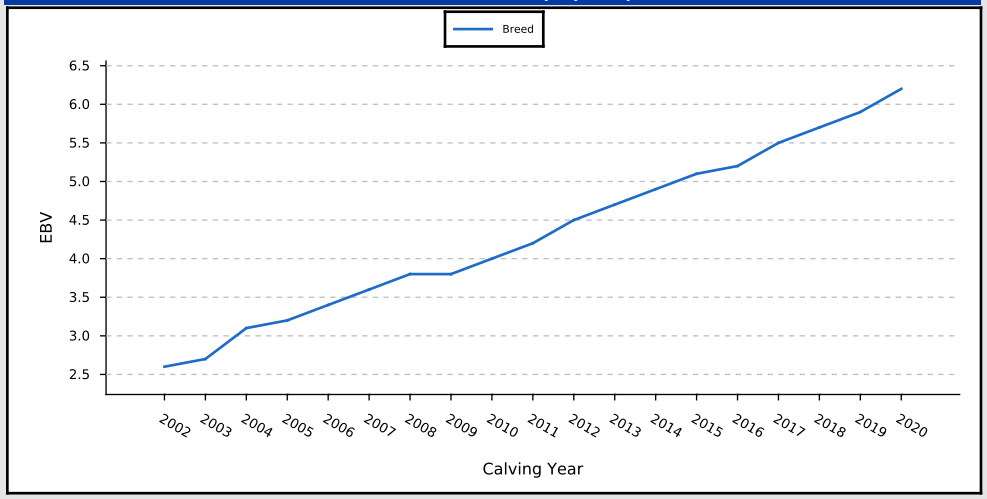
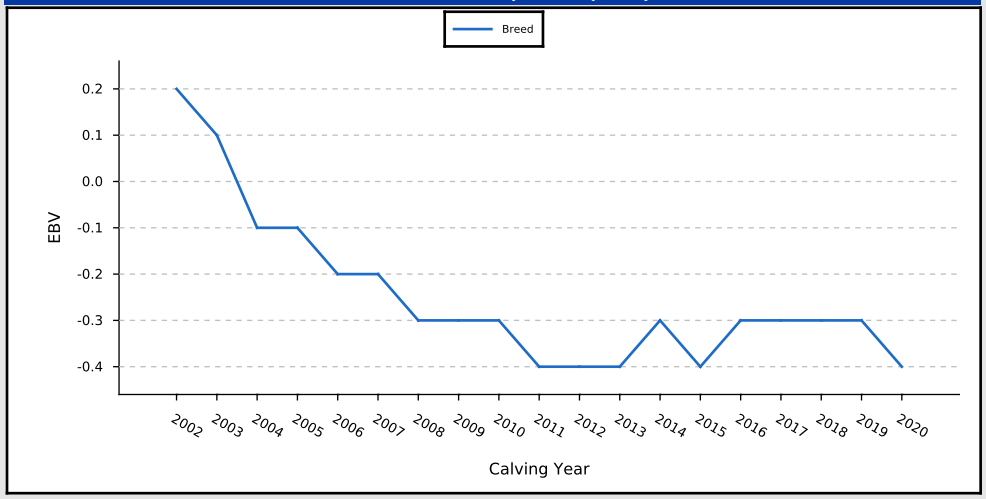
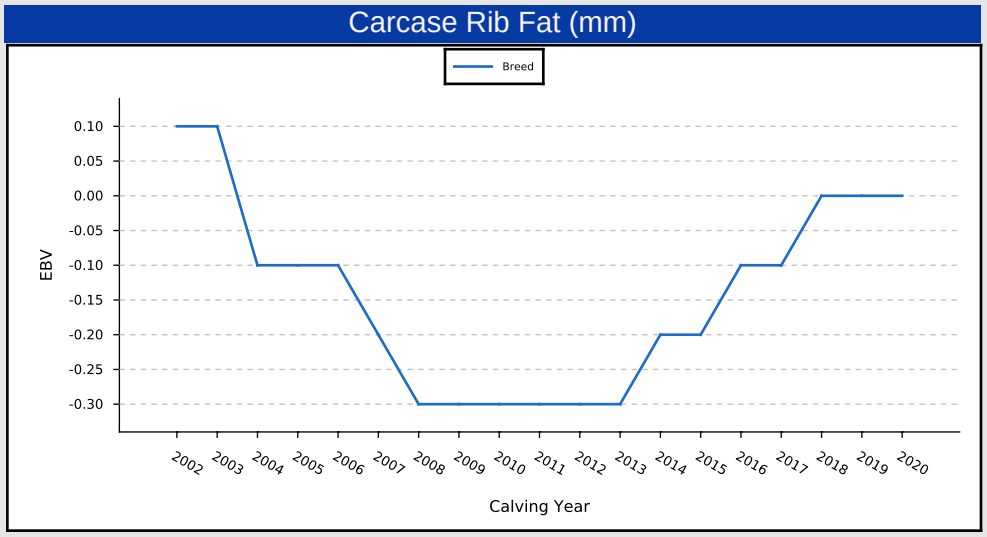
Carcase EMA (sq.cm)



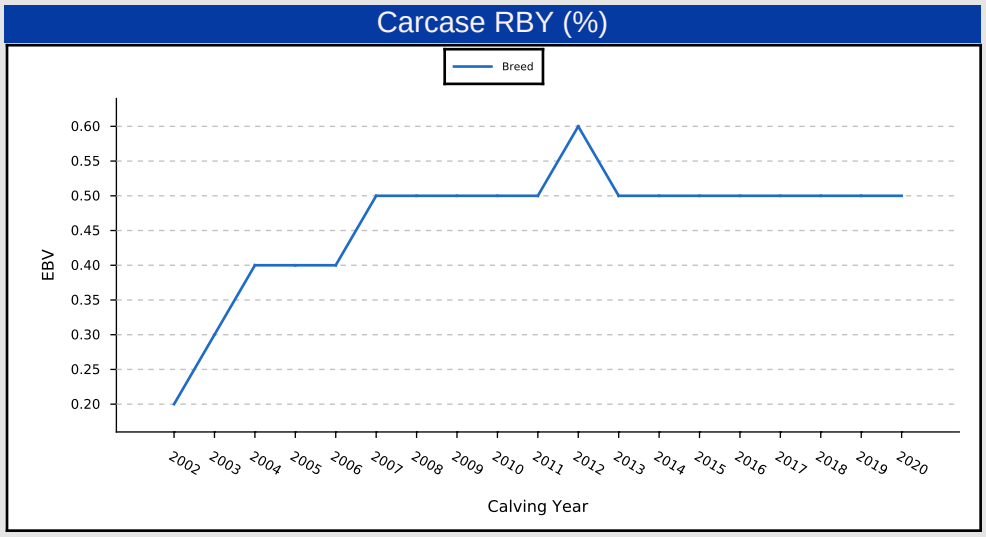
Carcase Rump Fat (mm)



Carcase Rib Fat (mm)



Carcase RBY (%)



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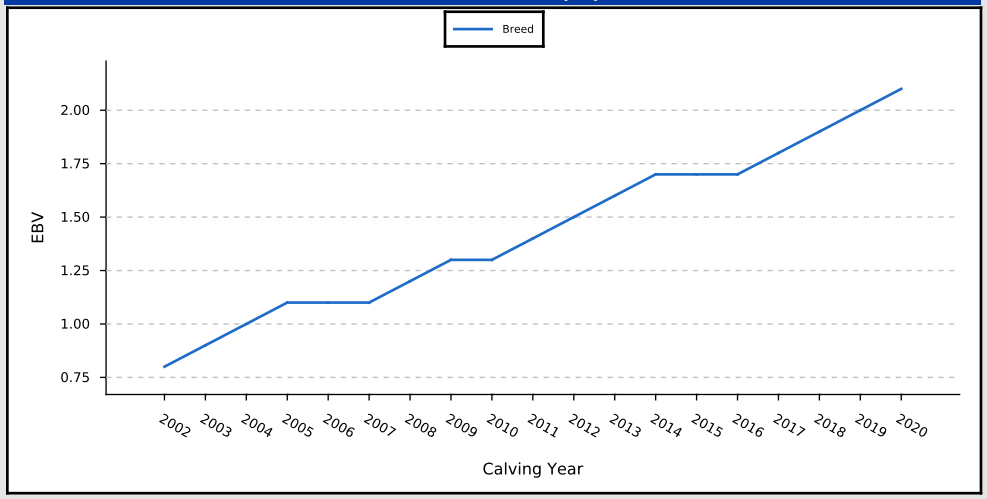
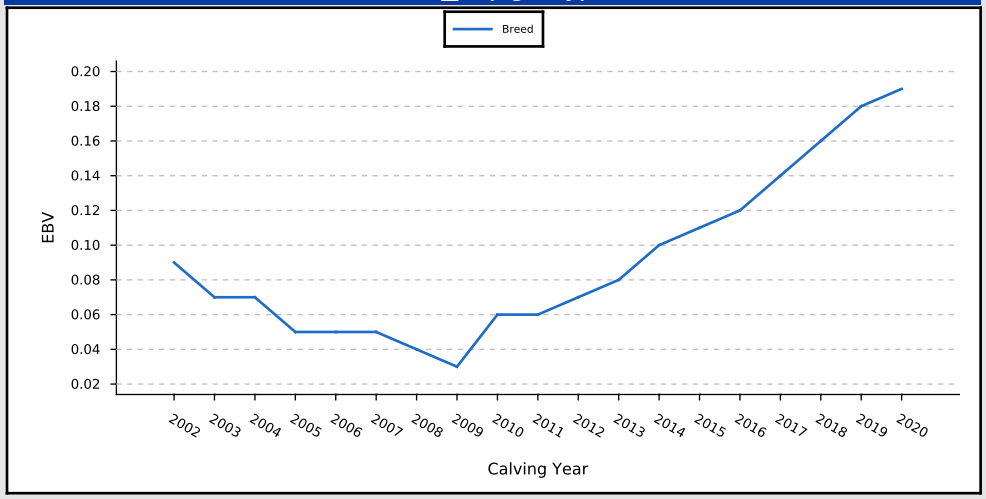
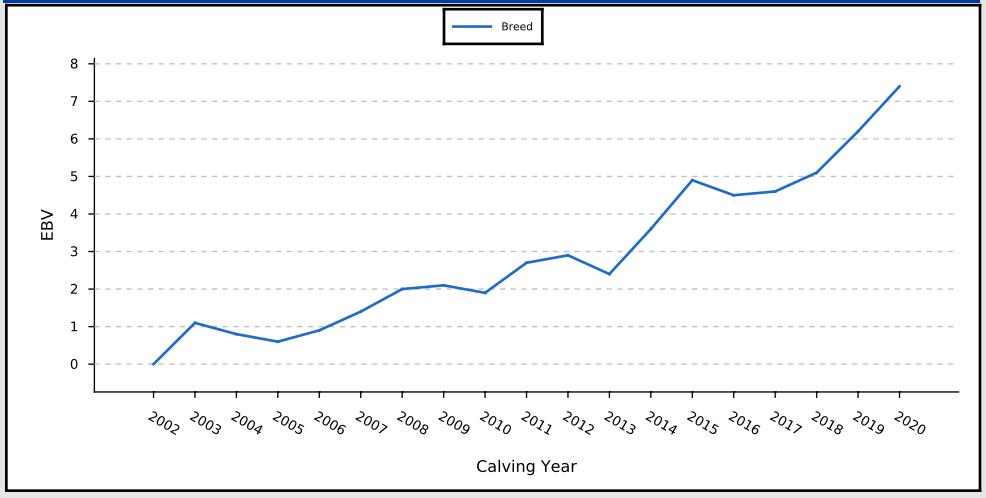
Carcase IMF (%)



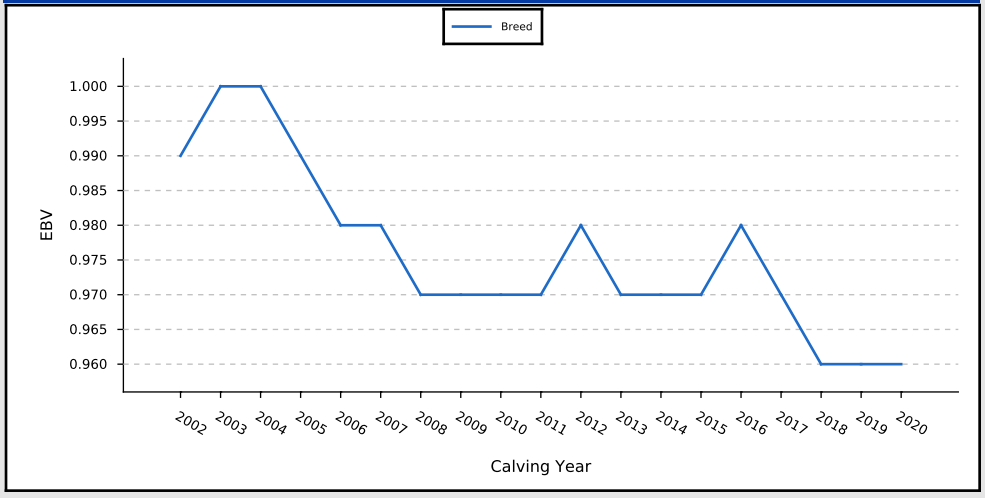
NFI_F (kg/day)



Docility (%)



Foot Angle (score)



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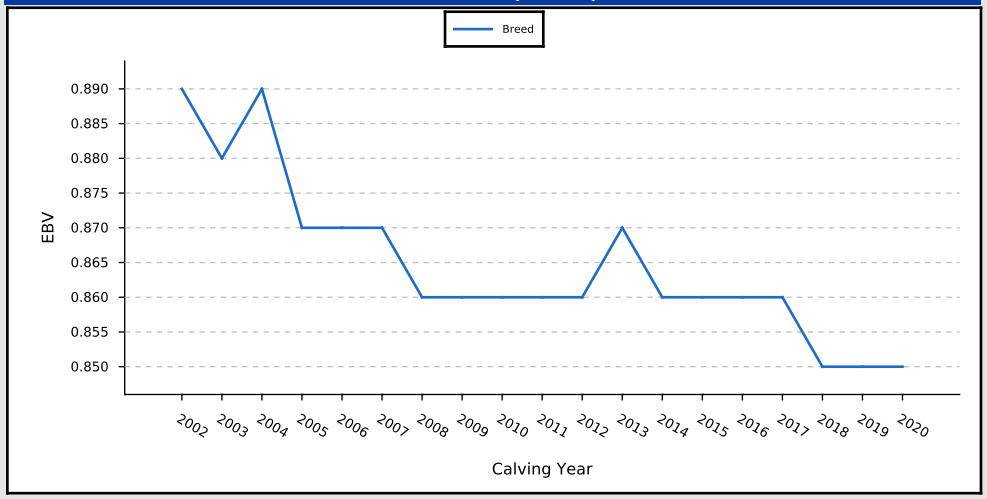
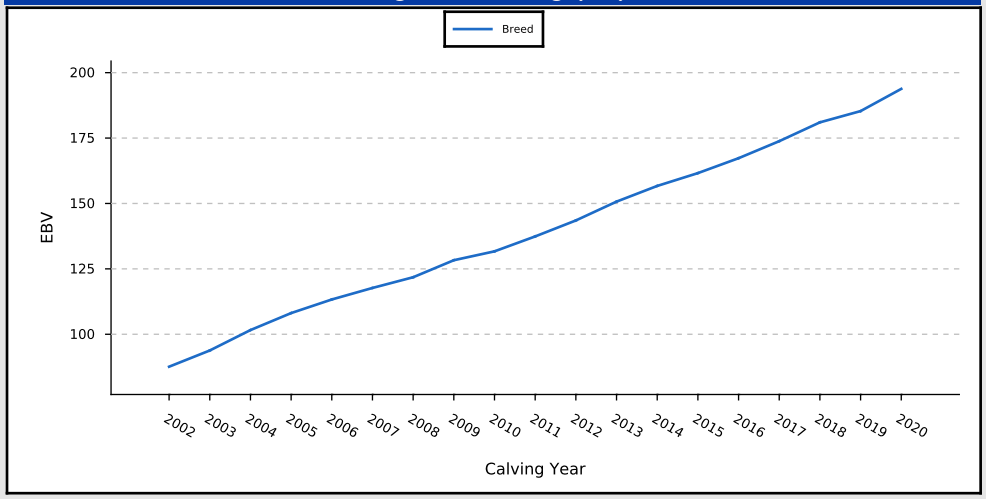
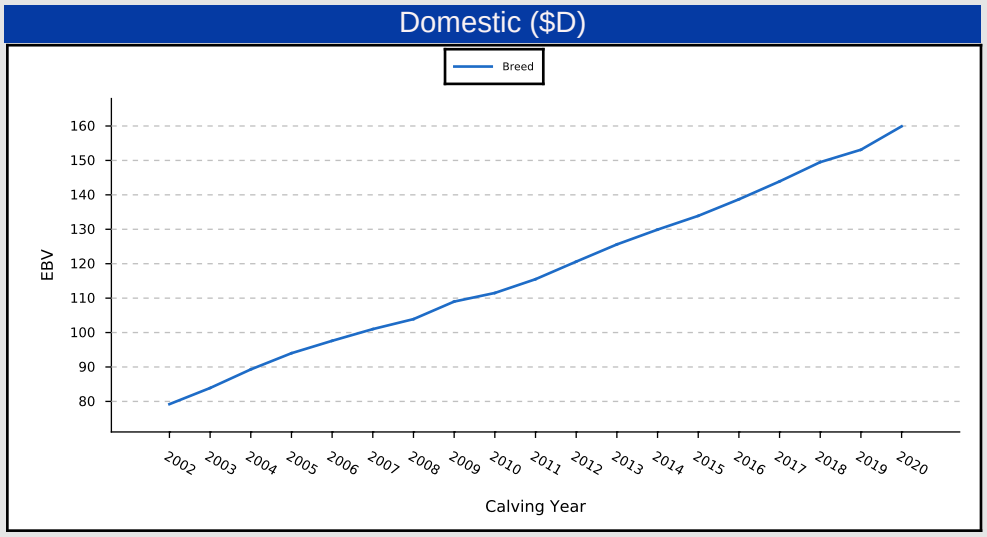
Claw Set (score)



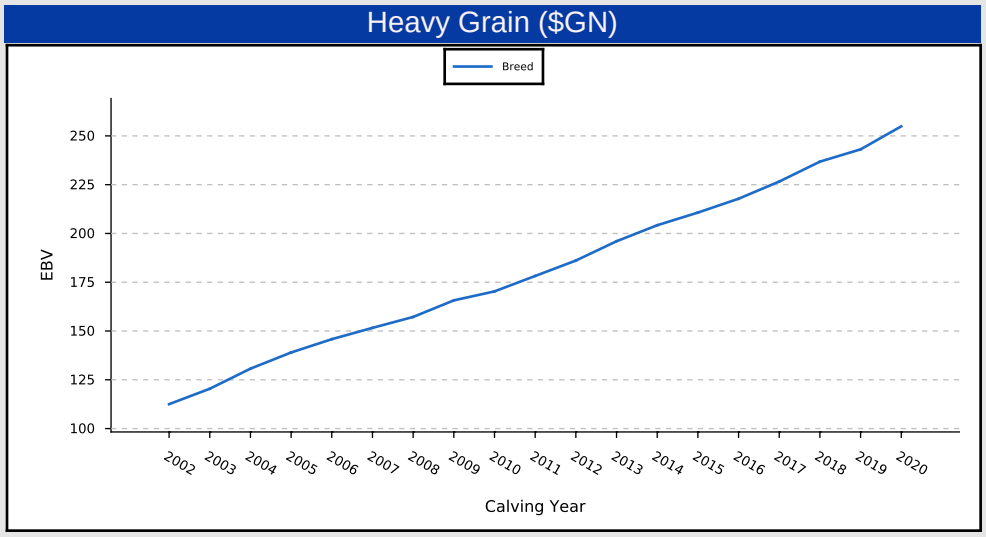
Angus Breeding ($A)



Domestic ($D)



Heavy Grain ($GN)



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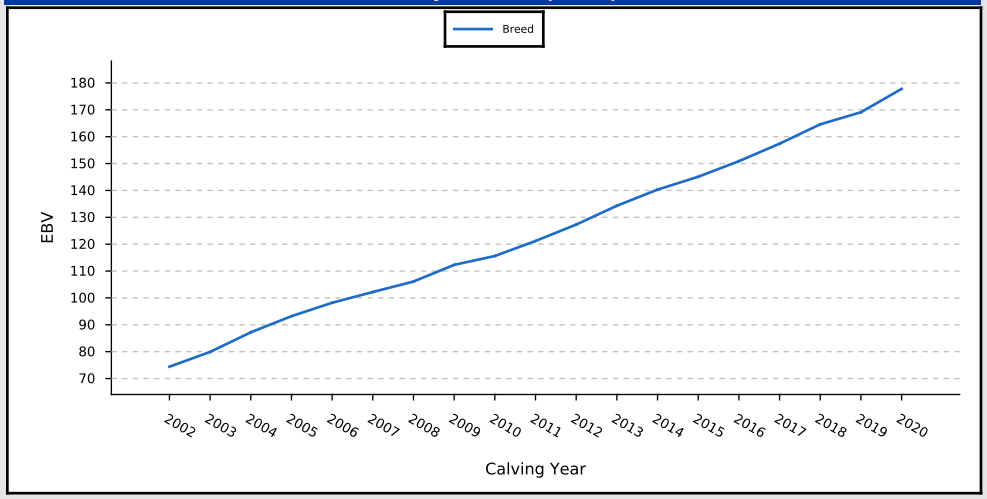
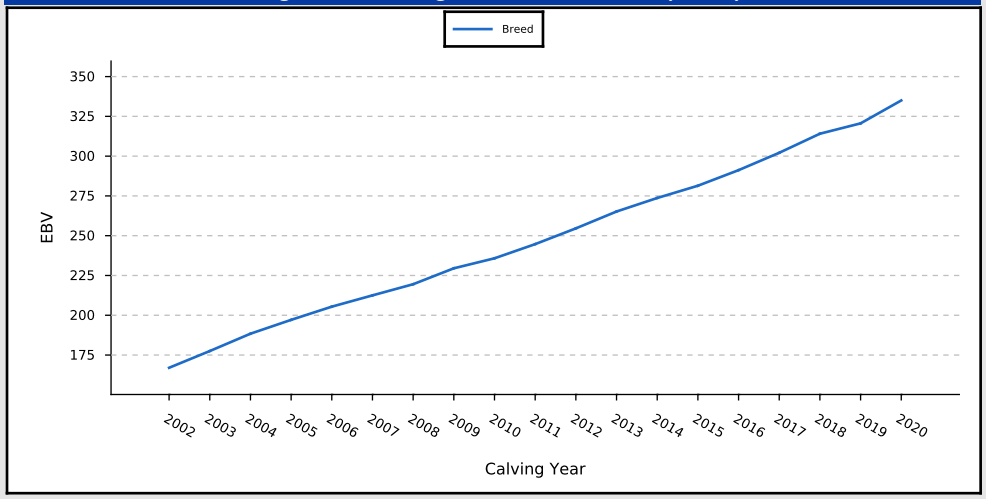
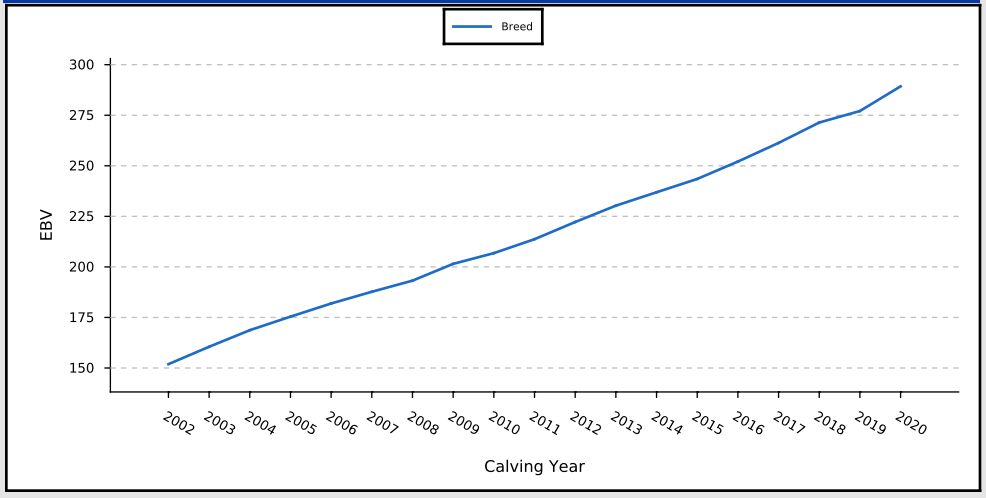
Heavy Grass ($GS)



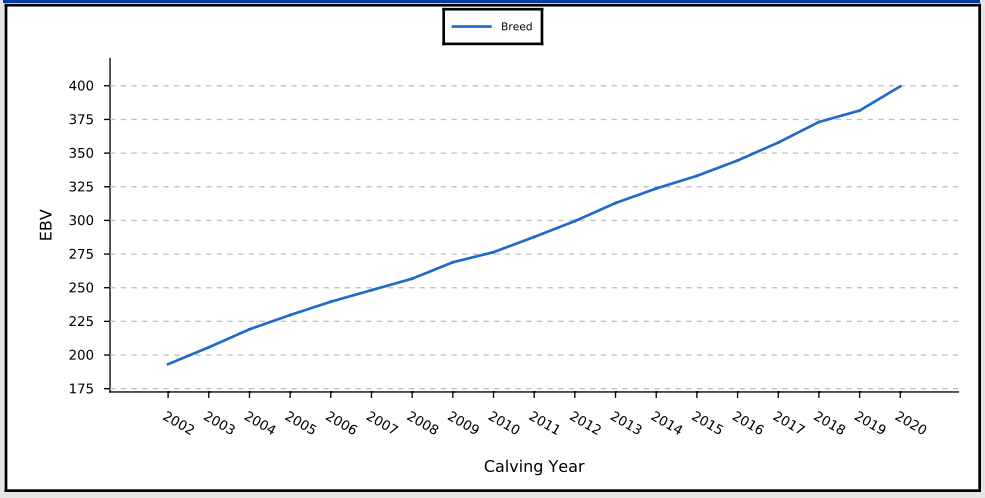
Angus Breeding Low Feed Cost ($A-L)



Domestic Low Feed Cost ($D-L)



Heavy Grain Low Feed Cost ($GN-L)



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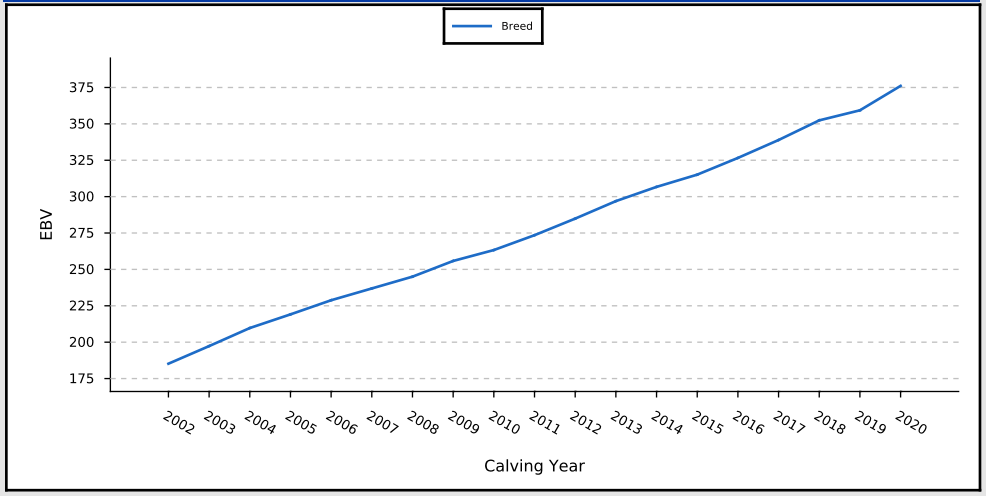
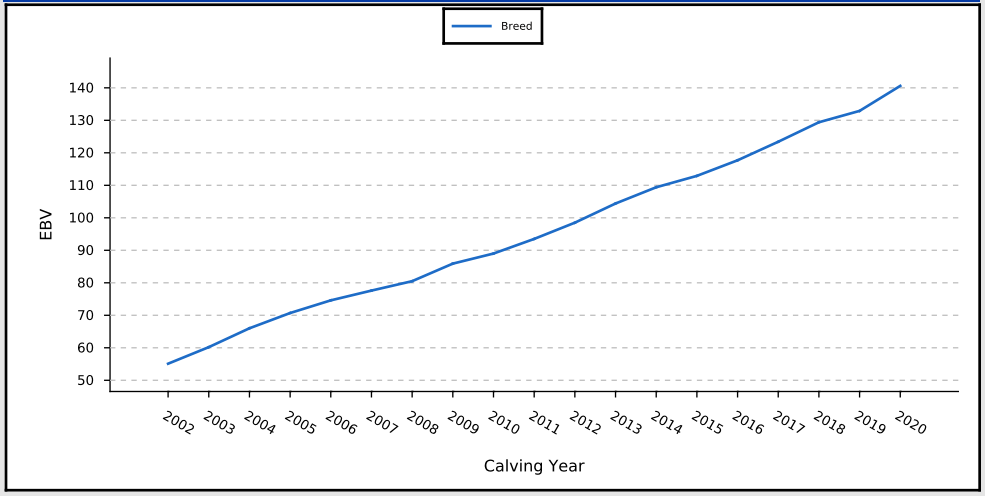
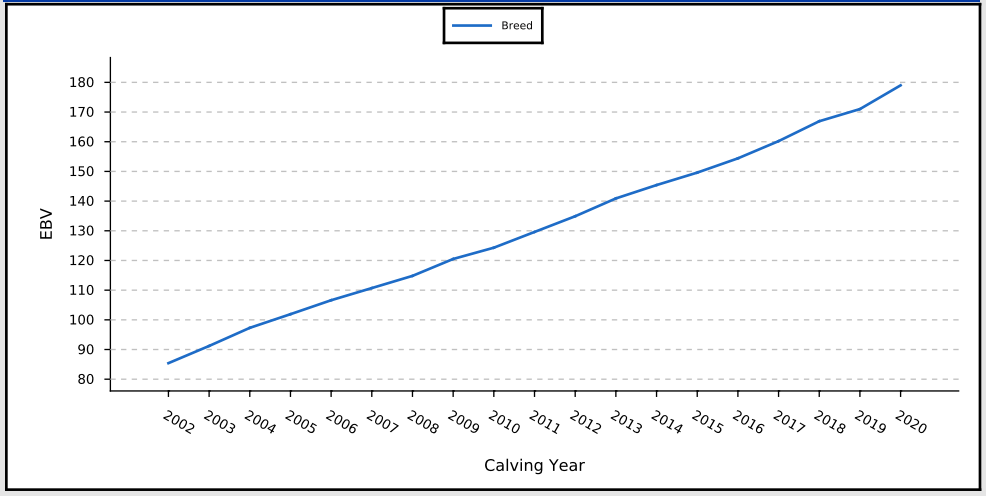
Heavy Grass Low Feed Cost ($GS-L)



AngusPRO ($PRO)



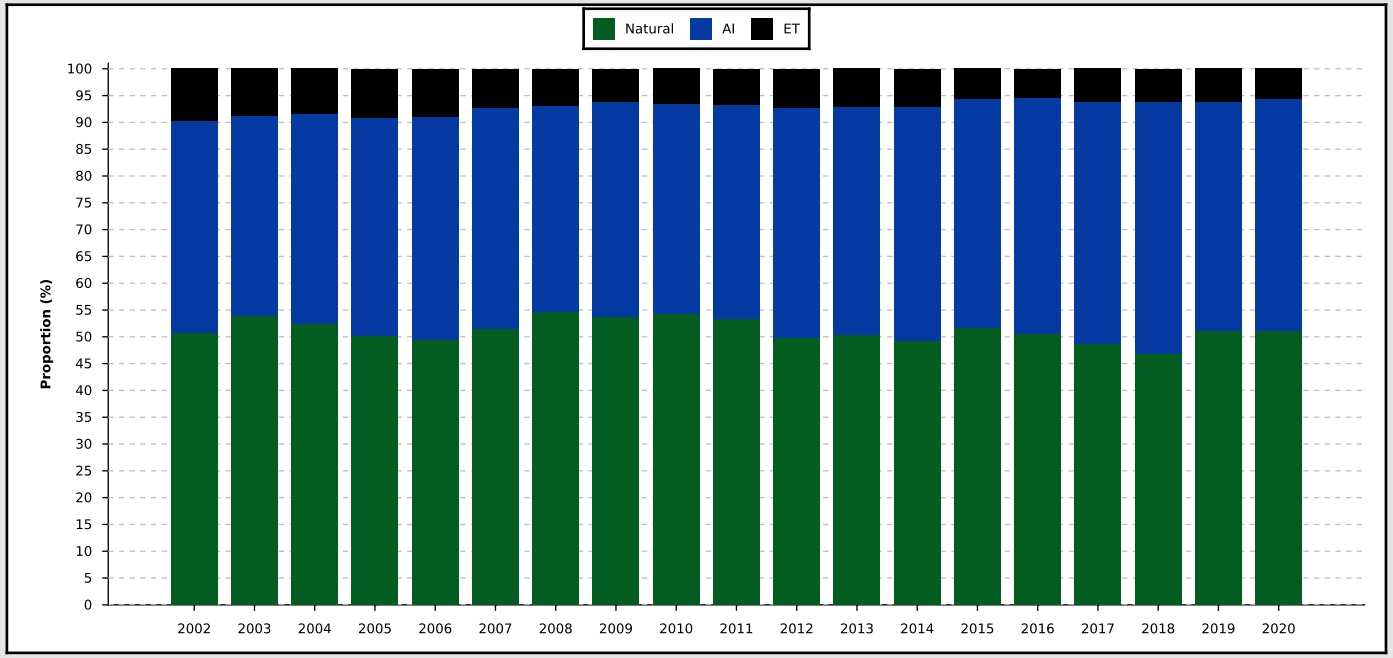
Angus Terminal Sire ($T)



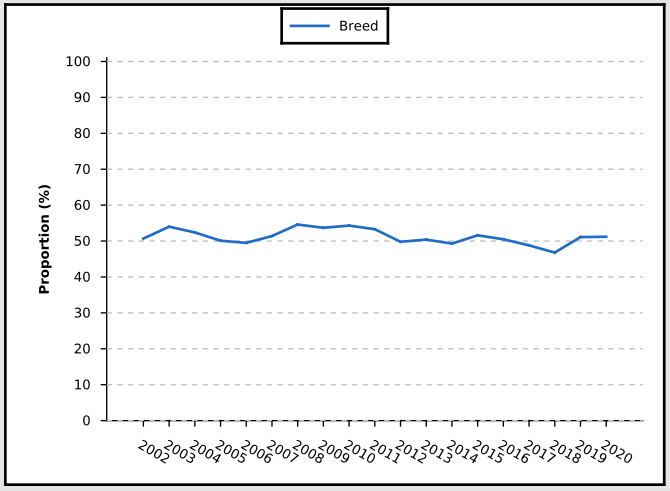
This report assesses the utilisation of reproductive technologies within the Angus breed in Australia by summarising the number of animals born in each year that have been bred by artificial insemination and embryo transfer.

Calving Year	Animals	Mating Type		
		Natural	AI	ET
2002	69616	35292	27573	6751
2003	64772	34985	24099	5688
2004	66690	34919	26127	5644
2005	69303	34739	28298	6266
2006	70231	34763	29227	6241
2007	66984	34439	27698	4847
2008	67468	36859	25931	4678
2009	66176	35530	26585	4061
2010	67064	36420	26240	4404
2011	73096	38981	29262	4853
2012	79104	39373	34039	5692
2013	81315	41015	34562	5738
2014	80174	39555	35021	5598
2015	80522	41523	34516	4483
2016	81405	41107	35929	4369
2017	84608	41296	38079	5233
2018	84185	39393	39619	5173
2019	82750	42259	35354	5137
2020	78922	40412	34109	4401

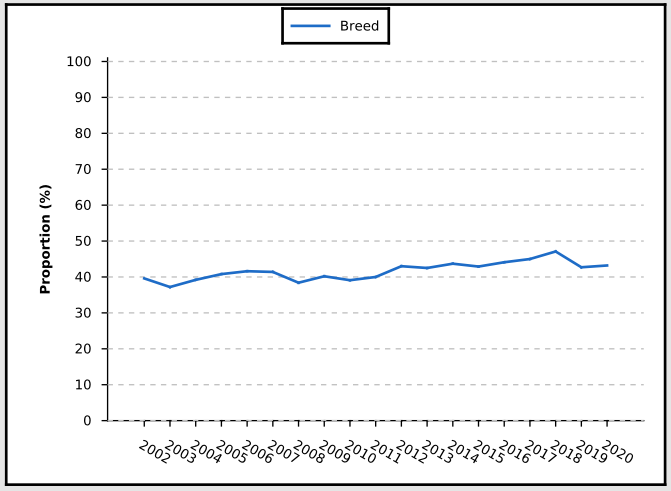
Mating Type



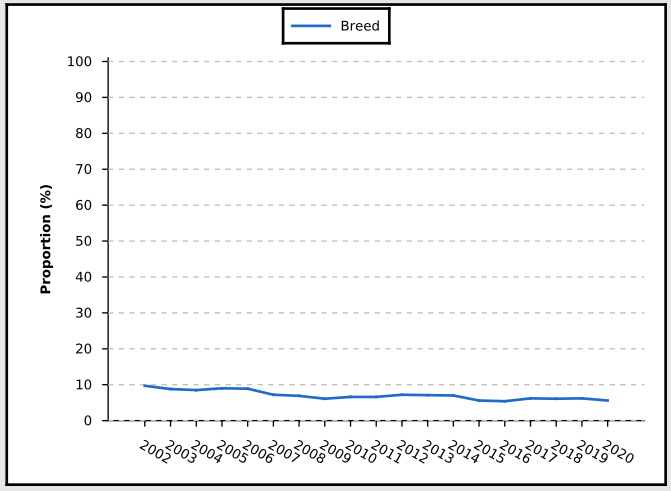
Natural



AI



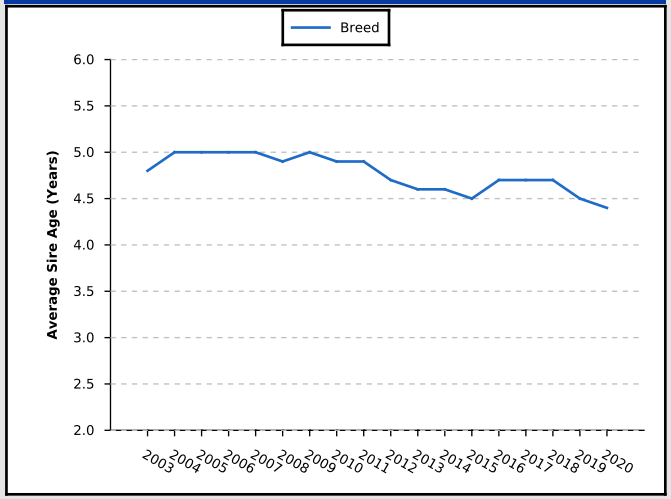
ET



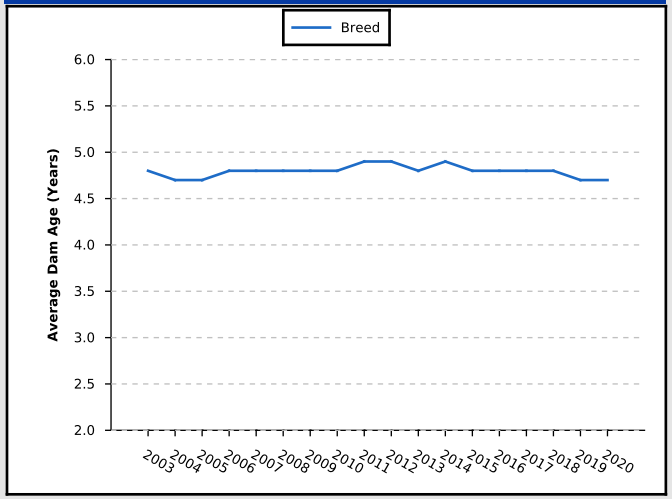
This report summarises the average age of the sires and dams of Australian Angus seedstock animals over time. The statistics are calculated as the age of the sire and dam when their progeny are born, and are weighted according to the number of progeny that a sire or dam has in a particular year. For example, if a sire has 50 calves in a particular calving year, its age will make a greater contribution to the average age statistics than a sire with 5 calves.

		Sire Age (Years)				Dam Age (Years)			
Calving Year	Animals	All	Natural	AI	ET	All	Natural	AI	ET
2003	59165	4.8	3.5	6.1	7.9	4.8	4.6	4.5	6.3
2004	61134	5.0	3.6	6.4	8.0	4.7	4.6	4.4	6.4
2005	63097	5.0	3.6	6.3	8.0	4.7	4.6	4.5	6.3
2006	64070	5.0	3.7	6.2	7.7	4.8	4.7	4.4	6.4
2007	62180	5.0	3.7	6.3	7.6	4.8	4.7	4.4	6.4
2008	62994	4.9	3.7	6.4	7.8	4.8	4.8	4.4	6.7
2009	62426	5.0	3.7	6.5	7.9	4.8	4.7	4.5	6.9
2010	63142	4.9	3.7	6.1	7.6	4.8	4.8	4.5	6.5
2011	69271	4.9	3.7	6.1	7.6	4.9	4.9	4.5	6.8
2012	74554	4.7	3.7	5.6	6.7	4.9	4.9	4.5	6.7
2013	76721	4.6	3.7	5.4	6.4	4.8	4.8	4.5	6.8
2014	75609	4.6	3.7	5.4	6.7	4.9	4.9	4.5	6.9
2015	76911	4.5	3.7	5.3	6.7	4.8	4.8	4.5	6.9
2016	77431	4.7	3.8	5.5	6.7	4.8	4.9	4.5	6.8
2017	79705	4.7	3.8	5.5	6.6	4.8	4.8	4.5	6.8
2018	79526	4.7	3.6	5.5	6.5	4.8	4.8	4.5	6.9
2019	78342	4.5	3.6	5.3	6.8	4.7	4.7	4.4	6.5
2020	75438	4.4	3.6	5.2	6.0	4.7	4.7	4.3	6.8

Sire Age

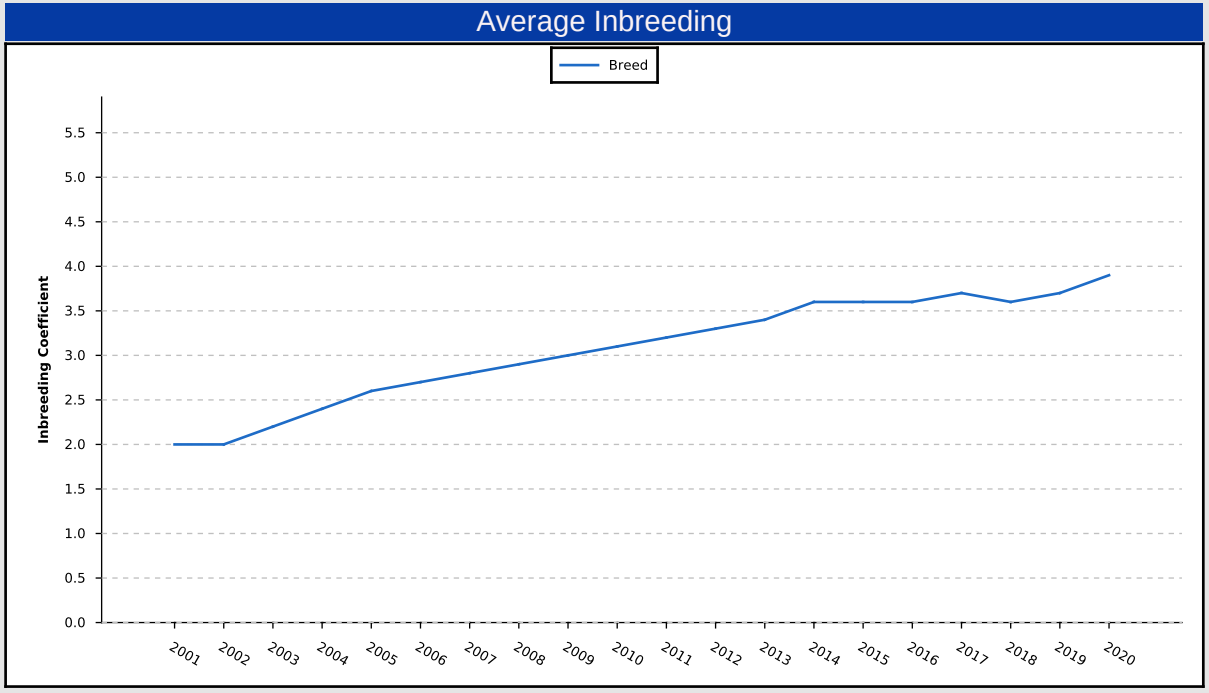


Dam Age



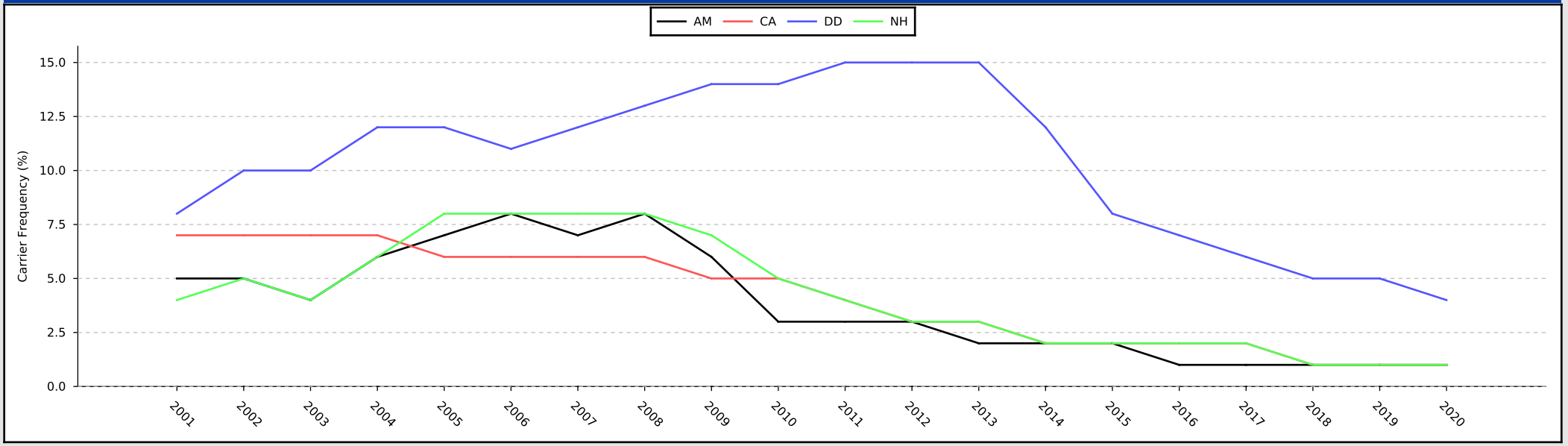
This report assesses the genetic diversity within the Angus breed in Australia by summarising the average inbreeding co-efficient of animals born in each year.

Calving Year	Animals	Inbreeding Coefficient (%) Breed
2001	57918	2.0
2002	62936	2.0
2003	59165	2.2
2004	61134	2.4
2005	63097	2.6
2006	64070	2.7
2007	62180	2.8
2008	62994	2.9
2009	62426	3.0
2010	63142	3.1
2011	69271	3.2
2012	74554	3.3
2013	76721	3.4
2014	75609	3.6
2015	76911	3.6
2016	77431	3.6
2017	79705	3.7
2018	79526	3.6
2019	78342	3.7
2020	75438	3.9

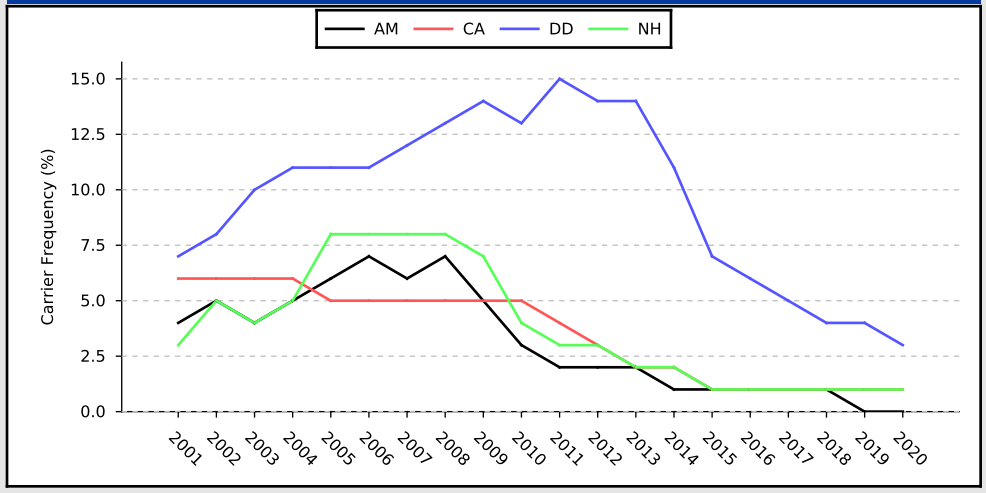


This report assesses the frequency of carriers for recessive genetic conditions within your seedstock enterprise over time. The statistics are calculated based on the results of the gene probability analyses conducted by Angus Australia.

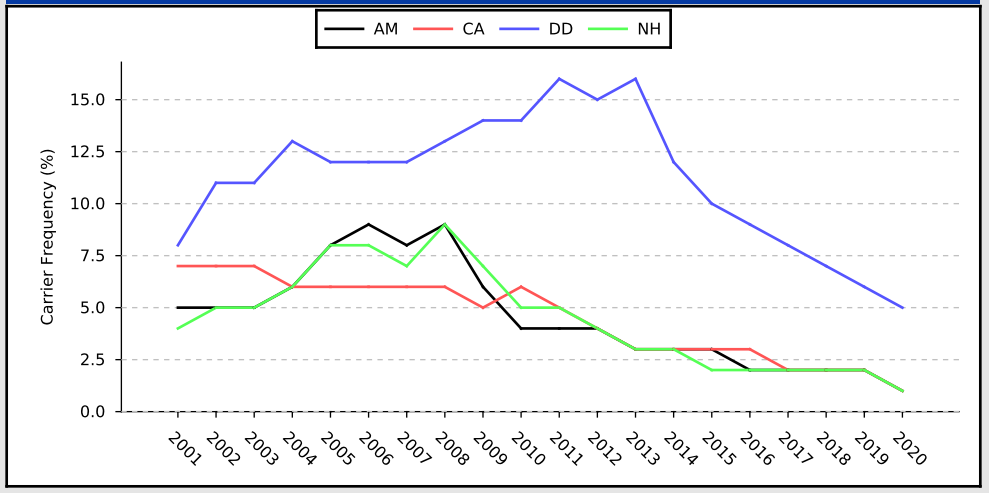
All Registers



Herdbook Register (HBR)



Angus Performance Register (APR)



This report provides the average EBVs for all animals recorded with Angus Australia over time.

		Estimated Breeding Values																														
		Calv-Ease		Birth		Growth					Fert		Carcase							Feed	Temp	Structural		Selection Index									
Year	Count	Dir	Dtrs	GL	BW	200	400	600	Mwt	Milk	SS	DC	CW	EMA	RIB	P8	RBY	IMF	NFI-F	DOC	Angle	Claw	$A	$D	$GN	$GS	$A-L	$D-L	$GN-L	$GS-L	$PRO	$T
2002	62936	-0.1	-0.2	-2.1	+4.0	+29	+55	+69	+64	+10	+1.0	-2.5	+39	+2.6	+0.1	+0.2	+0.2	+0.8	+0.09	+0	+0.99	+0.89	+88	+79	+113	+74	+167	+152	+193	+185	+55	+85
2003	59165	-0.1	-0.2	-2.3	+4.1	+31	+57	+72	+68	+10	+1.1	-2.8	+40	+2.7	+0.1	+0.1	+0.3	+0.9	+0.07	+1	+1.00	+0.88	+94	+84	+120	+80	+178	+161	+206	+197	+60	+91
2004	61134	-0.2	-0.2	-2.4	+4.1	+32	+59	+75	+69	+11	+1.1	-3.0	+42	+3.1	-0.1	-0.1	+0.4	+1.0	+0.07	+1	+1.00	+0.89	+102	+89	+131	+87	+188	+169	+219	+210	+66	+97
2005	63097	-0.1	+0.1	-2.5	+4.2	+33	+61	+78	+70	+11	+1.2	-3.1	+43	+3.2	-0.1	-0.1	+0.4	+1.1	+0.05	+1	+0.99	+0.87	+108	+94	+139	+93	+197	+175	+230	+219	+71	+102
2006	64070	-0.1	+0.1	-2.7	+4.2	+34	+62	+80	+73	+12	+1.2	-3.2	+45	+3.4	-0.1	-0.2	+0.4	+1.1	+0.05	+1	+0.98	+0.87	+113	+98	+146	+98	+205	+182	+240	+229	+75	+107
2007	62180	-0.2	+0.0	-2.7	+4.3	+35	+64	+83	+75	+12	+1.3	-3.3	+46	+3.6	-0.2	-0.2	+0.5	+1.1	+0.05	+1	+0.98	+0.87	+118	+101	+152	+102	+213	+188	+248	+237	+78	+111
2008	62994	-0.3	+0.1	-2.8	+4.4	+37	+66	+86	+77	+12	+1.3	-3.4	+48	+3.8	-0.3	-0.3	+0.5	+1.2	+0.04	+2	+0.97	+0.86	+122	+104	+157	+106	+220	+193	+257	+245	+81	+115
2009	62426	-0.1	+0.4	-2.9	+4.3	+38	+68	+88	+79	+13	+1.4	-3.4	+49	+3.8	-0.3	-0.3	+0.5	+1.3	+0.03	+2	+0.97	+0.86	+128	+109	+166	+112	+230	+202	+269	+256	+86	+121
2010	63142	-0.1	+0.3	-3.0	+4.3	+38	+70	+91	+81	+13	+1.5	-3.5	+51	+4.0	-0.3	-0.3	+0.5	+1.3	+0.06	+2	+0.97	+0.86	+132	+112	+170	+116	+236	+207	+276	+263	+89	+124
2011	69271	+0.1	+0.5	-3.1	+4.4	+39	+72	+93	+83	+13	+1.5	-3.6	+52	+4.2	-0.3	-0.4	+0.5	+1.4	+0.06	+3	+0.97	+0.86	+137	+116	+178	+121	+245	+214	+288	+274	+94	+130
2012	74554	+0.0	+0.5	-3.3	+4.4	+41	+74	+96	+86	+14	+1.6	-3.8	+54	+4.5	-0.3	-0.4	+0.6	+1.5	+0.07	+3	+0.98	+0.86	+144	+121	+186	+127	+255	+222	+300	+285	+99	+135
2013	76721	+0.3	+0.6	-3.4	+4.4	+42	+76	+99	+87	+14	+1.6	-3.9	+56	+4.7	-0.3	-0.4	+0.5	+1.6	+0.08	+2	+0.97	+0.87	+151	+126	+196	+134	+265	+230	+313	+297	+104	+141
2014	75609	+0.6	+0.6	-3.6	+4.3	+43	+77	+100	+88	+15	+1.6	-4.1	+57	+4.9	-0.2	-0.3	+0.5	+1.7	+0.10	+4	+0.97	+0.86	+157	+130	+204	+140	+274	+237	+324	+307	+109	+145
2015	76911	+0.6	+1.1	-3.8	+4.3	+44	+78	+102	+90	+15	+1.7	-4.1	+58	+5.1	-0.2	-0.4	+0.5	+1.7	+0.11	+5	+0.97	+0.86	+162	+134	+211	+145	+281	+244	+333	+315	+113	+150
2016	77431	+0.9	+1.3	-4.0	+4.3	+45	+81	+105	+92	+16	+1.8	-4.3	+60	+5.2	-0.1	-0.3	+0.5	+1.7	+0.12	+5	+0.98	+0.86	+167	+139	+218	+151	+291	+252	+345	+327	+118	+154
2017	79705	+1.3	+1.6	-4.1	+4.2	+46	+83	+108	+94	+16	+1.8	-4.4	+61	+5.5	-0.1	-0.3	+0.5	+1.8	+0.14	+5	+0.97	+0.86	+174	+144	+227	+157	+302	+261	+358	+339	+123	+160
2018	79526	+1.7	+2.1	-4.3	+4.2	+47	+85	+111	+96	+17	+1.9	-4.5	+63	+5.7	+0.0	-0.3	+0.5	+1.9	+0.16	+5	+0.96	+0.85	+181	+150	+237	+165	+314	+271	+373	+352	+129	+167
2019	78342	+1.9	+2.3	-4.4	+4.1	+48	+86	+113	+97	+17	+2.0	-4.4	+64	+5.9	+0.0	-0.3	+0.5	+2.0	+0.18	+6	+0.96	+0.85	+185	+153	+243	+169	+321	+277	+382	+359	+133	+171
2020	75438	+2.2	+2.5	-4.7	+4.1	+50	+89	+116	+100	+17	+2.1	-4.6	+66	+6.2	+0.0	-0.4	+0.5	+2.1	+0.19	+7	+0.96	+0.85	+194	+160	+255	+178	+335	+289	+400	+376	+141	+179

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