



Celebrating 100 years
• 1919-2019 •

BREEDING BETTER BREEDERS

RESEARCH BREEDING VALUES

MATURE COW BODY CONDITION
MATURE COW HEIGHT

MAY 2019

BACKGROUND

Angus Australia has partnered with the School of Environmental and Rural Science at the University of New England (UNE) to undertake research into the genetics of traits related to the productivity and profitability of the female breeding herd.

The research project, titled “Breeding Better Breeders” is being led by well-respected UNE geneticists, Dr Sam Clark and Dr Tom Granleese, and is part of Angus Australia’s commitment to providing Angus breeders with tools that enable them to maximise the rate of genetic improvement within their breeding program.

Initial research has focussed on better describing the genetics of Angus animals for traits associated with the maintenance requirements of the female breeding herd, with the development of research breeding values (RBVs) for mature height and body condition.

Research has demonstrated that approximately 60 to 75% of the total feed used in a cow-calf operation is related to maintaining the cow herd. Further, research has shown that there are differences in the maintenance requirements of individual animals, and that some of those differences can be attributed to genetics, making it possible to select bulls that will breed daughters with lower maintenance requirements when they enter the female breeding herd.

The development of research RBVs for mature height and body condition complements the existing Mature Cow Weight and Milk EBV that are published routinely for Angus animals, providing a more complete genetic description of Angus animals for the traits that are associated with differences in cow maintenance requirements.

Subsequent research priorities will focus on other areas related to the profitability of the female breeding herd, including better understanding the genetics of traits associated with female longevity, structural soundness and fertility.

UNDERSTANDING THE RESEARCH BREEDING VALUES

Research Breeding Values (RBVs) are provided in this publication for sires with greater than 70% accuracy, and 5 progeny or more with a performance record.

Mature Cow Body Condition

Mature Cow Body Condition (MBC) RBVs provide estimates of genetic differences between animals in the body condition of mature females, and are expressed in score units.

Higher Mature Body Condition RBVs indicate an animal is expected to produce daughters with more body condition as mature females. For example, a sire with a MBC RBV of +0.70 would be expected to produce daughters that have, on average, 0.25 of a score more body condition than a sire with a MBC RBV of +0.20, all other things being equal.

Mature Cow Height

Mature Cow Height (MCH) RBVs provide estimates of genetic differences between animals in the height of mature females, as assessed at the hip, and are expressed in cm units.

Higher Mature Cow Height RBVs indicate an animal is expected to produce daughters that are taller as mature females. For example, a sire with a MCH RBV of +15.0 would be expected to produce daughters that are, on average, 5 cm taller than a sire with a MCH RBV of +5.0, all other things being equal.

USING THE RESEARCH BREEDING VALUES IN SELECTION

The Research Breeding Values in this publication enable Angus breeders to select animals with desirable genetics for mature cow body condition and mature cow height, balanced with selection for other traits of importance within their breeding objective.

It is important to note that the Research Breeding Values are subject to greater potential change than EBVs routinely reported as part of the TransTasman Angus Cattle Evaluation (TACE) and should be used with caution in animal selection decisions.

Research Breeding Values may change as improvements are made to the analytical models that are used, and as additional performance information is collected.

ACKNOWLEDGEMENTS

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DISCLAIMER

The Research Breeding Values contained within this publication were calculated from data supplied to Angus Australia by members and/or third parties. Whilst every effort is made to ensure the accuracy of the data, Angus Australia, its officers and employees, assume no responsibility for the accuracy of the RBVs, nor the outcome (including consequential loss) of an action taken based on the information presented in this publication.

Id	Name	Birth Year	Mature Cow Body Condition			Mid May 2019 Angus BREEDPLAN EBVs													
			RBV	Acc	Prog	ABI	CED	200	400	600	MCW	Milk	SS	CWt	EMA	Rib	Rump	RBV	IMF
NORD372	RENNYLEA D372	2008	+0.80	83%	46	+95	-20.5	+53	+88	+121	+110	+17	+2.3	+76	+8.4	-0.6	-0.5	+0.6	+4.6
BIEZ214	ONSLow TRACES Z214	2004	+0.78	70%	31	+76	-6.8	+49	+84	+110	+137	+7	-0.2	+67	+7.1	-1.6	-2.0	+0.7	+1.1
VTMD131	TE MANIA DASHED D131	2008	+0.76	72%	31	+123	+4.8	+49	+85	+124	+125	+16	+3.0	+97	+2.9	-1.5	-2.7	+0.0	+2.7
VTMB1	TE MANIA BERKLEY B1	2006	+0.71	90%	109	+156	+5.2	+50	+92	+119	+137	+9	+2.2	+75	+4.8	+2.3	+0.2	-1.2	+3.6
VTMY437	TE MANIA YORKSHIRE Y437	2003	+0.70	79%	12	+141	+5.0	+45	+84	+111	+107	+15	+2.8	+71	+0.8	+0.0	-2.1	+0.3	+2.9
USAJ244	VERMILION YELLOWSTONE	1999	+0.68	76%	8	+129	+0.8	+51	+88	+121	+115	+13	+2.4	+60	+1.6	+0.0	+1.1	-0.3	+2.3
NZE04379	TE MANIA INFINITY 04 379 AB	2004	+0.68	87%	56	+87	-2.9	+36	+73	+89	+75	+11	+2.9	+46	+2.4	-1.6	+0.7	-1.5	+3.2
NORE11	RENNYLEA EDMUND E11	2009	+0.67	76%	8	+150	+4.8	+36	+68	+88	+66	+16	+2.1	+55	+7.1	+3.4	+1.3	-0.4	+4.1
VTMG555	TE MANIA GASKIN G555	2011	+0.66	70%	5	+111	-1.7	+46	+79	+119	+94	+21	-1.7	+79	+4.1	-0.7	-1.2	-1.2	+4.4
BHRE614	DUNOON EVIDENT E614	2009	+0.65	74%	11	+107	-11.3	+52	+91	+112	+107	+15	+3.7	+60	+11.6	-2.4	-0.7	+2.9	+1.7
USA14844711	TC TOTAL 410	2004	+0.63	74%	14	+104	-7.9	+61	+101	+131	+161	+13	+2.1	+69	+6.9	-2.6	-2.8	+1.3	+2.5
USA14237157	BT EQUATOR 395M	2002	+0.62	81%	30	+111	-6.1	+52	+95	+130	+129	+18	+1.5	+82	+1.4	-0.1	-0.7	+0.0	+0.9
USA14954578	R/M IRONSTONE 4047	2004	+0.62	74%	19	+77	-12.9	+50	+79	+109	+120	+12	+1.8	+60	+8.0	-3.1	-3.7	+2.4	+1.9
NORD443	RENNYLEA D443	2008	+0.61	74%	17	+115	+1.2	+28	+62	+85	+89	+13	+2.1	+52	+9.9	+1.3	+1.4	+0.0	+3.7
NORE846	RENNYLEA E846	2009	+0.61	71%	17	+111	-5.8	+55	+91	+115	+115	+12	+0.5	+74	+8.8	-2.8	-4.3	+1.6	+3.4
VTMA149	TE MANIA ADA A149	2005	+0.60	71%	13	+86	-4.0	+52	+94	+128	+163	+11	+1.9	+76	+3.9	-4.1	-2.5	+1.7	+0.6
NZE12170004408	HIGHLANDER OF STERN AB	2004	+0.60	75%	24	+104	-2.5	+42	+75	+99	+102	+15	+2.3	+48	+3.5	-1.1	+1.5	+0.2	+1.9
USA13361440	LEACHMAN BOOM TIME	1999	+0.59	81%	33	+80	-6.3	+56	+85	+115	+93	+21	+1.2	+70	+2.3	+0.0	-0.9	-0.9	+1.3
NORC19	RENNYLEA C19	2007	+0.59	70%	14	+94	-5.8	+49	+73	+102	+105	+7	+0.6	+66	+3.8	+1.4	-0.1	-0.9	+3.8
USA15585939	MOHNEN DYNAMITE 1356	2006	+0.59	76%	28	+105	-1.2	+48	+90	+118	+109	+9	+1.8	+69	+3.7	+0.6	+0.5	+0.3	+1.4
VTMA134	TE MANIA AMBASSADOR A134	2005	+0.58	81%	19	+110	-2.2	+29	+54	+76	+57	+12	+2.7	+48	+11.7	+0.0	+2.4	+0.7	+3.7
NORC511	RENNYLEA C511	2007	+0.56	89%	107	+140	-0.4	+34	+71	+83	+62	+17	+3.1	+53	+12.0	+2.1	+0.1	+0.6	+5.0
VTMX60	TE MANIA XAMINED X60	2002	+0.55	72%	8	+91	-0.4	+35	+66	+86	+100	+10	+1.4	+45	+8.8	+0.2	+3.6	+0.0	+1.2
NGMY145	BOOROOMOOKA UNDERTAKEN Y145	2003	+0.55	83%	29	+123	+3.5	+30	+63	+74	+55	+5	+2.2	+37	+1.4	+2.3	+1.7	-1.3	+4.2
NORC294	RENNYLEA C294	2007	+0.55	78%	29	+115	+1.7	+42	+83	+104	+92	+14	+2.9	+57	-1.0	-0.6	-0.8	-0.8	+3.4
NZE14647008839	MATAURI REALITY 839	2008	+0.55	78%	36	+120	+6.6	+42	+78	+96	+92	+10	+3.8	+49	+3.9	+5.3	+4.4	-2.5	+3.0
NAQA2	ARDROSSAN ADMIRAL A2	2005	+0.54	79%	20	+102	-7.7	+56	+95	+131	+120	+17	+0.9	+86	+7.7	-2.6	-6.2	+2.0	+2.1
NAQA241	ARDROSSAN EQUATOR A241	2005	+0.54	85%	44	+137	-0.4	+50	+91	+121	+105	+22	+3.1	+84	+5.9	-1.6	-1.5	+1.7	+1.9
NMMD78	MILLAH MURRAH EQUATOR D78	2008	+0.54	76%	23	+136	+0.3	+60	+110	+158	+182	+21	+2.2	+88	+3.3	-0.8	-1.2	+1.2	+0.3
USA16262077	SILVEIRAS CONVERSION 8064	2008	+0.54	73%	20	+106	-13.9	+65	+108	+132	+114	+19	+3.4	+84	+12.0	-1.7	+0.3	+2.0	+1.9
VTMB219	TE MANIA BARTEL B219	2006	+0.53	75%	9	+127	-9.5	+50	+85	+105	+78	+14	+1.3	+68	+14.2	-3.1	-4.6	+3.2	+3.0
BNAD145	TUWHARETOA REGENT D145	2008	+0.53	88%	61	+137	-6.2	+50	+85	+120	+111	+17	+1.4	+87	+9.2	+0.6	-1.4	+0.6	+4.3
NORC42	RENNYLEA C42	2007	+0.52	72%	20	+107	-3.8	+50	+79	+99	+86	+7	+0.5	+66	+4.5	+1.1	+0.1	-0.5	+3.1
QHED62	CARABAR DOCKLANDS D62	2008	+0.52	74%	17	+137	+3.6	+47	+88	+125	+91	+23	+3.3	+69	+6.3	+1.1	+1.1	+0.3	+1.1
NHZR13	HAZELDEAN RENAISSANCE R13	1996	+0.51	74%	7	+81	+6.4	+30	+53	+69	+47	+20	+3.6	+45	+4.8	+0.8	+0.8	-0.4	+1.8
USA13058662	HYLINE RIGHT TIME 338	1998	+0.51	85%	36	+120	-4.0	+53	+88	+126	+91	+21	+3.5	+63	+4.8	-0.1	+1.2	+0.9	+1.7
VTME343	TE MANIA EMPEROR E343	2009	+0.51	85%	47	+143	+0.9	+51	+95	+127	+125	+10	+1.9	+67	+4.6	+2.4	+0.4	-0.9	+3.0
NMMW100	MILLAH MURRAH WOODY W100	2001	+0.50	81%	42	+77	-5.6	+41	+68	+86	+82	+12	+1.4	+55	+5.1	-0.5	+0.2	+0.9	+1.1
NGME124	BOOROOMOOKA INSPIRED E124	2009	+0.50	76%	24	+124	-2.7	+47	+82	+106	+93	+16	+1.0	+67	+2.3	-1.8	+2.6	-0.3	+2.3
USA13346328	KMK ALLIANCE 6595 I87	1999	+0.49	75%	22	+82	-4.9	+56	+92	+116	+88	+15	+0.9	+77	+2.4	+0.3	-1.5	-0.1	+0.1
USA15354674	SYDGEN TRUST 6228	2006	+0.49	73%	17	+115	+1.7	+53	+83	+117	+94	+13	+0.2	+73	+7.8	-0.1	-1.7	+0.7	+1.2
USA14088249	RITO 2V1 OF 2536 1407	2002	+0.48	72%	5	+103	-5.6	+51	+84	+109	+90	+13	+1.7	+58	+7.4	-1.2	-0.4	+1.0	+1.8
DBLF4	TOPBOS AMBASSADOR F4	2010	+0.48	73%	14	+145	-1.4	+51	+95	+126	+92	+29	+2.2	+81	+6.5	-3.1	-4.5	+1.2	+4.6

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NGMA238	BOOROOMOOKA NEUTRON A238	2005	+0.47	78%	38	+103	+1.1	+44	+73	+101	+100	+14	+4.0	+51	+2.8	+1.1	+3.1	-0.4	+0.7
USA036	B/R NEW DESIGN 036	1990	+0.46	88%	7	+109	+1.3	+35	+63	+87	+77	+14	+1.4	+45	+4.6	-1.9	-4.8	+1.4	+3.0
NORX555	RENNYLEA XPONENTIAL X555	2002	+0.46	79%	6	+119	-4.9	+36	+58	+81	+80	+12	+1.3	+48	+11.3	-2.1	-1.5	+1.9	+3.2
VLYZ191	LAWSONS DINKY-DI Z191	2004	+0.46	83%	30	+129	+5.7	+43	+68	+98	+50	+20	+1.6	+45	+4.7	-1.1	-2.4	+0.9	+3.0
NORG255	RENNYLEA G255	2011	+0.46	76%	16	+131	-6.3	+49	+95	+131	+120	+22	+0.8	+92	+6.0	+0.2	-3.3	-0.8	+5.3
USA16295688	G A R PROPHET	2008	+0.45	71%	14	+150	+1.1	+65	+109	+131	+85	+26	+0.7	+72	+6.1	+0.8	+1.3	-1.4	+3.9
VLYU8	YTHANBRAE HENRY VIII U8	1999	+0.44	80%	9	+128	-4.2	+50	+87	+113	+83	+14	+1.8	+76	+7.1	-2.4	-5.3	+2.0	+3.1
VLYX1235	LAWSONS TANK X1235	2002	+0.43	73%	5	+107	-8.4	+44	+85	+111	+109	+7	-0.2	+67	+5.4	-0.8	-1.3	+0.1	+3.2
USA13880818	MYTTY IN FOCUS	2001	+0.43	73%	9	+108	+6.9	+49	+81	+99	+71	+16	+3.2	+61	+4.5	+0.2	-0.2	+0.9	+1.2
NORC154	RENNYLEA C154	2007	+0.42	71%	9	+113	-1.8	+35	+76	+102	+87	+21	+2.7	+54	+0.9	+0.6	-1.0	-0.9	+4.0
USA15840414	TC ABERDEEN 759	2007	+0.42	78%	23	+116	+2.0	+49	+89	+114	+82	+22	+1.0	+57	+11.1	+0.8	-0.8	+1.0	+1.1
NORE307	RENNYLEA 458N ELVIS E307	2009	+0.42	71%	12	+120	-0.6	+44	+85	+99	+75	+17	+1.7	+55	+3.8	+2.3	+3.2	-1.2	+3.4
HIOE7	AYRVALE BARTEL E7	2009	+0.42	71%	8	+160	+4.3	+49	+88	+113	+65	+27	+2.3	+75	+7.3	-1.0	+0.2	+0.2	+3.4
USA15462648	TC FRANKLIN 619	2006	+0.42	72%	15	+104	+2.7	+49	+86	+109	+97	+10	+0.9	+49	+2.0	-2.8	-1.3	-0.4	+2.1
NZE469	HINGAIA 469	1986	+0.41	78%	17	+75	+4.1	+30	+62	+84	+83	+13	+1.4	+31	+2.5	+1.4	+2.1	-0.3	-1.0
VTMU3271	TE MANIA UNLIMITED U3271	1999	+0.41	86%	37	+98	+0.1	+29	+62	+80	+55	+18	+2.8	+26	+2.8	+0.2	+1.0	-0.7	+3.5
USA13898124	BR MIDLAND	2000	+0.41	73%	11	+107	+2.0	+40	+68	+84	+72	+8	+1.0	+54	+6.3	+1.7	+3.6	-0.9	+2.1
VTMA217	TE MANIA AFRICA A217	2005	+0.41	87%	51	+146	+0.9	+40	+79	+105	+77	+27	+3.4	+28	+8.5	-1.5	+0.4	+0.9	+4.0
NMMF159	MILLAH MURRAH DOC F159	2010	+0.41	74%	27	+118	-9.0	+57	+110	+149	+133	+31	+2.6	+90	+3.7	+2.1	+2.7	-0.5	+1.3
USA16198796	EF COMPLEMENT 8088	2008	+0.41	73%	31	+139	+3.5	+53	+97	+127	+89	+22	+0.9	+75	+8.6	+1.1	+1.7	-0.2	+2.0
VTMU41	TE MANIA ULONG U41	1999	+0.40	85%	27	+133	+3.1	+40	+74	+98	+78	+20	+1.8	+22	+5.0	+0.2	+1.0	+0.5	+3.0
NAQW109	ARDROSSAN DIRECTION W109	2001	+0.40	81%	27	+107	+0.9	+41	+73	+99	+85	+17	+2.1	+71	+7.4	-0.1	-1.7	+1.0	+1.4
USA14474596	SITZ NEW DESIGN 458N	2003	+0.40	79%	22	+118	-0.6	+47	+88	+116	+84	+19	+2.7	+62	+3.9	+0.0	+0.5	+0.2	+2.4
NORC574	RENNYLEA C574	2007	+0.40	88%	91	+153	+0.9	+45	+90	+117	+89	+27	+2.1	+77	+6.0	+2.0	+1.5	-1.3	+3.8
NORG317	RENNYLEA G317	2011	+0.40	72%	10	+146	-0.1	+39	+75	+95	+46	+36	+5.4	+40	+10.8	-0.9	+0.0	+2.3	+3.4
VVCV9	WOORALLA PARK DYNAMITE V9	2000	+0.39	72%	20	+74	+3.2	+32	+69	+90	+72	+17	+2.6	+40	+2.1	+0.8	+0.8	+0.5	-0.1
USA095	B/R NEW FRONTIER 095	2000	+0.39	76%	9	+109	+2.1	+40	+67	+87	+70	+12	+2.8	+49	+2.8	-3.0	-5.1	+1.7	+2.5
USA14011547	G A R PRIME DESIGN	2001	+0.39	71%	11	+110	+0.3	+40	+72	+97	+78	+19	+2.1	+56	+7.0	-2.4	-3.8	+2.3	+1.9
VLYZ197	LAWSONS GAR FAIR DINKUM Z197	2004	+0.39	72%	7	+112	+3.2	+33	+57	+79	+39	+20	-1.1	+43	+5.2	-1.6	-2.1	+0.8	+3.3
NORA485	RENNYLEA A485	2005	+0.39	72%	12	+93	+0.0	+30	+57	+68	+56	+14	+2.1	+27	+4.7	-1.0	-0.3	+0.7	+2.6
NORB101	RENNYLEA B101	2006	+0.39	81%	32	+112	-2.6	+30	+62	+91	+58	+17	+2.1	+55	+5.5	+1.7	-1.3	-1.7	+4.8
USA7708	G A R PINNACLE	1998	+0.38	71%	5	+70	-21.3	+48	+86	+112	+111	+8	+1.0	+72	+6.4	-0.6	-0.4	+1.4	+1.8
USA1407	BON VIEW NEW DESIGN 1407	1997	+0.38	88%	47	+125	+4.2	+39	+67	+97	+62	+18	+0.4	+42	+5.4	-0.1	-0.8	-0.3	+3.4
NFJB1	FORRES BENAUD B1	2006	+0.38	72%	24	+104	+4.9	+50	+82	+102	+85	+18	+2.0	+59	+5.0	-1.6	-1.7	+1.7	+1.5
VLYC402	LAWSONS INVINCIBLE C402	2007	+0.38	70%	5	+124	+2.7	+42	+74	+97	+67	+11	+0.6	+62	+6.7	-0.9	-0.2	-0.1	+3.7
NGMT30	BOOROOMOOKA THEO T030	1998	+0.36	81%	33	+95	+2.8	+30	+59	+78	+44	+20	+2.8	+40	+5.0	+3.2	+1.1	-0.9	+2.3
NORF42	RENNYLEA F42	2010	+0.36	71%	7	+137	+0.0	+45	+92	+118	+68	+31	+0.6	+72	+9.7	+2.4	+1.1	+1.0	+0.9
VLYD1054	LAWSONS HENRY VIII D1054	2008	+0.35	82%	41	+120	-0.1	+39	+69	+95	+54	+16	+2.5	+46	+5.2	-0.8	-1.5	+0.8	+2.9
USA24J	BT RIGHT TIME 24J	1999	+0.34	81%	26	+103	-2.2	+45	+85	+112	+82	+19	+1.3	+57	+5.3	+1.2	+2.2	+0.1	+0.4
VLYB1155	LAWSONS TANK B1155	2006	+0.34	79%	15	+131	-2.3	+42	+81	+110	+98	+16	+1.9	+60	+7.0	-1.0	-2.2	+0.6	+2.9
USA13047487	GARDENS HIGHMARK	1998	+0.33	80%	22	+103	-2.4	+43	+75	+96	+77	+17	+2.4	+63	+5.6	-0.4	+1.4	+0.5	+2.3
NORH7	RENNYLEA H7	2012	+0.33	71%	13	+119	+2.8	+50	+89	+120	+83	+21	-0.1	+57	+9.6	+0.0	-1.8	+0.9	+0.6
USA13395344	G A R PREDESTINED	1999	+0.32	87%	49	+112	-2.9	+43	+67	+84	+55	+17	+0.9	+47	+8.0	+1.0	-0.2	+0.0	+3.9

Id	Name	Birth Year	Mature Cow Body Condition			Mid May 2019 Angus BREEDPLAN EBVs													
			RBV	Acc	Prog	ABI	CED	200	400	600	MCW	Milk	SS	CWt	EMA	Rib	Rump	RBV	IMF
NORH106	RENNYLEA H106	2012	+0.32	72%	15	+126	+0.4	+39	+72	+97	+62	+16	-1.2	+65	+13.4	-0.9	-1.0	+1.0	+3.6
NORZ313	RENNYLEA Z313	2004	+0.31	71%	13	+97	+0.0	+43	+68	+86	+59	+13	-0.1	+38	+5.0	-0.1	+0.4	+0.3	+1.7
NORF266	RENNYLEA F266	2010	+0.31	84%	61	+93	+2.8	+41	+74	+99	+47	+27	+1.2	+53	+7.7	-0.2	-1.4	-0.9	+2.4
USA13320150	IRONWOOD NEW LEVEL	1999	+0.30	73%	10	+80	+3.4	+41	+65	+85	+41	+18	+1.2	+52	+3.1	-0.2	-0.9	+1.2	+1.1
NGXZ3	BONGONGO BULLETPROOF Z3	2004	+0.29	82%	29	+117	+5.7	+30	+48	+68	+15	+22	-1.6	+25	+7.6	-2.4	-3.4	+1.2	+3.0
NORC803	RENNYLEA C803	2007	+0.29	76%	23	+119	-1.3	+43	+72	+101	+71	+24	+1.3	+47	+7.0	+3.7	+3.4	-1.3	+3.7
NAQX15	ARDROSSAN CONNECTION X15	2002	+0.28	84%	33	+87	+1.8	+39	+66	+86	+43	+19	+2.2	+56	+9.6	-0.7	-0.9	+1.8	+0.9
NGMY120	BOOROOMOOKA DESIGN Y120	2003	+0.28	78%	21	+109	+0.9	+44	+66	+100	+54	+18	+2.1	+58	+3.9	-2.0	-3.6	+1.1	+2.4
USA14222612	G A R INTEGRITY	2002	+0.28	72%	5	+95	+3.0	+28	+51	+64	+40	+14	-0.5	+42	+8.3	-0.8	-1.7	+1.2	+1.9
NZE12170000846	CRUSADER OF STERN AB	2000	+0.28	70%	11	+47	+3.4	+22	+51	+64	+45	+12	-0.7	+24	-2.2	+1.3	+2.1	-1.8	+0.0
NORC510	RENNYLEA C510	2007	+0.28	84%	62	+141	-0.2	+48	+82	+115	+52	+25	+3.3	+64	+13.9	-0.1	-0.5	+2.3	+1.3
NORA421	RENNYLEA A421	2005	+0.25	82%	48	+126	-2.4	+44	+78	+99	+72	+16	+2.8	+61	+7.1	+1.4	+1.5	-0.8	+3.3
CFQB7	CARRINGTON PARK TIME ON B7	2006	+0.23	75%	28	+79	-1.9	+43	+75	+104	+81	+25	+1.4	+68	+8.8	-2.5	-3.9	+2.5	+0.4
NAQX3	ARDROSSAN DIRECTION X3	2002	+0.22	75%	10	+91	-5.8	+42	+71	+95	+55	+15	+1.6	+60	+7.4	-1.8	-1.5	+1.8	+1.8
VTMD86	TE MANIA DANKNESS D86	2008	+0.21	71%	25	+118	+3.7	+37	+68	+80	+33	+21	+2.8	+40	+8.4	-1.7	-1.8	+1.0	+3.6
NORA79	RENNYLEA A79	2005	+0.20	71%	15	+105	-2.3	+43	+75	+99	+66	+24	+3.9	+59	+6.6	-0.2	-0.1	+0.9	+1.8
NXTY17	TWYNAM YARRAMAN Y17	2003	+0.19	77%	5	+120	+2.7	+30	+54	+78	+31	+24	+2.2	+44	+12.3	+1.7	-0.7	+1.7	+1.8
NORB77	RENNYLEA B77	2006	+0.19	82%	36	+128	-1.0	+38	+76	+99	+43	+29	+1.4	+59	+7.5	+2.0	+0.0	-0.2	+3.2
VTMB49	TE MANIA BRADMAN B49	2006	+0.16	75%	12	+113	+1.2	+46	+76	+94	+40	+22	+1.4	+75	+5.4	-1.3	-0.6	+1.2	+1.2

Id	Name	Birth Year	Mature Cow Height			Mid May 2019 Angus BREEDPLAN EBVs													
			RBV	Acc	Prog	ABI	CED	200	400	600	MCW	Milk	SS	CWt	EMA	Rib	Rump	RBV	IMF
QRFU27	RAFF ULTIMATE U27	1999	+12.0	73%	5	+60	-7.2	+50	+93	+137	+162	+15	+2.5	+72	+2.7	-4.5	-2.6	+1.9	+0.1
DHSD133	KOOLEWONG EQUATOR D133	2008	+11.6	76%	10	+112	-7.0	+54	+93	+131	+121	+11	+4.5	+65	+2.3	-2.0	-1.8	+0.8	+2.7
QRFW172	RAFF WIZARD W172	2001	+10.9	71%	6	+111	-0.7	+46	+86	+119	+111	+16	+0.2	+69	+3.1	-3.5	-5.3	+1.6	+1.9
NORX164	RENNYLEA X164	2002	+10.6	81%	12	+120	+0.3	+41	+79	+113	+106	+18	+2.3	+69	+9.2	-2.6	-2.2	+2.3	+1.3
NAQA248	ARDROSSAN EQUATOR A248	2005	+10.5	73%	8	+99	-10.8	+51	+88	+122	+113	+7	+3.1	+61	+7.3	-3.3	-2.9	+2.8	+1.4
NDLA53	OUTWEST XD ADMIRAL A53	2005	+10.4	74%	10	+87	+2.3	+24	+52	+66	+32	+13	+0.3	+33	+0.0	+2.8	+6.7	-2.1	+2.6
NGMW391	BOOROOMOOKA WESTALL W391	2001	+10.2	87%	23	+108	+0.7	+37	+59	+81	+68	+14	+1.6	+55	+11.2	-1.4	-2.6	+2.4	+2.3
NBBY136	BALD BLAIR VIKING Y136	2003	+10.2	75%	13	+80	-0.1	+27	+58	+77	+90	+0	+3.2	+24	-4.1	-0.1	+3.3	-0.5	+1.6
DDRV16	RACOVOLIS HI ROAD V16	2000	+10.1	84%	25	+96	-5.2	+46	+81	+108	+131	+7	+0.5	+67	+5.8	-2.5	-4.3	+1.9	+2.4
USA12760345	S A NEUTRON 377	1997	+10.1	83%	15	+125	-2.1	+57	+98	+127	+140	+8	+3.5	+71	+5.9	-0.4	+2.2	+1.1	+0.2
NENV142	KAROO FLATS S47 STOCKMAN V142	2000	+10.0	83%	22	+63	+4.4	+38	+70	+91	+79	+13	+2.8	+64	+3.2	-2.8	-4.9	+1.3	+0.6
NORX555	RENNYLEA XPONENTIAL X555	2002	+9.8	92%	60	+119	-4.9	+36	+58	+81	+80	+12	+1.3	+48	+11.3	-2.1	-1.5	+1.9	+3.2
NAQA241	ARDROSSAN EQUATOR A241	2005	+9.8	76%	6	+137	-0.4	+50	+91	+121	+105	+22	+3.1	+84	+5.9	-1.6	-1.5	+1.7	+1.9
VSyv133	BALLANGEICH V133	2000	+9.4	79%	9	+92	+1.3	+35	+68	+74	+68	+5	+1.5	+48	+4.4	-0.2	-0.2	+0.6	+1.5
VTME343	TE MANIA EMPEROR E343	2009	+9.4	81%	15	+143	+0.9	+51	+95	+127	+125	+10	+1.9	+67	+4.6	+2.4	+0.4	-0.9	+3.0
VSyw599	BALLANGEICH W599	2001	+9.2	72%	6	+66	-1.1	+40	+75	+88	+92	+6	+1.0	+53	+2.0	+1.8	+1.9	+0.1	+0.3
NAQW109	ARDROSSAN DIRECTION W109	2001	+9.1	80%	8	+107	+0.9	+41	+73	+99	+85	+17	+2.1	+71	+7.4	-0.1	-1.7	+1.0	+1.4
VSyX60	BALLANGEICH X60	2002	+9.1	87%	27	+92	+0.1	+34	+66	+86	+102	+12	+2.3	+48	-0.6	-0.5	-0.5	-0.8	+2.4
VSyw563	BALLANGEICH W563	2001	+9.0	72%	5	+82	-1.3	+38	+67	+82	+83	+6	+1.1	+49	+2.9	-1.3	-1.4	+0.7	+1.7
VSyZ155	BALLANGEICH Z155	2004	+8.9	77%	9	+99	+4.7	+34	+68	+87	+62	+20	+0.9	+45	+2.2	-1.2	-0.9	+0.4	+2.1
VSyw391	BALLANGEICH W391	2001	+8.7	75%	8	+80	+3.0	+32	+63	+75	+74	+11	+2.3	+46	+1.5	-2.0	-1.6	+1.3	+1.0
VSyw394	BALLANGEICH W394	2001	+8.7	72%	6	+71	+1.0	+30	+62	+68	+82	+7	+1.3	+47	+0.3	-1.2	-1.3	+0.4	+1.9
USA315	V D A R NEW TREND 315	1988	+8.6	87%	8	+99	+0.8	+35	+60	+78	+42	+15	+3.2	+36	+2.4	+0.5	+0.7	+0.3	+2.3
NDLX52	OUTWEST X-RAY DIRECTION X52	2002	+8.6	70%	7	+84	+2.5	+34	+56	+71	+48	+18	+1.0	+51	+6.5	+0.9	+1.4	+0.2	+1.5
VSyY465	BALLANGEICH Y465	2003	+8.6	73%	6	+83	-2.2	+38	+67	+91	+92	+9	+1.2	+49	+0.9	-1.0	-1.2	+0.5	+1.4
VSyY466	BALLANGEICH Y466	2003	+8.5	80%	13	+105	+1.6	+43	+74	+97	+109	+6	+2.2	+59	+5.7	+0.0	+0.1	+0.8	+1.1
USA13119152	HOFF LIMITED EDITION S C 594	1998	+8.5	84%	32	+50	-7.2	+47	+81	+103	+96	+7	+0.0	+65	+5.9	-2.4	-2.4	+1.8	+0.8
SMPB099	PATHFINDER IN FOCUS B099	2006	+8.5	75%	10	+105	+5.1	+54	+92	+120	+120	+19	+1.3	+68	+3.4	-2.1	-2.2	+2.1	+0.2
USAP65	R P 3RD BUSHWACKER	1996	+8.4	73%	5	+111	-4.1	+50	+87	+118	+117	+21	+2.7	+62	+3.7	-3.3	-3.8	+2.2	+0.9
USA095	B/R NEW FRONTIER 095	2000	+8.4	88%	22	+109	+2.1	+40	+67	+87	+70	+12	+2.8	+49	+2.8	-3.0	-5.1	+1.7	+2.5
USA1407	BON VIEW NEW DESIGN 1407	1997	+8.3	92%	34	+125	+4.2	+39	+67	+97	+62	+18	+0.4	+42	+5.4	-0.1	-0.8	-0.3	+3.4
BFBX14	NARRAWOLGA XANTHUS X14	2002	+8.3	81%	15	+105	-1.9	+45	+86	+111	+117	+10	+1.3	+66	+4.8	-4.2	-6.5	+2.5	+2.2
TFAD66	LANDFALL EVERLAST D66	2008	+8.3	75%	7	+92	+0.4	+45	+89	+120	+118	+20	+1.7	+63	-0.9	-1.4	-0.8	-2.2	+2.8
VONV84	BANQUET VENZO V84	2000	+8.2	75%	7	+71	-7.5	+38	+68	+93	+94	+10	+1.8	+44	+0.0	-1.7	+1.1	-0.1	+2.0
NAQA2	ARDROSSAN ADMIRAL A2	2005	+8.2	74%	5	+102	-7.7	+56	+95	+131	+120	+17	+0.9	+86	+7.7	-2.6	-6.2	+2.0	+2.1
VSyY451	BALLANGEICH Y451	2003	+8.1	72%	7	+64	-1.1	+33	+60	+72	+98	+11	+1.4	+42	-0.5	-0.9	-0.8	+0.2	+1.7
NDAU024	TRANGIE U024	1999	+8.0	74%	12	+31	+1.0	+16	+34	+43	+43	+5	+0.1	+16	+0.2	+3.2	+4.8	-2.2	+0.6
DHSX2	KOOLEWONG X2	2002	+8.0	71%	5	+86	+0.3	+35	+60	+78	+67	+12	-0.2	+51	+10.1	-2.3	-3.6	+2.2	+1.2
NGMZ309	BOOROOMOOKA BIG TIME PLAYER Z309	2004	+8.0	74%	6	+117	-3.3	+54	+94	+127	+107	+23	+2.7	+75	+5.6	-1.6	-2.9	+1.2	+2.4
VONZ021	BANQUET ZEALFUL Z021	2004	+7.9	72%	9	+84	-4.2	+48	+80	+108	+91	+8	+1.8	+52	-2.0	-0.5	+0.6	-0.8	+1.6
USA297E	B T ULTRAVOX 297E	1995	+7.8	92%	40	+91	-8.2	+55	+92	+123	+130	+15	+2.1	+61	+4.7	+0.5	+0.8	+0.4	+1.9
VSyw502	BALLANGEICH VSY W502	2001	+7.8	80%	13	+75	+2.4	+38	+67	+88	+108	+6	+2.1	+51	+1.0	+1.6	+2.8	-1.1	+1.4

Id	Name	Birth Year	Mature Cow Height			Mid May 2019 Angus BREEDPLAN EBVs													
			RBV	Acc	Prog	ABI	CED	200	400	600	MCW	Milk	SS	CWt	EMA	Rib	Rump	RBV	IMF
NQMV9	ROSEVALE V9	2000	+7.7	74%	8	+83	-2.5	+38	+66	+78	+89	+3	-0.6	+47	+4.4	+0.9	-0.4	+1.0	+1.2
NGMT204	BOOROOMOOKA TIM T204	1998	+7.6	86%	7	+91	+2.8	+31	+61	+80	+86	+16	+2.6	+43	+1.0	-3.7	-5.5	+1.1	+2.6
NXJT149	MERRIC RIVERS NEW DESIGN T149	1998	+7.6	85%	9	+99	+4.1	+30	+54	+71	+34	+20	+3.5	+30	+1.9	+0.9	+1.3	+0.0	+2.2
VSYW393	BALLANGEICH W393	2001	+7.6	76%	9	+84	+1.7	+32	+64	+83	+82	+16	+1.5	+45	+2.8	-3.4	-4.3	+2.4	+1.1
NGMY120	BOOROOMOOKA DESIGN Y120	2003	+7.6	77%	6	+109	+0.9	+44	+66	+100	+54	+18	+2.1	+58	+3.9	-2.0	-3.6	+1.1	+2.4
NAQV140	ARDROSSAN EXACTO V140	2000	+7.5	79%	15	+59	-7.2	+46	+80	+115	+140	+19	+0.8	+74	+3.0	-1.7	-2.0	+1.2	+0.1
SMPA224	PATHFINDER 2V1 A224	2006	+7.5	76%	11	+84	-2.8	+37	+63	+79	+72	+11	+1.3	+41	+3.9	-0.6	-0.4	+0.1	+2.4
BIQX14	COBBADAH CREEK DIRECTION X14	2002	+7.4	79%	10	+69	+2.3	+33	+57	+75	+54	+22	+0.3	+53	+6.0	-0.8	-1.3	+0.8	+0.9
USA13058662	HYLINE RIGHT TIME 338	1998	+7.4	83%	14	+120	-4.0	+53	+88	+126	+91	+21	+3.5	+63	+4.8	-0.1	+1.2	+0.9	+1.7
TFAV153	LANDFALL NEW DESIGN V153	2000	+7.3	91%	48	+82	+0.1	+34	+61	+80	+72	+15	+2.1	+45	+2.2	-0.8	-2.1	+0.5	+2.3
BCHA10	J & C APPEAL A10	2005	+7.3	71%	8	+106	-11.4	+61	+110	+146	+144	+8	+2.3	+91	+6.5	-4.0	-2.9	+3.6	+0.3
USAJ244	VERMILION YELLOWSTONE	1999	+7.2	90%	28	+129	+0.8	+51	+88	+121	+115	+13	+2.4	+60	+1.6	+0.0	+1.1	-0.3	+2.3
CYOW1	EUDUNDA LOCHTON W1	2001	+7.2	75%	23	+99	+2.7	+40	+70	+98	+59	+13	+0.4	+57	+7.5	-1.7	-1.6	+1.1	+1.4
USA24J	BT RIGHT TIME 24J	1999	+7.2	81%	10	+103	-2.2	+45	+85	+112	+82	+19	+1.3	+57	+5.3	+1.2	+2.2	+0.1	+0.4
USA7708	G A R PINNACLE	1998	+7.1	75%	7	+70	-21.3	+48	+86	+112	+111	+8	+1.0	+72	+6.4	-0.6	-0.4	+1.4	+1.8
NAQW107	ARDROSSAN MODEST W107	2001	+7.1	83%	16	+72	-9.1	+39	+75	+87	+60	+15	+2.9	+54	-3.7	+0.0	+1.0	-1.4	+2.0
USAC804	LEMMON NEWSLINE C804	2000	+7.1	81%	15	+114	-3.0	+45	+79	+105	+99	+16	+2.7	+59	+8.7	-2.5	-4.0	+3.0	+0.9
SMPF101	PATHFINDER ABERDEEN F101	2010	+7.1	73%	13	+101	-1.1	+47	+84	+115	+114	+14	+1.4	+59	+6.3	+0.1	+0.2	+0.2	+1.2
CSWE254	MURDEDUKE E254	2009	+7.1	74%	12	+121	-0.6	+51	+92	+125	+83	+25	+2.4	+70	+4.8	+0.0	+0.8	+0.6	+1.4
NTVT27	BOORAGUL TUMBLEWEED T27	1998	+6.9	84%	20	+48	-8.2	+43	+71	+87	+92	+13	+1.6	+54	+6.4	+0.0	+0.9	+0.7	+0.1
NEPY112	EASTERN PLAINS DESIGN PLUS Y112	2003	+6.9	82%	20	+61	-0.5	+39	+65	+73	+68	+9	+0.8	+34	+1.6	+0.7	+1.1	+0.2	+0.3
BBIV3	CAMDEN VIEW BLACK DOUGLAS V3	2000	+6.8	79%	15	+64	-5.1	+35	+68	+83	+101	+4	+1.8	+47	-0.6	-0.9	+0.7	-0.1	+1.3
VSYY383	BALLANGEICH Y383	2003	+6.8	78%	9	+88	+0.4	+37	+65	+86	+77	+10	+1.4	+46	+4.0	+3.4	+2.6	-1.4	+1.7
VSYZ154	BALLANGEICH Z154	2004	+6.8	70%	7	+97	+1.6	+34	+75	+92	+99	+15	+3.3	+55	+0.0	-0.6	+0.1	+0.4	+1.7
VSYW582	BALLANGEICH W582	2001	+6.6	75%	9	+95	-0.3	+39	+67	+89	+86	+8	+1.6	+52	+4.0	+0.7	+1.1	+0.6	+0.9
NZE04379	TE MANIA INFINITY 04 379 AB	2004	+6.6	79%	12	+87	-2.9	+36	+73	+89	+75	+11	+2.9	+46	+2.4	-1.6	+0.7	-1.5	+3.2
VSYV107	BALLANGEICH V107	2000	+6.5	79%	12	+57	-4.6	+35	+65	+81	+92	+11	+2.4	+52	+4.5	+2.7	+1.9	-0.4	+1.0
USAT510	S S TRAVELER 6807 T510	1995	+6.5	78%	7	+113	+3.1	+42	+81	+108	+117	+15	+0.9	+59	+1.1	-0.6	+1.3	-0.6	+2.3
NEPY110	EASTERN PLAINS DESIGN PLUS Y110	2003	+6.5	78%	16	+81	-2.8	+37	+69	+79	+79	+9	+0.4	+43	+2.3	-2.5	-4.3	+1.8	+0.5
VSYY369	BALLANGEICH Y369	2003	+6.5	73%	6	+85	-0.7	+40	+73	+98	+111	+10	+0.5	+51	+6.0	-1.5	-1.1	+1.5	+1.4
USA5321	C A FUTURE DIRECTION 5321	1995	+6.4	92%	30	+94	+1.4	+31	+51	+71	+38	+18	-0.2	+56	+10.7	-1.0	-1.1	+0.9	+2.1
NGCV103	DULVERTON VOTED NO.1 V103	2000	+6.1	81%	16	+71	-3.9	+44	+77	+90	+81	+10	+0.8	+52	+1.6	-2.3	-2.9	+0.7	+1.6
NFWX239	GLENAVON X239	2002	+6.1	77%	15	+71	+5.4	+22	+42	+48	+31	+10	+1.1	+23	+1.6	-0.8	-0.2	+0.5	+0.5
NENV36	KAROO FLATS AL TRAVELER V36	2000	+5.9	80%	19	+84	+1.4	+31	+55	+82	+73	+3	+0.9	+25	-0.6	+1.3	+2.2	-0.1	+0.9
USA13697595	BUSHS GRAND DESIGN	2000	+5.7	77%	8	+95	+0.9	+48	+71	+93	+66	+17	+1.0	+50	+7.5	-1.2	-3.3	+1.3	+1.8
NKSA57	DSK HLE AHEAD OF THE PACK A57	2005	+5.6	72%	7	+65	-1.6	+38	+66	+82	+67	+11	+0.2	+48	+1.5	+1.0	+1.8	+0.0	+0.8
AMCA28	MAIN CAMP A.OR A28	2005	+5.6	75%	11	+60	+1.4	+28	+52	+56	+67	+9	+0.3	+32	+11.7	+3.1	+0.2	+1.4	-0.4
USA13447282	CONNELY LEAD ON	1999	+5.5	82%	13	+135	-2.4	+44	+85	+112	+82	+19	+2.0	+61	+8.0	-2.8	-3.2	+3.7	+0.6
NGMT38	BOOROOMOOKA TRISTAN T038	1998	+5.2	86%	10	+72	-7.4	+34	+60	+75	+86	+3	+2.5	+43	+6.5	-1.9	-4.0	+1.9	+2.0
NGMU13	BOOROOMOOKA USA U13	1999	+5.2	73%	5	+81	-0.3	+24	+44	+48	+13	+13	+1.1	+26	+3.1	+2.4	+1.5	-1.0	+2.5
NGMW245	BOOROOMOOKA WARWICK W245	2001	+5.2	84%	20	+85	-0.7	+39	+70	+90	+89	+8	+0.8	+46	+7.3	-0.1	-0.9	+1.2	+0.4
NGMU170	BOOROOMOOKA UNDERTAKEN U170	1999	+5.0	88%	24	+85	-1.5	+26	+47	+48	+31	+4	+2.9	+20	+1.8	+3.0	+4.7	-1.5	+4.2

Id	Name	Birth Year	Mature Cow Height			Mid May 2019 Angus BREEDPLAN EBVs													
			RBV	Acc	Prog	ABI	CED	200	400	600	MCW	Milk	SS	CWt	EMA	Rib	Rump	RBV	IMF
VONY135	BANQUET TIME FRAME Y135	2003	+5.0	76%	12	+124	-1.6	+49	+91	+125	+131	+13	+2.7	+69	+5.4	-2.5	-1.7	+2.1	+0.8
NHZR13	HAZELDEAN RENAISSANCE R13	1996	+4.9	78%	5	+81	+6.4	+30	+53	+69	+47	+20	+3.6	+45	+4.8	+0.8	+0.8	-0.4	+1.8
NGMY145	BOOROOMOOKA UNDERTAKEN Y145	2003	+4.8	89%	30	+123	+3.5	+30	+63	+74	+55	+5	+2.2	+37	+1.4	+2.3	+1.7	-1.3	+4.2
VSX7	BALLANGEICH X7	2002	+4.6	71%	6	+93	+1.0	+32	+64	+84	+72	+11	+1.8	+45	+5.1	+1.1	-0.1	+0.5	+1.4
NDAU107	TRANGIE U107	1999	+4.3	72%	9	+20	+5.1	-3	+11	-7	-25	+8	-0.2	-11	+1.5	+4.0	+4.8	-1.2	+0.8
USA13687063	K C F BENNETT TOTAL	1999	+4.3	77%	9	+98	+3.6	+41	+73	+93	+61	+17	+1.7	+57	+4.2	+2.9	+2.7	-0.6	+0.8
NGMT30	BOOROOMOOKA THEO T030	1998	+3.9	90%	24	+95	+2.8	+30	+59	+78	+44	+20	+2.8	+40	+5.0	+3.2	+1.1	-0.9	+2.3
DHSC22	KOOLEWONG THEO C22	2007	+3.0	76%	11	+93	-0.1	+41	+69	+78	+44	+19	+2.1	+49	+8.1	+1.5	+0.1	+1.2	+1.1
AMCZ61	MAIN CAMP Z.WH Z61	2004	+3.0	76%	12	+60	-2.2	+27	+49	+45	+58	+1	+0.6	+35	+12.8	+1.0	+0.4	+2.8	-0.3
AMCA149	MAIN CAMP A.OR A149	2005	+2.1	80%	19	+25	-3.1	+18	+38	+24	+23	-9	+0.7	+8	+5.5	+3.0	+4.7	-0.4	+0.2
AMPU999	NSW DPI MP MAC U999	1999	+1.7	80%	26	+15	-10.2	+20	+37	+27	+15	+3	+0.0	+17	+10.7	+1.8	+3.0	+2.2	-0.6

For further information, please contact staff at:

Angus Australia
Phone: 02 6773 4600
Email: office@angusaustralia.com.au
Website: www.angusaustralia.com.au

