TACE

TransTasman Angus Cattle Evaluation

ANGUS ImmuneDEX

RESEARCH BREEDING VALUES

AUGUST 2025

BACKGROUND

Angus Australia has partnered with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to undertake research into the genetics of traits related to immune competence and resilience. An animal's resilience is defined as their capacity to cope with environmental challenges, especially those leading to disease, and to subsequently return to being productive.

This has involved collecting and analysing immune competence phenotypes on ~4000 Angus steers and heifers at weaning, primarily from the Angus Sire Benchmarking Program (ASBP). This information, combined with genotypes (i.e. DNA profiles), was analysed to determine genetic parameter estimates (heritabilities and correlations) and to produce Research Breeding Values for immune competence.

More specifically, immune competence was assessed by combining measures of antibody-mediated immune responses (Ab_IR), through a blood test, and cell-mediated immune responses (Cell_IR), through a skin reaction test. Pathogens, like the bacteria and viruses associated with Bovine Respiratory Disease (BRD), differ in the way they infect the host animal. For instance, many bacteria live outside host cells while viruses replicate within host cells. The immune system tailors how it responds to different pathogens with extra-cellular pathogens most effectively controlled by Ab_IR and intracellular pathogens most effectively controlled by Cell_IR.

Individuals identified as having a balanced ability to mount both a Cell_IR and Ab_IR response are expected to exhibit broad-based disease resistance against a wide range of pathogens. For this reason, an index value (ImmuneDEX) has been developed which combines research breeding values for the Cell_IR and Ab_IR traits into a single value. The process by which the ImmuneDEX value is generated ensures appropriate weightings are given to component traits so that high ImmuneDEX animals have a balanced response, and genetic gains in both traits are driven at similar rates.

The ImmuneDEX value is moderately heritable and negatively correlated with some of the production traits (e.g. carcase weight and eye muscle area), while being favourably correlated with the stress and temperament related traits.

Additionally, on a subset 1149 steers from this study, disease incidence during the feedlot feeding period was examined. Prior vaccination and minimal mixing with unfamiliar animals at feedlot entry provided a low disease risk environment in the study. Nonetheless, animals with superior immune competence phenotypes had significantly fewer health-related mortalities, and incurred substantially lower health related costs during feedlot finishing.

UNDERSTANDING THE ImmuneDEX RBV

ImmuneDEX Research Breeding Values (RBVs) are provided in this publication for sires with (i) at least 50% accuracy for their ImmuneDEX RBV, and (ii) one or more progeny born in the last two years.

The ImmuneDEX RBV provides an estimate of genetic differences between animals for overall immune competence, a key component of resilience.

Higher ImmuneDEX RBVs indicate an animal is expected to produce progeny with an enhanced ability to resist disease challenges and therefore have lower disease incidence. Lower ImmuneDEX RBVs indicate an animal is expected to produce progeny with a higher incidence of disease and associated production losses.

USING THE RESEARCH BREEDING VALUES IN SELECTION

The ImmuneDEX RBVs in this publication will enable Angus breeders to place selection emphasis on immune competence and resilience traits, while continuing selection for other traits of importance within their breeding objective.

It is important to note that the RBVs for AB_IR and Cell_IR that underpin the ImmuneDex values are subject to greater potential change than EBVs routinely reported as part of the TransTasman Angus Cattle Evaluation (TACE), and ImmuneDEX RBVs should be used with caution in animal selection decisions.

ImmuneDEX RBVs, and the component Research Breeding Values for AB_IR and Cell_IR, may change as improvements are made to the analytical models that are used, and as additional performance information is collected and methodologies for assessing resilience traits continue to evolve.

ACKNOWLEDGEMENTS

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DISCLAIMER

The ImmuneDEX RBVs 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.

Angus Australia - ImmuneDEX Research Breeding Values

Date: July 29, 2025

Ident / Sire / Dam	Name / Reg.	ImmuneDEX IMD	Calv-Ease		Birth		Growth			Maternal		Fert		Carcase						Feed	Temp	Structural			Selection Index	
			Dir	Dtrs	GL	BW	200	400	600	MCW	Milk	SS	DC	CW	EMA	Rib	P8	RBY	IMF	NFI-F	Doc	Claw	Angle	Leg	$A	$A-L
NXOL172	**AJC L172** SV	+72	+7.6	+7.8	-6.0	+2.9	+57	+99	+135	+122	+14	+2.1	-5.1	+72	+6.2	-0.5	+0.5	+0.3	+1.0	-0.97	+20	+1.44	+1.30	+1.18	$212	$388
NXOF43	APR	69%	77%	63%	94%	96%	94%	94%	94%	88%	90%	84%	56%	91%	89%	84%	90%	82%	91%	83%	85%	85%	85%	81%		
NXOJ432		52	11	9	27	28	25	35	21	21	71	51	41	42	52	61	37	53	82	1	51	99	98	89	44	24
DGJG10	**ALLOURA GET CRACKING G10** SV	+77	+8.0	+7.4	-2.9	+2.6	+44	+74	+87	+87	+12	-0.4	-8.1	+46	+14.3	+1.4	+0.4	+0.8	+5.8	+0.45	+6	+0.48	+0.98	+0.92	$266	$420
VTMB1	HBR	69%	95%	86%	99%	99%	98%	98%	98%	98%	98%	97%	77%	96%	94%	95%	95%	91%	93%	89%	97%	96%	96%	94%		
DGJZ15		39	9	11	75	22	83	93	97	74	86	99	3	95	2	21	39	24	2	73	95	3	54	21	4	8
DGJL94	**ALLOURA LOCK STOCK &**	+71	+6.4	+2.0	-4.2	+2.8	+57	+94	+124	+122	+11	+1.1	-3.9	+65	+1.0	+2.2	-1.2	+0.2	+1.8	-0.38	+24	+0.80	+0.88	+0.92	$184	$343
USA15832750	HBR	64%	80%	72%	93%	96%	94%	94%	94%	92%	88%	88%	54%	89%	84%	81%	86%	77%	87%	78%	93%	84%	82%	77%		
DGJH24		54	18	64	55	26	27	50	42	22	89	84	70	61	96	11	66	59	64	5	36	42	30	21	75	60
DGJQ30	**ALLOURA QUINELLA Q30** SV	+35	+2.0	+1.6	+0.5	+2.9	+53	+97	+118	+122	+15	+3.4	-7.4	+64	+14.1	+0.1	+0.5	+0.8	+7.3	+0.42	+16	+0.90	+1.02	+1.16	$283	$461
WWEL3	HBR	51%	74%	67%	94%	93%	91%	91%	92%	87%	81%	83%	62%	89%	88%	87%	88%	79%	90%	82%	89%	85%	86%	81%		
DGJK117		98	58	68	98	28	44	40	56	22	67	13	7	63	2	47	37	24	1	70	70	64	64	86	1	1
NAQA241	**ARDROSSAN EQUATOR A241** PV	+74	-1.4	+3.1	-4.4	+4.1	+49	+91	+121	+108	+20	+3.2	-8.8	+85	+7.9	-2.0	-0.3	+1.2	+1.7	+0.63	+25	+0.46	+0.86	+1.00	$230	$388
USA2928	HBR	80%	99%	98%	99%	99%	99%	99%	99%	99%	99%	99%	95%	99%	98%	98%	98%	98%	98%	96%	99%	99%	99%	99%		
NAQW38		47	81	53	51	54	61	57	49	40	29	17	2	12	32	88	51	10	66	86	34	2	25	43	25	24
NAQN329	**ARDROSSAN HOLBROOK N329**	+49	-7.1	+0.4	-2.9	+2.7	+47	+85	+109	+76	+25	+2.5	-8.0	+69	+5.5	+2.3	+2.1	-0.9	+3.8	+1.09	+12	+0.82	+1.02	+0.92	$205	$322
NAQH318	HBR	54%	72%	67%	96%	95%	96%	95%	95%	91%	92%	87%	59%	91%	89%	89%	90%	82%	91%	83%	91%	81%	87%	83%		
NAQK30		90	96	77	75	24	73	75	73	86	7	36	4	48	61	10	16	96	19	99	84	47	64	21	53	75
NAQH255	**ARDROSSAN HONOUR H255** PV	+55	-1.8	-1.2	-2.6	+4.6	+43	+75	+97	+92	+13	+2.2	-5.9	+60	+5.7	+0.9	-1.5	+0.6	+2.4	+0.98	+9	+0.42	+1.00	+1.24	$168	$291
NORE11	HBR	81%	96%	90%	99%	99%	98%	98%	98%	98%	98%	98%	85%	97%	96%	96%	96%	95%	96%	92%	98%	97%	97%	96%		
NAQD17		83	83	86	78	65	86	92	90	66	83	47	25	73	59	30	71	35	48	98	90	2	59	96	86	89
QQFH147	**ASCOT HALLMARK H147** PV	+73	-3.6	+0.9	-5.0	+7.1	+60	+110	+151	+136	+14	+3.8	-6.0	+79	-1.5	+0.6	-0.2	-0.9	+3.3	+0.36	+18	+0.48	+0.86	+1.02	$195	$362
VTME343	HBR	72%	96%	89%	99%	99%	98%	98%	98%	98%	98%	98%	80%	96%	95%	96%	96%	94%	95%	90%	97%	95%	95%	94%		
NMMF123		49	89	74	42	96	16	12	5	10	72	8	23	22	99	36	49	96	28	64	62	3	25	49	64	45
HIOE7	**AYRVALE BARTEL E7** PV	+68	+8.7	+9.0	-4.4	+1.8	+49	+86	+113	+75	+25	+2.5	-9.5	+64	+7.9	-0.3	+0.8	+1.1	+3.5	+0.29	+4	+1.04	+1.00	+1.14	$291	$448
VTMB219	HBR	85%	99%	97%	99%	99%	99%	99%	99%	99%	99%	99%	94%	98%	98%	98%	98%	98%	98%	96%	99%	99%	99%	99%		
BVVB32		61	6	4	51	12	62	71	67	86	6	36	1	63	32	56	32	13	24	57	96	86	59	82	1	2
ECMM114	**BANNABY BERKLEY M114** SV	+38	+3.7	+3.2	-9.8	+4.1	+56	+94	+136	+164	+5	+4.0	-8.4	+65	+2.7	-1.2	-3.7	+0.3	+2.5	+0.04	+17	+0.80	+0.76	+1.10	$187	$390
VTMB1	HBR	52%	79%	71%	95%	94%	92%	92%	93%	88%	85%	88%	66%	87%	86%	86%	87%	80%	88%	79%	85%	87%	87%	84%		
BBAZ107		97	42	52	2	54	32	47	20	2	99	6	3	60	88	76	93	53	46	30	64	42	10	73	72	22
NUIF32	**BONNY BROOKE FALCO F32** SV	+75	-3.1	-10.1	-0.2	+5.9	+54	+83	+108	+89	+17	-0.5	-2.0	+66	-1.8	+2.2	+1.5	-1.1	+2.1	-0.41	+22	+0.96	+0.92	+1.06	$134	$228
NGMC196	HBR	53%	67%	55%	91%	89%	91%	89%	90%	84%	78%	77%	52%	84%	82%	82%	83%	73%	81%	73%	81%	79%	79%	74%		
NUID96		44	88	99	96	87	41	79	77	71	48	99	95	59	99	11	22	98	56	5	46	74	39	62	97	99
HCAG013	**BOONAROO GRAVITY G013** PV	+94	+4.7	+3.8	-5.3	+3.7	+51	+87	+115	+99	+22	+4.0	-5.3	+57	+5.5	-2.8	-3.5	+1.3	+2.9	-0.77	+20	+0.48	+0.92	+1.06	$213	$361
VTMA217	HBR	70%	91%	84%	98%	98%	97%	98%	97%	95%	96%	97%	73%	94%	92%	92%	93%	88%	91%	86%	95%	94%	94%	91%		
VTMZ618		2	33	46	37	45	54	68	63	55	16	6	37	81	61	95	92	8	37	1	51	3	39	62	43	46
NGME124	**BOOROOMOOKA INSPIRED E124**	+41	-5.5	-0.1	-5.9	+3.7	+45	+82	+107	+104	+15	+0.9	-8.5	+82	+3.6	-0.3	+3.6	-0.3	+2.3	+0.94	+18	+0.80	+0.80	+0.82	$190	$329
NAQA241	HBR	73%	96%	92%	99%	99%	98%	98%	98%	98%	98%	98%	84%	97%	96%	96%	96%	95%	96%	90%	98%	97%	97%	96%		
NGMB325		95	94	80	28	45	78	81	78	47	68	88	2	16	81	56	6	83	51	97	59	42	15	6	69	71
	Breed Average EBVs	**+71**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+68**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.83**	**+0.96**	**+1.01**	**+205**	**+351**

Angus Australia - ImmuneDEX Research Breeding Values

Ident **Name**

Sire / Dam	Reg.	ImmuneDEX IMD	Calv-Ease		Birth		Growth			Maternal		Fert		Carcase						Feed	Temp	Structural			Selection Index	
			Dir	Dtrs	GL	BW	200	400	600	MCW	Milk	SS	DC	CW	EMA	Rib	P8	RBY	IMF	NFI-F	Doc	Claw	Angle	Leg	$A	$A-L
NGMN418	**BOOROOMOOKA JACKPOT N418**	+52	+1.8	+6.8	-8.6	+5.5	+64	+113	+139	+138	+4	+3.5	-7.7	+81	+8.4	-0.6	-0.1	+0.7	+2.7	+0.28	+28	+1.30	+1.10	+1.08	$269	$466
WWEL3	HBR	50%	71%	66%	95%	97%	96%	96%	96%	94%	91%	94%	63%	89%	87%	87%	88%	82%	89%	80%	95%	94%	94%	88%		
NGML471		87	60	16	6	82	8	8	16	9	99	12	5	18	27	63	47	29	41	56	23	99	80	68	3	1
NGMP96	**BOOROOMOOKA PARAGON P96**	+38	-4.0	+2.3	-7.7	+3.7	+64	+120	+160	+126	+29	+3.7	-8.5	+110	+13.2	-2.8	-1.3	+1.5	+2.4	+0.87	+32	+0.82	+0.96	+1.06	$295	$473
WWEL3	HBR	52%	82%	75%	99%	98%	98%	98%	98%	97%	94%	97%	67%	94%	92%	92%	92%	85%	93%	87%	99%	98%	98%	96%		
NGMM566		97	90	62	10	45	8	3	2	17	2	9	2	1	3	95	68	5	48	96	14	47	49	62	1	1
BOWK2	**BOWMAN AUSTRALIA K2** PV	+70	+8.0	+2.0	-6.5	+3.5	+48	+98	+123	+96	+22	+4.9	-7.6	+68	+8.2	-0.1	-1.4	+0.9	+1.5	-0.59	+11	+0.86	+1.04	+0.96	$225	$387
VTME343	HBR	74%	80%	76%	94%	91%	91%	91%	91%	88%	86%	85%	69%	89%	88%	88%	88%	83%	90%	83%	88%	85%	85%	81%		
NAQZ31		56	9	64	21	40	66	37	44	61	15	2	6	52	29	52	70	20	71	2	86	55	68	31	30	24
SRKK306	**BOWMONT KING K306** PV	+60	-1.2	-8.7	-4.6	+4.5	+49	+78	+102	+86	+2	-0.3	-4.2	+64	+14.8	-0.4	-1.8	+1.5	+4.8	+0.51	+25	+0.54	+0.90	+0.70	$231	$342
NJWG279	HBR	69%	76%	74%	97%	98%	97%	97%	97%	95%	95%	96%	70%	94%	93%	93%	93%	91%	94%	87%	97%	94%	94%	91%		
TFAD58		76	80	99	48	63	63	89	84	74	99	99	63	63	2	59	76	5	7	78	33	6	34	1	24	61
QBUG49	**BURENDA GEIGER COUNTER**	+32	+8.6	+8.8	-6.6	+2.9	+41	+80	+105	+90	+17	+2.1	-9.0	+62	+3.6	+0.1	-1.6	+0.4	+3.4	+0.14	+26	+0.98	+1.18	+0.96	$221	$381
VTMB1	HBR	69%	86%	76%	97%	97%	96%	96%	95%	94%	93%	94%	69%	92%	91%	91%	91%	86%	90%	85%	95%	85%	85%	82%		
QBUE5		99	6	5	20	28	89	84	80	69	49	51	1	68	81	47	73	47	26	40	30	78	90	31	35	29
WLHD19	**CHERYLTON STEWIE D19** PV	+55	+3.6	+2.9	-4.7	+3.1	+45	+90	+111	+96	+20	+2.2	-7.2	+57	+4.7	-1.7	+1.1	-0.2	+4.1	+0.38	+15	+1.02	+1.02	+1.06	$222	$376
USA13058662	HBR	73%	94%	89%	98%	98%	98%	98%	98%	97%	98%	98%	78%	96%	95%	95%	95%	93%	95%	89%	96%	95%	95%	92%		
USA14311946		83	43	56	46	31	78	61	71	60	32	47	8	81	71	84	28	79	15	66	73	83	64	62	34	33
GTNP9	**CHILTERN PARK PICASSO P9** PV	+65	+8.5	+8.6	-3.5	+1.1	+53	+100	+127	+85	+26	+3.4	-8.3	+88	+6.0	+0.0	+1.5	-0.8	+4.2	+0.68	+31	+0.64	+0.76	+0.84	$265	$433
HKFJ5	HBR	53%	83%	70%	99%	98%	98%	97%	97%	92%	88%	95%	63%	90%	88%	88%	88%	82%	89%	78%	97%	95%	95%	91%		
GTNK26		67	7	5	66	6	45	32	36	77	5	13	3	8	55	49	22	95	13	89	16	14	10	8	4	5
QMUM13	**CLUNES CROSSING DUSTY M13**	+63	+1.7	+5.5	-6.7	+5.2	+63	+100	+116	+57	+16	+0.9	-7.3	+68	+12.5	-2.5	-3.0	+0.9	+2.1	+0.28	+10	+0.84	+0.86	+0.98	$296	$424
USA16295688	HBR	50%	85%	81%	99%	99%	98%	98%	98%	98%	98%	98%	78%	96%	95%	95%	95%	93%	95%	88%	98%	98%	98%	97%		
QMUG1		71	60	28	19	77	10	32	61	97	56	88	8	51	5	93	89	20	56	56	88	51	25	37	1	7
NBHF526	**CLUNIE RANGE FIRST CLASS**	+80	-4.8	+4.2	-4.7	+6.7	+63	+104	+134	+89	+16	+1.7	-1.6	+90	+4.4	-0.3	-1.3	+0.4	+0.0	+0.30	+12	+0.84	+1.04	+1.22	$186	$299
USA13346328	HBR	68%	80%	69%	95%	94%	93%	93%	93%	89%	84%	88%	65%	91%	90%	89%	90%	84%	92%	85%	88%	88%	88%	84%		
NBHD124		31	92	41	46	94	9	22	23	70	58	66	97	7	74	56	68	47	95	58	83	51	68	94	73	86
NBHL348	**CLUNIE RANGE LEGEND L348** PV	+43	-6.8	+4.4	-7.8	+5.8	+56	+102	+123	+153	+2	+2.8	-5.8	+61	-0.3	+3.8	+0.9	-0.8	+2.6	+0.14	+23	+0.50	+0.80	+1.20	$154	$325
NZE14647008839	HBR	68%	95%	87%	99%	99%	98%	98%	98%	98%	98%	98%	81%	96%	94%	95%	95%	93%	94%	87%	97%	97%	97%	96%		
AHWJ81		94	96	39	10	86	29	26	45	3	99	27	27	72	98	3	31	95	44	40	40	4	15	92	92	73
WDCH249	**COONAMBLE HECTOR H249** SV	+61	+1.3	+1.1	-8.4	+4.7	+45	+80	+99	+92	+6	+1.3	-4.6	+45	+9.1	+4.3	+4.4	+0.6	+0.2	-0.46	+39	+0.40	+0.48	+0.78	$183	$315
USA14885809	HBR	70%	96%	89%	99%	99%	98%	98%	98%	98%	98%	98%	80%	96%	95%	96%	96%	94%	95%	89%	98%	96%	96%	94%		
WDCE9		75	64	72	6	67	80	86	89	67	99	79	54	96	21	2	3	35	94	4	5	1	1	4	76	79
USA16198796	**EF COMPLEMENT 8088** PV	+39	+4.5	+6.6	-4.6	+3.0	+53	+98	+130	+100	+21	+1.5	-7.3	+76	+7.5	+1.2	+0.6	+0.8	+1.6	+0.61	+20	+0.92	+1.24	+1.16	$253	$417
USA14686137	HBR	85%	99%	95%	99%	99%	99%	99%	99%	99%	99%	99%	92%	98%	98%	98%	98%	97%	98%	94%	99%	99%	99%	99%		
USA15452880		96	35	18	48	29	45	36	30	54	25	73	8	29	37	24	35	24	69	85	53	67	95	86	9	9
WWEL3	**ESSLEMONT LOTTO L3** PV	+26	-5.7	-1.6	-5.4	+4.7	+61	+110	+141	+135	+15	+3.6	-10.0	+90	+14.7	-0.6	+0.8	+1.6	+3.8	+0.37	+14	+1.12	+0.98	+1.14	$301	$483
HIOG18	HBR	77%	87%	86%	99%	99%	99%	99%	99%	98%	98%	98%	84%	97%	96%	97%	97%	95%	96%	92%	98%	98%	98%	98%		
WWEJ8		99	94	88	35	67	15	11	14	11	69	10	1	7	2	63	32	4	19	65	75	93	54	82	1	1
	Breed Average EBVs	**+71**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+68**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.83**	**+0.96**	**+1.01**	**+205**	**+351**

Angus Australia - ImmuneDEX Research Breeding Values

Ident **Name**

Sire / Dam	Reg.	ImmuneDEX IMD	Calv-Ease		Birth		Growth			Maternal		Fert		Carcase						Feed	Temp	Structural			Selection Index	
			Dir	Dtrs	GL	BW	200	400	600	MCW	Milk	SS	DC	CW	EMA	Rib	P8	RBY	IMF	NFI-F	Doc	Claw	Angle	Leg	$A	$A-L
WWEQ24	**ESSLEMONT QUOKKA Q24 PV**	+77	+6.0	+1.2	-4.7	+1.4	+41	+81	+92	+49	+19	+3.8	-7.5	+63	+16.8	+1.5	+0.5	+2.2	+2.2	+1.13	+29	+0.76	+0.84	+0.94	$272	$399
WWEN12	HBR	52%	69%	62%	96%	96%	94%	94%	93%	89%	82%	91%	58%	90%	89%	88%	89%	80%	91%	84%	87%	81%	81%	78%		
WWEN7		39	22	71	46	8	90	83	94	99	39	8	6	66	1	20	37	1	53	99	20	34	21	25	3	17
WWE21S6	**ESSLEMONT SEAN S6 PV**	+56	+5.3	+7.2	-5.9	+2.7	+57	+101	+115	+91	+14	+4.3	-6.7	+80	+16.5	+2.8	+1.5	+1.1	+3.8	+1.08	+27	+1.12	+1.26	+1.22	$296	$465
NGMN418	HBR	54%	69%	63%	94%	91%	91%	90%	91%	87%	80%	82%	55%	81%	81%	82%	82%	75%	82%	71%	89%	84%	85%	81%		
WWEN7		82	27	13	28	24	26	29	63	68	71	4	13	20	1	7	22	13	19	99	26	93	96	94	1	1
USA16295688	**G A R PROPHET SV**	+70	+3.6	+6.3	-0.7	+3.7	+67	+108	+133	+84	+23	+0.6	-4.8	+72	+3.6	-0.3	-1.4	-0.9	+4.7	+0.81	+26	+1.00	+0.82	+0.92	$265	$409
USA13009379	HBR	88%	98%	94%	99%	99%	99%	99%	99%	99%	99%	99%	91%	98%	97%	98%	98%	97%	97%	94%	99%	99%	99%	98%		
USA15129456		56	43	20	94	45	4	15	25	77	15	93	49	41	81	56	70	96	8	94	28	81	18	21	4	12
USA17328461	**G A R SURE FIRE SV**	+98	+6.3	+2.2	-3.0	+2.3	+50	+90	+113	+84	+20	+4.1	-7.5	+64	+7.9	-0.3	-0.6	+0.9	+3.4	-0.14	+25	+1.16	+0.92	+0.62	$253	$405
USA16205036	HBR	79%	96%	87%	99%	99%	98%	98%	98%	97%	98%	98%	81%	97%	96%	96%	96%	95%	96%	90%	97%	99%	99%	93%		
USA16431932		1	19	62	73	18	61	61	68	78	27	5	6	65	32	56	56	20	26	16	34	95	39	1	8	14
QBGH221	**GLENOCH HINMAN H221 SV**	+86	+6.8	-3.7	-2.9	+3.0	+53	+93	+125	+112	+19	+1.0	-3.8	+85	+7.0	-2.3	-5.0	+0.8	+5.3	-0.34	+9	+0.82	+0.80	+1.04	$214	$360
BNAD145	HBR	70%	79%	73%	97%	97%	96%	96%	96%	92%	94%	95%	70%	92%	91%	91%	92%	88%	92%	85%	87%	89%	89%	85%		
QBGD80		15	16	94	75	29	42	50	39	34	34	86	72	12	43	91	98	24	4	6	90	47	15	56	43	47
NHZQ319	**HAZELDEAN Q319 PV**	+87	+4.6	+9.3	-8.8	+2.4	+54	+105	+141	+140	+16	+3.2	-10.0	+80	+2.5	+2.6	+1.0	-1.0	+4.9	+0.59	+31	+0.80	+1.00	+1.08	$250	$461
NHZM586	APR	51%	81%	66%	98%	98%	96%	96%	95%	90%	82%	95%	64%	91%	89%	89%	90%	81%	91%	82%	96%	92%	92%	88%		
NHZL1175		13	34	3	5	19	39	20	13	8	56	17	1	20	89	8	29	97	6	84	16	42	59	68	10	1
KILK18	**KILLAIN ALASKA K18 PV**	+54	-11.1	-6.3	-0.8	+6.9	+66	+121	+162	+169	+16	+3.8	-2.4	+83	+6.1	-3.1	-5.0	+1.0	-1.2	-0.68	+35	+1.10	+0.76	+0.98	$123	$277
USA16417285	HBR	53%	75%	64%	90%	89%	89%	88%	89%	86%	84%	83%	52%	86%	85%	85%	86%	82%	88%	77%	80%	77%	77%	66%		
USA15107929		85	99	98	94	95	5	3	2	1	63	8	92	15	54	96	98	16	99	1	9	92	10	37	98	92
BLAP130	**KNOWLA PACKER P130 PV**	+40	+2.3	+1.2	-2.7	+4.8	+56	+101	+134	+111	+12	+1.1	-5.8	+78	+8.5	-0.2	-1.0	+0.9	+1.9	+0.17	+25	+0.80	+1.18	+0.94	$238	$395
SRKK306	HBR	51%	68%	62%	93%	92%	90%	89%	90%	86%	79%	86%	56%	86%	84%	84%	85%	77%	87%	78%	84%	81%	81%	77%		
BLAK113		96	55	71	77	70	30	28	23	36	87	84	27	24	26	54	63	20	61	43	33	42	90	25	18	19
BLAP91	**KNOWLA PEPPER P91 PV**	+49	+5.8	+1.7	-5.2	+3.7	+60	+115	+143	+169	+7	+1.7	-9.1	+66	+8.5	+3.3	+0.3	+0.6	+2.3	+0.47	-2	+0.96	+1.02	+1.02	$252	$478
HIOG18	HBR	53%	79%	71%	96%	95%	94%	93%	94%	90%	87%	90%	65%	91%	90%	90%	91%	82%	92%	85%	91%	91%	92%	89%		
BLAL06		90	23	67	39	45	17	6	11	1	98	66	1	59	26	4	40	35	51	75	99	74	64	49	9	1
VLYL483	**LAWSONS LINKEDIN L483 SV**	+78	+4.3	-7.0	-1.0	+4.1	+58	+109	+153	+138	+25	+3.9	-5.3	+103	+8.8	-1.5	+2.2	+0.2	+2.1	-0.19	+19	+1.06	+0.84	+0.90	$220	$395
HKFJ5	HBR	67%	73%	72%	98%	98%	97%	97%	97%	95%	95%	94%	68%	93%	89%	88%	91%	85%	91%	82%	89%	85%	85%	81%		
VLYH221		36	37	99	93	54	22	13	5	9	8	7	37	1	24	81	15	59	56	13	56	88	21	17	36	19
VLYP316	**LAWSONS PROPHET P316 PV**	+40	+4.4	+5.2	-1.9	+3.5	+57	+87	+105	+66	+15	+0.3	-3.7	+67	+11.9	-3.3	-3.2	+1.3	+4.0	+0.36	+29	+0.70	+0.76	+0.80	$262	$382
USA16295688	HBR	58%	80%	71%	93%	96%	95%	94%	92%	92%	88%	91%	63%	88%	86%	86%	87%	79%	88%	79%	94%	91%	91%	87%		
VLYM527		96	36	31	86	40	28	68	81	93	66	96	74	56	6	97	90	8	16	64	19	23	10	5	5	28
NMMK35	**MILLAH MURRAH KINGDOM K35**	+65	-11.9	-5.6	-2.0	+8.8	+55	+100	+138	+148	+11	+0.9	-5.7	+64	+7.5	+0.1	-0.1	+1.0	-1.0	-0.73	+28	+0.82	+1.30	+1.20	$143	$285
NZE469	HBR	73%	96%	90%	99%	99%	98%	98%	98%	98%	98%	98%	82%	96%	95%	96%	96%	94%	95%	90%	98%	96%	96%	94%		
NMMG41		67	99	97	85	99	34	31	17	5	91	88	29	63	37	47	47	16	99	1	24	47	98	92	95	90
NMMK42	**MILLAH MURRAH KLOONEY K42**	+16	+3.1	+1.3	-6.0	+5.6	+47	+86	+108	+91	+22	+2.2	-5.5	+65	+7.0	-1.2	-3.1	+1.2	+2.0	-0.01	+17	+0.82	+0.92	+1.04	$199	$334
NGMT30	HBR	75%	88%	86%	99%	99%	99%	99%	98%	98%	98%	98%	84%	97%	96%	96%	96%	95%	96%	90%	99%	97%	97%	95%		
NMMH4		99	48	70	27	83	71	73	76	67	18	47	33	60	43	76	90	10	59	25	65	47	39	56	60	67
	Breed Average EBVs	**+71**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+68**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.83**	**+0.96**	**+1.01**	**+205**	**+351**

Angus Australia - ImmuneDEX Research Breeding Values

Ident **Name**

Sire / Dam	Reg.	ImmuneDEX IMD	Calv-Ease		Birth		Growth			Maternal		Fert		Carcase						Feed	Temp	Structural			Selection Index	
			Dir	Dtrs	GL	BW	200	400	600	MCW	Milk	SS	DC	CW	EMA	Rib	P8	RBY	IMF	NFI-F	Doc	Claw	Angle	Leg	$A	$A-L
NMML133	**MILLAH MURRAH LOCH UP L133**	+28	+6.1	+4.9	-5.5	+4.8	+59	+99	+131	+102	+25	+2.1	-2.7	+79	+1.6	-2.2	-3.9	-0.7	+1.9	-0.11	+33	+0.70	+1.08	+1.14	$171	$314
USA17091363	HBR	73%	84%	84%	99%	99%	98%	98%	98%	98%	98%	98%	82%	97%	95%	96%	96%	94%	96%	90%	98%	98%	97%	96%		
NMMH49		99	21	34	34	70	20	33	29	51	7	51	89	23	94	90	94	93	61	18	12	23	76	82	84	79
NJWH283	**MILWILLAH ELSOM H283 PV**	+61	+0.9	-5.6	-2.1	+3.9	+46	+82	+121	+111	+22	+1.7	-1.3	+75	+9.0	-2.3	-2.5	+1.4	+1.4	+0.32	+18	+0.74	+0.82	+1.04	$144	$265
NJWF189	HBR	67%	83%	72%	97%	97%	96%	96%	95%	92%	94%	94%	64%	92%	91%	91%	91%	86%	92%	85%	88%	89%	90%	85%		
NJWE51		75	67	97	84	49	76	81	48	36	18	66	98	33	22	91	84	6	74	60	60	30	18	56	95	95
NJWE158	**MILWILLAH LAD E158 SV**	+68	-3.1	-8.7	-7.8	+8.0	+41	+78	+106	+107	+7	+2.0	-5.1	+43	+8.6	-0.9	-5.2	+1.4	+3.3	+0.27	+12	+0.78	+0.82	+0.74	$158	$279
NZEE230	HBR	57%	84%	77%	95%	97%	97%	96%	96%	93%	96%	93%	65%	92%	91%	91%	91%	86%	92%	83%	90%	79%	80%	72%		
VTMX114		61	88	99	10	99	90	88	79	42	98	55	41	97	25	70	98	6	28	54	81	38	18	2	91	92
CSWP036	**MURDEDUKE BLACK PEARL**	+46	+2.3	+2.6	-8.4	+4.7	+49	+93	+129	+117	+22	+3.3	-7.5	+58	+0.9	+0.4	-1.2	-1.1	+6.4	+0.62	+14	+0.84	+1.18	+1.22	$213	$379
USA17236055	HBR	53%	80%	71%	96%	96%	95%	95%	94%	92%	86%	91%	68%	92%	91%	90%	91%	82%	92%	86%	95%	93%	94%	90%		
CSWL123		92	55	59	6	67	65	52	32	28	19	15	6	79	96	40	66	98	1	86	75	51	90	94	43	30
CSWK428	**MURDEDUKE KICKING K428 PV**	+59	+7.6	+10.0	-7.6	+1.9	+48	+93	+115	+89	+24	+3.3	-6.1	+67	+2.5	-0.4	-3.0	+0.3	+0.8	-0.01	+40	+0.86	+1.02	+1.16	$188	$343
VTME343	HBR	74%	89%	77%	98%	98%	97%	98%	97%	96%	95%	97%	71%	93%	92%	90%	93%	87%	93%	87%	97%	97%	97%	95%		
CSWE175		78	11	2	11	13	69	53	62	71	8	15	22	55	89	59	89	53	86	25	4	55	64	86	71	60
NURM204	**MURRAY PROCEED M204 PV**	+72	-5.6	+6.6	-3.8	+4.5	+62	+107	+145	+136	+20	+2.4	-3.5	+89	+13.6	-4.9	-5.9	+0.7	+6.9	+0.06	+21	+0.96	+0.74	+0.90	$237	$395
USA16956101	HBR	77%	81%	71%	96%	96%	95%	95%	95%	91%	87%	90%	64%	92%	90%	88%	91%	86%	92%	85%	93%	91%	91%	88%		
NURJ43		52	94	18	61	63	12	16	9	10	28	40	78	8	3	99	99	29	1	32	48	74	8	17	19	19
SFNL21	**NAMPARA LIBERTY L21 SV**	+80	-5.1	-4.8	-6.5	+8.6	+67	+111	+148	+162	+20	+2.8	-1.1	+78	+7.6	-2.1	-0.8	+1.8	-2.4	-0.65	+23	+0.90	+0.88	+1.00	$146	$301
NZE10322010609	HBR	70%	88%	75%	98%	98%	97%	97%	97%	95%	95%	96%	64%	94%	92%	90%	93%	88%	93%	86%	95%	92%	92%	88%		
SFNH65		31	93	96	21	99	4	10	7	2	29	27	99	24	36	89	60	2	99	2	41	64	30	43	94	85
SKOJ6	**NEWLYN PARK EMPEROR J6 PV**	+33	-6.9	-6.3	-6.8	+7.5	+65	+112	+143	+160	+8	+1.3	-3.7	+79	+8.4	-1.0	-1.2	+1.3	+0.2	-0.78	+15	+1.06	+0.82	+0.74	$181	$342
VTME343	HBR	64%	78%	71%	93%	92%	91%	90%	91%	88%	84%	85%	65%	87%	86%	86%	87%	81%	88%	80%	85%	86%	85%	81%		
NZCE115		98	96	98	18	98	6	9	11	2	98	79	74	22	27	72	66	8	94	1	74	88	18	2	77	61
NZE21095018	**NGAPUTAHI P206 PV**	+91	+9.7	+4.4	-1.4	+0.0	+42	+83	+96	+66	+26	+2.7	-8.3	+54	+5.7	+0.2	-1.7	+1.0	+3.9	+0.18	+15	+0.94	+1.12	+1.10	$246	$386
HIOE7	HBR	55%	81%	73%	93%	97%	96%	96%	95%	91%	88%	95%	68%	90%	90%	89%	90%	82%	91%	83%	89%	85%	86%	83%		
NZE21095112H49		5	3	39	90	2	89	78	91	93	6	30	3	87	59	45	74	16	18	45	72	71	83	73	12	25
USA16981588	**PA FULL POWER 1208 PV**	+83	-5.1	-4.5	-4.8	+3.8	+52	+98	+118	+75	+14	+2.0	-2.4	+71	+12.8	-1.8	+0.4	+1.1	+3.0	+0.89	+21	+1.22	+0.94	+0.72	$224	$330
USA16381311	HBR	76%	94%	86%	99%	98%	98%	98%	98%	98%	98%	98%	75%	96%	95%	94%	95%	92%	95%	88%	98%	98%	98%	92%		
USA16408070		23	93	96	45	47	48	37	55	87	72	55	92	44	4	85	39	13	34	96	49	98	44	2	31	70
SMPG357	**PATHFINDER GENESIS G357 PV**	+69	-0.7	+3.7	-7.2	+6.6	+62	+109	+148	+137	+26	+4.4	-7.3	+97	+14.0	+0.2	-1.0	+1.4	+0.3	+0.65	+28	+0.86	+1.06	+0.78	$243	$424
VTMB1	HBR	65%	97%	90%	99%	99%	99%	99%	99%	98%	98%	98%	86%	97%	96%	97%	96%	95%	96%	91%	99%	98%	98%	97%		
SMPD245		59	77	47	14	94	12	13	7	9	6	4	8	3	2	45	63	6	93	87	24	55	72	4	14	7
SMPK22	**PATHFINDER KOMPLETE K22 SV**	+88	+10.2	+8.0	-9.1	+0.9	+41	+74	+96	+50	+26	+2.9	-7.1	+54	+7.0	+3.7	+5.5	+0.2	+2.3	+0.51	+26	+0.48	+0.84	+0.66	$240	$368
SMPG357	HBR	73%	93%	81%	99%	98%	98%	98%	98%	97%	97%	98%	75%	95%	94%	94%	95%	93%	94%	88%	97%	96%	96%	94%		
SMPH756		11	2	8	4	5	91	93	91	98	6	24	9	86	43	3	1	59	51	78	29	3	21	1	16	40
SMPM651	**PATHFINDER MASTERPIECE**	+60	+4.3	+4.6	-6.0	+5.1	+56	+103	+127	+138	+20	+3.5	-7.6	+52	+9.5	-1.7	-4.2	+1.6	+1.6	-0.21	+34	+1.00	+1.20	+1.20	$228	$418
VTMG67	HBR	60%	80%	73%	92%	95%	93%	93%	93%	89%	89%	89%	64%	88%	87%	87%	87%	81%	89%	81%	83%	77%	77%	74%		
SMPH66		76	37	37	27	75	31	23	35	9	28	12	6	89	18	84	96	4	69	12	10	81	92	92	26	9
	Breed Average EBVs	**+71**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+68**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.83**	**+0.96**	**+1.01**	**+205**	**+351**

Angus Australia - ImmuneDEX Research Breeding Values

Ident	Name	ImmuneDEX IMD	Calv-Ease		Birth		Growth			Maternal		Fert		Carcase						Feed	Temp	Structural			Selection Index	
Sire / Dam	Reg.		Dir	Dtrs	GL	BW	200	400	600	MCW	Milk	SS	DC	CW	EMA	Rib	P8	RBY	IMF	NFI-F	Doc	Claw	Angle	Leg	$A	$A-L
SMPN56	**PATHFINDER NUCLEUS N56** SV	+63	+4.9	+3.6	-3.4	+5.2	+59	+106	+137	+133	+16	+4.6	-6.6	+74	+12.7	+0.9	+1.2	+0.9	+1.7	+0.40	+7	+0.76	+0.80	+0.84	$249	$439
HIOG18	HBR	50%	82%	71%	96%	97%	96%	96%	95%	91%	91%	94%	64%	92%	90%	90%	91%	83%	92%	86%	90%	87%	87%	82%		
SMPL179		71	31	48	68	77	18	18	18	12	56	3	15	34	4	30	26	20	66	68	93	34	15	8	11	4
NZE41-97	**PINEBANK WAIGROUP 41/97** #	+82	+3.3	-4.3	-3.4	+3.7	+37	+64	+76	+50	+18	+0.9	-4.3	+17	+5.5	+1.1	+0.3	+0.9	+1.1	-0.05	+34	+0.26	+0.90	+0.94	$162	$250
NZE53195	HBR	69%	96%	91%	98%	99%	98%	98%	98%	98%	98%	98%	89%	97%	96%	96%	96%	95%	96%	90%	93%	88%	88%	84%		
NZE63988		25	46	95	68	45	96	99	99	98	44	88	61	99	61	26	40	20	80	22	10	1	34	25	89	97
NLRE17	**REILAND EVERITT E17** PV	+50	-4.4	+4.0	-1.1	+5.0	+52	+89	+122	+89	+16	+4.4	-3.2	+66	+10.5	-2.0	+0.9	+1.0	+1.6	-0.47	+13	+1.06	+0.92	+1.00	$199	$320
USA13058662	HBR	64%	87%	78%	95%	97%	95%	95%	96%	94%	94%	94%	70%	92%	91%	91%	91%	87%	92%	84%	88%	86%	87%	83%		
NAQW232		89	91	44	92	73	50	63	48	71	60	4	83	58	12	88	31	16	69	4	80	88	39	43	60	76
NORF340	**RENNYLEA BLACK GOLD F340** PV	+88	+6.4	+0.2	-2.9	+1.3	+35	+65	+79	+82	+2	+0.9	-2.6	+20	+2.0	-0.5	+0.2	-0.1	+4.4	-0.11	+15	+0.76	+0.80	+0.74	$140	$258
NZE04379	HBR	67%	83%	75%	96%	96%	95%	94%	94%	92%	92%	91%	70%	91%	90%	90%	90%	83%	91%	85%	90%	88%	88%	84%		
VLYZ1393		11	18	78	75	8	98	98	99	80	99	88	90	99	92	61	42	75	11	18	74	34	15	2	96	96
NORE11	**RENNYLEA EDMUND E11** PV	+52	+8.7	+0.1	-6.7	+1.2	+34	+64	+83	+55	+16	+1.8	-9.0	+50	+4.2	+3.4	+1.3	-0.2	+4.2	+0.77	+23	+0.54	+1.04	+1.08	$209	$330
NGMY145	HBR	79%	99%	97%	99%	99%	99%	99%	99%	99%	99%	99%	95%	98%	98%	98%	98%	98%	98%	96%	99%	99%	99%	99%		
VLYY5		87	6	79	19	7	98	99	98	97	60	62	1	92	76	4	25	79	13	93	41	6	68	68	49	70
NORH708	**RENNYLEA H708** PV	+98	-7.5	+2.3	+1.3	+4.6	+47	+102	+128	+129	+12	+2.3	-3.3	+71	+12.3	-3.4	-6.7	+2.0	+7.2	+0.65	+22	+0.68	+0.68	+0.92	$218	$364
NORC511	APR	86%	93%	85%	98%	98%	98%	98%	98%	97%	97%	98%	83%	96%	95%	96%	96%	94%	96%	93%	98%	98%	98%	97%		
NORE176		1	97	62	99	65	73	27	34	15	87	44	81	42	5	97	99	1	1	87	44	20	4	21	37	43
NORK163	**RENNYLEA K163** PV	+57	+4.9	-7.2	-3.8	+2.6	+40	+75	+96	+69	+10	+0.8	-5.8	+63	+19.3	-0.4	-1.1	+2.7	+2.6	+0.15	+18	+0.64	+0.76	+1.02	$247	$364
NORH106	APR	80%	77%	73%	98%	98%	98%	98%	98%	97%	96%	96%	79%	95%	94%	94%	94%	92%	95%	88%	91%	90%	90%	87%		
NORE176		81	31	99	61	22	92	92	92	91	93	90	27	65	1	59	65	1	44	41	61	14	10	49	12	43
NORK522	**RENNYLEA KODAK K522** SV	+73	+8.6	+8.2	-4.8	+1.3	+44	+82	+107	+107	+12	+4.6	-7.9	+47	+3.8	+3.4	+1.2	-0.3	+4.0	+0.31	+7	+0.58	+0.80	+0.92	$208	$381
NORE11	HBR	71%	94%	85%	99%	99%	98%	98%	98%	97%	98%	98%	76%	96%	94%	94%	95%	92%	94%	89%	96%	97%	97%	95%		
NORF810		49	6	7	45	8	83	81	78	42	86	3	4	94	80	4	26	83	16	59	93	8	15	21	50	29
NORL508	**RENNYLEA L508** PV	+89	+1.7	+8.3	-5.8	+2.6	+46	+85	+118	+91	+27	+1.3	-7.5	+55	+5.6	+0.8	-0.2	-0.2	+5.4	+0.64	+14	+0.64	+0.82	+0.88	$239	$387
USA17366506	HBR	55%	87%	81%	99%	99%	98%	98%	98%	98%	98%	98%	83%	96%	95%	96%	96%	94%	95%	90%	99%	98%	98%	97%		
NORH414		9	60	6	30	22	75	74	56	67	4	79	6	85	60	32	49	79	4	87	75	14	18	13	17	24
NORP987	**RENNYLEA P987** PV	+81	+10.2	+8.9	-8.2	+1.5	+50	+98	+122	+127	+7	+0.3	-3.1	+70	+5.6	+4.1	+2.6	-1.2	+8.3	+0.97	+11	+0.90	+1.04	+1.02	$226	$405
NORM763	APR	52%	75%	66%	97%	97%	97%	96%	96%	94%	90%	96%	64%	90%	89%	89%	89%	82%	91%	81%	96%	94%	94%	91%		
NORM1184		28	2	4	7	9	57	37	46	17	99	96	84	47	60	2	11	99	1	97	86	64	68	49	29	14
NORQ1077	**RENNYLEA Q1077** PV	+90	+3.7	+9.9	-4.0	+2.7	+50	+98	+123	+107	+14	+2.1	-5.8	+76	+15.8	+0.6	-0.1	+1.5	+5.2	+0.71	+20	+0.66	+0.82	+0.84	$284	$456
NORH708	APR	60%	82%	70%	98%	98%	97%	97%	96%	94%	88%	96%	62%	86%	86%	86%	86%	81%	86%	75%	97%	94%	95%	91%		
NORG101		7	42	2	58	24	59	35	45	42	76	51	27	31	1	36	47	5	5	90	52	17	18	8	1	2
NORQ213	**RENNYLEA Q213** PV	+57	+9.2	+7.5	-7.5	+0.8	+63	+117	+145	+92	+24	+0.5	-10.1	+97	+8.7	+0.9	+0.3	+0.1	+3.3	+0.73	+27	+0.52	+0.72	+0.88	$331	$514
NORK907	APR	53%	84%	70%	98%	98%	97%	97%	97%	94%	90%	97%	62%	91%	90%	89%	90%	84%	90%	81%	97%	96%	96%	93%		
NORL110		81	4	11	12	5	10	5	9	66	11	94	1	3	25	30	40	64	28	91	25	4	6	13	1	1
NORR992	**RENNYLEA R992** PV	+61	+4.8	+8.0	+1.9	+1.2	+44	+84	+116	+86	+26	+1.8	-6.5	+69	+11.2	+1.5	+2.0	-0.2	+6.4	+1.13	+23	+0.64	+0.82	+0.86	$255	$408
NORN542	APR	50%	69%	61%	95%	95%	94%	94%	94%	91%	84%	91%	54%	82%	82%	82%	82%	76%	82%	68%	92%	89%	90%	85%		
NORM1034		75	32	8	99	7	82	76	60	75	6	62	16	50	9	20	17	79	1	99	39	14	18	10	7	12
	Breed Average EBVs	**+71**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+68**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.83**	**+0.96**	**+1.01**	**+205**	**+351**

Angus Australia - ImmuneDEX Research Breeding Values

Ident / Sire / Dam	Name / Reg.	ImmuneDEX IMD	Calv-Ease		Birth		Growth			Maternal		Fert		Carcase						Feed	Temp	Structural			Selection Index	
			Dir	Dtrs	GL	BW	200	400	600	MCW	Milk	SS	DC	CW	EMA	Rib	P8	RBY	IMF	NFI-F	Doc	Claw	Angle	Leg	$A	$A-L
APBK11	**SHACORRAHDALU KINETIC K11**	+46	+10.1	+10.2	-9.1	+0.2	+48	+87	+104	+94	+10	+4.6	-6.5	+65	+10.5	+3.9	+2.8	+0.5	+2.4	+0.92	+2	+0.98	+1.22	+1.06	$234	$402
VTMB1	HBR	51%	78%	71%	93%	92%	91%	91%	91%	89%	85%	86%	65%	86%	84%	84%	85%	78%	86%	78%	86%	84%	83%	80%		
APBF2		92	2	1	4	3	66	70	82	64	93	3	16	62	12	2	10	41	48	97	98	78	94	62	21	15
NZE19507013	**STORTH OAKS JACK J7** SV	+37	+6.4	+7.9	-4.8	+4.4	+61	+113	+151	+143	+17	+3.6	-1.7	+79	+8.2	-0.2	-3.2	-0.3	+2.5	+0.10	+20	+1.02	+0.98	+0.92	$183	$366
VTME343	HBR	69%	89%	80%	98%	98%	97%	97%	97%	96%	95%	96%	71%	94%	93%	93%	93%	90%	94%	87%	96%	93%	93%	90%		
NZE19507111G183		97	18	8	45	61	14	7	6	7	48	10	97	23	29	54	90	83	46	36	54	83	54	21	76	41
VSNG34	**STRATHEWEN BERKLEY G34** PV	+68	+8.3	+8.2	-6.5	+3.7	+58	+108	+143	+149	+17	+2.2	-7.2	+84	+6.5	+1.0	+0.3	+0.2	+2.1	-0.08	+29	+1.08	+1.22	+1.08	$232	$439
VTMB1	HBR	70%	81%	74%	96%	94%	93%	93%	93%	91%	90%	88%	69%	91%	90%	89%	90%	86%	91%	85%	89%	88%	88%	85%		
VSNE22		61	7	7	21	45	24	15	12	4	48	47	8	14	49	28	40	59	56	20	19	90	94	68	23	4
USA17236055	**SYDGEN BLACK PEARL 2006** PV	+26	+2.5	+7.2	-7.0	+3.2	+51	+85	+123	+88	+21	+1.5	-3.5	+74	+8.3	+0.4	-0.5	+0.4	+2.9	+0.28	+15	+1.02	+1.18	+1.14	$210	$342
USA15354674	HBR	76%	98%	93%	99%	99%	99%	99%	99%	98%	99%	99%	89%	98%	97%	97%	97%	96%	97%	92%	99%	99%	99%	98%		
USA16214508		99	53	13	16	33	52	75	45	73	22	73	78	34	28	40	54	47	37	56	72	83	90	82	47	61
VTMK52	**TE MANIA KALIBROOK K52** PV	+71	+7.5	+5.5	-3.2	+1.5	+52	+102	+130	+105	+29	+1.7	-6.1	+75	+4.3	+0.9	+1.7	-0.7	+5.5	+1.42	+7	+1.22	+1.12	+1.18	$246	$415
USA16295688	HBR	71%	79%	71%	94%	95%	92%	92%	91%	88%	84%	88%	66%	88%	86%	85%	87%	83%	89%	80%	87%	90%	91%	87%		
VTMH423		54	11	28	70	9	49	25	30	46	2	66	22	32	75	30	20	93	3	99	93	98	83	89	12	10
VTMK138	**TE MANIA KIRBY K138** PV	+43	+1.0	+7.9	-1.5	+4.6	+52	+88	+116	+94	+19	+2.5	-7.6	+65	+5.4	+1.8	+3.1	-2.0	+8.5	+0.92	+15	+0.78	+0.76	+0.94	$251	$406
USA16295688	HBR	68%	88%	82%	99%	99%	98%	98%	98%	98%	98%	98%	84%	97%	97%	96%	97%	95%	96%	90%	99%	99%	99%	99%		
VTMH17		94	66	8	89	65	51	65	61	64	38	36	6	62	62	16	8	99	1	97	73	38	10	25	9	13
VTMN424	**TE MANIA NEBO N424** PV	+76	+9.2	-0.9	-6.7	+4.0	+54	+102	+135	+102	+28	+4.3	-5.0	+54	+6.7	-0.8	-4.0	+0.2	+4.0	-0.04	+47	+0.92	+0.86	+0.92	$217	$368
VTMJ89	HBR	51%	91%	84%	99%	98%	98%	98%	98%	97%	97%	97%	74%	97%	96%	96%	96%	91%	95%	86%	98%	98%	98%	98%		
VTMJ214		42	4	85	19	52	38	27	22	49	3	4	44	86	46	68	95	59	16	23	1	67	25	21	39	39
VTMN1387	**TE MANIA NEON N1387** SV	+45	+1.5	+2.4	-6.5	+3.5	+46	+83	+105	+91	+19	+1.2	-6.1	+39	+3.2	-0.1	-0.6	-2.2	+10.	-0.32	+25	+0.70	+0.78	+0.92	$213	$352
VTMK138	HBR	50%	82%	74%	98%	98%	98%	98%	97%	96%	93%	96%	67%	95%	94%	93%	95%	86%	94%	87%	98%	97%	97%	96%		
VTML452		93	62	61	21	40	75	79	81	68	37	82	22	98	85	52	56	99	1	7	33	23	12	21	44	53
VTMP888	**TE MANIA PESO P888** PV	+77	+7.2	+6.3	-5.2	+2.1	+57	+114	+145	+117	+25	+2.4	-7.4	+92	+7.1	-0.4	+1.3	+0.5	+1.6	-0.16	+23	+0.84	+1.08	+1.02	$264	$452
VTMK226	HBR	56%	84%	77%	98%	98%	97%	97%	97%	96%	95%	94%	71%	95%	94%	94%	95%	87%	93%	85%	96%	95%	96%	94%		
VTMH423		39	13	20	39	15	27	7	10	28	7	40	7	5	41	59	25	41	69	14	39	51	76	49	5	2
VTMR795	**TE MANIA ROCCO R795** SV	+78	-0.4	+1.3	-3.9	+1.8	+41	+90	+118	+113	+19	+1.6	-4.8	+48	+6.2	+0.7	-2.3	+0.0	+5.6	+0.24	+36	+0.72	+0.88	+1.20	$184	$332
NORH708	APR	58%	82%	70%	99%	98%	98%	97%	97%	92%	86%	96%	60%	91%	91%	90%	90%	83%	90%	83%	97%	97%	97%	96%		
VTML1374		36	75	70	60	12	90	61	55	33	34	69	49	94	52	34	82	70	3	51	8	26	30	92	74	68
DBLL292	**TOPBOS LEADING EDGE L292** PV	+54	+2.8	+8.4	-5.9	+6.6	+73	+125	+163	+150	+23	+1.4	-3.9	+82	+4.0	-2.2	-5.2	+0.0	+1.6	+0.03	+18	+0.94	+0.82	+0.82	$220	$409
USA16295688	HBR	74%	88%	75%	98%	98%	97%	97%	97%	95%	96%	97%	71%	94%	92%	91%	93%	88%	93%	86%	97%	92%	92%	89%		
VSNF04		85	51	6	28	94	1	2	2	4	12	76	70	17	78	90	98	70	69	29	62	71	18	6	35	12
QKBP29	**WARRAWEE PATROL P29** PV	+80	+7.4	+10.7	-12.0	+2.9	+54	+103	+138	+129	+17	+2.3	-10.5	+99	+9.6	+3.7	+2.2	+0.3	+2.0	+0.65	+30	+0.78	+1.18	+0.98	$273	$482
SMPG357	HBR	64%	80%	71%	96%	94%	93%	92%	92%	89%	83%	88%	66%	86%	85%	85%	86%	79%	87%	78%	88%	78%	78%	74%		
QKBM01		31	12	1	1	28	37	23	17	15	49	44	1	2	17	3	15	53	59	87	17	38	90	37	3	1
NWPE111	**WATTLETOP SITZ 458N E111** SV	+42	+4.8	+7.1	-3.8	+2.8	+51	+90	+124	+93	+25	+1.9	-1.3	+82	+5.4	-4.1	-3.5	+0.9	+2.7	-0.53	+26	+0.98	+0.94	+1.10	$187	$318
USA14474596	HBR	67%	90%	80%	97%	98%	97%	97%	97%	95%	96%	95%	74%	94%	92%	92%	93%	89%	93%	86%	95%	87%	88%	83%		
NWPC36		95	32	14	61	26	56	60	42	64	7	59	98	16	62	99	92	20	41	3	28	78	44	73	72	77
	Breed Average EBVs	**+71**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+68**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.83**	**+0.96**	**+1.01**	**+205**	**+351**

Angus Australia - ImmuneDEX Research Breeding Values

Ident	Name		Calv-Ease		Birth		Growth			Maternal		Fert		Carcase						Feed	Temp	Structural			Selection Index	
Sire Dam	Reg.	ImmuneDEX IMD	Dir	Dtrs	GL	BW	200	400	600	MCW	Milk	SS	DC	CW	EMA	Rib	P8	RBY	IMF	NFI-F	Doc	Claw	Angle	Leg	$A	$A-L
CWDM5	**WEATHERLY MOXY M5** [SV]	+71	+4.2	+6.7	-4.4	+4.0	+56	+101	+135	+115	+27	+2.6	-7.1	+91	+7.6	+2.7	-0.3	+0.4	+2.5	+0.29	+20	+0.94	+1.04	+1.02	$245	$419
SMPG357	HBR	52%	72%	67%	93%	96%	95%	95%	95%	93%	91%	89%	64%	86%	85%	86%	86%	80%	85%	73%	92%	93%	93%	87%		
CWDJ15		54	38	17	51	52	29	29	21	31	4	33	9	6	36	7	51	47	46	57	51	71	68	49	13	8
	Breed Average EBVs	**+71**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+68**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.83**	**+0.96**	**+1.01**	**+205**	**+351**

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