TACE

TransTasman Angus Cattle Evaluation

ANGUS ImmuneDEX

RESEARCH BREEDING VALUES

JUNE 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: May 26, 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	+46	+7.2	+8.0	-6.0	+3.0	+58	+99	+135	+123	+15	+2.1	-5.1	+71	+6.2	-0.5	+0.5	+0.3	+1.0	-0.98	+22	+1.44	+1.30	+1.18	$213	$390
NXOF43	APR	69%	76%	62%	94%	96%	94%	94%	94%	88%	90%	84%	56%	91%	89%	84%	90%	82%	91%	83%	85%	85%	85%	81%		
NXOJ432		51	13	8	27	29	24	34	21	20	67	51	41	42	53	61	37	53	82	1	47	99	98	89	43	23
DGJG10	**ALLOURA GET CRACKING G10** SV	+53	+7.9	+7.4	-2.9	+2.5	+44	+74	+87	+86	+12	-0.4	-8.1	+46	+14.3	+1.4	+0.5	+0.8	+5.8	+0.46	+6	+0.48	+0.98	+0.94	$267	$421
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	12	75	21	84	93	97	76	86	99	3	95	2	21	37	24	2	74	95	3	54	25	4	8
DGJL94	**ALLOURA LOCK STOCK &**	+44	+6.1	+1.5	-4.2	+2.8	+57	+94	+123	+121	+11	+1.1	-4.2	+65	+0.9	+2.2	-1.3	+0.2	+1.8	-0.39	+24	+0.82	+0.88	+0.92	$186	$345
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		55	20	70	55	26	26	49	45	23	91	84	63	62	96	11	68	59	64	5	37	46	29	21	74	59
DGJQ30	**ALLOURA QUINELLA Q30** SV	+13	+2.1	+1.5	+0.4	+2.9	+52	+97	+117	+120	+14	+3.3	-7.3	+65	+14.2	+0.1	+0.5	+0.8	+7.3	+0.43	+15	+0.92	+1.02	+1.16	$281	$458
WWEL3	HBR	51%	74%	67%	94%	93%	91%	91%	92%	87%	80%	83%	61%	89%	88%	87%	88%	79%	90%	82%	89%	85%	86%	81%		
DGJK117		98	56	70	98	28	46	40	57	24	72	15	8	62	2	47	37	24	1	71	74	67	63	86	2	2
NAQA241	**ARDROSSAN EQUATOR A241** PV	+49	-1.3	+3.1	-4.4	+4.1	+50	+91	+121	+108	+20	+3.2	-8.8	+86	+8.1	-2.0	-0.3	+1.2	+1.6	+0.63	+25	+0.46	+0.86	+1.00	$231	$389
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		46	80	54	52	54	61	57	50	41	29	17	2	11	31	88	51	10	69	86	33	2	25	43	24	23
NAQN329	**ARDROSSAN HOLBROOK N329**	+22	-7.4	+0.5	-3.0	+2.7	+47	+86	+111	+77	+25	+2.5	-7.9	+70	+5.5	+2.4	+2.1	-0.9	+3.8	+1.08	+14	+0.82	+1.02	+0.92	$205	$322
NAQH318	HBR	54%	72%	67%	96%	95%	96%	95%	95%	90%	92%	86%	59%	91%	89%	89%	90%	82%	91%	83%	91%	81%	87%	83%		
NAQK30		89	97	77	73	24	71	72	71	85	7	36	4	46	62	9	15	96	19	99	79	46	63	21	54	75
NAQH255	**ARDROSSAN HONOUR H255** PV	+27	-1.8	-0.6	-2.6	+4.6	+43	+75	+97	+93	+13	+2.2	-6.0	+60	+5.7	+0.9	-1.5	+0.6	+2.4	+0.98	+10	+0.44	+1.02	+1.24	$168	$293
NORE11	HBR	81%	96%	89%	99%	99%	98%	98%	98%	98%	98%	98%	85%	97%	96%	96%	96%	95%	96%	92%	98%	97%	97%	96%		
NAQD17		83	82	84	79	65	85	92	91	66	83	47	23	74	59	30	71	35	49	98	89	2	63	96	86	88
QQFH147	**ASCOT HALLMARK H147** PV	+47	-3.7	+1.3	-5.0	+7.1	+61	+110	+152	+138	+14	+3.8	-6.0	+79	-1.6	+0.6	-0.2	-0.9	+3.3	+0.35	+18	+0.48	+0.88	+1.02	$196	$365
VTME343	HBR	72%	96%	89%	99%	99%	98%	98%	98%	98%	98%	98%	80%	96%	95%	96%	96%	94%	95%	90%	97%	95%	95%	93%		
NMMF123		50	89	71	42	96	15	11	5	9	74	8	23	22	99	36	49	96	28	63	61	3	29	49	63	43
HIOE7	**AYRVALE BARTEL E7** PV	+41	+8.7	+9.1	-4.4	+1.8	+49	+87	+113	+75	+26	+2.5	-9.4	+65	+8.0	-0.4	+0.6	+1.2	+3.5	+0.28	+5	+1.04	+1.02	+1.14	$292	$450
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		60	6	4	52	12	62	71	68	87	6	36	1	63	32	59	35	10	25	56	96	85	63	82	1	2
ECMM114	**BANNABY BERKLEY M114** SV	+14	+3.2	+2.8	-9.9	+4.0	+55	+94	+137	+164	+5	+4.0	-8.2	+65	+2.8	-1.0	-3.6	+0.3	+2.6	+0.05	+16	+0.80	+0.74	+1.12	$184	$386
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	46	57	2	52	35	48	18	2	99	6	3	60	88	72	93	53	44	31	70	41	8	78	75	25
NUIF32	**BONNY BROOKE FALCO F32** SV	+49	-4.2	-10.5	-0.1	+6.0	+53	+83	+108	+90	+18	-0.5	-2.1	+66	-2.0	+2.2	+1.3	-1.1	+2.0	-0.38	+20	+1.00	+0.92	+1.08	$127	$220
NGMC196	HBR	53%	67%	55%	91%	89%	91%	89%	91%	84%	78%	77%	52%	84%	82%	82%	83%	73%	82%	73%	81%	79%	79%	74%		
NUID96		46	91	99	96	88	42	79	76	69	44	99	95	58	99	11	25	98	59	5	54	80	39	68	98	99
HCAG013	**BOONAROO GRAVITY G013** PV	+87	+4.7	+3.9	-5.4	+3.7	+51	+87	+114	+100	+22	+3.9	-5.4	+57	+5.6	-2.8	-3.5	+1.3	+2.9	-0.77	+22	+0.50	+0.92	+1.06	$213	$362
VTMA217	HBR	70%	91%	84%	98%	98%	97%	97%	97%	95%	96%	97%	73%	93%	92%	92%	93%	88%	91%	86%	95%	94%	94%	91%		
VTMZ618		2	32	45	36	45	54	69	64	54	16	7	35	80	60	95	92	8	37	1	47	3	39	62	43	45
NGME124	**BOOROOMOOKA INSPIRED E124**	+16	-5.4	+0.5	-6.0	+3.7	+45	+82	+107	+104	+15	+0.9	-8.4	+83	+3.5	-0.3	+3.6	-0.3	+2.3	+0.94	+19	+0.80	+0.80	+0.80	$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	77	27	45	78	81	78	48	70	88	3	15	83	57	6	83	51	97	60	41	15	5	69	71
	Breed Average EBVs	**+48**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+69**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.84**	**+0.96**	**+1.02**	**+205**	**+351**

Angus Australia - ImmuneDEX Research Breeding Values

Date: May 26, 2025

Ident / Sire / Dam	Name / Reg.	ImmuneDEX IMD	Calv-Ease Dir	Calv-Ease Dtrs	Birth GL	Birth BW	Growth 200	Growth 400	Growth 600	Maternal MCW	Maternal Milk	Fert SS	Fert DC	Carcase CW	Carcase EMA	Carcase Rib	Carcase P8	Carcase RBY	Carcase IMF	Feed NFI-F	Temp Doc	Structural Claw	Structural Angle	Structural Leg	Selection Index $A	Selection Index $A-L
NGMN418	**BOOROOMOOKA JACKPOT N418**	+24	+2.1	+7.0	-8.8	+5.5	+63	+112	+138	+135	+4	+3.4	-7.7	+81	+8.5	-0.7	-0.3	+0.8	+2.7	+0.29	+28	+1.30	+1.08	+1.06	$271	$466
WWEL3	HBR	50%	71%	66%	95%	97%	96%	96%	96%	94%	89%	94%	63%	89%	87%	87%	88%	81%	88%	80%	95%	93%	93%	87%		
NGML471		87	56	15	5	82	9	9	17	11	99	14	5	18	27	66	51	24	42	57	23	99	76	62	3	1
NGMP96	**BOOROOMOOKA PARAGON P96**	+15	-4.3	+2.0	-7.8	+3.7	+63	+119	+161	+124	+29	+3.6	-8.3	+110	+13.4	-2.8	-1.4	+1.5	+2.4	+0.88	+33	+0.84	+1.00	+1.10	$291	$465
WWEL3	HBR	52%	82%	75%	99%	98%	98%	98%	98%	96%	93%	97%	66%	94%	92%	91%	92%	84%	93%	87%	98%	97%	97%	94%		
NGMM566		96	91	65	10	45	9	3	2	19	2	11	3	1	3	95	70	5	49	96	13	50	59	73	1	1
BOWK2	**BOWMAN AUSTRALIA K2 PV**	+43	+7.6	+2.1	-6.5	+3.5	+49	+98	+123	+95	+22	+5.0	-7.6	+69	+8.2	-0.1	-1.4	+0.9	+1.5	-0.59	+11	+0.86	+1.02	+0.94	$228	$390
VTME343	HBR	74%	80%	76%	94%	91%	91%	91%	91%	88%	86%	85%	69%	89%	88%	88%	88%	83%	90%	83%	88%	84%	85%	81%		
NAQZ31		57	10	64	21	40	65	37	45	62	19	2	6	51	30	52	70	20	72	2	86	54	63	25	26	22
SRKK306	**BOWMONT KING K306 PV**	+31	-1.5	-9.1	-4.6	+4.5	+49	+78	+103	+86	+2	-0.3	-4.2	+65	+14.7	-0.4	-1.8	+1.5	+4.8	+0.51	+25	+0.54	+0.90	+0.70	$230	$341
NJWG279	HBR	69%	75%	73%	97%	98%	97%	97%	97%	95%	95%	96%	70%	94%	93%	93%	93%	91%	94%	87%	96%	94%	94%	91%		
TFAD58		77%	81	99	48	63	63	88	84	75	99	99	63	63	2	59	76	5	7	78	32	5	34	1	25	62
AMQL39	**BROOKLANA INFINITY L39 SV**	+68	-9.6	-5.1	-1.4	+5.6	+49	+88	+111	+127	+9	+3.5	-4.4	+39	-3.9	+1.0	+2.5	-0.6	+1.5	+0.01	+28	+0.88	+0.94	+0.78	$107	$234
NZE04379	HBR	74%	77%	70%	94%	93%	91%	91%	91%	87%	81%	82%	65%	90%	89%	84%	89%	82%	91%	85%	87%	85%	85%	81%		
AMQH11		17	98	97	90	84	65	66	71	16	96	12	58	98	99	28	12	91	72	27	24	59	44	4	99	98
QBUG49	**BURENDA GEIGER COUNTER**	+11	+8.4	+8.8	-6.6	+2.9	+41	+81	+106	+91	+17	+2.0	-8.9	+63	+3.5	+0.2	-1.5	+0.4	+3.3	+0.14	+26	+0.98	+1.20	+0.94	$220	$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	7	5	20	28	90	84	80	69	49	55	2	68	83	45	71	47	28	40	30	77	92	25	36	29
WLHD19	**CHERYLTON STEWIE D19 PV**	+26	+3.4	+2.4	-4.7	+3.1	+45	+90	+111	+96	+20	+2.2	-7.2	+57	+4.7	-1.6	+1.2	-0.2	+4.1	+0.38	+15	+1.02	+1.00	+1.04	$221	$375
USA13058662	HBR	73%	94%	89%	98%	98%	98%	98%	98%	97%	98%	98%	77%	96%	95%	95%	95%	93%	95%	89%	96%	95%	95%	92%		
USA14311946		84	45	61	47	31	78	61	71	60	30	47	8	80	71	83	26	79	15	66	74	83	59	55	34	34
GTNP9	**CHILTERN PARK PICASSO P9 PV**	+37	+8.5	+8.8	-3.5	+1.1	+53	+100	+127	+85	+24	+3.3	-8.3	+89	+6.1	+0.0	+1.3	-0.7	+4.1	+0.68	+30	+0.64	+0.74	+0.82	$266	$434
HKFJ5	HBR	53%	83%	69%	99%	98%	97%	97%	97%	92%	88%	95%	63%	90%	87%	88%	88%	81%	89%	78%	96%	94%	94%	90%		
GTNK26		67	6	5	66	6	44	32	36	76	8	15	3	8	54	50	25	93	15	89	18	14	8	6	4	4
QMUM13	**CLUNES CROSSING DUSTY M13**	+35	+1.4	+5.4	-6.7	+5.3	+63	+100	+117	+57	+17	+0.9	-7.3	+70	+12.6	-2.5	-3.3	+1.0	+2.1	+0.27	+10	+0.84	+0.86	+1.00	$297	$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		70	62	29	19	79	9	31	58	97	53	88	8	47	5	93	91	16	56	54	89	50	25	43	1	7
NBHL348	**CLUNIE RANGE LEGEND L348 PV**	+18	-6.0	+4.4	-7.8	+5.8	+57	+102	+123	+153	+2	+2.8	-6.0	+61	-0.2	+3.8	+0.8	-0.8	+2.6	+0.13	+24	+0.50	+0.80	+1.20	$159	$333
NZE14647008839	HBR	68%	95%	87%	99%	99%	98%	98%	98%	98%	98%	98%	80%	96%	94%	95%	95%	93%	94%	87%	97%	97%	97%	96%		
AHWJ81		94	95	40	10	86	28	25	44	3	99	27	23	72	98	3	32	95	44	39	39	3	15	92	90	68
WDCH249	**COONAMBLE HECTOR H249 SV**	+33	+1.6	+1.2	-8.4	+4.6	+45	+80	+99	+94	+5	+1.3	-4.6	+45	+9.2	+4.3	+4.5	+0.6	+0.2	-0.44	+40	+0.40	+0.48	+0.80	$182	$316
USA14885809	HBR	70%	96%	88%	99%	99%	98%	98%	98%	98%	98%	98%	79%	96%	95%	96%	96%	94%	95%	89%	98%	96%	96%	94%		
WDCE9		74%	61	72	6	65	80	86	88	64	99	79	54	96	21	2	3	35	94	4	4	1	1	5	76	78
USA16198796	**EF COMPLEMENT 8088 PV**	+15	+4.5	+7.0	-4.6	+3.0	+53	+98	+130	+100	+21	+1.4	-7.4	+76	+7.6	+1.2	+0.6	+0.8	+1.6	+0.61	+20	+0.92	+1.24	+1.16	$254	$419
USA14686137	HBR	85%	99%	95%	99%	99%	99%	99%	99%	99%	99%	99%	92%	98%	98%	98%	98%	97%	97%	94%	99%	99%	99%	99%		
USA15452880		96	34	15	48	29	46	36	31	54	24	76	7	29	36	24	35	24	69	85	53	67	95	86	8	8
WWEL3	**ESSLEMONT LOTTO L3 PV**	+8	-5.5	-1.4	-5.4	+4.6	+60	+110	+140	+134	+15	+3.6	-9.9	+89	+14.7	-0.5	+0.8	+1.5	+3.8	+0.37	+15	+1.12	+1.00	+1.14	$297	$478
HIOG18	HBR	77%	87%	86%	99%	99%	99%	99%	99%	98%	98%	98%	84%	97%	96%	96%	97%	95%	96%	92%	98%	98%	98%	98%		
WWEJ8		99	94	88	36	65	16	11	14	11	68	11	1	7	2	61	32	5	19	65	76	93	59	82	1	1
	Breed Average EBVs	**+48**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+69**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.84**	**+0.96**	**+1.02**	**+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
WWEQ24	**ESSLEMONT QUOKKA Q24 PV**	+53	+6.0	+1.4	-4.8	+1.5	+41	+82	+92	+48	+18	+3.8	-7.4	+64	+17.0	+1.4	+0.4	+2.2	+2.2	+1.13	+30	+0.76	+0.82	+0.92	$273	$400
WWEN12	HBR	52%	69%	62%	95%	96%	94%	94%	93%	89%	81%	91%	58%	90%	89%	88%	89%	80%	91%	84%	87%	81%	81%	78%		
WWEN7		39	21	70	45	9	90	82	94	99	44	8	7	65	1	21	38	1	54	99	18	33	18	21	3	17
WWE21S6	**ESSLEMONT SEAN S6 PV**	+27	+5.7	+7.6	-6.0	+2.7	+57	+101	+113	+86	+14	+4.3	-6.4	+78	+17.1	+2.4	+1.0	+1.2	+3.8	+1.08	+27	+1.08	+1.20	+1.12	$297	$462
NGMN418	HBR	54%	69%	63%	94%	91%	91%	90%	89%	86%	79%	82%	53%	81%	78%	79%	79%	72%	81%	71%	89%	68%	68%	66%		
WWEN7		83	24	10	27	24	27	29	67	75	72	4	17	24	1	9	29	10	19	99	26	89	92	78	1	1
USA16295688	**G A R PROPHET SV**	+43	+3.5	+6.3	-0.7	+3.7	+67	+108	+133	+85	+23	+0.7	-4.7	+72	+3.8	-0.3	-1.5	-0.9	+4.7	+0.81	+27	+1.02	+0.82	+0.92	$262	$407
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		57	44	20	94	45	4	15	24	77	14	92	51	40	80	57	71	96	8	94	28	83	18	21	5	13
USA17328461	**G A R SURE FIRE SV**	+96	+6.1	+2.1	-3.0	+2.3	+50	+90	+113	+85	+21	+4.1	-7.3	+64	+8.0	-0.3	-0.6	+0.9	+3.4	-0.13	+26	+1.18	+0.92	+0.62	$250	$402
USA16205036	HBR	79%	95%	87%	99%	99%	98%	98%	98%	97%	98%	98%	81%	97%	96%	96%	96%	95%	96%	90%	97%	99%	99%	93%		
USA16431932		1	20	64	73	18	60	61	67	76	25	5	8	63	32	57	56	20	26	16	32	96	39	1	10	15
QBGH221	**GLENOCH HINMAN H221 SV**	+69	+6.6	-3.0	-3.0	+3.0	+53	+94	+126	+113	+19	+1.0	-3.1	+85	+6.9	-2.3	-5.0	+0.8	+5.3	-0.35	+10	+0.82	+0.78	+1.04	$209	$355
BNAD145	HBR	70%	73%	69%	97%	97%	96%	96%	96%	92%	94%	95%	70%	92%	91%	91%	92%	88%	92%	85%	86%	89%	89%	85%		
QBGD80		16	16	93	73	29	43	49	38	33	33	86	84	12	44	91	98	24	4	6	89	46	12	55	48	51
DKKM41	**HARDHAT H708 MAIMURU J51**	+86	-1.2	+2.9	-1.6	+2.3	+42	+91	+117	+97	+11	+1.3	-3.1	+62	+1.7	+0.9	-2.0	-0.6	+6.4	+0.04	+25	+1.08	+1.02	+1.10	$179	$311
NORH708	APR	50%	71%	63%	95%	94%	92%	91%	91%	87%	84%	86%	65%	90%	89%	88%	89%	81%	91%	84%	88%	89%	90%	86%		
DKKJ51		2	80	56	89	18	87	57	58	58	90	79	84	70	93	30	78	91	1	30	35	89	63	73	79	81
NHZQ319	**HAZELDEAN Q319 PV**	+70	+3.9	+9.3	-8.7	+2.5	+54	+105	+142	+140	+17	+3.2	-10.2	+81	+2.4	+2.7	+1.1	-1.0	+4.9	+0.59	+31	+0.80	+0.98	+1.08	$251	$460
NHZM586	APR	51%	79%	64%	98%	98%	96%	96%	95%	89%	81%	95%	64%	91%	89%	89%	90%	81%	91%	82%	96%	92%	92%	88%		
NHZL1175		15	40	3	5	21	38	19	12	8	54	17	1	18	90	7	27	97	7	84	16	41	54	68	9	1
VMIC31	**INNESDALE CARBINE C31 SV**	+33	+0.5	-4.7	-1.4	+5.4	+37	+63	+81	+87	+18	+0.6	-5.2	+35	+3.3	-0.2	-0.9	+1.1	+0.7	+0.34	+6	+0.68	+0.98	+1.04	$129	$237
USA14739204	HBR	61%	86%	78%	95%	97%	96%	96%	95%	94%	94%	93%	68%	92%	91%	91%	92%	86%	92%	84%	91%	82%	82%	77%		
VMIU102		74	69	96	90	80	96	99	98	74	41	93	39	99	84	54	61	13	87	62	95	19	54	55	98	98
KILK18	**KILLAIN ALASKA K18 PV**	+26	-10.6	-5.3	-0.9	+7.1	+66	+122	+163	+170	+15	+3.8	-2.3	+84	+6.2	-3.1	-5.1	+1.0	-1.2	-0.68	+36	+1.10	+0.76	+0.98	$124	$282
USA16417285	HBR	53%	75%	64%	90%	89%	89%	88%	89%	86%	84%	83%	52%	85%	85%	85%	86%	82%	88%	77%	80%	77%	77%	66%		
USA15107929		84	99	97	93	96	5	3	2	1	65	8	93	14	53	96	98	16	99	1	8	91	10	37	98	91
BLAP130	**KNOWLA PACKER P130 PV**	+16	+2.2	+1.3	-2.8	+4.8	+56	+102	+134	+112	+12	+1.1	-5.9	+78	+8.4	-0.2	-1.1	+0.9	+1.8	+0.17	+26	+0.80	+1.18	+0.94	$236	$395
SRKK306	HBR	51%	68%	62%	93%	92%	90%	89%	90%	86%	79%	86%	55%	86%	84%	84%	85%	77%	87%	78%	84%	81%	81%	77%		
BLAK113		95	56	71	76	70	30	27	23	34	87	84	25	24	28	54	65	20	64	43	30	41	90	25	20	19
VLYL483	**LAWSONS LINKEDIN L483 SV**	+55	+4.1	-7.0	-1.1	+4.1	+58	+109	+153	+140	+25	+4.0	-5.1	+103	+8.9	-1.4	+2.3	+0.2	+2.0	-0.18	+19	+1.06	+0.80	+0.86	$216	$391
HKFJ5	HBR	67%	72%	71%	98%	98%	97%	97%	97%	95%	95%	94%	68%	93%	89%	88%	91%	84%	91%	82%	89%	85%	85%	81%		
VLYH221		36	38	99	92	54	22	12	5	8	7	6	41	1	23	80	13	59	59	13	59	87	15	10	40	22
VLYP316	**LAWSONS PROPHET P316 PV**	+16	+4.9	+5.5	-2.0	+3.5	+57	+88	+106	+66	+15	+0.2	-3.8	+67	+12.2	-3.2	-3.3	+1.4	+4.1	+0.35	+30	+0.70	+0.76	+0.82	$267	$390
USA16295688	HBR	58%	80%	72%	93%	96%	95%	94%	92%	92%	88%	91%	63%	88%	86%	86%	87%	79%	88%	79%	93%	91%	91%	87%		
VLYM527		95	31	28	85	40	27	68	80	93	64	97	72	56	6	97	91	6	15	63	19	22	10	6	4	22
NMMK35	**MILLAH MURRAH KINGDOM K35**	+37	-12.3	-6.2	-2.0	+8.8	+55	+100	+138	+149	+11	+0.9	-5.6	+64	+7.6	+0.1	-0.1	+1.0	-1.0	-0.73	+28	+0.82	+1.28	+1.20	$140	$281
NZE469	HBR	73%	96%	90%	99%	99%	98%	98%	98%	98%	98%	98%	81%	96%	95%	96%	96%	94%	95%	90%	98%	96%	96%	94%		
NMMG41		67	99	98	85	99	34	31	17	4	90	88	30	63	36	47	47	16	99	1	25	46	97	92	96	91
	Breed Average EBVs	**+48**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+69**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.84**	**+0.96**	**+1.02**	**+205**	**+351**

Angus Australia - ImmuneDEX Research Breeding Values

Date: May 26, 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
NMMK42	**MILLAH MURRAH KLOONEY K42**	+4	+3.6	+1.4	-6.0	+5.6	+47	+86	+107	+91	+22	+2.2	-5.5	+66	+6.9	-1.2	-3.2	+1.2	+2.0	-0.01	+17	+0.84	+0.92	+1.04	$199	$335
NGMT30	HBR	75%	86%	84%	99%	99%	99%	99%	98%	98%	98%	98%	84%	97%	96%	96%	96%	94%	96%	90%	99%	97%	97%	95%		
NMMH4		99	43	70	27	84	70	72	77	68	18	47	33	60	44	76	90	10	59	25	66	50	39	55	60	67
NMML133	**MILLAH MURRAH LOCH UP L133**	+9	+5.1	+4.8	-5.5	+4.8	+59	+99	+131	+102	+25	+2.1	-2.7	+80	+1.7	-2.2	-3.9	-0.7	+1.9	-0.11	+32	+0.70	+1.08	+1.14	$170	$313
USA17091363	HBR	73%	81%	81%	99%	99%	98%	98%	98%	98%	98%	98%	82%	97%	95%	96%	96%	94%	96%	90%	98%	97%	97%	96%		
NMMH49		99	29	35	34	70	19	33	28	51	7	51	89	21	93	90	95	93	61	17	13	22	76	82	85	80
NJWH283	**MILWILLAH ELSOM H283 PV**	+32	+1.1	-5.2	-2.2	+3.9	+46	+83	+122	+109	+21	+1.7	-1.3	+76	+8.9	-2.3	-2.5	+1.4	+1.4	+0.32	+19	+0.74	+0.82	+1.04	$148	$269
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	65	97	83	49	75	80	48	39	21	66	98	31	23	91	84	6	74	60	57	29	18	55	94	94
NJWE158	**MILWILLAH LAD E158 SV**	+41	-2.8	-9.5	-7.8	+8.0	+41	+78	+106	+108	+7	+2.0	-5.1	+43	+8.9	-0.9	-5.1	+1.4	+3.3	+0.28	+12	+0.80	+0.84	+0.72	$157	$278
NZEE230	HBR	57%	84%	76%	95%	97%	97%	96%	96%	93%	96%	93%	65%	92%	91%	91%	91%	86%	92%	83%	90%	79%	80%	72%		
VTMX114		60	87	99	10	99	90	88	79	41	98	55	41	97	23	70	98	6	28	56	83	41	21	2	91	92
CSWP036	**MURDEDUKE BLACK PEARL**	+19	+1.9	+2.8	-8.4	+4.7	+49	+94	+130	+117	+21	+3.2	-7.6	+59	+0.9	+0.4	-1.3	-1.1	+6.4	+0.61	+15	+0.84	+1.18	+1.22	$215	$381
USA17236055	HBR	53%	80%	71%	96%	96%	95%	95%	94%	91%	85%	90%	68%	92%	90%	90%	91%	82%	92%	86%	95%	93%	94%	90%		
CSWL123		93	58	57	6	68	63	50	29	27	21	17	6	78	96	40	68	98	1	85	75	50	90	94	42	29
CSWK428	**MURDEDUKE KICKING K428 PV**	+31	+7.6	+10.2	-7.6	+1.9	+48	+93	+115	+88	+24	+3.3	-6.1	+66	+2.5	-0.4	-2.9	+0.3	+0.8	-0.01	+41	+0.86	+1.02	+1.18	$190	$344
VTME343	HBR	74%	89%	77%	98%	98%	97%	98%	97%	96%	95%	97%	70%	93%	92%	90%	92%	87%	93%	86%	97%	97%	97%	95%		
CSWE175		77	10	1	11	13	70	52	62	72	9	15	21	58	89	59	88	53	86	25	4	54	63	89	70	60
NURM208	**MURRAY GENESIS M208 PV**	+39	+1.6	+5.6	-5.9	+4.5	+49	+94	+127	+106	+18	+3.7	-6.6	+82	+16.5	-0.3	-2.3	+2.0	+1.3	+1.43	+7	+0.88	+1.02	+0.70	$240	$399
SMPG357	HBR	73%	80%	70%	94%	94%	93%	93%	93%	89%	88%	86%	65%	89%	88%	86%	89%	83%	90%	82%	89%	91%	91%	88%		
NURK45		64	61	27	29	63	62	49	36	44	41	9	14	16	1	57	82	1	76	99	94	59	63	1	17	17
NURM204	**MURRAY PROCEED M204 PV**	+46	-5.6	+7.6	-4.0	+4.5	+62	+107	+145	+134	+19	+2.4	-3.4	+89	+13.4	-5.0	-5.8	+0.6	+6.9	+0.05	+21	+0.94	+0.76	+0.90	$235	$392
USA16956101	HBR	77%	80%	71%	96%	96%	95%	95%	94%	90%	86%	90%	64%	92%	90%	88%	91%	86%	92%	85%	93%	91%	91%	88%		
NURJ43		51	94	10	58	63	12	16	10	11	34	40	80	8	3	99	99	35	1	31	49	70	10	16	20	21
SFNL21	**NAMPARA LIBERTY L21 SV**	+58	-5.0	-4.8	-6.5	+8.6	+67	+111	+149	+165	+19	+2.9	-1.0	+79	+7.7	-2.1	-0.8	+1.8	-2.4	-0.65	+23	+0.90	+0.88	+0.98	$144	$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	9	7	2	33	24	99	23	35	89	60	2	99	1	40	63	29	37	95	85
SKOJ6	**NEWLYN PARK EMPEROR J6 PV**	+12	-8.1	-5.8	-6.8	+7.6	+65	+112	+144	+162	+7	+1.3	-3.7	+80	+8.4	-1.0	-1.1	+1.3	+0.2	-0.76	+14	+1.06	+0.82	+0.74	$178	$338
VTME343	HBR	64%	78%	70%	93%	92%	91%	90%	91%	88%	84%	85%	65%	87%	86%	86%	87%	81%	88%	80%	85%	86%	85%	81%		
NZCE115		98	97	98	18	98	6	9	10	2	98	79	74	21	28	72	65	8	94	1	78	87	18	2	80	64
NZE21095018	**NGAPUTAHI P206 PV**	+81	+9.9	+4.8	-1.5	-0.1	+41	+83	+97	+66	+27	+2.7	-8.2	+54	+6.0	+0.1	-1.9	+1.1	+4.0	+0.18	+17	+0.94	+1.12	+1.10	$246	$386
HIOE7	HBR	55%	81%	73%	93%	97%	96%	95%	95%	91%	86%	94%	68%	90%	89%	89%	89%	82%	91%	83%	89%	85%	86%	83%		
NZE21095112H49		5	2	35	89	2	90	78	91	93	4	30	3	86	55	47	77	13	16	44	65	70	83	73	12	25
USA16981588	**PA FULL POWER 1208 PV**	+63	-5.1	-4.6	-4.8	+3.8	+52	+98	+119	+75	+14	+2.0	-2.4	+70	+12.7	-1.8	+0.5	+1.1	+3.0	+0.89	+21	+1.24	+0.94	+0.72	$225	$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%	91%		
USA16408070		24	93	96	45	47	48	38	55	87	76	55	92	45	4	86	37	13	35	96	48	98	44	2	30	70
SMPG357	**PATHFINDER GENESIS G357 PV**	+41	-0.7	+3.8	-7.2	+6.6	+62	+109	+148	+136	+26	+4.4	-7.1	+96	+13.9	+0.1	-1.0	+1.4	+0.3	+0.65	+28	+0.86	+1.06	+0.78	$242	$421
VTMB1	HBR	65%	97%	90%	99%	99%	99%	99%	99%	98%	98%	98%	86%	97%	96%	96%	96%	95%	96%	91%	99%	98%	98%	96%		
SMPD245		60	77	47	14	94	12	13	7	10	6	4	9	3	2	47	63	6	93	87	24	54	72	4	15	7
	Breed Average EBVs	**+48**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+69**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.84**	**+0.96**	**+1.02**	**+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
SMPK22	**PATHFINDER KOMPLETE K22** SV	+73	+10.0	+7.8	-9.1	+0.9	+41	+74	+96	+49	+26	+2.9	-7.1	+54	+7.1	+3.7	+5.5	+0.2	+2.3	+0.52	+27	+0.50	+0.86	+0.66	$241	$368
SMPG357	HBR	73%	93%	81%	99%	98%	98%	98%	98%	97%	97%	98%	75%	95%	94%	94%	94%	93%	94%	88%	97%	96%	96%	94%		
SMPH756		11	2	9	4	5	90	93	91	99	5	24	9	86	42	3	1	59	51	79	26	3	25	1	16	40
SMPM651	**PATHFINDER MASTERPIECE**	+31	+3.8	+4.4	-6.1	+5.0	+56	+104	+128	+138	+21	+3.5	-7.6	+52	+9.6	-1.7	-4.2	+1.6	+1.6	-0.21	+33	+0.98	+1.22	+1.18	$229	$418
VTMG67	HBR	60%	80%	73%	92%	95%	93%	93%	93%	89%	88%	89%	64%	88%	87%	87%	87%	81%	89%	81%	83%	77%	77%	74%		
SMPH66		77	41	40	26	74	30	21	33	9	23	12	6	89	18	84	96	4	69	12	13	77	94	89	26	9
SMPN56	**PATHFINDER NUCLEUS N56** SV	+34	+4.7	+2.8	-3.4	+5.3	+60	+106	+137	+132	+16	+4.6	-6.9	+75	+12.8	+0.9	+1.1	+0.9	+1.7	+0.40	+8	+0.76	+0.78	+0.84	$253	$442
HIOG18	HBR	50%	81%	70%	96%	97%	96%	95%	95%	91%	91%	94%	64%	92%	90%	90%	91%	83%	92%	86%	90%	86%	87%	82%		
SMPL179		72	32	57	68	79	18	18	18	13	60	3	11	33	4	30	27	20	66	68	92	33	12	8	9	3
NZE41-97	**PINEBANK WAIGROUP 41/97** #	+61	+3.5	-3.9	-3.4	+3.6	+37	+64	+76	+50	+18	+0.9	-4.3	+17	+5.4	+1.1	+0.2	+1.0	+1.1	-0.05	+33	+0.28	+0.90	+0.96	$163	$251
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		27	44	95	68	42	96	99	99	98	44	88	61	99	63	26	42	16	80	22	12	1	34	31	89	97
NLRE17	**REILAND EVERITT E17** PV	+22	-4.4	+4.7	-1.2	+5.0	+52	+89	+121	+89	+16	+4.4	-3.2	+66	+10.5	-2.0	+0.9	+1.0	+1.7	-0.47	+14	+1.06	+0.92	+1.00	$201	$321
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	36	92	74	50	64	49	72	59	4	83	59	12	88	30	16	66	3	78	87	39	43	59	75
NORF340	**RENNYLEA BLACK GOLD F340** PV	+73	+6.4	+0.6	-2.9	+1.3	+35	+66	+80	+82	+2	+0.9	-2.7	+21	+2.0	-0.5	+0.2	-0.1	+4.4	-0.11	+15	+0.76	+0.82	+0.74	$143	$262
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	76	75	7	98	98	99	80	99	88	89	99	92	61	42	75	11	17	76	33	18	2	95	95
NORE11	**RENNYLEA EDMUND E11** PV	+24	+8.6	+0.3	-6.7	+1.2	+34	+64	+84	+55	+16	+1.8	-9.0	+50	+4.2	+3.5	+1.3	-0.2	+4.2	+0.77	+23	+0.54	+1.04	+1.10	$210	$331
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	63	1	91	76	3	25	79	13	93	41	5	68	73	48	69
NORH708	**RENNYLEA H708** PV	+96	-8.0	+1.8	+1.3	+4.6	+47	+102	+128	+129	+12	+2.4	-3.3	+72	+12.4	-3.4	-6.8	+2.0	+7.2	+0.65	+22	+0.70	+0.68	+0.92	$216	$360
NORC511	APR	86%	93%	85%	98%	98%	98%	98%	98%	97%	97%	98%	83%	96%	95%	95%	96%	94%	96%	93%	98%	98%	98%	97%		
NORE176		1	97	67	99	65	73	26	34	15	87	40	81	41	5	98	99	1	1	87	47	22	4	21	40	46
NORK163	**RENNYLEA K163** PV	+29	+4.7	-7.8	-3.8	+2.6	+40	+74	+95	+69	+10	+0.8	-5.8	+63	+19.2	-0.5	-1.3	+2.7	+2.6	+0.15	+19	+0.64	+0.74	+1.02	$244	$359
NORH106	APR	80%	76%	73%	98%	98%	98%	98%	97%	97%	96%	96%	78%	95%	94%	94%	94%	92%	95%	88%	91%	90%	90%	87%		
NORE176		80	32	99	61	22	93	93	92	92	92	90	27	67	1	61	68	1	44	41	60	14	8	49	14	47
NORK522	**RENNYLEA KODAK K522** SV	+47	+8.5	+8.4	-4.8	+1.4	+44	+82	+107	+108	+12	+4.6	-8.0	+47	+3.9	+3.4	+1.1	-0.3	+4.0	+0.31	+7	+0.58	+0.80	+0.92	$207	$382
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		50	6	6	45	8	82	81	78	41	87	3	4	94	79	4	27	83	16	59	93	8	15	21	51	28
NORL508	**RENNYLEA L508** PV	+75	+1.6	+7.9	-5.9	+2.6	+46	+85	+118	+90	+27	+1.3	-7.5	+55	+5.6	+0.8	-0.2	-0.2	+5.4	+0.65	+14	+0.64	+0.80	+0.88	$239	$387
USA17366506	HBR	55%	84%	79%	99%	99%	98%	98%	98%	98%	98%	98%	83%	96%	95%	96%	96%	94%	95%	90%	99%	98%	98%	97%		
NORH414		9	61	9	29	22	77	74	56	69	3	79	6	85	60	32	49	79	4	87	76	14	15	13	17	25
NORL683	**RENNYLEA L683** PV	+73	+2.7	+1.5	-4.3	+4.9	+54	+95	+117	+101	+5	+2.4	-6.4	+78	+4.6	+0.6	-1.3	+0.8	+2.3	+0.57	+23	+0.70	+0.86	+1.00	$229	$381
NORE11	APR	71%	84%	75%	98%	97%	96%	96%	96%	94%	93%	95%	71%	91%	90%	89%	91%	86%	91%	85%	95%	92%	92%	89%		
NORJ631		11	51	70	53	72	37	47	59	52	99	40	17	25	72	36	68	24	51	83	42	22	25	43	26	29
NORP987	**RENNYLEA P987** PV	+60	+10.3	+8.8	-8.2	+1.5	+51	+98	+124	+125	+7	+0.4	-3.0	+72	+5.6	+3.9	+2.4	-1.3	+8.3	+0.96	+11	+0.90	+1.02	+1.04	$226	$403
NORM763	APR	52%	75%	66%	97%	97%	96%	96%	96%	94%	89%	95%	63%	90%	89%	89%	89%	82%	91%	81%	96%	93%	93%	90%		
NORM1184		28	2	5	7	9	54	36	42	18	99	95	86	41	60	2	13	99	1	97	87	63	63	55	29	15
	Breed Average EBVs	**+48**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+69**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.84**	**+0.96**	**+1.02**	**+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
NORQ1081	**RENNYLEA Q1081** PV	+82	-3.4	+4.0	-3.8	+3.9	+51	+92	+119	+108	+12	+3.5	-5.6	+49	+8.8	+0.5	-0.9	+0.3	+6.9	+0.75	+14	+0.86	+0.88	+0.88	$238	$386
NORH708	APR	57%	77%	67%	93%	93%	92%	91%	92%	88%	82%	89%	63%	88%	87%	87%	88%	80%	89%	81%	90%	88%	88%	84%		
NORL841		4	89	44	61	49	55	55	55	41	88	12	30	93	24	38	61	53	1	92	79	54	29	13	18	25
NORQ213	**RENNYLEA Q213** PV	+28	+9.1	+7.6	-7.4	+0.8	+63	+117	+148	+92	+24	+0.5	-10.0	+100	+8.6	+0.8	+0.1	+0.1	+3.3	+0.74	+28	+0.50	+0.70	+0.86	$331	$514
NORK907	APR	53%	84%	70%	98%	98%	97%	97%	97%	94%	90%	96%	62%	91%	89%	89%	90%	83%	90%	81%	97%	95%	95%	92%		
NORL110		81	4	10	12	5	10	5	7	67	9	94	1	2	26	32	44	65	28	91	25	3	5	10	1	1
NORR992	**RENNYLEA R992** PV	+32	+4.8	+8.0	+1.9	+1.2	+44	+84	+115	+85	+26	+1.7	-6.4	+68	+11.5	+1.7	+2.2	-0.2	+6.5	+1.13	+24	+0.58	+0.82	+0.84	$258	$410
NORN542	APR	50%	69%	61%	95%	95%	94%	94%	93%	91%	84%	91%	53%	82%	81%	81%	81%	75%	82%	68%	92%	84%	84%	78%		
NORM1034		75	31	8	99	7	83	77	63	76	6	66	17	54	8	17	14	79	1	99	37	8	18	8	7	12
APBK11	**SHACORRAHDALU KINETIC K11**	+20	+9.9	+10.3	-9.1	+0.3	+49	+88	+105	+95	+10	+4.7	-6.8	+65	+10.5	+3.8	+2.7	+0.5	+2.3	+0.92	+2	+0.98	+1.22	+1.06	$238	$408
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	63	67	81	61	93	2	12	62	12	3	10	41	51	97	98	77	94	62	18	12
NZE19507013	**STORTH OAKS JACK J7** SV	+14	+6.2	+8.1	-4.8	+4.4	+61	+113	+151	+143	+17	+3.5	-1.8	+79	+8.1	-0.3	-3.2	-0.3	+2.5	+0.10	+20	+1.02	+0.98	+0.92	$184	$368
VTME343	HBR	69%	89%	80%	98%	98%	97%	97%	97%	95%	95%	96%	71%	94%	93%	93%	93%	90%	94%	87%	96%	93%	93%	90%		
NZE19507111G183		97	19	8	45	61	14	7	6	6	49	12	96	23	31	57	90	83	46	36	52	83	54	21	75	40
VSNG34	**STRATHEWEN BERKLEY G34** PV	+40	+7.8	+8.1	-6.6	+3.6	+57	+107	+142	+148	+18	+2.2	-7.4	+84	+6.4	+1.0	+0.3	+0.2	+2.1	-0.09	+29	+1.06	+1.24	+1.10	$230	$436
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		62	9	8	20	42	25	15	12	5	45	47	7	14	50	28	40	59	56	19	20	87	95	73	25	4
USA17236055	**SYDGEN BLACK PEARL 2006** PV	+8	+2.2	+7.3	-7.0	+3.2	+51	+85	+123	+87	+21	+1.5	-3.4	+74	+8.3	+0.4	-0.5	+0.4	+2.9	+0.28	+16	+1.04	+1.18	+1.14	$210	$340
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	56	12	16	33	51	74	45	73	23	73	80	35	29	40	54	47	37	56	72	85	90	82	48	63
VTMK52	**TE MANIA KALIBROOK K52** PV	+45	+7.5	+5.5	-3.2	+1.4	+52	+103	+129	+102	+29	+1.7	-5.9	+74	+4.1	+1.0	+1.7	-0.7	+5.5	+1.43	+7	+1.22	+1.12	+1.18	$247	$414
USA16295688	HBR	71%	78%	70%	94%	95%	92%	92%	91%	88%	84%	88%	66%	88%	86%	85%	87%	83%	89%	80%	87%	90%	90%	87%		
VTMH423		53	11	28	71	8	51	25	32	50	2	66	25	35	77	28	20	93	3	99	93	98	83	89	11	10
VTMK138	**TE MANIA KIRBY K138** PV	+18	+0.6	+7.9	-1.3	+4.7	+52	+89	+117	+95	+19	+2.5	-7.8	+65	+5.5	+1.8	+3.1	-2.0	+8.5	+0.91	+15	+0.78	+0.76	+0.94	$253	$410
USA16295688	HBR	68%	88%	81%	99%	99%	98%	98%	98%	98%	98%	98%	84%	97%	97%	96%	97%	95%	96%	90%	99%	99%	99%	99%		
VTMH17		94	68	9	91	68	49	65	59	62	35	36	5	61	62	16	8	99	1	96	74	37	10	25	8	12
VTMN424	**TE MANIA NEBO N424** PV	+51	+9.0	-1.0	-6.6	+4.1	+54	+101	+134	+102	+28	+4.4	-5.0	+54	+6.8	-0.7	-4.0	+0.3	+4.0	-0.03	+47	+0.92	+0.86	+0.94	$218	$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		43	5	86	20	54	39	27	23	51	3	4	44	87	45	66	95	53	16	24	1	67	25	25	38	39
VTMN1387	**TE MANIA NEON N1387** SV	+19	+1.4	+2.4	-6.5	+3.5	+46	+83	+105	+92	+19	+1.2	-6.1	+39	+3.3	-0.1	-0.6	-2.2	+10.	-0.32	+25	+0.72	+0.80	+0.92	$212	$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	78	81	67	35	82	21	98	84	52	56	99	1	7	34	26	15	21	45	53
VTMP888	**TE MANIA PESO P888** PV	+53	+7.3	+6.1	-5.2	+2.2	+57	+114	+146	+118	+25	+2.4	-7.3	+91	+6.8	-0.4	+1.3	+0.5	+1.6	-0.15	+23	+0.84	+1.08	+1.00	$262	$450
VTMK226	HBR	56%	81%	75%	98%	98%	97%	97%	97%	96%	94%	94%	71%	95%	94%	94%	95%	87%	93%	85%	96%	95%	96%	94%		
VTMH423		39	12	22	39	16	26	7	9	26	7	40	8	6	45	59	25	41	69	15	43	50	76	43	5	2
DBLL292	**TOPBOS LEADING EDGE L292** PV	+26	+2.6	+8.3	-5.9	+6.6	+73	+125	+164	+150	+23	+1.4	-3.9	+83	+4.0	-2.2	-5.2	+0.0	+1.6	+0.02	+19	+0.94	+0.82	+0.82	$220	$408
USA16295688	HBR	74%	88%	75%	98%	98%	97%	97%	97%	95%	96%	97%	70%	94%	92%	91%	93%	88%	93%	86%	97%	92%	92%	88%		
VSNF04		84	52	7	29	94	1	2	2	4	12	76	70	16	78	90	98	70	69	28	60	70	18	6	35	12
	Breed Average EBVs	**+48**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+69**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.84**	**+0.96**	**+1.02**	**+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
QKBP29	**WARRAWEE PATROL P29** [PV]	+58	+7.0	+10.6	-11.8	+3.0	+55	+104	+139	+129	+17	+2.4	-10.3	+100	+9.4	+3.6	+2.1	+0.2	+2.0	+0.63	+31	+0.80	+1.18	+1.00	$271	$479
SMPG357	HBR	64%	80%	71%	96%	94%	93%	92%	91%	88%	82%	88%	65%	86%	85%	85%	86%	79%	87%	78%	88%	78%	78%	74%		
QKBM01		31	14	1	1	29	35	21	16	15	48	40	1	2	19	3	15	59	59	86	16	41	90	43	3	1
NWPE111	**WATTLETOP SITZ 458N E111** [SV]	+17	+4.5	+6.7	-3.7	+2.8	+51	+91	+125	+96	+25	+2.0	-1.4	+83	+5.5	-4.1	-3.5	+0.9	+2.7	-0.53	+26	+0.98	+0.94	+1.12	$187	$321
USA14474596	HBR	67%	90%	80%	97%	98%	97%	97%	97%	95%	96%	95%	74%	94%	92%	92%	93%	89%	93%	85%	95%	87%	88%	83%		
NWPC36		94	34	17	63	26	53	57	40	61	7	55	98	14	62	99	92	20	42	3	30	77	44	78	72	76
CWDM5	**WEATHERLY MOXY M5** [SV]	+44	+3.1	+6.9	-4.3	+4.0	+56	+101	+135	+113	+27	+2.6	-6.7	+92	+7.2	+2.9	-0.2	+0.3	+2.6	+0.29	+21	+0.94	+1.06	+0.98	$240	$409
SMPG357	HBR	52%	72%	66%	93%	96%	95%	95%	95%	93%	91%	89%	64%	86%	85%	85%	85%	80%	85%	73%	92%	92%	92%	84%		
CWDJ15		55	47	15	53	52	30	29	21	33	3	33	13	5	41	6	49	53	44	57	48	70	72	37	17	12
	Breed Average EBVs	**+48**	**+2.2**	**+3.0**	**-4.5**	**+3.9**	**+52**	**+93**	**+120**	**+102**	**+17**	**+2.2**	**-4.8**	**+69**	**+6.5**	**+0.0**	**-0.2**	**+0.4**	**+2.5**	**+0.23**	**+21**	**+0.84**	**+0.96**	**+1.02**	**+205**	**+351**

For further information, please contact staff at Angus Australia:
P: 02 6773 4600 | E office@angusaustralia.com.au

www.angusaustralia.com.au

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