

Breed Benchmark for Luining 2023									
EBV/Index	Bottom 1%	Bottom 5%	Bottom 10%	Bottom 25%	Breed Average	Top 25%	Top 10%	Top 5%	Top 1%
Birth weight	1.59	1.08	0.81	0.36	-0.14	-0.64	-1.10	-1.37	-1.88
Calving Ease	-2.27	-1.59	-1.23	-0.63	0.05	0.72	1.33	1.69	2.37
Maternal Calving Ease	-1.11	-0.82	-0.67	-0.41	-0.12	0.16	0.42	0.57	0.86
Gestation Length	1.52	1.01	0.74	0.29	-0.21	-0.71	-1.17	-1.44	-1.94
Calving Value	-1	0	1	1	2	3	4	4	5
200 Day Growth	-11.73	-8.11	-6.17	-2.94	0.65	4.24	7.47	9.41	13.03
400 Day Growth	-18.08	-12.21	-9.08	-3.85	1.97	7.79	13.02	16.15	22.03
Muscle Depth	-1.62	-1.15	-0.90	-0.48	-0.01	0.46	0.88	1.13	1.60
Fat Depth	-0.13	-0.09	-0.07	-0.03	0.01	0.05	0.09	0.11	0.15
Beef Value	0	3	4	7	9	11	14	15	18
200 Day Milk	-2.98	-1.95	-1.40	-0.49	0.53	1.55	2.47	3.02	4.05
Age at First Calving	0.13	0.08	0.06	0.02	-0.02	-0.06	-0.10	-0.12	-0.16
Lifespan	-0.29	-0.13	-0.04	0.10	0.26	0.43	0.57	0.66	0.82
Calving Interval	4.71	3.28	2.53	1.26	-0.15	-1.56	-2.83	-3.59	-5.01
Maternal Value	-11	-6	-4	1	6	11	15	18	23
Maternal Production Value	-11	-6	-4	1	6	11	15	18	23

Example:

400-Day Growth (kg liveweight) - A measure of the animal's genetic potential for growth from birth to 400 days of age.

A bull with an EBV of +40 for 400-Day Growth is expected to produce, on average, calves 20kg heavier at 400-days than calves sired by a bull with an EBV of 0. Because a bull only passes on half of his genes to the next generation his EBVs must be halved to estimate how much of his genetic superiority (or inferiority) will be passed on.

Selection for faster growth (i.e. high 200 and 400-Day Growth EBVs) results in animals which will have heavier carcasses at a constant fat class or leaner carcasses at a constant age. Selection for high growth rates also tends to result in an overall increase in mature size for that breed (and therefore higher birthweights).

EBV / Index	Explanation	Interpretation
Birth weight	Estimates the genetic potential of calf weight at birth. Negative values indicate animals that will produce smaller calves, where high values are more likely to be associated with difficult calvings	Negative values = lighter calves born
Calving Ease (direct)	Estimates the percentage of unassisted calving that can be derived from a particular sire.	Positive values = more unassisted calvings
Maternal Calving Ease	Identifies females that will calve more easily. Should not be confused with calving ease direct (see above), which is an EBV predicting how easily born a bull's progeny will be	Positive values = more unassisted calvings
Gestation Length	Short gestation lengths (negative values) result in easier calving because birthweights tend to be lower. A short gestation also increases the interval between calving and the start of mating, giving the cow more time to recover body condition.	Negative values = shorter gestation length
Calving Value	The economic value of an animal in terms of gestation length and difficult calving	
200- & 400-Day Growth	A measure of the animal's genetic potential for growth from birth. Selection for faster growth will result in animals that have heavier carcasses at a constant fat class or leaner carcasses at a constant age. Selection for high growth rates also tends to result in an overall increase in mature size (and therefore higher birthweights).	Positive values = faster growth rates
Muscle Depth	Selecting for this trait will increase the yield of lean meat in the carcase.	Positive values = deeper loin muscles
Fat Depth	Indicates animals capable of producing lean carcasses or, if required, can be taken to heavier carcase weights without becoming overfat.	Negative values = leaner carcasses
Beef Value	The economic value of an animal in terms of the financial merit their offspring. This prediction is a combination of traits carcass weight, carcass conformation and carcass fat.	
200 Day Milk	This EBV is the maternal component of 200-day weight. It indicates how well a bull's heifer calves will perform when they become mothers and is greatly influenced by milking ability.	Positive values = more productive female replacements
Age at First Calving	Herds looking to calve heifers at two years of age should identify bulls with superior (negative) EBVs for this trait. This will increase conception rates at first mating.	Negative values = puberty reached at an early age
Lifespan	Predicts the length of an animal's breeding life in the herd.	Positive values = longer breeding life
Calving Interval	This EBV can be used to breed cows with short calving intervals that get in calf again quickly.	Negative values = cows that get back in calf more quickly
Maternal Value	The economic value of an animal's genetic ability to produce breeding females	
Maternal Production Value	The economic value of an animal in terms of its genetic potential to produce females for breeding and animals with beef carcass characteristics, calculated from the sub-indexes listed above.	