

## Checking out the Gestation Length EBV in Angus Breedplan

### What is an EBV?

An EBV is an Estimated Breeding Value. This is an estimate of the average performance of a sire's calves- compared to calves of other sires. Half the genes in a calf come from it's dam and the other half come from the sire- so half the benefit of a bull's EBV is passed on to his calves.

In this way, you'd think that an EBV of x for Gestation Length would equal x days in the sire's calves. Unfortunately, EBVs don't quite work that way. However, what we do know is when we compare the EBVs of sires to each other we *can* predict the difference in the performance of their calves. However, recent industry R&D projects have provided some handy benchmarks that roughly show how Angus Gestation Lengths stack up.

### What is an Angus Gestation Length EBV?

Angus Breedplan Gestation Length EBVs are, put simply- the average number of days a sire's calves will spend inside their mothers. This is the number of days from date of conception to calf birth date- compared to other sires. Less days in gestation is more favourable hence more negative values in the EBV are favoured also.

In practice:

**Sire 1**, GL EBV= -6 days

**Sire 2**, GL EBV= -2 days

Difference between sires GL EBV= 4 days

*(50% of genes from dam & 50% from sire i.e. half the EBV)*

Difference between sires in actual calf Gestation Length= 2 days

### So what's a good one?

The 'percentile bands table' is a handy way to see what is a good EBV and what's a poor one. It's an easy way to see that more negative values are more favourable.

Percentile Band	Top Value	Top 1%	Top 5%	Top 10%	Top 15%	Top 20%	Top 25%	Top 30%	Top 35%	Top 40%	Top 45%	Top 50%	Top 55%	Top 60%	Top 65%	Top 70%	Top 75%	Top 80%	Top 85%	Top 90%	Top 95%	Top 99%	Low Value
Gestation Length EBV	-14	-8.9	-7.1	-6.2	-5.6	-5.2	-4.9	-4.6	-4.3	-4.1	-3.8	<b>-3.6</b>	-3.4	-3.1	-2.9	-2.7	-2.4	-2.1	-1.7	-1.3	-0.5	1.1	8.3

### So why should I care about gestation length EBVs?

Shorter gestation length is associated with lighter birth weight, improved calving ease and improved re-breeding performance among cows. Calves that are born with a shorter GL are often heavier at weaning due to more days of growth. For the dairy cocky, calves born with a shorter GL allow their mothers to begin milking earlier.

### But how do we know they actually work?

The Beef + Lamb NZ Genetics Dairy Beef Progeny Test mated 50 Angus and Hereford bulls by AI to over 800 cross bred dairy cows at Port Waikato. Gestation length was investigated, and actual calf gestation length (when matched up to the calf gestation length predicted from the EBV) was not far from smack on where you'd expect it to be.

The positive slope in the graph below shows that sire's GL EBVs do a great job of predicting the actual average gestation lengths of their calves.

#### Expectation:

For each day longer in a sire's GL EBV, we expect 0.5 extra days in calf gestation.

#### Reality:

For each day longer in a sire's GL EBV, 0.43 extra days was shown in calf gestation.

#### Angus Benchmark in the DBPT

Angus calves born from sires with top 10% GL EBVs were born with average gestation lengths of 279.3 days.

