



Economic Evaluations

Economic evaluations combine trait evaluations of animals into an estimate of their comparative ability to convert feed into profit through breeding replacement (Breeding Worth).

For Breeding Worth, the Economic Values represent the net income per unit of feed from breeding replacements with a one unit genetic improvement in the trait. The base unit of feed is 4.5 tonnes of dry matter in average quality pasture.

The profit-related traits are combined into a single economic index.

$$\begin{aligned}
 \text{Breeding Worth} &= \text{Milkfat BV} && \times && \$\text{EV} + \\
 &\text{Protein BV} && \times && \$\text{EV} + \\
 &\text{Milk BV} && \times && \$\text{EV} + \\
 &\text{Liveweight BV} && \times && \$\text{EV} + \\
 &\text{Fertility BV} && \times && \$\text{EV} + \\
 &\text{Somatic Cell BV} && \times && \$\text{EV} + \\
 &\text{Residual Survival BV} && \times && \$\text{EV}
 \end{aligned}$$

where : BV = Breeding Value for each trait

\$EV = economic value for each trait for breeding replacements

The current Economic Values for Breeding Worth (as at 13 February 2010) are in the table below. The Economic Values for Production Worth and Lactation Worth are also provided and they are worked out in the same way as the Breeding Worth but don't include Fertility, Somatic Cells or Residual Survival.

	Milkfat	Protein	Milk Volume	Liveweight	Fertility	Somatic Cell	Residual Survival
Breeding Worth	\$1.570	\$8.215	\$-0.085	\$-1.238	\$2.867	\$-30.001	\$0.043
Production Worth	\$1.456	\$7.041	\$-0.074	\$-1.078	-	-	-
Lactation Worth	\$1.710	\$7.977	\$-0.085	\$-1.224	-	-	-