What is an EPD ?

An EPD (estimated progeny difference) is an estimation of the genetic value that an animal will pass on to its progeny. An EPD uses all performance information on the relatives of the animal, as well as the animal's own performance. Animals with the best EPD's for a trait have the highest probability of producing exceptional progeny for that trait.

How are EPD's expressed?

EPD's are expressed in the same units in which the trait is measured. For example, "number born" is measured in lambs, so "number born" EPD's are also expressed in lambs. It is important to remember that EPDs are expressed as a genetic difference from the average animal of the breed for that trait. Therefore, a ram "A" with a number born EPD of +0.10 means that the progeny of ram "A", on average, will have 0.10 more lambs than a ram "B" with an EPD of 0. This is not the performance. If the daughters of ram "B" have 1.9 lambs per lambing in your flock then the daughters of ram "A" would have 2.0 lambs per lambing in your flock. These sound like very small numbers, but they represent the genetic differences between animals. Also, flock calculations show that these small numbers can be deceiving. For example, a flock with 200 ewes lambing will have 20 additional lambs from the +0.10 animals which translates to $2,000 at $100 lambs with very little additional cost. However, it is important to note that when buying a ram, maternal traits take a generation longer to be expressed than growth traits. For example, if you buy a ram which will improve numbers born, the ewes that he is bred to will not have more lambs. It is the daughters that you keep back in your flock that will have more lambs.

What is the Accuracy of an EPD?

Accuracy is an indication of how much information was available to evaluate the trait for an animal. Accuracy ranges from 1% to 99%. As the accuracy improves the EPD value becomes more stable. A value with an accuracy of 90% is not expected to change very much even as new information is added to the evaluation. But an EPD with an accuracy of 30% can change considerably.

How can using EPD's make you money?

Dorset = 1.75 lambs / year x 50 ewes = 87.5 lambs

A 50 day maternal contribution EPD (50-Mat) gives a good indication of the milk production and the ewe' maternal ability; it is this EPD that gives you the chance to increase your weaning weights. An EPD of 0.5 means that this animal may produce 0.5 kg more at 50 days of age than other females with an EPD of 0.

0.5 kg x 87.5 lambs = 43.75 kg x 4.95$/kg (price of milk lamb $2.25/lb) = $216.56 more per year. This shows the benefit of using rams with superior index. $216.56 x 5 year use of this ram = $1083

Suffolk or Hampshire = 1.50 lambs / year x 50 ewes = 75 lambs

100 day EPD (100-Dir) indicates the expected average gain of weight of the progeny at 100 days. An EPD of 3.00 means that this animal progeny will have an average weight of 3 kg more at 100 days than those with an EPD of 0.

75 lambs x 3kg = 225 kg more produced.
225 kg x 47% (carcass) = 105.75 kg x $7.75/kg = $819.56 more per year x 5 year use of this ram = $4097.80 more.

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Ewes with a higher EPD #weaned will have daughters who will wean more lambs. An EPD of 0.05 means that the numbers of lambs weaned will be 0.05 more per daughter. 50 ewes x 0.05 = 2.5 more lambs weaned / lambing. 2.5 x $125/lamb = $312.50 more per year x 5years = $1562.50.

The EPD of the number of lambs weaned is the percentage of the number of lambs weaned per breed. An EPD of 0.05 means that the numbers of lambs weaned will be 0.05 more per ewe. 50 ewes x 0.05 = 2.5 more lambs weaned / lambing. 2.5 x $125/lamb = $312.50 more per year x 5years = $1562.50.

It is worthwhile to spend more money on breeding stock that will produce more lambs that grow faster. In return, you will have more money in your pocket every year!