

# Details of Breeding Indexes

A breeding index combines multiple measured traits, or ASBVs, into a single value that reflects a certain emphasis on these traits. It is important that you use an index that best matches the breeding objective and production system of the flock you are selecting for. For instance the DP+ index will place more emphasis on increasing meat production and less on increasing wool production.

It is recommended that the performance of individual measured and visually assessed traits also be used in conjunction with an index. Selection indexes assist in making balanced selection decisions, however individual traits can be used to give a detailed view of the genetics being considered.

MSS reports four indexes in the main table of the results and in the Top 50 sire lists. This page outlines the indexes used:

- A description of these indexes. This explains the breeding objectives of each index.
- The percentage contribution that each trait included in the index makes to economic gain in a commercial flock is also shown along on the lower axis.
- Likely within-flock responses that a flock would exhibit if an index was used for 10 years are given on the right hand side of the graph. This shows the likely increase or decrease in actual measurable traits (ie. fibre diameter). These responses are based on a ram breeding flock with a standard breeding program; with no introduction of outside genetics and using 35% of their selection emphasis on traits that are not in the index (such as visually assessed performance).

	Percentage Contribution to Economic Gain	Trait Gain
<p><b>Dual Purpose Plus (DP+)</b></p> <p>Based on a meat focused production system where surplus progeny are sold as lambs and a portion of ewes are joined to terminal sires. Large increase in body weight and carcass traits. Moderate increase in fleece weight. Maintain fibre diameter and staple strength. Moderate increase in reproduction.</p>		<p>Fleece weight 3%</p> <p>Fibre diameter 0µm</p> <p>Staple strength 0.5Nktex</p> <p>Yearling weight 3kg</p> <p>Adult weight 2.7kg</p> <p>Eye muscle 0.4mm</p> <p>NLW 2.5%</p>
<p><b>Merino Production Plus (MP+)</b></p> <p>Based on a balanced wool and meat production system where surplus progeny are sold as hoggets. Balanced emphasis on increasing fleece weight and reduction in fibre diameter. Moderate increase in body weight, with little change in reproduction.</p>		<p>Fleece weight 5.7%</p> <p>Fibre diameter -0.3µm</p> <p>Staple strength 0.8Nktex</p> <p>Yearling weight 2kg</p> <p>Adult weight 1.6kg</p> <p>NLW 0%</p>
<p><b>Fibre Production Plus (FP+)</b></p> <p>Based on a wool production system where wethers are retained, operating in an environment where worms cause economic losses. Large reduction in fibre diameter. Moderate increase in staple strength. Small reduction in WEC (if measured in breeding program). Small increase in fleece weight. Little change in body weight and reproduction.</p>		<p>Fleece weight 2.1%</p> <p>Fibre diameter -0.7µm</p> <p>Staple strength 1.3Nktex</p> <p>Yearling weight 0.6kg</p> <p>Adult weight 0.3kg</p> <p>WEC -9.2%</p> <p>NLW -0.6%</p>
<p><b>Wool Production Plus (WP+)</b></p> <p>Based on the MP+ production system with a greater emphasis on increasing fleece weight, while maintaining fibre diameter and a moderate emphasis on increasing body weight.</p>		<p>Fleece weight 8.4%</p> <p>Fibre diameter 0.1µm</p> <p>Staple strength -0.1Nktex</p> <p>Yearling weight 2.2kg</p> <p>Adult weight 1.9kg</p> <p>NLW -0.3%</p>