WOOL COLOUR

Merino Raw Wool

Crossbred Raw Wool

The base colour of raw wool is regarded as an important price factor for New Zealand crossbred wools in particular. It is an indicator of the best colour that can be achieved, rather than the "as-is" colour, which is the actual colour achieved by commercial scouring. Both results may be requested, but base colour is always the one certified on wools exported from New Zealand. The base colour test is also carried out on greasy wools offered at auction as well as on commercially scoured wool prior to export (Info-bulletin 2.1).

The results are certified as X, Y and Z tristimulus values, but for trading only the Y and Y-Z values are considered. The Y value is taken as indicating brightness, with a higher value indicating "better" colour, whilst the Y-Z value is an indicator of yellowness, with the higher values indicating more yellow wools and lower values indicating very white wools. In January 2001, Australia was the first to move to an agreed new system of measurement units (called D65/10°) that shifts the Y and Y-Z baselines. As of the first week of December 2002, New Zealand also commenced reporting the new units but will also continue to report in the old units (called C/2°). A simple spreadsheet outlining the changes and incorporating the calculations for the conversions is available here. IWTO stated that the reporting of C/2° would cease in June 2004, but this decision has been rescinded for New Zealand and results continue to be certified as C/2°. Further information on the change is detailed in Info-bulletin 2.3 and IWTO circular 58/02.

Scoured wool colour is generally stable for years (unless the wool was bleached during the process), but greasy wool may change colour in a matter of days, depending on the bloodline/environment combination and the moisture content at the time of shearing. This colour change is always regarded as a deterioration. This means that some greasy wool may change colour between testing and scouring, so that after scouring its colour may be worse than was predicted (Info-bulletin 2.2).

Scoured Wool

Colourimeter Measuring Instrument

Wool processors sometimes require both the "as-is" and base colour in order to assess the efficiency of scouring. However, considerable caution should be used. With modern scouring, opening and de-dusting processes the differences between "as-is" and base colour can be relatively small. The precision of an individual colour tristimulus measurement is approximately ± 2 units. If base and "as-is" Y values are compared, for example, the precision of the difference will be nearly ± 3 units. This is a poor precision when compared with the range of probable differences, and it can be considered that measurements of residual ash and residual grease probably provide more meaningful measures of scouring efficiency.

The measurements described above for greasy and scoured wool are undertaken using IWTO-56. For tops and sliver a separate method would be used (IWTO-35), but in essence, the methods are almost identical.

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