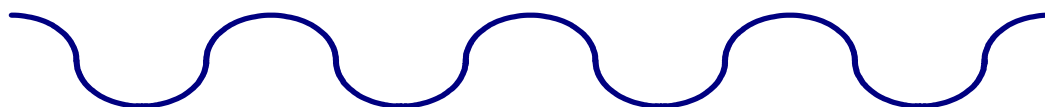


WHAT'S ALL THE FUSS ABOUT FIBRE CURVATURE?

WHAT IS CURVATURE?

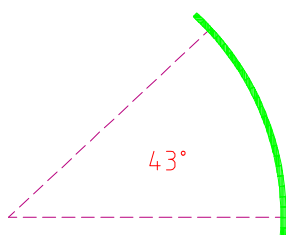
Wool fibres typically have a wave or **crimp** pattern as illustrated below. Wool staple crimp can readily be seen in wools with good character. Even in wools with poor character, or clarity of staple crimp, the individual fibres will generally have a crimped shape. **Fibre Curvature** is related to **crimp**.



Crimp in a Wool Fibre

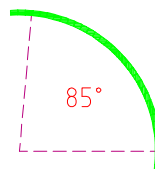
Fibre Curvature is a measure of **crimp** using fibre snippets. It is measured by a **LASERSCAN** or by an **OFDA** in units of degrees/mm.

The scale drawing below illustrates wools of Low, Medium and High Fibre Curvature.



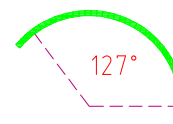
Low Curvature

<50 degrees/mm



Medium Curvature

60-90 degrees/mm



High Curvature

>100 degrees/mm

SOME TYPICAL VALUES:

A 30µm Crossbred fleece wool typically has a **Low Curvature** and a broad crimp. The crimp frequency is approximately **2 crimps/cm**.

A 21µm Merino fleece wool typically has a **Medium Curvature** and a medium crimp. The crimp frequency is approximately **4 crimps/cm**.

A 16µm Superfine Merino fleece wool typically has a **High Curvature** and a fine crimp. The crimp frequency is approximately **7 crimps/cm**.

WHY IS CURVATURE IMPORTANT?

Due to curvature's relationship to crimp, for wools of the same diameter, it might be expected that **Low Curvature** is associated with:

Wool Production

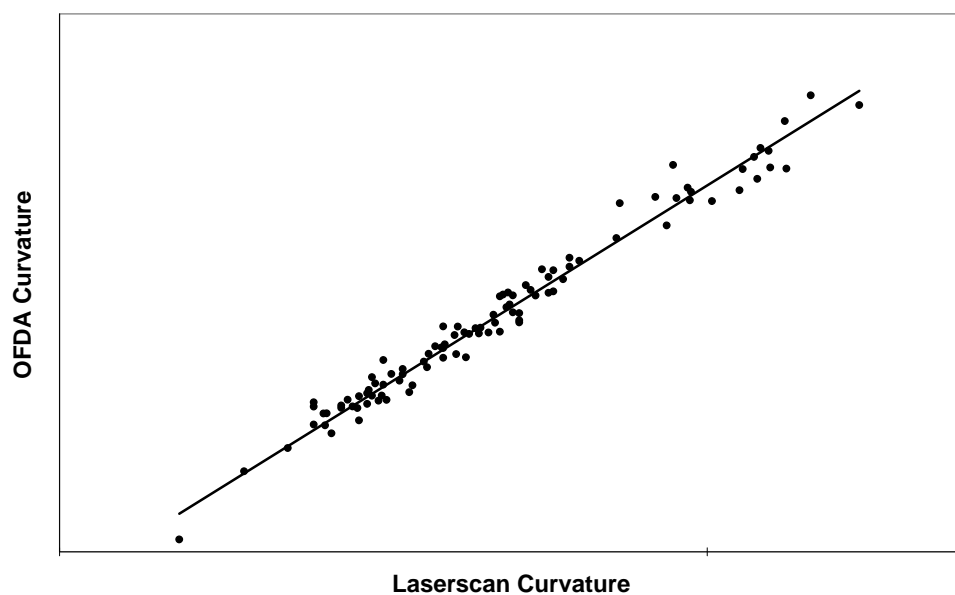
- Longer Staple Length; and
- Higher Fleece weight.

Wool Processing

- Longer Hauteur (fibre length) in top;
- Less noil and card waste;
- More even yarns; and
- Smoother fabric handle.

OFDA or LASERSCAN - WHICH INSTRUMENT SHOULD BE USED?

Research shows an excellent **correlation** between OFDA and LASERSCAN curvature results:



AWTA **recommends** the use of **LASERSCAN** for cost considerations (LASERSCAN is cheaper than OFDA).

Although LASERSCAN is recommended, AWTA will conduct an OFDA test if requested.

FURTHER INFORMATION

Ian Ashman
General Manager Raw Wool
AWTA Ltd
Ph: 03 9371 2101
Fax: 03 9371 2191
Email: ian.ashman@awta.com.au