Southern Cotton Pty Ltd
Ph: 02 6955 2755 Fax: 02 6955 2765
Email: info@southerncotton.com.au
881 Darlington Point – Whitton Road
(PO Box 41) Whitton, NSW, 2705
southerncotton.com.au

Cotton speak: cotton classing

Cotton classing is the process of establishing the **overall quality** of cotton. In Australia, this is determined by using both **visual and mechanical methods**. Cotton merchants, growers and spinning mills use this information to sort bales, make future agronomic decisions and optimise blending.

Creating a cotton sample

While cotton is being baled, a **cotton sample** is taken from each side of the bale. These are then put together, tagged (with bale number and barcode of bale) and rolled up in groups of 50-60 with consecutive bale numbers.

Cotton classification

Once samples are conditioned as per standard requirements, they are first taken to the **High Volume Instrument** (HVI) machines to test various fibre properties. Once this is complete, they are passed onto the **manual classing station** where colour and leaf classification is determined.

Cotton is valued on six qualities

1. Colour
2. Leaf
3. Extraneous matter
4. Length
5. Strength
6. Micronaire

Colour and leaf

A trained cotton classer uses visual methods to classify the colour and leaf of the cotton. The sample of cotton is compared to 15 different grade boxes to determine grade. Each box contains six examples that represent the acceptable colour and leaf for the box's grade.

Extraneous matter

Extraneous matter is any substance present other than fibre or leaf (bark, grass, spindle twist, dust, oil etc). The classer will make note of the type and amount of extraneous matter present.

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Length

Cotton length is measured mechanically by HVI, which measure in inches and round to the nearest 100th of an inch. Fibres are bushed out, inserted into a chamber and measured by infrared. Each sample is measured twice, with the average being the final length.

Strength

Strength is measured in terms of grams force per tex (GPT). A bundle of fibres are clamped between a pair of jaws and increased separation force is applied until the bundle breaks. A reading of 28-30 is considered average.

Micronaire

To measure micronaire, a portion of lint (of a known weight) is placed into a chamber, compressed to a set volume and subjected it to a known airflow. Measuring the resistance to this airflow will indicate the thickness of the fibre wall and will give an approximate measure of fibre maturity.

For more information visit: http://www.proclass.com.au/Classing.aspx or http://www.cottoninc.com/fiber/quality/Classification-Of-Cotton/Classing-booklet.pdf