Volume 3.12

Wool Testing Services Info-bulletin

Alpaca fleece testing

Introduction

Alpaca ownership has increased significantly in New Zealand over the last few years. The Alpaca Association New Zealand (AANZ) now lists some 600 members throughout the country, with the largest number of members (~40%) in the North of the North Island. In 2005, alpacas were shown at 14 Agricultural shows.

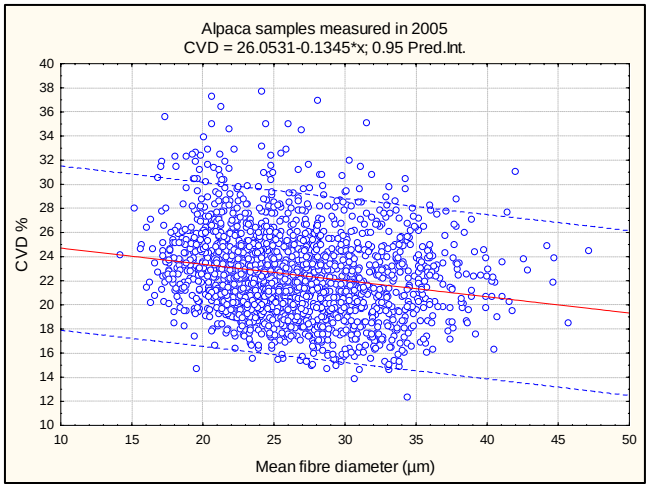
The Australian Alpaca Association Across-herd Genetic Evaluation (AGE) is available to AANZ members. This service allows breeders to improve their genetic progress using both objective and subjective traits, and calculates the Alpaca Breeding Value (ABV) in the same manner as estimated breeding values (EBV) in other livestock industries.

Fleece traits are usually evaluated using midside sampling, and it's recommended that the samples should be taken when all the animals in the progeny group have at least 6 months fibre growth. AGE traits that require laboratory measurement include mean fibre diameter (MFD), coefficient of variation of fibre diameter (CVD), comfort factor (CF), spinning fineness (SF), medullation (Med), and staple strength (SS)

Fleece measurements

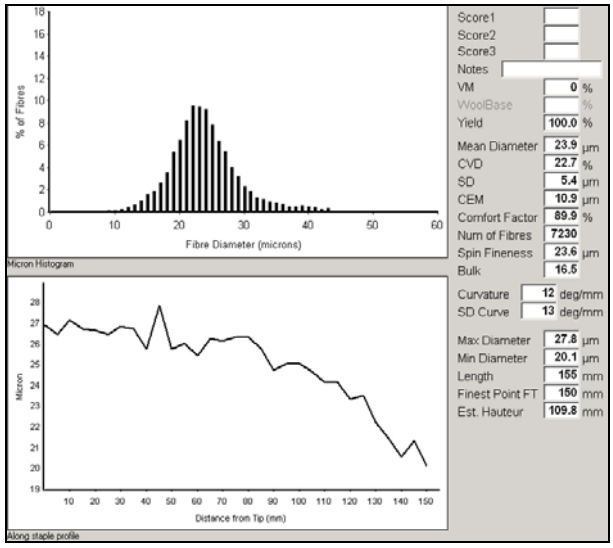
SGS provide fleece measurements either through their Timaru laboratory, using OFDA 100, or through their on-farm fleece measurement service operators using OFDA2000.

The following figure shows the overall relationship between CVD and MFD for samples received in 2005. This can be



compared with typical relationships seen for merino wool in Info-bulletin 3.10. It can be seen that there is a very wide range of fibre diameters in the NZ alpaca population.

OFDA 100 and OFDA2000 diameter measurements are very similar. They should be of equivalent accuracy, for all practical purposes, but laboratory measurements are generally of



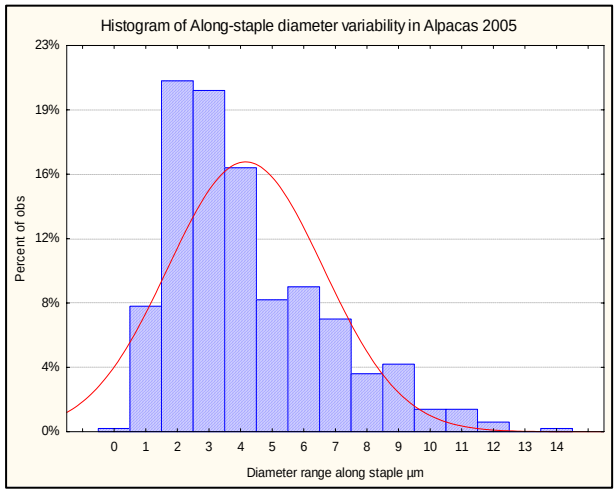
Example of a diameter distribution & diameter-length profile

slightly better precision. Medullation can be measured by OFDA 100 but not by OFDA2000. Staple length and diameter-length profile can be measured by OFDA2000 but not by OFDA100.

Staple strength measurements can also be provided through the Timaru laboratory.

Along-staple diameter variation

The CVD-MFD plot shows a wide range of CVD values, and this is a reflection of relatively high (compared with merino wool) along-staple diameter variation – an indicator of environmental and feed variation since the last shearing.



The data suggests that improved selection and management practices could be potentially beneficial.

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