OFDA Laser Scanning: The Basics

By Ian Watt

The OFDA 2000 uses the same technology as the OFDA 100 but applies it in a different fashion and gives a different result, making the two test results incomparable.

The OFDA 2000 requires a sample to be spread across an inert plastic grid in a way that exposes as many fibers as possible to scanning. As the laser moves across the sample tray, the field of fibers is exposed to the scan. Within the field of the laser, as it moves...
The Average Fiber Profile illustrated here represents the typical effect of colostrum and milk on fiber microns. The longer-term micron range for this animal is not near the in-utero measurement (the left hand side of the profile) but more in a band across the top of the graph.

across and down the sampler tray, fibers that are crossed or not allowing a minimum field of measurement, are excluded from the count. Thus, only fibers free from others are measured.

As the scan progresses, the data is compiled, analysed, and plotted and an average fiber profile is developed, created by the measurements recorded with each passing scan of the sample tray. The results are therefore representative of the total length of the fiber/staple, which is what buyers purchase and is what classifiers class. The technology measures the temperature and humidity at the time of testing and also makes an allowance for grease content as it develops the results.

The Pros and Cons
The nature of each testing system denies users the opportunity to compare differently tested samples consistently. Research has shown there are times when the two tests on the same sample (or as close to same as one can get) give the same result. These are few in number when compared to those that are not similar.

Ian Watt is an alpaca industry consultant living on Morro Bay, California and operates Alpaca Consulting USA as well as Alpaca Fiber Testing USA, a testing service devoted solely to the US alpaca industry. He has been breeding alpacas since 1991, has been the National President of the Australian Alpaca Association, and continues to share his knowledge of the alpaca fibre industry through seminars held across the USA. Ian can be reached at alpacaconsult@earthlink.net.