

Regional Distribution of Cotton Fiber Quality in China

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The fiber quality status is very important for super quality cotton production and diverse requirements of textile industry in China. In this study, the quality of cotton fiber samples which are collected from 13 major cotton production provinces between 2001 to 2005 were analyzed. Eight quality traits including fiber length, uniformity index, specific strength, elongation, micronaire, reflectance rate, yellow degree, and Spinning Consistency Index were tested. The data indicated that the cotton fiber length ranges around 28 mm to 29 mm, the fiber uniformity index ranges from 82% to 84%, fiber strength ranges from 27 cN · tex⁻¹ to 29 cN · tex⁻¹, micronaire ranges from 4.0 to 5.0. These fibers satisfy the requirements of middle and low grade spinning. The fibers from Yangtze River Valley (Jiangxi, Hubei, and Hunan Provinces) were superior in length, strength, and uniformity index. However, the micronaire was a little higher, the color character was not good enough, and the grade was lower. The fiber qualities of the Northwest Inland Region (Xinjiang) were the best in terms of micronaire, color, and grade. As for the Yellow River Valley Region, the index of its fiber qualities was between the above two regions. Cotton fiber quality and yield are two key factors, which are influencing the textile industry. The fiber demand for textile industry increased very fast in China. The total demand reached 9.5 Mt in 2005, while the total yield was only 5.5 Mt in 2005. The status and regional distribution of fiber quality in China was not known till now. In order to improve the super cotton quality production, optimize the layout of cotton production, and better satisfy the diversification requirement of textile, it is necessary to analyze cotton samples which are collected from different regions in our country.