N. Abldl E. Hequet Fiber and Biopolymer Research Institute, Dept. of Plant and Soil Science, Texas Tech University Lubbock TX Frank Meulewaeter Bayer CropScience N.V. BioScience – Research Gent, Belgium

Abstract

The basic requirement of cotton breeding programs is to produce germplasm that is balanced in terms of fiber properties and that fits a market need. It is well documented that lower fiber maturity leads to poor yarn quality, dye uptake and an increased probability of the presence of color defects such as "shiny neps" (cluster of very low maturity fibers with low dye affinity). Assessing new germplasm for yarn quality and dye uptake is not always possible because of cost considerations, and also because it requires large quantities for raw fibers. In this study, cotton bales representing a wide range of fiber properties were selected. Knitted fabrics were produced from yarns spun on industrial size ring and rotor spinning equipments, as well as MDTA3 + Quickspin. Yarn quality, dye uptake and dye exhaustion kinetics of reactive blue 19 are compared.