A PRELIMINARY INVESTIGATION INTO THE REMOVAL OF PLASTIC WRAP DURING GINNING AND TEXTILE PROCESSING

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Abstract

Contamination, even if it is a single foreign fiber, can lead to the downgrading of yarn, fabric or garments to second quality or even the total rejection of an entire consignment and is thus a very important fiber parameter. The release of the new John Deere harvesters that produce round modules covered with a plastic wrap is of concern to the ginning, marketing and textile processing industries because the plastic presents a serious contamination risk. There is evidence that at times not all the plastic is removed in the module feed area resulting in plastic fragments broken up during ginning and contaminating bales. Contamination is a serious issue as it creates harm to the reputation of a growth. This study was initiated to investigate the consequence of plastic contamination on textile processing performance and yarn and fabric quality. A trial in which raw cotton was deliberately contaminated with plastic wrap and processed through CSIRO's full scale cotton and textile processing mill was recently conducted. To date, the trial has shown that the mill blow room does not remove large amounts of the plastic, whereas the carding and combing processes removed substantial amounts. Despite the effect of carding and combing, small amounts of plastic wrap were found in the single jersey fabric knitted from the yarn. A larger and more in-depth trial will be conducted during 2016, to gain a better understanding of the effect of plastic wrap contamination on textile processing and quality.