A review on the formation, causes, measurement, implications and reduction of neps during cotton processing

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ABSTRACT:

Neps not only adversely affect the appearance of cotton yarns and fabric but are also usually associated with lower yarn strength, ends down in spinning and less-uniform yarn. Depending on the type and size of the nep, the appearance of dyed or printed fabrics is negatively influenced by the presence of these blemishes, which appear as white or dark spots on the surface, resulting in downgrading or rejection. Although neps have been identified as a major quality issue in cotton production and processing as far back as the late 1700s, no comprehensive review has been published on the formation, composition, measurement, consequences and ways to reduce the effects of neps, only a limited review has been published in 1999 [1 M.H.J. van der Sluijs and L. Hunter, Text. Prog. 28(4) (1999) p.1–47. [Taylor & Francis Online], [Google Scholar]. Given the adverse effects on quality arising from neps, it was considered important to compile and publish a comprehensive and definitive review of published work and knowledge to date relating to cotton neps for this issue of Textile Progress.