

**Producing yarn with durable properties via cotton blends with
regenerated cellulosic fibers using ring and compact spinning
systems**

El-Banna, M.N.¹, M.A.M. Negm · A.A.A. El-Banna¹, M.I. El-Bagoury³, Dalia M. N.
Hanna³

¹ Fac. Agric., Saba Basha, Alex. Univ., Egypt.

²Cotton Research Institute, Giza-Egypt

³Cotton Arbitration & Testing General Organization

Nowadays, with rising life standards and the effect of fashion trend, comfort has become an important factor in choosing clothes, and under the title of "Back to Nature", people is always looking for natural raw materials. In this research paper, the properties of cotton/bamboo, cotton /lyocell, cotton /modal blended yarns as well as 100% cotton, 100% bamboo, 100% lyocell, and 100% modal yarns, have been studied.

It is observed that the studied properties : Evenness (C.V%), thin places /400 m, thick places / 400 m, number of neps / 400 m, are significantly affected by fibre type, spinning system and blending percentage. However, strength (RKM) and elongation (100%) are significantly affected only by fiber type and blending percentage.

The highest reading for strength was for 100 % lyocell yarns while the lowest reading was for 50% bamboo/50% cotton yarns.

The highest reading for elongation was for 100 % bamboo yarns while the lowest reading was for 33% bamboo/67% cotton yarns.

It is found that the highest reading of the evenness (C.V%) was for 67% bamboo/33%cotton compact spinning yarns while the lowest reading was for 100% modal compact spinning.

The highest reading of thin places was for 33% bamboo/67%cotton ring spinning yarns while the lowest reading was for 100% modal ring and compact spinning yarns.

The highest reading of thick places was for 33% bamboo/67%cotton ring spinning yarns while the lowest reading was for 33% modal/ 67% cotton ring and compact spinning yarns.