SPINNERS DEMANDS ON FUTURE COTTON PROPERTIES

- BREMEN AACHEN SURVEY -

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March 22, 2018
The report presents the results from the Bremen Aachen Survey on Cotton Quality, which was implemented worldwide in 2016/2017.

Implemented by

- Faserinstitut Bremen eV. / Bremer Baumwollboerse
- ITA Aachen / ITA GmbH

This worldwide survey builds a basic collection of information to discuss demands of the textile industry for the interest of

- cotton producers
- researchers
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• Questions
  • Section A: General Information about the responding companies
    • Country, size, activities, processing technologies, processed materials, products

  • Section B: Materials and Properties
    • Most important yarn properties
    • Cotton properties: defects/deficiencies, potential/demand for improvements
    • Competing fibres, man-made fibre properties
    • Blends

• Section C: Cotton Identity Programs
  • Identity programs, benefits, deficiencies
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- More than 2000 spinning mills and related industry worldwide were contacted
- More than 170 respondents
- 28 different countries
  - India 42
  - China 25
  - Europe 21
  - Turkey 14
  - Brazil 11
  - Korea 10
  - Pakistan 10
  - USA 8
  - ...
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Section A: Spinning technology used by the respondents

- Ring spinning: 87%
- Rotor spinning: 55%
- Compact ring spinning: 55%
- Air jet spinning: 17%
- Other: 5%
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Section A: Processed fibre materials

- Cotton: 98%
- PES/PET: 49%
- Cellulosic fibres: 45%
- Other natural fibres: 15%
- Other man-made fibres: 40%
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Section B: Most important properties of a yarn

- Tenacity: 72%
- Neps, thick/thin places: 70%
- Evenness: 61%
Section B: Fibres which are blended with cotton

- PES/PET: 57%
- Cellulosic fibres: 44%
- Natural fibres: 44%
- No blending: 43%
- Other man-made fibres: 40%
Section B: Reasons for blending cotton fibres

- Customer request: 76%
- Fabric properties: 56%
- Yarn properties: 46%
- Costs: 35%
- Other: 42%
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- Fineness related properties
  - Micronaire
  - Fineness
  - Maturity
- Length related properties
  - UHML
  - Mean length
  - Uniformity / Length CV%
  - Short fibre content / Short fibre index
- Strength related properties
  - Strength/Tenacity
  - Elongation
- Colour
  - Reflectance (Rd)
  - Yellowness (+b)
  - UV stability
- Trash
  - Leaf / trash amount
  - Leaf / trash size
  - Bark / grass content
- Other contaminants
  - Stickiness
  - Twists /knots
  - Seed coat fragments
  - Dust
  - Odour
  - Fungal infestation
- Others
Section B: Defects or deficiencies of cotton fibres that affect yarn properties

- Strength/Tenacity: 82%
- Short fibre content: 79%
- Micronaire: 78%
- UHML/staple length: 72%
- Leaf/trash amount: 65%
- Stickiness (Sugar/Seed Oil): 64%
- Maturity: 62%
- Length uniformity/Length CV%: 62%
- Yellowness (+b): 59%
- Seed coat fragments: 58%
- Bark/grass content: 55%
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Section B: Top properties of man-made fibres

- High tenacity: 91%
- High elongation: 46%
- Low shrinkage at boil/steam: 35%
- High UV stability: 23%
- Water absorbence: 21%
- Filament count: 17%
- High service temperature: 11%
- High melting or decomposition: 11%
- Low electrical conductivity: 7%
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Section B: Man-made fibres which are seen in direct competition with cotton

- PES/PET: 75%
- Other synthetic fibres: 21%
- Cellulosic fibres: 63%
- None: 2%
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Section B: If respondents could drastically improve one single fibre characteristic of cotton

- Length related properties: 46%
- Strength related properties: 19%
- Fineness related properties: 14%
- Other contaminants: 11%
- Trash: 5%
- Colour: 4%
Section B: Most important properties of cotton for non-spinning companies

- **Length related properties**: 60%
- **Fineness related properties**: 43%
- **Strength related properties**: 33%
- **Colour**: 32%
- **Other contaminants**: 31%
- **Trash**: 29%
Section C: Cotton identity programs used by the respondents

- BCI: 56%
- Organic / GOTS: 45%
- Others: 35%
- None / I don't know: 27%
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Section C: Benefits of cotton identity programs

- Marketing advantage: 55%
- Final consumers' trust / demand: 55%
- Sustainability: 46%
- Price premium for your products: 24%
Section C: Deficiencies of cotton identity programs

- Price / costs: 52%
- Availability of specific quality: 43%
- Dependency on supplier: 41%
- I don't know / Other: 24%
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• Although based on a large amount and worldwide distribution of participating spinning mills, this study is only a snap-shot of the current situation.

• It is planned to repeat the survey periodically in order to
  • Identify trends in cotton property demands
  • Provide information to allow adjustments research directions and policies
  • Prepare cotton for the future demands
  • Strengthen the competitiveness of cotton

• Please support our future surveys by
  • Your continuous participation
  • Your recommendations for improvements