Welcome to the 3rd issue of the CottonGen newsletter in 2023. This newsletter is issued to inform users about **new or updated data and tools in CottonGen**. In addition to new and updated data, each issue will provide more information on data or tools on the **featured tools/data** section.

### New Data & Tools

- CottonGen Functional Analysis (InterProScan and KEGG, Protein Homologies, CottonGen Marker and RefTran Alignments, etc.) added to three genomes ([Ref. Peng, Xu, etc., 2022](#)):
  - *G. hirsutum* (AD1) ’TX-1000’ CRI v1
  - *G. ekmanianum* (AD6) 'AD602' CRI v1
  - *G. stephensii* (AD7) 'AD701' CRI v1

- 2123 GWAS data (100 based on 16 agronomic traits of 215 germplasm on A2-CRI genome and 2023 based on 43 root traits of 200 germplasm on AD1-NBI genome)

- Over 25,800 phenotype scores of 43 root traits collected on the 200 germplasm from the Henan Anyang, China in the year of 2020

### New tutorial videos available

Two short tutorials, “Learn how to use MegaSearch for Gene and Transcripts” and “Learn how to search traits and see all the linked data” were made available. See the manual page or our YouTube channel for more.

### BIMS Workshop at NAPB 2023!

We had a successful BIMS workshop at NAPB 2023 (July 16-20, Greenville, SC)! Thank you for those who participated! The presentations for each section of workshop including the use case demo is available at the presentations page in breedwithbims.org. Recordings will also be available when they are released.

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**Search Trait**

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<thead>
<tr>
<th>Category</th>
<th>Abbreviation</th>
<th>Trait</th>
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<tbody>
<tr>
<td>quality trait</td>
<td>AREOAO</td>
<td>Arealimeter A</td>
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<tr>
<td>quality trait</td>
<td>AREOD</td>
<td>Arealimeter D</td>
</tr>
<tr>
<td>quality trait</td>
<td>FCG</td>
<td>fiber color grade</td>
</tr>
<tr>
<td>quality trait</td>
<td>FEL</td>
<td>fiber elongation</td>
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</table>

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**Definition**

- Arealimeter A measures the external surface area of the fibers given volume of material, expressed in square mm per mm of fibrous material.
- Arealimeter D is the difference between specific area determined at high pressure and standard pressure. D is presumably a measure of flatness of the fiber ribbon.
- Color grade refers to the gradations of reflectance (Rd) and yellowness (+b) the cotton
- Elongation is the degree of extension of the fibers before a break occurs when measuring strength.

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![CottonGen Newsletter](www.cottongen.org)
Featured Data and Tools

Search Traits and See Linked Data – continue

By clicking on a trait from the search result table, you can view detailed information and access various types of data associated with the trait.

Fiber Elongation

- **Trait:** fiber elongation
- **Trait Category:** quality trait
- **Abbreviation:** FEL
- **Definition:** Elasticity is the degree of extension of the fibers before a break occurs when measuring strength

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<th>Linkage Group</th>
<th>Peak</th>
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<th>Stop</th>
<th>Dataset</th>
<th>MapViewer</th>
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Boll Color

- **Species:** barbadense
- **Germplasm:** GB-1418
- **Boll Color:** dark green

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