



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 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.

## 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 25.8K phenotype scores of 43 root traits collected on the 200 germplasm from the Henan Anyang, China in the year of 2020



### Search Trait

Category

Keyword

32 records were returned

#	Category	Abbreviation	Trait	Definition
1	quality trait	AREOA	Arealometer A	Arealometer A measures the external surface area of the fibers of a given volume of material, expressed in square mm per cubic mm of fibrous material.
2	quality trait	AREOD	Arealometer D	Arealometer 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.
3	quality trait	FCG	fiber color grade	Color grade refers to the gradations of reflectance (Rd) and yellowness (+b) the cotton
4	quality trait	FEL	fiber elongation	Elongation is the degree of extension of the fibers before a break occurs when measuring strength

Start **searching for traits** based on category and keyword, and explore their linked data, such as fiber elongation (see page2). The search results can be downloaded in a table format.

[Download Table](#)



## 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.

Trait Overview

- Descriptors
- QTLs/MTLs
- Dataset
- Publications

Year	Publication
2022	Gowda SA, Katageri IS, Patil RS genetic mapping and QTL analysis
2019	Kumar NVM, Katageri IS, Gowda analysis for fibre quality and yield
2019	Deng X, Gong J, Liu A, Shi Y, G across multiple generations in se
2018	Diouf L, Magwanga RO, Gong W in an Intra-Specific Upland Cotton 01; 19(2).
2018	Huang C, Shen C, Wen T, Gao B cotton using an eight-way MAGI
2018	Jia X, Wang H, Pang C, Ma Q, S specific Gossypium hirsutum L. r
2018	Tan Z, Zhang Z, Sun X, Li Q, Suf Map Construction and Fiber Qua 2018; 9:225.
2018	Li C, Yu H, Li C, Zhao T, Dong Y, Analysis for Fiber Quality Traits A

Trait Overview

- Descriptors
- QTLs/MTLs
- Dataset
- Publications

**Fiber Elongation**

Trait	fiber elongation
Trait Category	quality trait
Abbreviation	FEL
Definition	Elongation is the degree of extension of the fibers before a break occurs when measuring strength
Descriptors	[view all 8]
QTLs	[view all 671]

QTLs

QTL/MTL	Linkage Group	Peak	Start	Stop	Dataset	MapViewer
qFEL.0s-RIL_ch03-1.ay10.1	AD_ch03_At.03	0.01	-	11.5	0S-RIL-2016	View
qFEL.0s-RIL_ch03-1.ay10.2	AD_ch03_At.03	26.71	11.5	28.9	0S-RIL-2016	View
qFEL.0s-RIL_ch04.ay10	AD_ch04_At.04	59.6	48.7	59.6	0S-RIL-2016	View
qFEL.0s-RIL_ch04.ay13.1	AD_ch04_At.04	75.11	73.6	76.2	0S-RIL-2016	View
qFEL.0s-RIL_ch04.ay13.2	AD_ch04_At.04	84.31	83.3	88.3	0S-RIL-2016	View
qFEL.0s-RIL_ch04.ay13.3	AD_ch04_At.04	88.3	86.9	88.3	0S-RIL-2016	View

Descriptor Overview

- Alias
- Datasets
- Germplasm
- Image

**Boll Color**

Trait Descriptor	boll color
Of Trait	boll color
Definition	boll color descriptor code dedinitions from two datasets: a) NCGS code: 1=green; 2=dark green; 3=light green; 4=red; 5=sun red; 9=seg/off type; b) CN_COT code: 1=Green, 2=Red-green, 3=Red, 4=Blue-yellow.
Alias	[view all 1]
Format	categorical
Trait Category	morphological trait
Datasets	[view all 18]
Germplasm	[view all 8072]

Sepecies	Germplasm	boll color
barbadense	GB-1418	dark green
barbadense	Yanowitch	dark green
barbadense	Assili	dark green
barbadense	Assili	dark green
barbadense	Sake	dark green
barbadense	Sake	dark green
barbadense	Maarad	dark green
barbadense	Maarad	dark green
barbadense	Maarad	dark green

Image Overview

Trait Descriptor

**BOLL COLOR**

Legend: NCGS standardized descriptor panel image: boll color

Contact: Love, Janna; Udall, Joshua A.

Trait Descriptor: [view all 1]

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