



January 2025

Welcome to the 1st issue of the CottonGen newsletter in 2025. 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 in **the featured tools/data** section.

COTTONGEN

COTTON DATABASE RESOURCES

What's New in CottonGen?

Short video tutorials

• How to find orthologs and corresponding functional annotations. (2:14mins)

New Genome Data

- <u>Gossypium hirsutum (AD1) 'TM-1' genome</u> <u>HAU_v2.0</u>. (Chang 2024)
- <u>Gossypium barbadense</u> (AD2) '3-79' genome <u>HAU_v3.0 (Chang 2024)</u>
- **CottonGen Functional Annotations** were added to the above genomes

Conference Presentations

Presented at the 2025 Plant and Animal Genome Conference (PAG-32) and the Cotton 2025 Beltwide Cotton Conference (BCC-2025):

- <u>Database Resources for Crop Genomics,</u> <u>Genetics and Breeding: NRSP10 (at PAG-32).</u>
- <u>How to Use the Rosaceae, Cotton, Citrus,</u> <u>Vaccinium, and Pulse Crop Databases to Further</u> <u>Research and Breeding</u> (at PAG-32)
- <u>CottonGen BIMS for Effective and Efficient</u> <u>Management of Breeding Data</u> (at BCC-2025)

New Data

- 2901 GWAS data for fiber qualities with 1717 SNP markers and marker genome positions (*He 2021, <u>The</u> genomic basis of geographic differentiation and fiber improvement in cultivated cotton*)
- The 2023 <u>RBTN Trial Data</u>, which contains: 3593 phenotypic measurements of 18 fiber quality traits collected from 20 germplasm tested in 10 different locations in 2023
- NCGC (National Cotton Germplasm Characterizations) data:
 - 39000 phenotype scores of 46 traits collected from 3076 plants before 2006.
 - Categories of the 46 traits are: biochemical, disease resistance, morphological, phenological, and production.

These data are searchable from both <u>CottonGen Search</u> (<u>Trait Descriptors</u> or <u>Trait Evaluation</u>) and <u>CottonGen BIMS</u>





BIMS: Breeding Information Management System

BIMS can store, manage, archive, and analyze private or public breeding data. If accessing BIMS for **publicly** available data, **log-in** is **not required**. Otherwise, log-in is required before accessing BIMS.

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	Results : matched 171 samples and 51 Descriptions	³ phenotypic meas.	Result of Select accessions by phenotype data					
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	320F	Gossypium	hirsutum	SA-1167	25.26	21.22	9.9032	
	A-637-33	Gossypium	hirsutum	SA-1300	24.3833	19.92	10.2333	
	Acala 1517-99	Gossypium	hirsutum	SA-2580	23.5133	21.45	11.2222	
	Acala 5	Gossypium Gossypium	hirsutum	SA-0239 SA-1103	23.4333 21.0267	20.23	12.4167	
	Acala Royale	Gossypium	hirsutum	SA-3781	22.96	22.08	10.5667	
	Albar 627	Gossypium	hirsutum	SA-1440	23.5533	21.83	12.4146	
	Aleppo I Allen 333	Gossyplum Gossyplum	hirsutum	SA-1395 SA-1262	23.3633 25.3167	20.64 19.97	11.4595 11.5641	
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Breeding Tools								

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