About CottonGen

CottonGen is the genomics, genetics and breeding database developed to facilitate basic, translational and applied research in cotton. It is built using the open-source Tripal database infrastructure, providing access to publicly available cotton data and tools for easy querying, visualizing and downloading of research data.

Providing a hub for community communication, CottonGen is fully integrated with the International Cotton Genome Initiative website. It maintains the ICGI membership database, information for the ICGI biennial international research conferences and biennial elections. CottonGen is developed by Mainlab Bioinformatics at WSU (www.bioinfo.wsu.edu).

Tools

BLAST: Search for sequence similarity against all the publicly available cotton sequence databases.

CMap: Search and view mapped genes, markers, and QTLs using Compare maps.

CottonCyc: Browse the PlantCyc and KEGG pathway databases for cotton, using Pathway Tools and the JGI v2.0 *G. raimondii* genome gene models.

GBrowse and JBrowse: Browse and search genes, markers, expressed sequences, etc. on *G. raimondii* (D5) and *G. arboreum* (A2) genomes using GBrowse or JBrowse.

Search Interfaces: Search by gene, QTL, trait evaluation, marker, germplasm, publication.

Data Overview

Genomes: *G. raimondii* and *G. arboreum* genome sequence assembles and functional. Annotations including genes, GO, InterPro, and KEGG assignments.

Maps: 49 maps with 34,559 loci covering cotton genome groups AD, A, D, and G.

Markers: Over 265,000 genetic markers consisting of 3,541 RFLPs; 78,340 SSRs and 183,035 SNPs

Germplasm: Over 15,000 germplasm including populations or individual entries identified from nearly 50,000 names obtained from 14 collections from the US Uzbekistan, and China.

Traits: 107,889 trait scores from USDA GRIN, China and Uzbekistan germplasm evaluations

Images: 12,269 digital images from the USDA-ARS National Cotton Germplasm Characterization Project

Literature: 15,425 articles from journals, conferences, book chapters, and theses.

Coming Soon …

GBrowse-Syn: view synteny between related genomes

The Cotton Breeders Toolbox: search the national cotton variety trials data

Evaluation Data: search the ARS College Station germplasm evaluation data

SNP Data: more whole genome SNP data

CottonGen

a genomics, genetics, and breeding resource for cotton improvement

Web site
www.cottongen.org

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Conferences, employment, & mailing list achieves

QTL Details

QTL Label	qFL.HP-ch14
Published Symbol	qFLchr14
Trait Name	Fiber_length
Trait Alias	length. Fiber.
Trait Study	HP-F2:3-2007
Population	Handan-208 x Pima-90, F2:3
Female Parent	Handan-208
Male Parent	Pima 90
Colocalizing Marker	N/A
Neighboring Marker	m7e11-360 BNL1059
LOD	3.82
Additivity Dominance Ratio	0.17
R2	0.134

Search Markers

- All markers
  - Search for marker source information. A table of m
  - Search for mapped markers. A table of all markers
  - Search markers on nearby loci. A list of all loci t
  - Advanced Marker Search. Search markers in eith
- Mapped markers with sequences
  - Browse or search by map name A table listed by
  - Browse or search by chromosome number. A tab
 - Browse or search by Genome Group A table liste

Marker Details

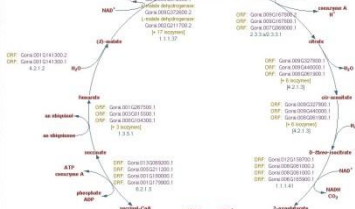|	
Name	TMB0364
Alias	TMF14 TMB0334 TMB0364=TMB0334 TML20
Genbank ID	BV679351
Type	SSR
Probe	N/A
Species	Gossypium hirsutum
Germplasm	TM-1
Source Sequence	N/A
Source Type	genomic
Repeat Motif	(CA)9
PCR Condition	Annealing temperature: 55
Primer 1	TMB0364_F: GGCACACCGGTA
Primer 2	TMB0364_R: TTGCATGACCAA
Product Length	227

Maps

Genome

v2.0 (annot v2.1): 162 kbp from Chr03:6,192,586..6,354,585

CottonCyc
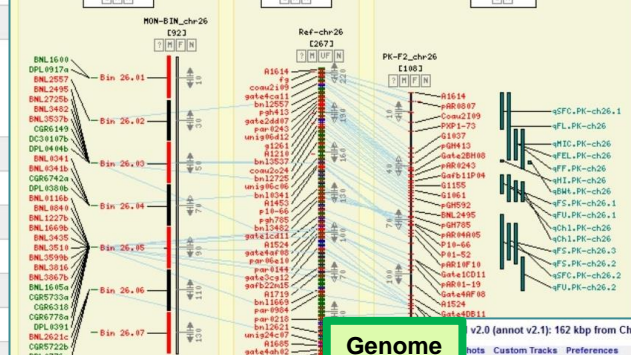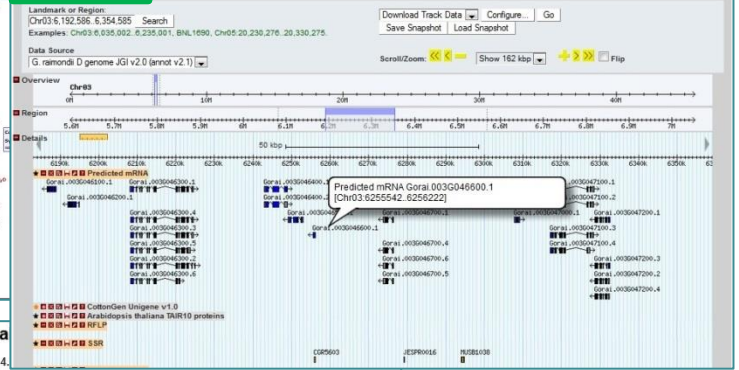
Germplasm Details

Name	TM-1
Alias	Texas-marker 1 (TM1) [view all 17]
Type	undefined
Species	Gossypium hirsutum
In Collection	[view all 3]
Description	genetic standard line
Origin	USDA-ARS-SPARC-CGRU
Pedigree	derived from the cultivar Deltap
Maternal Parent of	TM-1 x 3-79, F2 [view all 6]
Paternal Parent of	7235 x TM-1, RIL
Phenotypic Data	[view all 163]
Genotypic Data	[view all 2516]
Map	[view all 6]
DNA Library	[view all 13]
Sequence	[view all 48417]

Garo Hill (PI 529730)

Germplasm Images

[A2-0103] leaf, Tecoman Plot# 207, 2011

[A2-0103] leaf close up of the back surface, Tecoman Plot# 208, 2011

[A2-0103] flower, Tecoman Plot# 208, 2011

[A2-0103] green boll, Tecoman Plot# 208, 2011

Trait Descriptors

Standardized Descriptors and Rating Sca

Data provided by USDA-ARS College Station, TX, USA, Nov. 2014.

Descriptor	Description Code or Rating Scale					
	0	1	2	3	4	5
Boll Color*		green	dark green	light green	red	sun
Boll Glanding	glandless*	medium	light	heavy	seg/off type	
Boll Nectaries	absent	present	reduced	inactive	seg/off type	
Boll Pitting		smooth	light pitted	pitted	very pitted	seg
Boll Point		Moderately pointed	pointed	blunt	seg/off type	
Boll Shape		Oval	round	cone	cone-oval	seg
Boll Size		medium	large	small	seg/off type	extra
Bract Color		green	red	sun red	seg/off type	

BRACT COLOR

GREEN   SUN RED   RED