# CottonGen User Tutorial: Search Markers

Move cursor over 'Search' one home page Navigation Bar and select 'Markers' from the drop-down menu:

#### • All markers

A. Search for marker source information

A table of markers listed with source information such as source sequence, source germplasm, etc.

B. Search for mapped markers

A table of all markers listed by marker name with marker type, locus name, and map information.

C. Search markers on nearby loci.

Displays a list of all loci that are within a specified distance of the particular locus on any map.

#### D. Advanced Marker Search

Search markers in either a combination of type, species, mapped species, or restricted by genome or genetic map location.

### • Mapped markers with sequences

E. Browse or search by map name

A table listed by map name, followed by Linkage Group name, Locus and position on map, Marker and sequence name.

- *F.* Browse or search by chromosome number A table listed by chromosome number (AD\_chr.07, A\_chr.01, D\_chr13, etc.) with the same contents as that of *E*.
- G. Browse or search by Genome Group

A table listed by Genome Group (AD, A, D, etc.) with the same contents as that of E.

### A. Search for Marker Source Information web interface

The result table shows marker name, type, marker source sequence and molecule type, DNA library, source germplasm and species. The **default result is the table of all markers**.

		Search ca source m germplas	n be restricted by olecule, m, or marker type	To run a search, click HERE by the click	a column head the result table red column	To download resu table, click HERE
Marker Sou Source sequence	urce Inform	Source molecule typ Any	e Source Any	germplasm Marker type		
6,934 records we	ere returned.				V	ne sul
Marker Name	Marker Type	Source Sequence	Sequence Molecule Type	DNA Library	Source Gemplasm	Source Species
CM0017	SSR	CM0017=JESPR0214	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0014	SSR	CM0014	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0013	SSR	CM0013	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0012	SSR	CM0012	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0010	SSR	CM0010	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0008	SSR	CM0008=JESPR0209	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0007	SSR	CM0007=JESPR0208	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0006	SSR	CM0006	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0005	SSR	CM0005	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0004	SSR	CM0004	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
CM0003	SSR	CM0003	genomic	15-20 DAA bolls from irrigated plants	Coker 312	Gossypium hirsutum
STV0177	SSR	STV0177	EST	3 and 5 week old seedlings	Paymaster HS 26	Gossypium hirsutum
STV0176	SSR	STV0176	EST	3 and 5 week old seedlings	Paymaster HS 26	Gossypium hirsutum
STV0169	SSR	STV0169	EST	3 and 5 week old seedlings	Paymaster HS 26	Gossypium hirsutum
STV0152	SSR	STV0152	EST	3 and 5 week old seedlings	Paymaster HS 26	Gossypium hirsutum
STV0148	SSR	STV0148	EST	3 and 5 week old seedlings	Paymaster HS 26	Gossypium hirsutum

Click on any **green color** displayed 'record name' (such as 'Paymaster HS 26') will redirect you to the record's details page (i.e. to the details page of germplasm 'Paymaster HS 26').

B. Search for Mapped Markers web interface:

The default result is the table of all mapped markers



# C. Search markers on nearby loci web interface.

Sea	arch Ma	Enter locus name for search of nearby loci arke on Nearby Loci Distance: * 5	Provide a specified genetic distance CM Submit	Click on any greer 'record name' wil the record's detai	l redirect you to ls page.	download result ble, click HERE
26 rec	cords were r	eturned	Linkage Group	Position	Nighbor	Download the results
"	R2	CIRAD High Density Consensus (2012)	Linnage Storp	102.4	HAU0775	105.6
2	R2	CIRAD High Density Consensus (2012)		102.4	pvnc030	102
3	R2	CIRAD High Density Consensus (2012)	Click on a column head	102.4	nau0845	107.4
4	R2	CIRAD High Density Consensus (2012)	will reorder the result	102.4	Gate4CD12	99.2
5	R2	CIRAD High Density Consensus (2012)	table by the column	102.4	ESTS196	101.5
6	R2	CIRAD High Density Consensus (2012)		102.4	UCcg10436_1035	103.5
7	R2	CIRAD High Density Consensus (2012)		102.4	Unig27D04	104.4
8	R2	CIRAD High Density Consensus (2012)		102.4	DOW078	98.6
9	R2	TM-1 x Hai-7124, BC1 (2012)		78.116	me5od12-310	73.523
10	R2	TM-1 x Hai-7124, BC1 (2012)		78.116	nau0845	80.714
11	R2	TM-1 x Hai-7124, BC1 (2008)	TM-1 x Hai-7124, BC1 (2008).TH-BC1.08_chr07/A7	44.265	R2	44.265
12	R2	TM-1 x Hai-7124, BC1 (2008)	TM-1 x Hai-7124, BC1 (2008).TH-BC1.08_chr07/A7	44.265	me5od12-310	47.865
13	R2	TM-1 x Hai-7124, BC1 (2008)	TM-1 x Hai-7124, BC1 (2008).TH-BC1.08_chr07/A7	44.265	nau0845	42.868
14	R2	TM-1 x Hai-7124, BC1 (2008)	TM-1 x Hai-7124, BC1 (2008).TH-BC1.08_chr07/A7	44.265	NAU845-155	42.868
15	R2	TM-1 x Hai-7124, BC1 (2008)	TM-1 x Hai-7124, BC1 (2008).TH-BC1.08_chr07/A7	44.265	me5od12-310	47.865
16	R2	TM-1 x Hai-7124, BC1 (2008)	TM-1 x Hai-7124, BC1 (2008).TH-BC1.08_chr07/A7	44.265	nau0845	42.868
17	R2	TM-1 x Hai-7124, BC1 (2008)	TM-1 x Hai-7124, BC1 (2008).TH-BC1.08_chr07/A7	44.265	NAU845-155	42.868
18	R2	TM-1 x Hai-7124, BC1 (2008)	TM-1 x Hai-7124, BC1 (2008).TH-BC1.08_chr07/A7	44.265	R2	44.265
19	R2	TM-1 x Hai-7124, BC1 (2007)	TM-1 x Hai-7124, BC1 (2007).TH-BC1_chr07	44.1	me5od12-310	47.1
20	R2	TM-1 x Hai-7124, BC1 (2007)	TM-1 x Hai-7124, BC1 (2007).TH-BC1_chr07	44.1	NAU845-155	41.6

## D-1. Advanced Marker Search interface



**D-2. Advanced Marker Search** by uploading a text format 'marker name' list result interface.

Advanced Mai Search by Name	rker Search	<ol> <li>To upload a marker name list from local computer, first to cli on the button 'Browse' to oper the 'File Upload' window</li> </ol>	st ick n		<b>2.</b> From the find and sel	e 'File Upload' wine ect the text file of	dow, the
Marker Name File Upload Provide marker names in	Browse mknm.bt	<b>3.</b> The uploaded file name show appears here after uploading	uld		marker nam then click 'C of this wind	nes from local com Open' from the bot ow to upload	iputer, ttom
-Restrict by Features		📵 File Upload			7 /		x
Marker Type	Any - Marker Devel	ope		/	Searc	h Desktop	2
-Restrict by Location -		Organize 👻 New folder				III 🔹 🗖	0
G. raimondii (D5) Genome Location	Any	t Favorites Desktop		Name IMG_0506 IMG_0512	Size 283 KB 275 KB	Item type JPEG image JPEG image	Dati * 5/1/ 5/1/
Мар	Any	🕮 Recent Places	В	■ Jing-1 ■ jing-2	349 KB 746 KB	JPEG image JPEG image	10/: 10/:
Chr Number	Any 👻	Documents		Map_Marker_Chad	59 KB 1 KB	Text Document	10/: 7/5/
Submit Reset	Cotton USDA	Music     Pictures     Videos		NCBI_EST_485339_t ncbi-EST nucest_result	4,928 KB 30,343 KB 43 KB	Microsoft Office E Microsoft Office E Text Document	8/14 8/14 3/4/ +
4. Click [Submit]	Incorporated	5 Homegroup File name:	mknm	<u>د ا</u>	All File	en 🔽 Cance	+ -
to run the search							

# D-3. Advanced Marker Search result interface.

Click on any green color displayed 'record name' (except 'Linkage Group' names) will redirect you to the record's details page. Click on 'Linkage Group' name will redirect you to CMap To download result table, click HERE To download marker sequence(s), click HERE

4 re	coras we					Downio	ad Table	Pas
#	Name Alias	Туре	Species	Sequence	Мар	inkage Group	Start	Stop
1	A1046	RFLP	Gossypium herbaceum	A1046	AD-genome wide Reference Map (2009)	AD-genome wide Reference Map (2009).Ref-chr07	58	58
2	A1046	RFLP	Gossypium herbaceum	A1046	Palmeri x K-101, F2 (2007)	Palmeri x K-101, F2 (2007).PK-F2_chr07	119.9	119.9
3	A1046	RFLP	Gossypium herbaceum	A1046	Gtr x Gra, F2 (2004)	Gtr x Gra, F2 (2004).D_D01	73.2	73.2
4	A1046	RFLP	Gossypium herbaceum	A1046	A1-97 x A2-47, F2 (1999)	A1-97 x A2-47, F2 (1999).AA-F2_A04	22	22
5	A1097	RFLP	Gossypium herbaceum	A1097	AD-genome wide Reference Map (2009)	AD-genome wide Reference Map (2009).Ref-chr01	43	43
6	A1097	RFLP	Gossypium herbaceum	A1097	Palmeri x K-101, F2 (2007)	Palmeri x K-101, F2 (2007).PK-F2_chr01	72.4	72.4
7	A1097	RFLP	Gossypium herbaceum	A1097	Gtr x Gra, F2 (2004)	Gtr x Gra, F2 (2004).D_D02	45.8	<b>4</b> 5.8
8	A1097	RFLP	Gossypium herbaceum	A1097	CAMD-E x Seaberry, F2 (1998)	CAMD-E x Seaberry, F2 (1998).CS-F2_chr01	38.5	38.5
9	A1097	RFLP	Gossypium herbaceum	A1097	A1-97 x A2-47, F2 (1999)	A1-97 x A2-47, F2 (1999).AA-F2_A05	58	58
10	BNL3400	SSR	Gossypium hirsutum	BNL3400	Vsg x (TM-1 x Hai-7124), DH (2005)	Vsg x (TM-1 x Hai-7124), DH (2005).VTH- DH.05_lgD08.1	9.3	9.3
11	BNL3400	SSR	Gossypium hirsutum	BNL3400	TM-1 x 3-79, RIL (2012)	TM-1 x 3-79, RIL (2012).T3-RIL.12_c05	2.616	2.616
12	BNL3400	SSR	Gossypium hirsutum	BNL3400	AD-genome wide Reference Map (2009)	AD-genome wide Reference Map (2009).Ref-chr19	29	29
13	BNL3400	SSR	Gossypium hirsutum	BNL3400	Monsanto SSR Bin Map, (2009)	Monsanto SSR Bin Map, (2009).BIN-SSR_chr05	210	210
14	BNL3400	SSR	Gossypium hirsutum	BNL3400	(Simian-3 x Sumian-12) x (Zhong-4133 x 8891), 4WC (2008) part	(Simian-3 x Sumian-12) x (Zhong-4133 x 8891), 4WC (2008) part.SSZ8-4WC D05.1	34.6	34.6

# E. Search for Mapped markers with sequences: Browse or search by map name

A table listed by map name, followed by Linkage Group name, Locus and position on map, Marker and sequence name. The **default result** is the table of all mapped markers with sequence

Search can be restricted by map name	Click on a column head will reorder the result table by the column	Click on any gr 'record name' the record's de	een color dis will redirect etails page.	played you to		o download esult table, lick HERE
Search Mapped Seq. ances b Map Name Any 23,388 records were returned.	vy Ma Name				2 Down	load the results
Мар	Linkage Group	Locus Start	Locus Stop	Locus	Marker	Sequence
AD-genome wide Reference Map (2009)	AD-genome wide Reference Map (2009).Ref-chr07	58	58	A1046	A1046	A1046
Palmeri x K-101, F2 (2007)	Palmeri x K-101, F2 (2007).PK-F2_chr07	119.9	119.9	A1046	A1046	A1046
Gtr x Gra, F2 (2004)	Gtr x Gra, F2 (2004).D_D01	73.2	73.2	A1046	A1046	A1046
A1-97 x A2-47, F2 (1999)	A1-97 x A2-47, F2 (1999).AA-F2_A04	22	22	A1046	A1046	A1046
AD-genome wide Reference Map (2009)	AD-genome wide Reference Map (2009).Ref-chr01	43	43	A1097	A1097	A1097
Palmeri x K-101, F2 (2007)	Palmeri x K-101, F2 (2007).PK-F2_chr01	72.4	72.4	A1097	A1097	A1097
Gtr x Gra, F2 (2004)	Gtr x Gra, F2 (2004).D_D02	45.8	45.8	A1097	A1097	A1097
CAMD-E x Seaberry, F2 (1998)	CAMD-E x Seaberry, F2 (1998).CS-F2_chr01	38.5	38.5	A1097	A1097	A1097
A1-97 x A2-47, F2 (1999)	A1-97 x A2-47, F2 (1999).AA-F2_A05	58	58	A1097	A1097	A1097
Gtr x Gra, F2 (2004)	Gtr x Gra, F2 (2004).D_D03	0.9	0.9	A1100	A1100	A1100
A1-97 x A2-47, F2 (1999)	A1-97 x A2-47, F2 (1999).AA-F2_A11	6.7	6.7	A1100	A1100	A1100
AD-genome wide Reference Map (2009)	AD-genome wide Reference Map (2009).Ref-chr24	187	187	A1107	A1107	A1107
Guazuncho-2 x VH8-4602, consensus (2009)	Guazuncho-2 x VH8-4602, consensus (2009).GV-cons_c24	37.28	37.28	A1107	A1107	A1107
Guazuncho-2 x VH8-4602, BC1 (2005)	Guazuncho-2 x VH8-4602, BC1 (2005).GV-BC1_chr24/lgD03	54	54	A1107	A1107	A1107

#### F. Browse or search by chromosome number

A table listed by chromosome number (AD\_chr.07, A\_chr.01, D\_chr13, etc.) with the same contents as that of E. The **default result is the table of all mapped markers with sequence** 

Search N Chromosome 23,388 records	Image: Apply       Search can be r         s were returned.       by chromosome	estricted e number				Downle	oad the results
Chr number	Мар	Linkage Group	Locus Start	Locus Stop	Locus	Marker	Sequence
AD_chr.07	AD-genome wide Reference Map (2009)	AD-genome wide Reference Map (2009).Ref-chr07	58	58	A1046	A1046	A1046
AD_chr.07	Palmeri x K-101, F2 (2007)	Palmeri x K-101, F2 (2007).PK-F2_chr07	119.9	119.9	A1046	A1046	A1046
D_chr.01	Gtr x Gra, F2 (2004)	Gtr x Gra, F2 (2004).D_D01	73.2	73.2	A1046	A1046	A1046

#### G. Browse or search by Genome Group

A table listed by Genome Group (AD, A, D, etc.) with the same contents as that of E. The default result is the table of all mapped

markers with sequence Search can be restricted by genome group Search Mapped Servences by Genome Group Genome group --Any-- -Apply 23,388 records were returned. Download the results Genome Locus Locus Map Linkage Group Locus Marker Sequence Group Start Stop AD AD-genome wide Reference Map (2009) AD-genome wide Reference Map (2009).Ref-chr07 58 58 A1046 A1046 A1046 AD Palmeri x K-101, F2 (2007) Palmeri x K-101, F2 (2007).PK-F2\_chr07 119.9 119.9 A1046 A1046 A1046 D Gtr x Gra, F2 (2004) Gtr x Gra, F2 (2004).D\_D01 73.2 73.2 A1046 A1046 A1046 A A1-97 x A2-47, F2 (1999) A1-97 x A2-47, F2 (1999).AA-F2\_A04 22 22 A1046 A1046 A1046