



A Comparative Mapping Resource for Grains

GRAMENE NAVIGATION TUTORIAL



Accessing Gramene

To access Gramene, open your browser (such as Netscape, IE, Mozilla, or Firefox).

(If some website features don't work correctly, try using a different browser)

In the address bar type www.gramene.org and press “Enter” to open the **Gramene Home Page**.

Home Page Navigation

Only on home page,
indicates Gramene release
number being used



Click on Gramene
Logo to return to
the Home page

Select "feedback" from any page to
reference that page and open a
communication box. Use for asking
questions or giving feedback.

Home Page

Quick Search

Find anything

Search

Quick search, found at the top of all other pages

Have you tried...?

- Learning to use Gramene tools and resources with the **tutorials**
- **Gramene Tips Archive**

Gramene Tips give advice on using the site. The Archive contains all tips.

Quick Start

- **GENOMES:** Browse sequenced genomes for [Rice](#), [Maize](#) & [Arabidopsis](#); Look for [rice/maize synteny](#); Narrow your search with [GrameneMart](#); Search for sequence alignment with [BLAST](#); search by [Gene Ontology](#).
- **PROTEINS:** Search by [PFam](#) or [ProSite](#) or Browse by Gene Ontology using [GO Slim](#).
- **MAPS:** Browse genetic or physical maps for [Rice](#), [Maize](#), [wheat](#), [Barley](#), [Oats](#), [Sorghum](#), and other grasses, or use the Comparative Map Viewer ([CMap](#)) to compare maps of different types and species.
- **MOLECULAR MARKERS:** Use the Simple Sequence Repeat Identification Tool ([SSR-IT](#)); or search by [marker type](#) or species, including [Rice](#), [Maize](#), [Sorghum](#) and [Others](#).
- **TRAITS:** Search [phenotypes](#) or [QTL](#) database for important phenotypes or QTLs such as [Rice Genes](#), [Rice QTL](#), [Maize QTL](#).
- **LITERATURE:** Search for interesting links and topics of interest.
- **SUBMISSION:** Submit a [Rice Gene](#) or [Ontology Term](#) to Gramene.

Quick links help get you directly to where you want to go

Featured News

- Breaking news on genomic research
- [Rice News Worldwide](#) from IRRI
- [Gramene News Archive](#)

Visit us at

- [Plant and Animal Genome XIV Conference](#), January 14-18, 2006, San Diego, CA, USA
- [Rice Technology Working Group Meeting](#), Feb. 26-Mar 5, The Woodlands, Texas, USA

News about the current release and the grass genomic community is listed here, along with a **Gramene Calendar**.

Non-home Page Navigation

This heading is on all pages except for the home page.

Title identifies the page being viewed.

Quick search, optionally select a specific database to search, enter a term to search for, and click on "search."



Click logo to return to Home page

Dropdown Navigation Bar (see next slides)

Easily accessible "Feedback" button on every page.

Searches



Each module has its own module-specific navigation bar below the main Gramene navigation bar.

- Genomes-Ensembl
- Maps-CMap
- Markers
- QTL
- Genes
- Proteins
- Ontologies
- Literature
- Sequences-EST
- All-Gramene



Module specific searches will search ONLY that module (the example here is the QTL module)

Gramene Modules and tools used to **access** the **databases**. See individual module tutorials.

QTL Search or Browse Options

The user can search the QTL database using a wild card search (e.g. [seed*](#)).

- Trait name (e.g. [Seed color](#), [Abiotic stress](#))
- Trait symbol (e.g. [SDCL](#), [ALSI](#))
- Trait category
 - [Abiotic stress](#) | [Anatomy](#) | [Quality](#) | [Sterility or fertility](#) | [Vigor](#) | [Yield](#)



Genomes

The screenshot shows the GRAMENE Genome Browser interface. At the top, there is a green header with the logo and navigation links: Search, Genomes, Download, Resources, About, Help, and Feedback. A search bar is located on the right. Below the header, there is a secondary navigation bar with a 'Find' dropdown menu set to 'All' and a search input field. A red 'Help' button and a red 'Tutorial' button are on the right. The main content area is titled 'Gramene Genome Browser' and features a 'Species in Gramene' table. A green callout bubble points to the 'Genomes' menu, and another points to the 'Species in Gramene' table.

GRAMENE *Genome_browser* Find anything Search

Search Genomes Download Resources About Help Feedback

Find All Help Tutorial

Gramene Genome Browser

Species in Gramene

Rice-japonica	Dec 2004	TIGR v3
Maize	Oct 2004	AGI
Arabidopsis	May 2004	TIGR v5

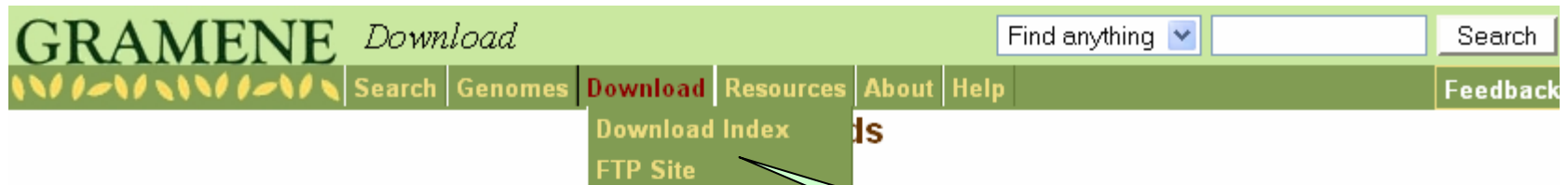
Links

- [GrameneMart](#)
- [BlastView](#)
- [Release Note](#)

Select Genomes to access the genome browser, as well as search tools GrameneMart and BLAST Logo to return to the Home page

Select which genome to view. Also available are Rice-Maize synteny diagrams.

Downloads



- FPC Physical Map (AGI)
- Genetic Maps
- In Silico Data
- Microsatellites
- Databases as tab-separated-value files
- MySQL database dumps (insert statements)
- Protein Data
- RiceGenes Database (Archived Copy, October 2000)
- Blast Databases
- Software
 - Script to search for simple sequence repeats in FASTA-formatted DNA sequences --by S.Cartinhour
 - Gramene Web Site and supporting code. (live version)
 - Gramene Web & supporting software by anonymous CVS.

Download data or software to install Gramene on your own machine.

Defines terms, abbreviations and acronyms used. Links to other on-line glossaries

Click to browse fact pages on different **grass species**

Provides **links** to other websites of interest

Submit a gene or ontology term to the database

Links page of **genetic newsletters** for rice

Rice Genome Sequencing Efforts

- ◆ [Rice Genome Program \(RGP\)](#)
- ◆ [US Rice Genome Sequencing](#)
- ◆ [Plant Genome Initiative at Rutgers](#)
- ◆ [Arizona Genomics Institute \(AGI\)](#)
- ◆ [Clemson University Genomics Institute \(CUGI\)](#)
- ◆ [Wisconsin Rice Genome Project](#)
- ◆ [Rice Genome Analysis, McCombie Lab, Cold Spring Harbor Laboratory](#)
- ◆ [TIGR Rice Genome Project and TIGR Rice Gene Index](#)
- ◆ [National Center for Gene Research Chinese Academy of Sciences, China](#)
- ◆ [National Center for Genetic Engineering and Biotechnology, Thailand](#)
- ◆ [Rice Genome Project in Republic of China, Taiwan](#)
- ◆ [Genoscope, France](#)
- ◆ [IRD Rice Genetics Group, France](#)
- ◆ [Monsanto Rice Genome Project](#)

Gramene: A Resource for Comparative Genomics

The rice genome is more than a resource for understanding the biology of a single reference genome. The discovery of synteny relationships among crop grasses has shown remarkably conserved segments of grass genomes. Rye, sugarcane and other crop grasses, opening the possibility of using rice synteny relationships to rapidly isolate and characterize homologues in maize, wheat, barley and sorghum.

Click to access
Gramene information
and history.

As an information resource, Gramene's purpose is to provide added value to data sets available within the public sector to facilitate researchers' ability to leverage the rice genomic sequence to identify and understand corresponding genes, pathways and phenotypes in the crop grasses. This is achieved by building automated and curated relationships between rice and other cereals for both sequence and biology. The automated and curated relationships are queried and displayed using controlled vocabularies and web-based displays. The controlled vocabularies (Ontologies), currently being utilized include Gene ontology, Plant ontology and Trait ontology. The web-based displays for phenotypes include mutant and quantitative trait loci (QTL) modules. Sequence based relationships are displayed in the genome browser adapted from Ensembl, in the comparative map viewer (CMap), Blast databases, and protein displays.

Gramene help docs and documentation

- Site Map
- Help Documents
- Release Notes
- Tutorials
- FAQs
- Workshop Materials
- Mailing Lists
- Rice Gene
- Ask Us

The following table is a guide to the resources available to help you answer your

There are currently **9 main modules** within Gramene. The modules are interrelate... one way to obtain information of interest. The following table provides a brief des... individual entry pages, **help documents, tutorials and guided tours**.

s often more than with a link to their

we have provided both

Searchable Frequently Asked Questions about Gramene, curation, and database modules.

Link to info on Rice gene nomenclature

E-Lists for discussion and for announcements

... types of queries that can be... used in Gramene, please view the **Glossary**.
... using Gramene... **Feedback** button on the top...
... The page you are on when you click...

- General, Data
- Curation,
- BLAST, Maps,
- Genomes,
- Literature,
- Genes,
- Ontologies,

... answers to frequently asked questions

Footer

Images link to species information pages

Collaborators and funding sources are linked along the bottom



Information about citing Gramene

Gramene **purpose, history and people**

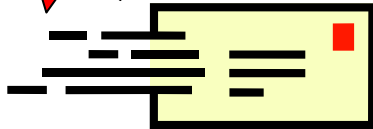
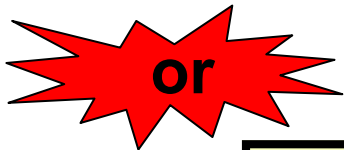
Provides an **overview** of everything on the site

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Contact Gramene



Use the feedback button, located at the top of every page, to provide feedback or to ask questions about Gramene.



Email Gramene at gramene@gramene.org

