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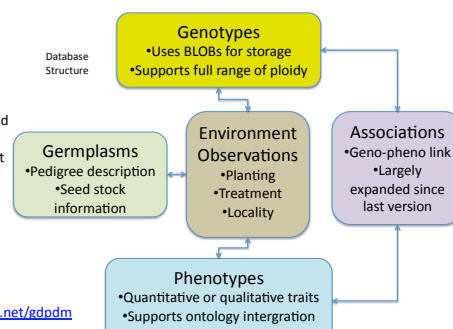
Summary of Datasets Hosted on Diversity

Species	Diversity Data Sources
<i>Arabidopsis</i>	Large scale SNP data from 1001 Genomes and NSF 2010 <i>Arabidopsis</i> Project
Maize	Molecular and Functional Diversity of the Maize Genome Project, Panzea.org
Rice	QTL and SSR based diversity studies from over 20 publications; Large scale SNP data from ricediversity.org and oryzasnp.org , NSF Rice Diversity, OryzaSNP, and Rice Haplotype Map projects
Sorghum	Sorghum Diversity Project
Wheat	Haplotype Polymorphism in Polyploid Wheats and Their Diploid Ancestors project

As data storage is a bottleneck, Gramene Diversity hosts many large scale genotype, phenotype, environment, germplasm and association data. Currently we host such data for 5 species, *Arabidopsis*, Maize, Rice, Sorghum, and Wheat using the GDPDM schema

GDPDM: Genomic Diversity and Phenotype Data Model

The Gramene Genetic Diversity database module implements the GDPDM schema. GDPDM is designed to capture both Molecular and Phenotypic Diversity data, whether this data is a product of QTL mapping, association studies, large scale SNP genotype assay studies, field data from plant breeding programs, or germplasm evaluation studies.

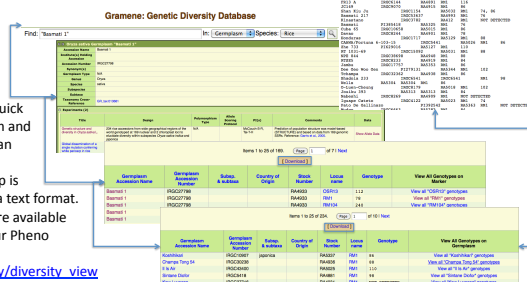


GDPDM: www.maizegenetics.net/gdpdm

Data Availability

For a more targeted search, Diversity allows the user to directly query for a germplasm, gene, QTL of interest. On the right is an example of a quick search for the “Basmati 1” germplasm. After the quick search, Diversity displays germplasm and experiment information. The user can then proceed to view allele and genotype data. Included in each step is the ability to download the data in a text format. Additional search options and tools are available including our SNP query tool and our Pheno browser.

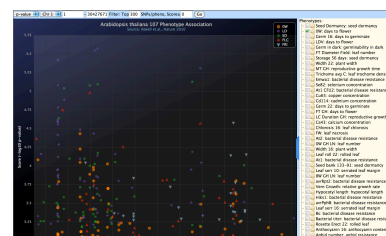
Visit www.gramene.org/db/diversity/diversity_view



Diversity Tools

Gramene Diversity offers advanced tools for searching, filtering, and analyzing data. TASSEL, left, runs locally on your computer with connectivity with the Diversity database. SNP Query, below, is a web based search tool used to interact with the large scale SNP datasets. GWAS Association Viewer, right, is our new web based GWAS visualization tool.

SNP Query (www.gramene.org/db/diversity/snp_query) is our built in search tool. It allows the user to search top down, going from a species and publication down to the gene and SNP level or bottom up, from the gene and QTL level up to the publication. Either way the tool will return subsets of data appropriate to the given query and provide download links for the data in various formats.



GWAS Association Viewer (www.gramene.org/db/jshc2010) is the latest entry in our line up of available tools. This tool allows the user to plot GWAS results on an interactive graph. Users can choose specific traits to be plotted, zoom into specific regions on the graph and set specific p-value cutoffs.