Gramene: A Resource for Comparative Grass Genomics

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Gramene (www.gramene.org) is a curated, open-source, data resource for comparative genome analysis in the plant kingdom, with emphasis on the grasses. Gramene is comprised of database modules that integrate publicly-available information about genomic sequence, genes, proteins, biochemical pathways, maps and markers, QTL, and genetic and phenotypic diversity. Ontologies (controlled vocubularies) are used to associate the different types of data. Maize researchers and breeders can take advantage of known microsynteny between the different species of the grass family by using maps and genomic sequence as a reference point for gene and marker discovery in maize.
Gramene releases data updates and feature improvements on a semi-annual basis. Online tutorials and help documents provide users with an overview of how to conduct a wide variety of operations on the database. Gramene is a collaborative effort between Cold Spring Harbor Laboratory, the Department of Plant Breeding and Genetics at Cornell University and various national and international projects dedicated to cereal genomics and genetics research.