Abstract

Biogen base serves the maize (Zea mays L.) research community by making a wealth of genetics and genomics data available through an intuitive Web-based interface. We have developed an Open access database as a resource to enhance research with the unique data obtained from the genomics and proteomics lab of TNAU. Biogen Base is an interactive database in bringing out the different traits of the inbreds of Tamil Nadu Agricultural University (UMI - University Maize Inbreds's) and the SSR Markers. The database interface is developed in PHP and HTML as the front end and MySQL as the backend tools. The webpage was
Biogen Base - An interactive maize database for phenomics platform

developed using Dreamweaver and the database in MySQL is connected with the web server. The current version of this database has four major parts and functions; (1) Germplasm - contains 101 germplasm lines and its 28 corresponding traits with values, (2) Genotype Search – enables the search among 31 SSR markers along with the chromosome number, gel patterns, forward and reverse primer, and allele size, (3) Phenotype Search - which contains text descriptions of all the phenotypic terminologies and their corresponding abbreviations stored in the database and (4) Mutant Phenotype Search – contains 5 mutant phenotypes with its traits and values. In addition, it includes brief description about the terms, and links to other publicly available databases. Images of plants with novel characteristics are also available at the website. The large and growing body of experimental data on maize germplasm and DNA markers is of enormous value in the Genomics and Proteomics laboratories. The database can be searched using a user friendly web interface. This database is publicly available at http://www.tnaugenomics.com/database/maize. It also facilitates the deposition of new values for processing and inclusion in the database to fulfill the priceless work going on in Genomics and Proteomics Laboratory of TNAU.

Reference

- P. Rice, I. Longden, and Bleasby, A. EMBOSS: the European Molecular Biology Open

**Index Terms**

Computer Science | Databases

**Key words**

Biogen base

University Maize Inbreds

My Sql

Php

TNAU Genomics

Maize germplasm