A Project Portal for corn

A set of project and sequence-indexed data search resources

http://www.maizeGDB.org/POPcorn/

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Description

POPcorn is an ancillary project to MaizeGDB. It addresses the challenge of the proliferation of genetic data and online resources for maize researchers:

- It is difficult to find all online resources relevant to one's research

  Solution: *Project Search*
  A hand-curated database of maize projects and online resources which is updated monthly.

- Locating all relevant sequence-based resources requires repeated BLAST searches at multiple sites

  Solution: *POPcorn BLAST*
  Permits BLASTing against sequence at multiple websites from one location.

- Sequence-indexed data can be challenging to search, especially if data is spread across multiple sites or databases

  Solution: *Sequence-Indexed Data Search*
  Carries out multi-step searches for sequence-indexed data.

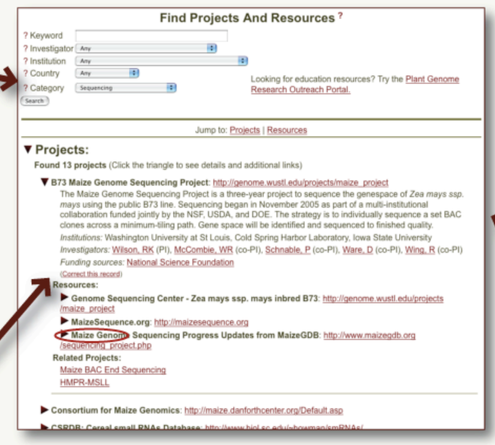
- Data and web resources can disappear after project completion

  Solution: Processes and scripts to migrate data to MaizeGDB
  When MaizeGDB is determined to be a reasonable location for long-term storage, data will be migrated to MaizeGDB using processes and pipelines developed as part of the POPcorn project.

Project Search

- 79 projects, 112 resources
- hand-curated and up-to-date
- goal: all major maize projects and resources

Search for projects and resources



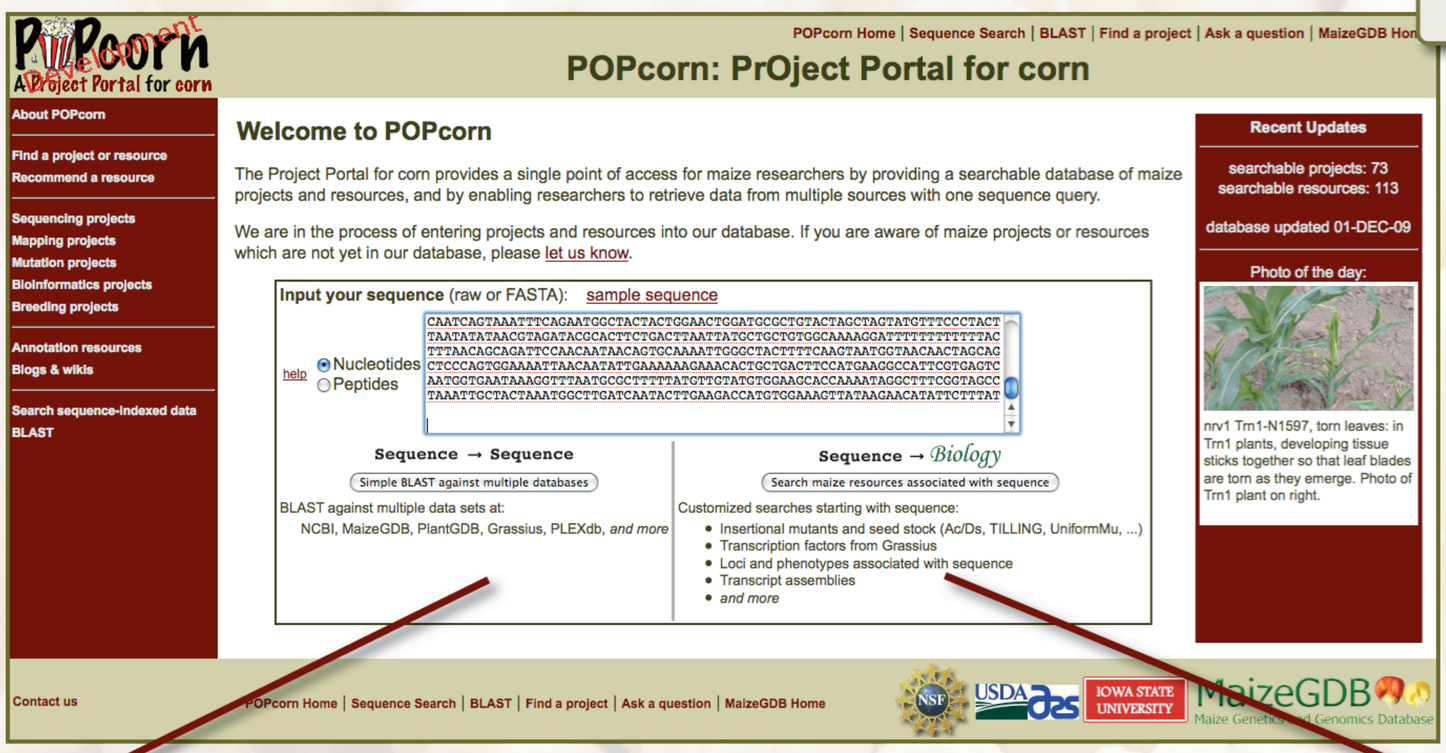
Information about each project and resource is displayed

Please send corrections if you see errors!

Is your project listed?

Check if your project is in our database. If it is not, or if there are errors in the description, please **let us know!**

Complete search and BLAST details are viewable and downloadable



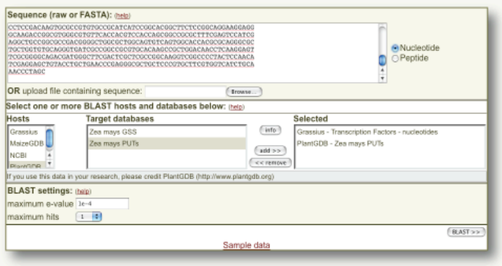
Become a POPcorn collaborator!

Join these collaborating groups to become part of the POPcorn family:

MaizeGDB, PlantGDB, PLEXdb, NCBI, Grassius, BioExtract

POPcorn BLAST

Released for public comment in March, 2010



BLAST your sequence against multiple sequences. MaizeGDB, Grassius, Genbank, and PlantGDB sequences now available. More collaborator data sets will be added.

BLAST against Grassius - Transcription Factors - nucleotides

Input: E-value cutoff: **1e-4**, max hits: **2**

Description: BLAST was executed at **Grassius**, against the sequence database **grassiustf_nt**, using BLAST program **blastn**.

Query sequence 1: gi|215269417|gb|FM252125.1|FM252125 PLN Zea mays mRNA for C2H2 zinc finger protein (mrpi-1 gene), cultivar A69Y.
(Full BLAST results available here)

BLAST against PlantGDB - Zea mays PUTs

Input: E-value cutoff: **1e-4**, max hits: **2**

Description: BLAST was executed at **PlantGDB**, against the sequence database **Zea_Mays_PUT**, using BLAST program **blastn**.

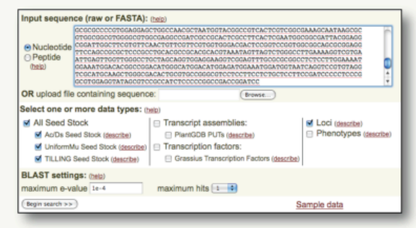
Query sequence 1: gi|215269417|gb|FM252125.1|FM252125 PLN Zea mays mRNA for C2H2 zinc finger protein (mrpi-1 gene), cultivar A69Y.
(Full BLAST results available here)

ID:	PUT-163a-Zea_mays-0122511
Definition:	No definition line found
E-value:	0
ID:	PUT-163a-Zea_mays-028468
Definition:	No definition line found
E-value:	0

Sequence-Indexed Data Search

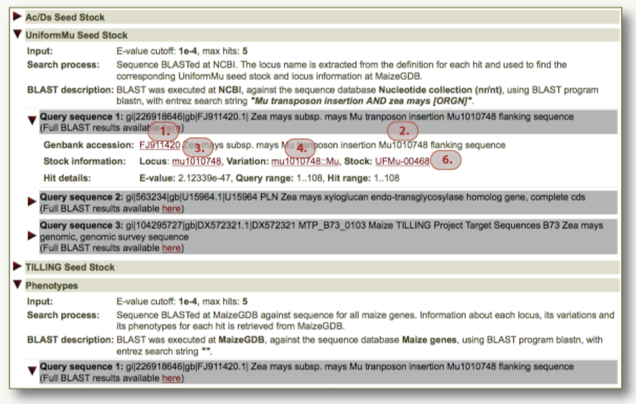
Released for public comment in March, 2010

POPcorn will carry out complex, multi-step searches, within one database or across multiple databases. More types of searches will be added in the coming year.



Example of a sequence-indexed data search
Find UniformMu seed stock containing a particular mutation:

1. BLAST query sequence against NCBI GSS
2. Parse definition line to get UniformMu locus name
3. Get locus record at MaizeGDB
4. Get variation records for that locus at MaizeGDB
5. Get UniformMu stock records for each variation at MaizeGDB
6. Construct links to MGC Stock Center for each stock found.



In collaboration with MaizeGDB at Iowa State University
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