



Phaseolus and Internet

1. What is Internet and WWW?
2. Modern use
3. *Phaseolus* on the Internet
4. Legume sites

What is the Internet?



The Internet is a worldwide, publicly accessible *network of interconnected computer networks* that transmit data by packet switching using the standard Internet Protocol (IP). It is a "**network of networks**" that consists of millions of smaller domestic, academic, business, and government networks.

World Wide Web (WWW)



The World Wide Web (or the "Web") is a **system of interlinked, hypertext documents that runs over the Internet**. With a Web browser, a user views Web pages that may contain text, images, and other multimedia and navigates between them using hyperlinks.

The Web was created around 1990 by the Englishman **Tim Berners-Lee** and the Belgian **Robert Cailliau** working at CERN in Geneva, Switzerland.

Timeline



- 1960s Advent of packet-switching network heralds **birth of Internet**
- 1970s** ARPA introduces network for defense and develops **e-mail**
US universities join network
- 1973 First **intercontinental** network connection (London)
- 1979 **USENET** is developed, pushing Internet's rapid expansion
- 1990 Tim Berners-Lee develops the **HTML**
- 1991** WorldWideWeb **browser and server** software made available
by Tim Berners-Lee
- 1993 **Mosaic**, the first properly developed **graphic web-browser**
takes Internet by storm
- 1995 Amazon launched and **1998 Google** "opens its doors"
- 2004 Web 2.0: user generated content, collaboration, social
networking, tagging, RSS feeds
- 2006 Number of websites tops the 100,000,000 mark



Use of the Internet



Classical	Modern (Web 2.0)
<ul style="list-style-type: none">• email, mailing list, forums• presentation of individuals and groups• static information and database searches	<ul style="list-style-type: none">• blog• wiki• social bookmarking and tagging• communities and portals

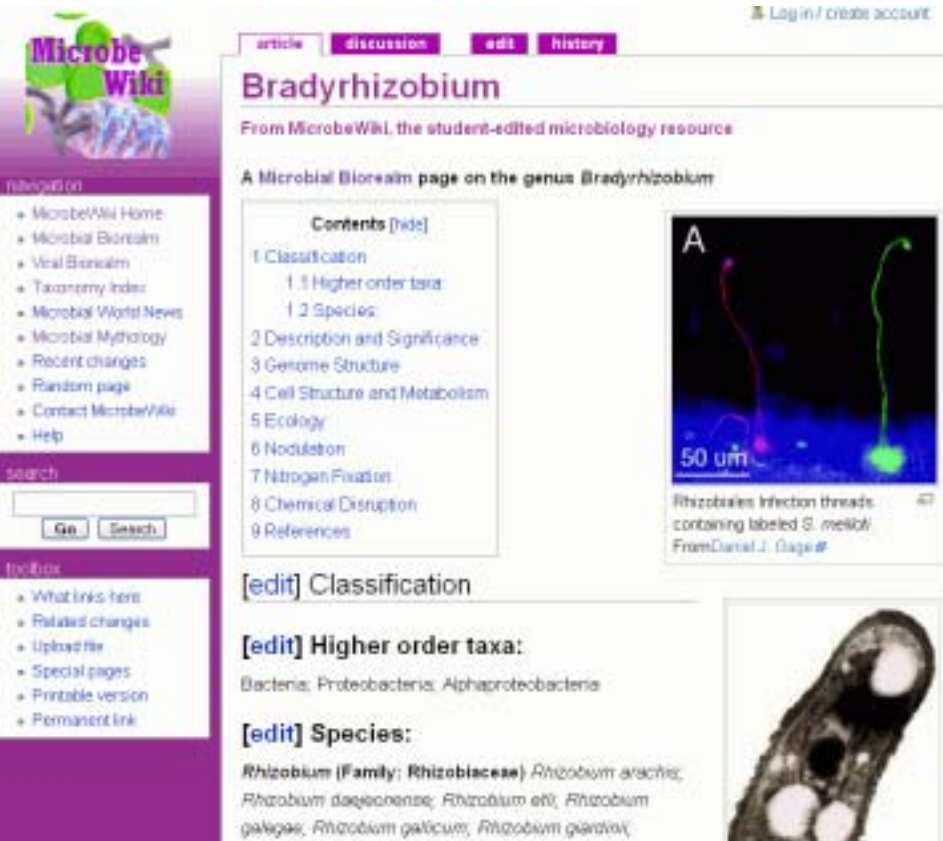
Blog - (web log)



- Blogs provide **commentary or news on a particular subject**, such as food, politics, or local news.
- combines text, images, and links to other blogs, web pages
- articles in a **reverse chronological order**
- updated **regularly**

Paul Myers (assoc. Prof. Univ. Minnesota)

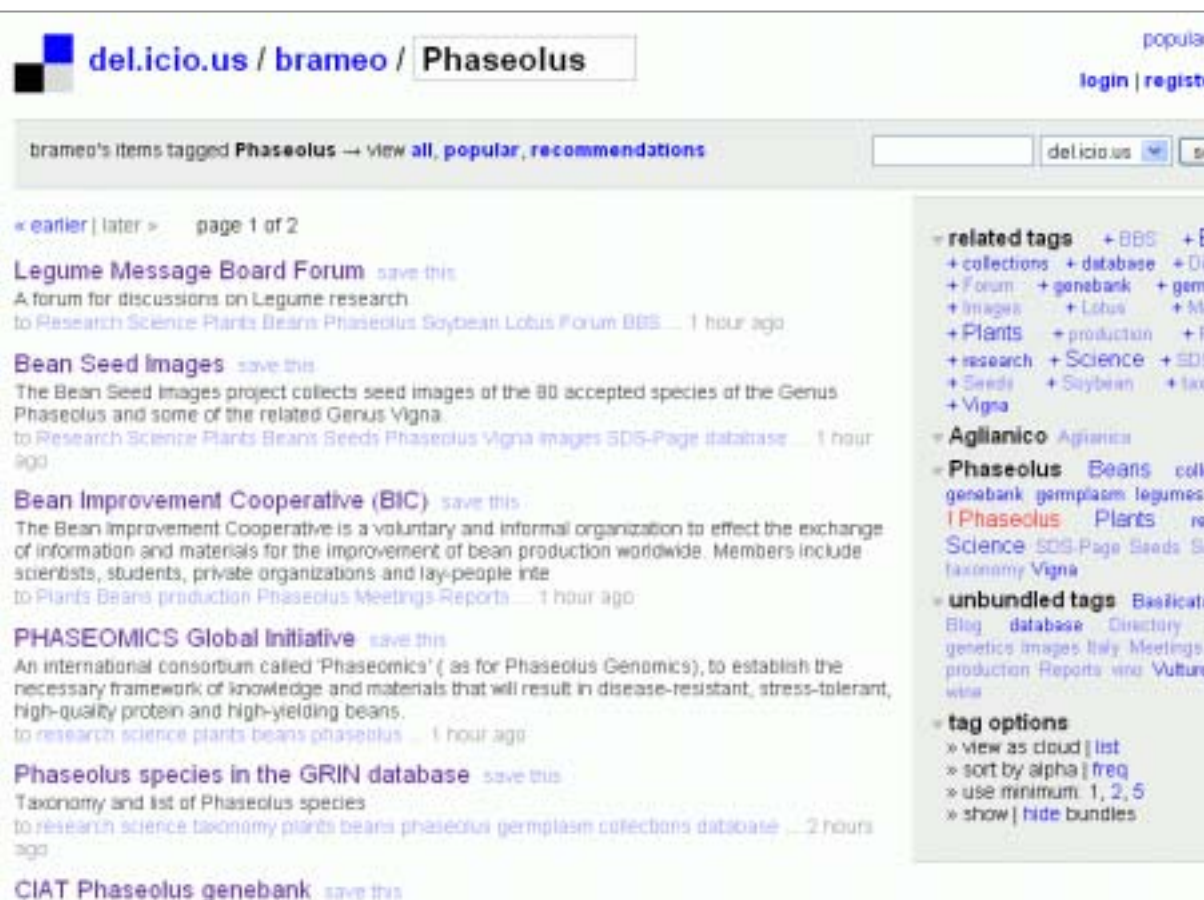
Wiki



A wiki is a:

- a web site where a group of people can **add, remove, and edit content** (text, images, videos, documents)
- a **collaborative technology** for **organizing information** on Web sites
- the first wiki (WikiWikiWeb) was developed by Ward Cunningham in the mid-1990s
- **Wikipedia**, an online encyclopedia, is one of the best known wikis

Social bookmarking and tagging



The screenshot shows a del.icio.us profile page for user 'brameo' with the tag 'Phaseolus'. The page displays a list of bookmarked items, each with a title, a brief description, and a timestamp. On the right side, there is a sidebar with 'related tags' and 'tag options'.

del.icio.us / brameo / Phaseolus

brameo's items tagged Phaseolus → view all, popular, recommendations

« earlier | later » page 1 of 2

Legume Message Board Forum save this
A forum for discussions on Legume research
to Research Science Plants Beans Phaseolus Soybean Lotus Forum BBS ... 1 hour ago

Bean Seed Images save this
The Bean Seed Images project collects seed images of the 80 accepted species of the Genus Phaseolus and some of the related Genus Vigna
to Research Science Plants Beans Seeds Phaseolus Vigna Images SDS-Page database ... 1 hour ago

Bean Improvement Cooperative (BIC) save this
The Bean Improvement Cooperative is a voluntary and informal organization to effect the exchange of information and materials for the improvement of bean production worldwide. Members include scientists, students, private organizations and lay-people into
to Plants Beans production Phaseolus Meetings Reports ... 1 hour ago

PHASEOMICS Global Initiative save this
An international consortium called 'Phaseomics' (as for Phaseolus Genomics), to establish the necessary framework of knowledge and materials that will result in disease-resistant, stress-tolerant, high-quality protein and high-yielding beans.
to research science plants beans phaseolus ... 1 hour ago

Phaseolus species in the GRIN database save this
Taxonomy and list of Phaseolus species
to research science taxonomy plants beans phaseolus germplasm collections database ... 2 hours ago

CIAT Phaseolus genebank save this

related tags +BBS +E
+collections +database +Di
+Forum +genebank +gem
+Images +Lotus +Ma
+Plants +production +P
+research +Science +SDS
+Seeds +Soybean +tax
+Vigna

Aglianico Aglianico

Phaseolus Beans coll
genebank germplasm legumes
I Phaseolus Plants re
Science SDS-Page Seeds Se
taxonomy Vigna

unbundled tags Basicat
Blog database Directory
genetics Images Italy Meetings
production Reports vino Culture
wina

tag options
» view as cloud | list
» sort by alpha | freq
» use minimum: 1, 2, 5
» show | hide bundles

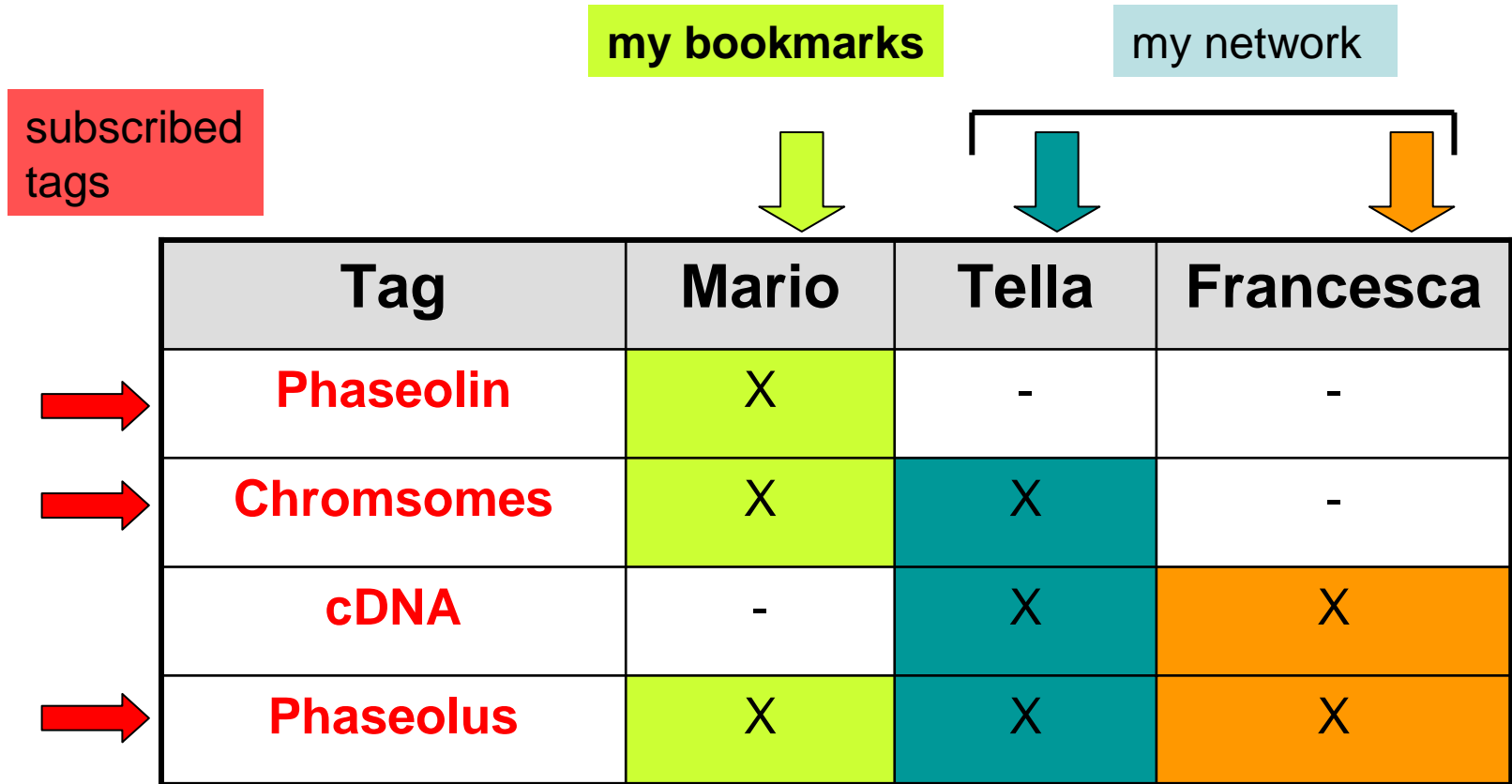
store and share
bookmarks on the web

Advantages:

- **use** your bookmarks from **anywhere**
- **share** your bookmarks publicly
- find other people who have interesting bookmarks and add their links to your own collection
- **tagging** (keywords)

- del.icio.us
- technorati.com

How is working social bookmarking/tagging?



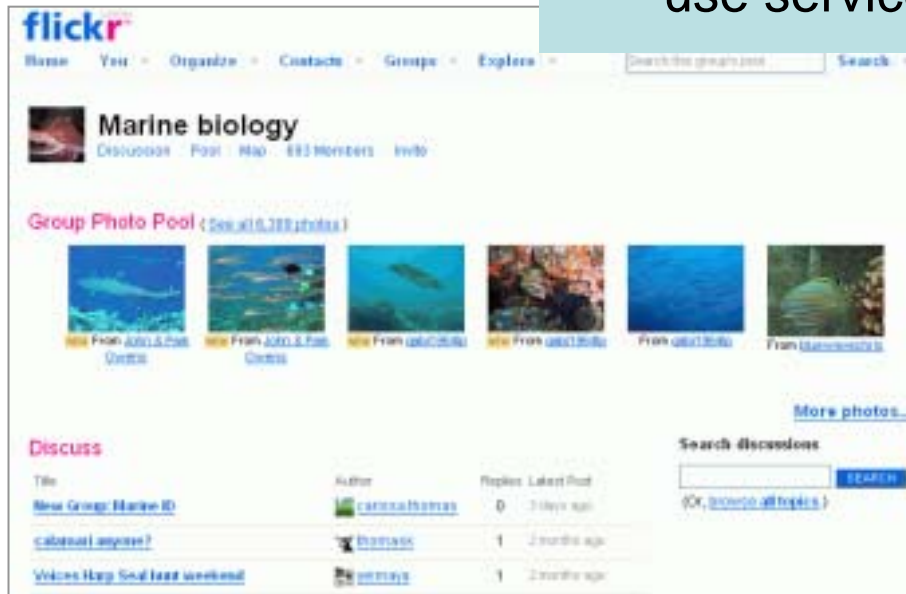
The diagram illustrates the workflow of social bookmarking/tagging. It features a table with four columns: Tag, Mario, Tella, and Francesca. Above the table, three boxes represent different sources of tags: 'subscribed tags' (red), 'my bookmarks' (green), and 'my network' (blue). Arrows indicate the flow of tags into the table. A red arrow points to the 'Tag' column. A green arrow points to the 'Mario' column. A blue arrow points to the 'Tella' column. An orange arrow points to the 'Francesca' column. The table contains 'X' marks indicating which user has bookmarked a specific tag. The tags are Phaseolin, Chromsomes, cDNA, and Phaseolus. The users are Mario, Tella, and Francesca.

	Tag	Mario	Tella	Francesca
→	Phaseolin	X	-	-
→	Chromsomes	X	X	-
	cDNA	-	X	X
→	Phaseolus	X	X	X

Communities and portals



- user registration
- interest groups
- multi-topic
- multi-function:
 - messages
 - forums
 - upload content
 - use services



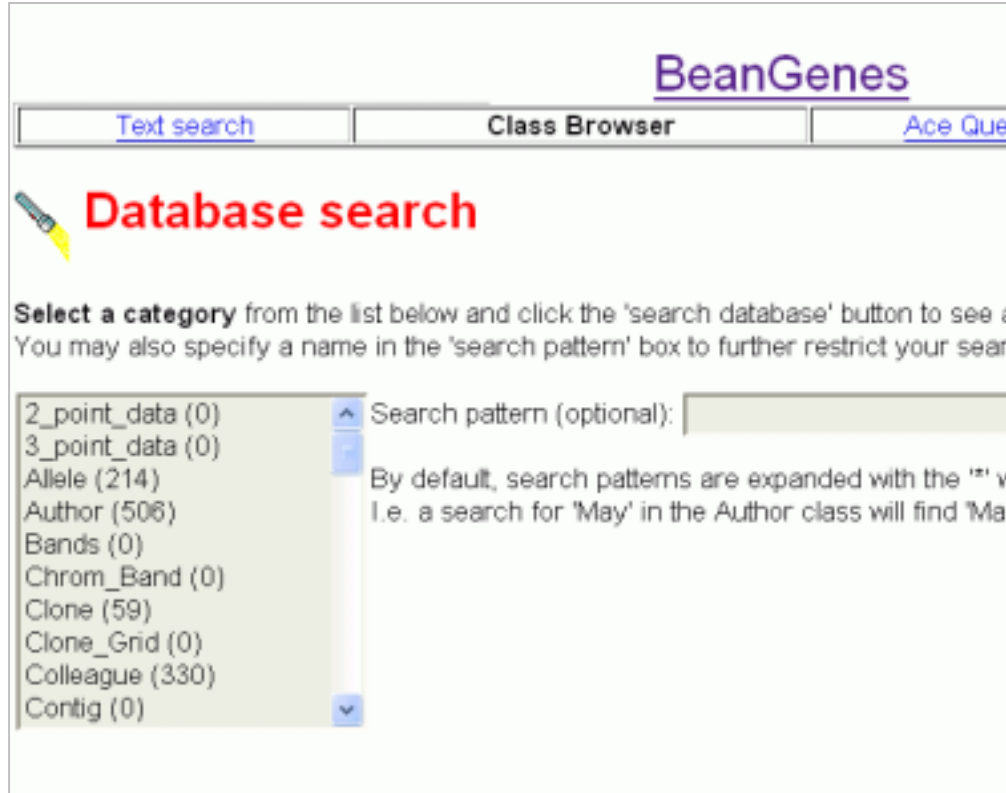


Phaseolus on the Internet

- **Websites and link directories**
- **Genebanks**
- **Sequence and image databases**
- **Group presentation**
- **Communication**

BeanGenes DB


ACEDB Database released in March 1995



The screenshot shows the BeanGenes database search interface. At the top, the title "BeanGenes" is displayed in a purple font. Below it, there are three tabs: "Text search" (selected), "Class Browser", and "Ace Query". A red pencil icon is next to the text "Database search". Below this, a instruction reads: "Select a category from the list below and click the 'search database' button to see a list of results. You may also specify a name in the 'search pattern' box to further restrict your search." A list of categories is shown on the left, each with a count in parentheses: 2_point_data (0), 3_point_data (0), Allele (214), Author (506), Bands (0), Chrom_Band (0), Clone (59), Clone_Grid (0), Colleague (330), and Contig (0). To the right of the list is a "Search pattern (optional):" text box. Below the text box, a note states: "By default, search patterns are expanded with the '*' wildcard. I.e. a search for 'May' in the Author class will find 'May' and 'Maya'." The "search database" button is partially visible at the bottom right.

BeanGenes

[Text search](#) [Class Browser](#) [Ace Query](#)

 **Database search**

Select a category from the list below and click the 'search database' button to see a list of results. You may also specify a name in the 'search pattern' box to further restrict your search.

2_point_data (0) Search pattern (optional):

3_point_data (0)

Allele (214)

Author (506)

Bands (0)

Chrom_Band (0)

Clone (59)

Clone_Grid (0)

Colleague (330)

Contig (0)

By default, search patterns are expanded with the '*' wildcard. I.e. a search for 'May' in the Author class will find 'May' and 'Maya'.

Contains:

- published molecular maps of *Phaseolus vulgaris*
- associated with each molecular map are loci and probe information
- gene information that was compiled by Dr. Bassett
- the published references

BeanRef history



Contains:

- Links and references to different topics in Phaseolus and Vigna research

- Released in autumn 1995 at Univ Kaiserslautern (DE)
- 1997 CNR at Bari (IT)
- 2002 Milan (IT)

BeanRef today

BeanRef

General overview
Genetic resources
Molecular Biology
Cytogenetics
Physiology
Phytopathology
Production-Consumption
Conferences, Organizations
and Groups
Databases
Communication
Useful links

News
Contact
My M.Nemo

Last update: 2007-04-09

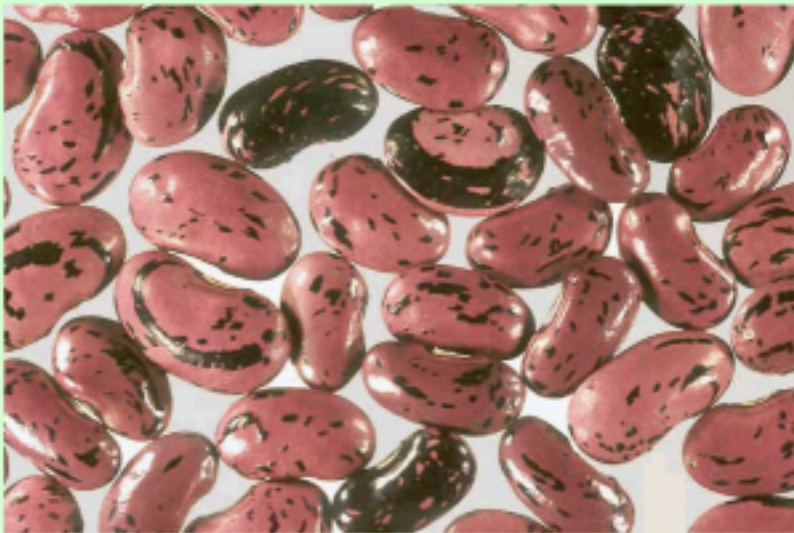
Find! by [EzraCand](#)

[PrimerX](#)
Automated primer
design for site-
directed
mutagenesis

BioBanner Ad

BeanRef

BeanRef is a collection of external links and references from literature to different aspects of research on beans (*Phaseolus* and *Vigna*). Suggestions for further links or references as well as comments are welcome.



Links and references:

- germplasm collections, taxonomy,
- molecular biology and genetics, classical and molecular cytogenetics,
- physiology and phytopathology
- production and consumption,
- conferences, organizations, laboratory groups, and
- related databases
- electronic and printed communications

Centro Internacional de Agricultura Tropical (CIAT) genebank

Genetic Resources Unit

Welcome

Home | English

The Reserve of all Options

User: Mario Nemes [Update] [Logout]

Material search

Services

Bean search result(s) (1 - 10 of 325):
How to make requests?

Identification					Collection information				
Accession number	Synonym	Common names	Seed color	100 seed weight (g)	Country	Department	County	Place	Date of collection (dd-mm-yyyy)
G40001	GENTRY 10402, PI198932	Frijol Bayo		15.1	Mexico	Veracruz	Cordoba	Market in Cordoba	25-04-1951
G40002	NORVELL 3856, PI197032			1					951
G40003	NORVELL 3855, PI197041			1					951
G40004	A-1070, NA-016, PI200749	White		1					952
G40005	NA-017, NA-020, NORVELL 3421, PI200902	A 1622 White		1					952

CIAT

http://isa.ciat.cgiar.org - G40001 - ...



- 36.000 Phaseolus accessions
- 26.500 cultivated Phaseolus vulgaris
- 1.300 wild Phaseolus vulgaris

USDA Phaseolus Genetic Stock Collection

USDA United States Department Of Agriculture
ARS Agricultural Research Service

Pacific West Pullman, WA Plant Germplasm Introduction and Testing

ARS Home | About ARS | Help | Contact Us | En Español
Printable Version E-mail this page

You are here: Home / Phaseolus Genetic Stock Collection

Home

Common Bean (*Phaseolus vulgaris* L.) Genetic Stocks

Introduction

Common bean (*Phaseolus vulgaris* L.), consumed in both dry and fresh forms, is one of the most significant food legumes worldwide. Only soybean (*Glycine max* L.) and peanut (*Arachis hypogea* L.) are considered more important.

Throughout the world, common bean is rated as the most important pulse crop, providing proteins complementary to cereals and other carbohydrate-rich foods, and is a source of many health benefits, e.g. soluble fiber and anti-oxidants.¹⁾



Germplasm Resources Information Network (GRIN)

- GRIN Home Page
- Descriptor Data
- Accession Queries
- Taxonomic Queries
- GRIN *Phaseolus* Species

Related Links

- Phaseolus* Curator
- Phaseolus* Researchers
- CIAT*
- BeanRef News*
- Bean Improvement Cooperative*
- BeanGenes*
- Phaseomics Global Initiative*
- Phaseomics IV Meeting*
- Plant and Animal Genomics XI Conference*

* Goes to a non-federal site

- National Plant Germplasm System (NPGS)
- located in Pullman, WA
- many *P.* species
- GRIN (Germplasm Resources Information Network)

GRIN Taxonomy DB

USDA  United States Department of Agriculture
Agricultural Research Service, Beltsville, MD
Germplasm Resources Information Network ([GRIN](#))

GRIN Taxonomy for Plants

[Distribution](#) [References](#) [Synonyms](#) [Links](#) [Images](#)

[Please tell us why you value GRIN Taxonomy](#)

Taxon: *Phaseolus augusti* Harms

Genus: [Phaseolus](#)
Family: [Fabaceae](#) (alt. *Leguminosae*) subfamily: [Faboidae](#) tribe: [Phaseoleae](#) subtribe: [Phaseolinae](#). Also placed in:
Nomen number: 405611
Place of publication: Notizbl. Bot. Gart. Berlin-Dahlem 7:503. 1921
Name verified on: 02-Aug-1996 by Systematic Botany Laboratory. Last updated: 16-Dec-2004
Species priority site is: Western Regional PI Station ([W6](#)).
Accessions: 16 in National Plant Germplasm System.

- ☐ [List](#) all available (and unavailable ☐) NPGS accessions (include images ☐) sorted by number ☒ or name
- ☐ [List](#) all available (and unavailable ☐) NPGS accessions by country.

Distributional range:

Native:

- SOUTHERN AMERICA**
Western South America: **Bolivia:** Ecuador - Azuay, Loja; **Peru** - Amazonas, Apurimac, Cajamarca, Cuzco, Huancayo, La Libertad
Southern South America: **Argentina** - Jujuy, Salta, Tucuman

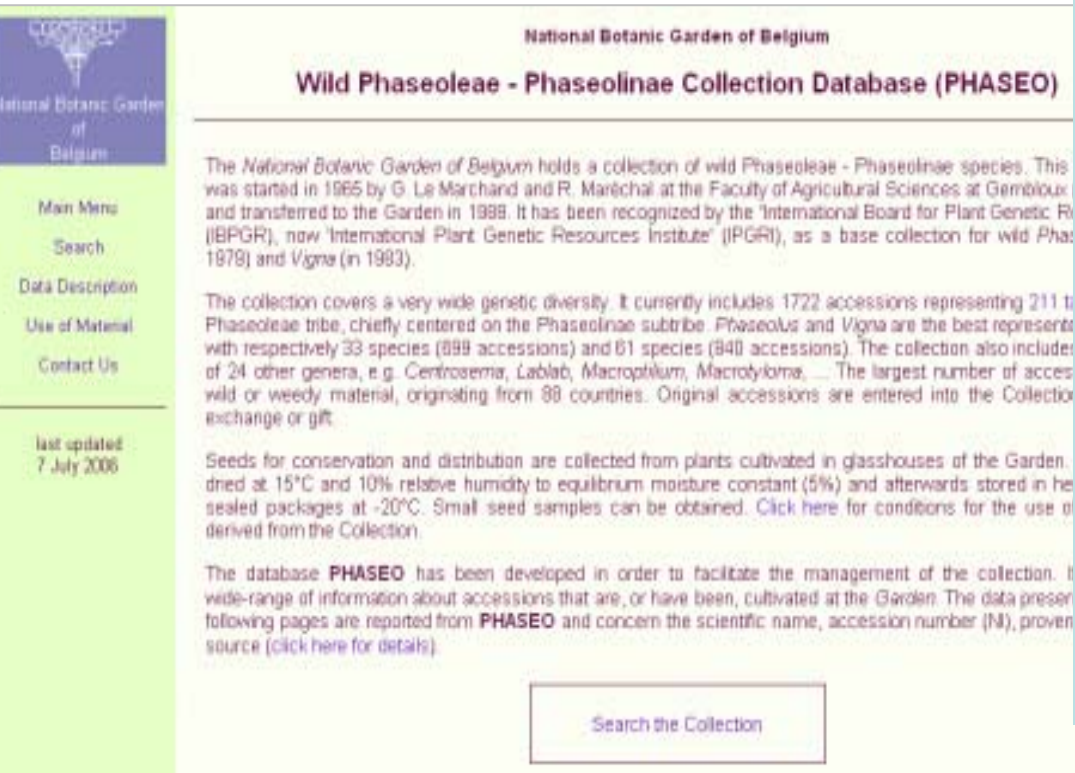
References:

- Brako, L. & J. L. Zarucchi. 1993. Catalogue of the flowering plants and gymnosperms of Peru. Monogr. S. Bot. Gard. 45. (L. Peru)
- Caicedo, A. L. et al. 1999. AFLP fingerprinting of *Phaseolus lunatus* L. and related wild species from South America. [Crop](#)

Contains:

- taxonomy
- geographic distribution
- literature references
- list of NPGS accessions
- synonyms
- common names (lang)
- economic importance
- other plant databases (Flora Europea, W3Tropicos, ILDIS, ePIC, Agricola, Entrez)
- Images

Wild Phaseoleae - Phaseolinae Collection Database (PHASEO)



The screenshot shows the website of the National Botanic Garden of Belgium. On the left is a green sidebar with a logo at the top and a menu with links: Main Menu, Search, Data Description, Use of Material, Contact Us, and last updated 7 July 2006. The main content area has a header with the garden's name and the title 'Wild Phaseoleae - Phaseolinae Collection Database (PHASEO)'. Below the header, there are three paragraphs of text. The first paragraph describes the collection's history. The second paragraph details the genetic diversity and species included. The third paragraph explains the seed conservation process. At the bottom of the main content area is a button labeled 'Search the Collection'.

National Botanic Garden of Belgium

Wild Phaseoleae - Phaseolinae Collection Database (PHASEO)

The National Botanic Garden of Belgium holds a collection of wild Phaseoleae - Phaseolinae species. This was started in 1965 by G. Le Marchand and R. Maréchal at the Faculty of Agricultural Sciences at Gembloux and transferred to the Garden in 1988. It has been recognized by the 'International Board for Plant Genetic Resources' (IBPGR), now 'International Plant Genetic Resources Institute' (IPGRI), as a base collection for wild *Phaseolus* (in 1979) and *Vigna* (in 1983).

The collection covers a very wide genetic diversity. It currently includes 1722 accessions representing 211 taxa of the Phaseoleae tribe, chiefly centered on the Phaseolinae subtribe. *Phaseolus* and *Vigna* are the best represented genera with respectively 33 species (899 accessions) and 61 species (940 accessions). The collection also includes material of 24 other genera, e.g. *Centrosema*, *Lablab*, *Macroptilium*, *Macrotyloma*, The largest number of accessions is derived from wild or weedy material, originating from 88 countries. Original accessions are entered into the Collection as such or after exchange or gift.

Seeds for conservation and distribution are collected from plants cultivated in glasshouses of the Garden. They are dried at 15°C and 10% relative humidity to equilibrium moisture constant (5%) and afterwards stored in hermetic sealed packages at -20°C. Small seed samples can be obtained. [Click here](#) for conditions for the use of seeds derived from the Collection.


The database **PHASEO** has been developed in order to facilitate the management of the collection. It contains a wide-range of information about accessions that are, or have been, cultivated at the Garden. The data presented on the following pages are reported from **PHASEO** and concern the scientific name, accession number (N°), provenance and source ([click here](#) for details).

[Search the Collection](#)

Contains:

- 700 *Phaseolus* acc.
- status
- location and altitude
- collector and donor information
- related accessions

Italian Landraces of Common bean(ILCB)

**ILCB**

Basilicata
Overview
Seed pictures
Select/ browse
List all data
References

Other regions:
[Veneto](#)
[Lazio](#)
[Abruzzo](#)
[From others](#)

Dott. A.R. Perugini
HTML by Mario Nenna
Last change: 21 Oct 2004

Italian Landraces of Common Bean



Local name	PANZAREDDA
Origin	ROTONDA
Consumption from	GREEN POD, GREEN SEED, DRY SEED
Growth habit	CLIMBING
Plant height (cm)	228
Dry pod colour	PURPLE STRIPE ON GREEN
Seeds per pod	6.5
Dry seed yield (q/ha)	38
100 seed weight (g)	62.1
Protein content (% dm)	25.9
Phaseolin type	C



Italy



BASILICATA

Contains:

- 96 Italian landraces
- local name
- origin
- growth habit
- seed description
- 100 seed weight
- protein content
- phaseolin type
- seed images

Bean Improvement Cooperative (BIC)



Bean Improvement Cooperative

BIC Annual Reports 1998-2006

BIC annual reports volumes 41 through 49 are attached as links. If you have difficulty downloading the files, CD versions are available for the cost of \$15.00 by contacting BIC President Dr. James D. Kelly at kellyj@msu.edu.

Current year 2006 BIC report volume 49 can be obtained by joining the BIC - see details on registration form on the attached page.

- ▶ Home
- ▶ Annual Reports
- ▶ Registration
- ▶ Meetings
- ▶ Review Articles
- ▶ Research


Techniques

- ▶ BIC Committees
- ▶ Genetics
- ▶ BIC Awards
- ▶ Links


-  [BIC 2002 Annual Report](#)
-  [BIC 2003 Annual Report](#)
-  [BIC 2004 Annual Report](#)
-  [BIC 2005 Annual Report](#)
-  [BIC 2006 Annual Report](#)






Gepts Lab



Plant Sciences



CROP EVOLUTION, DOMESTICATION, AND BIODIVERSITY - PAUL GEPTS LAB AT UC DAVIS



[Home](#)
[Lab Members](#)
[Research](#)
[Phaseolus-Vigna Genome Mapping](#)
[Education and Teaching](#)
[Plant Breeding Education at UC Davis](#)
[Lab Meetings](#)
[CATG Initiative](#)
[Phaseomics V Meeting](#)
[Outreach](#)
[Links](#)

Publications

(in reverse chronological order; [for publications listed by themes, click here](#))

Updated April 15, 2007

2007 Chambers KJ, Brush SB, Grote M, Gepts P Describing maize (*Zea mays* L.) landrace persistence in the Bajío of Mexico: A survey of 1940s and 1950s collection locations. *Econ Bot* 61:60-72 [Pdf version](#) (© 2007 Society for Economic Botany)

2007 Martínez-Castillo J, Zizumbo-Villareal D, Gepts P, Colunga-García-Marín P. Gene flow and genetic structure in the wild-weedy-domesticated complex of *Phaseolus lunatus* L. in its Mesoamerican center of domestication and diversity. *Crop Sci* 47:58-66 DOI 10.2135/cropsci2006.04.0241 [Abstract](#) / [Pdf version](#) (© 2007 Springer Verlag)

2006 Feleke, Y., R.S. Pasquet and P. Gepts. Development of PCR-based chloroplast DNA markers that characterize domesticated cowpea (*Vigna unguiculata* ssp. *unguiculata* var. *unguiculata*) and highlight its crop-weed complex. *Plant Systematics and Evolution* 262: 75-87 DOI 10.1007/s00606-006-0475-0 [Abstract](#) / [Pdf version](#) (© 2006 Springer Verlag)

2006 Gepts P. Plant genetic resources conservation and utilization: the accomplishments and future of a societal insurance policy. *Crop Science* 46:2278-2292 DOI:10.2135/cropsci2006.03.0169gas [Abstract](#) / [Pdf version](#) (© 2006 Crop Science Society of America).

2006 Gepts P, Hancock J. The future of plant breeding. *Crop Science* 46: 1630-1634 DOI: 10.2135/cropsci2005-12-0497op. [Abstract](#) / [Pdf version](#) (© 2006 Crop Science Society of America).

2006 Martínez-Castillo J, Zizumbo-Villarreal J, Gepts P, Delgado-Valerio P, and Colunga-GarcíaMarín P. Structure and genetic diversity of wild populations of Lima bean (*Phaseolus lunatus* L.) from the Yucatan peninsula, Mexico. *Crop Sci* 46: 1071-1080 doi:10.2135/cropsci2005.05-0081. [Abstract](#) / [Pdf version](#) (© 2005 Crop Science Society of America).

Phaseolus Seed Protein Group (PSPG)

PSPG

[About PSPG](#)


Activities

[Patents](#)

[Members & Collaborators](#)

[Links](#)


[Press communications](#)



Phaseolus Seed Protein Group

Present ongoing research activities

[Bean seeds improvement](#)



[Modulation of nutritionally active compounds](#)

[APA locus organization and evolution](#)

[Transcriptional analysis of the UPR in bean cotyledons](#)

Phaseolus coccineus EST DB

Contains:

- Cell differentiation events during early embryogenesis
- 16.000 suspensor
- 3.000 embro-proper
- categorized into different functional groups based on the results of BLAST searches

Phaseolus coccineus Embryo EST Project

The *Phaseolus coccineus* EST Project

We are using the giant embryos of *Phaseolus coccineus* (Scarlet Runner Bean) to identify genes active in different regions of post-fertilization plant embryos in order to understand the mechanisms responsible for cell differentiation events during early embryogenesis. Globular-stage embryos were dissected from developing seeds and embryo proper (ep) and suspensor (s) regions were collected. cDNA libraries were generated from the suspensor and embryo-proper total RNAs. The 5' ends of individual clones from each library were subjected to "single-pass" high-throughput sequencing. To date, we have sequenced a total of 16,810 suspensor and 3,311 embryo-proper cDNAs. These ESTs have been categorized into different functional groups based on the results of BLAST searches and organized into an EST relational database. We identified ~250 ESTs representing different transcription factor classes (e.g., AP2/EREBP, B3 domain, CCAAT-box binding protein, homeodomain, polycomb complex, etc.) and ~250 signaling transduction proteins.

Our Scarlet Runner Bean EST database is open to the scientific community in order to explore mRNAs found in the suspensor and embryo proper of the globular-stage embryos. In addition, you can identify orthologs to your DNA sequence(s) by performing BLASTN and/or TBLASTX searches against our EST database.

[Click here](#) to browse or BLAST your sequences against the *Phaseolus coccineus* EST database.

Phaseolus vulgaris physical map

Contains:

- WebFPC: display contigs
- WebChrom: contigs and genetic markers aligned to chr.
- WebBSS:BLAST your sequence against sequenced clones
- WebFcmp: compare one fp against all

The screenshot shows the WebFPC v2.1 web interface. At the top left is the CSREES logo. The title is "WebFPC: Phaseolus". Below the title is a paragraph: "This work was supported by the National Research Initiative Plant Genome Program of USDA's Cooperative State Research, Education and Extension Service, grant number 2006-03556". There are links for Home, WebFPC, WebChrom, WebBSS, and WebFcmp. The main content area is titled "WebFPC v2.1" and has a "Help" button. It contains two sections: "Select Contig" and "Search for Contig". The "Select Contig" section has a table with columns: Contig, Clones, Markers, Sequence, G# Lg. The "Search for Contig" section has two search buttons: "Search By Marker" and "Search By Clone", each with an input field. Below these is a table with columns: Type, Name, Ctg. At the bottom are "Display" and "Clear" buttons.

Contig	Clones	Markers	Sequence	G# Lg
1	899	2		101
2	37			3
3	81			4
4	161			10
5	287	2		23
6	338	4		20
7	63	2		3
8	180			14
9	121			7
10	29			2
11	69			4
12	258	1		24
13	94			6
14	89			8
15	82	1		5
16	17			2
17	114	2		6
18	85			2

Phaseomics site

PHASEOMICS

PHASEOMICS Global Initiative

- Global Initiative
- Transformation workgroup
- Est workgroup
- Genetic Resources and Libraries
- Partner links
- Links to Phaseolus related sites
- Meetings pictures
- Link to exchange grants page
- Feedback

Last update:
2004-02-26



- [Introduction](#)
- [The Phaseomics initiative](#)
- [Partners](#)

Introduction

Beans are one of the most ancient crops of the world. Together with maize and cassava, they have been a dominant staple in the low to mid-altitudes of the Americas for millennia. Beans (*Phaseolus* spp. L) are extremely diverse crops in terms of cultivation methods, uses, the range of environments to which they have been adapted, and morphological variability. They are found from sea level up to 3,000 metres above sea level, are cultivated in monoculture, in associations, or in rotations. Beans are consumed as mature grain, as immature seed, as well as a vegetable (both leaves and pods). Their genetic resources exist as a complex array of major and minor gene pools, races and intermediate types, with occasional introgression between wild ancestors and domesticated types. Beans are thus a crop that is adapted to many niches, both in agronomic and consumer preference terms. As fruit (pods) can be obtained in as little as two months, rotations are possible with other crops during short growing seasons. Short bush growth habits offer minimal competition and permit inter-planting with other species, for example, in reforestation projects or among fruit trees or coffee plantations during the early years until the main crop can be exploited. At the other extreme are aggressive climbers found at higher altitudes on subsistence farms where a few plants are maintained as a sort of insurance and are continually harvested for about six months. Over the past twenty years, beans have also been increasingly cultivated on a commercial scale, and are now offered in national, regional and international markets.

Diets of subsistence level farmers in Africa and Latin America often contain sufficient

Bean seed images



Bean Seed Images

[Home](#) | [Images](#) | [Species list](#) | [Search](#) | [References](#) | [Links](#)

The *Bean Seed Images* project collects seed images of the 80 accepted species of the Genus *Phaseolus* and some of the related Genus *Vigna*.



Bean seed images project

To find seed images or the profile of total seed proteins (SDS-PAGE) of a particular species or accession number go either to the menu:

- [Images](#) to browse the thumbnail pics or
- [Species](#) for overview for which species images are available.
- [Search](#) to select from scientific species name, common name or accession number.



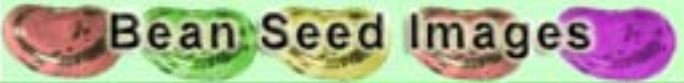
New
SDS-PAGE
profiles
of total
seed proteins

Project by [Mario Neri](#), [Acknowledgement](#)

Contains:



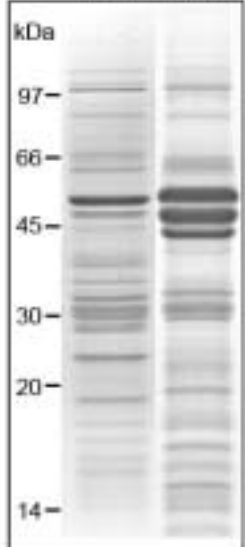
- Seed images from available *Phaseolus* sp.
- seed images (macro) lateral and hilum region
- *Phaseolus* species list
- search for scientific name, common name and accession number
- links to genebanks
- links to GRIN DB
- SDS-PAGE profiles

Bean seed images – example



Home Images Species list Search References Links

P.acutifolius var. *acutifolius* (Tepary bean)

Seed image	Seed data
 	Accession in image NI-576
	Genebank: National Botanic Garden of Belgium
	Related GRIN Taxonomy info
	Nomen number 312012
	Accessions List
	SDS-PAGE of total seed proteins
	NI-576 <i>P. vulgaris</i> Taylor's H.
	
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Legume Message Board



Legume Message Board • Discussions on Legume research

[FAQ](#) [Search](#) [Memberlist](#) [Usergroups](#) [Register](#) [Profile](#) [Log in](#)

The time now is Tue May 08, 2007 10:13 am
Legume Message Board Forum Index

View shoutbox

Forum	Topics	Posts	Last Post
Legumes			
Legume and Research news Specific and general news, information and announcements related to legume research.	4	4	Mon Apr 09, 2007 11:11 am marco ➡
Material and Methods Problems, questions, comments on plant and microbe material and laboratory and field methods.	0	0	No Posts
Problems and research targets What are the issues of legumes and what can be done	0	0	No Posts
Medicago - Model legume M. truncatula (barrel medic) , Alfalfa (M. sativa) and others	0	0	No Posts
Soybean Glycine max	0	0	No Posts
Beans Phaseolus and Vigna	0	0	No Posts
Lotus Lotus japonicus	1	1	Wed Mar 22, 2006 10:03 am marco ➡
Beans and Lotus What can bean and lotus research learn from each other	0	0	No Posts
Plant-microbe interaction and Nitrogen fixation Rhizobium and Legumes	0	0	No Posts
Pathogens and disease problems Xanthomonas, Ralstonia, Common Blight, Halo Blight, Brown Spot, White Mold, Bean Common Mosaic Necrosis	0	0	No Posts
Research projects			
FP7 EC 7th Framework Programme	1	1	Wed Dec 06, 2006 2:11 pm marco ➡
Phyten Phyate and phosphorus project	1	1	Wed Sep 20, 2006 6:45 pm marco ➡
Groups and organisations			
Jobs Postdoc and other open job positions	2	2	Tue Oct 03, 2006 7:43 pm athina50 ➡

Topic:

- general discussion
- material & methods
- Phaseolus, medicago, soybean, lotus
- Plant-microbe interaction
- Pathogens
- research projects
- job announcements
- work group presentations
- started 2006



Legume sites

- **ILDIS**
- **Legume Informations system (LIS)**
- **Medicago sequencing project**

International Legume Database & Information Service (ILDIS)



The screenshot shows the ILDIS website. At the top left is the ILDIS logo, a green circle with a purple bar and the text 'INTERNATIONAL LEGUME DATABASE & INFORMATION SERVICE'. To the right is a book cover for 'Legumes of China'. Below the logo is a 'Quick search (scientific name)' field with a 'Submit' button. The main content area is divided into 'Current version' and 'Older versions'. The 'Current version' section includes links to search the ILDIS World Database of Legumes (version 10, November 2005) using the LegumeWeb on-line database search service, and to download the ILDIS Explorer software and database. The 'Older versions' section includes links to search the ILDIS World Database of Legumes (version 9.00, dated January 2005) using the LegumeWeb on-line database search service, and to browse the ILDIS Legumes of the World draft checklist created by the AlexWeb HTML report generator from the ILDIS World Database of Legumes (version 6.00, 11 June 2001). A central image of a white and red flower is also visible.

ILDIS
INTERNATIONAL LEGUME DATABASE & INFORMATION SERVICE

ILDIS
International Legume Database & Information Service

new

- *Legumes of China - a check-list* by X.Y. Zhu, Y.F. Du, J. Wen & B.J. Bao (2007)
A new volume in the series of ILDIS regional checklists is in preparation. It will be published in April 2007 by ILDIS at the University of Reading and available from Xiangyun Zhu at IP/CAS, Beijing. See our [Products and Services](#) page.

December 2006

Quick search (scientific name):

Current version

Search the [ILDIS World Database of Legumes](#) (version 10, November 2005) using the [LegumeWeb](#) on-line database search service

Download the [ILDIS Explorer](#) software and database, with an innovative new program for browsing and searching

Older versions

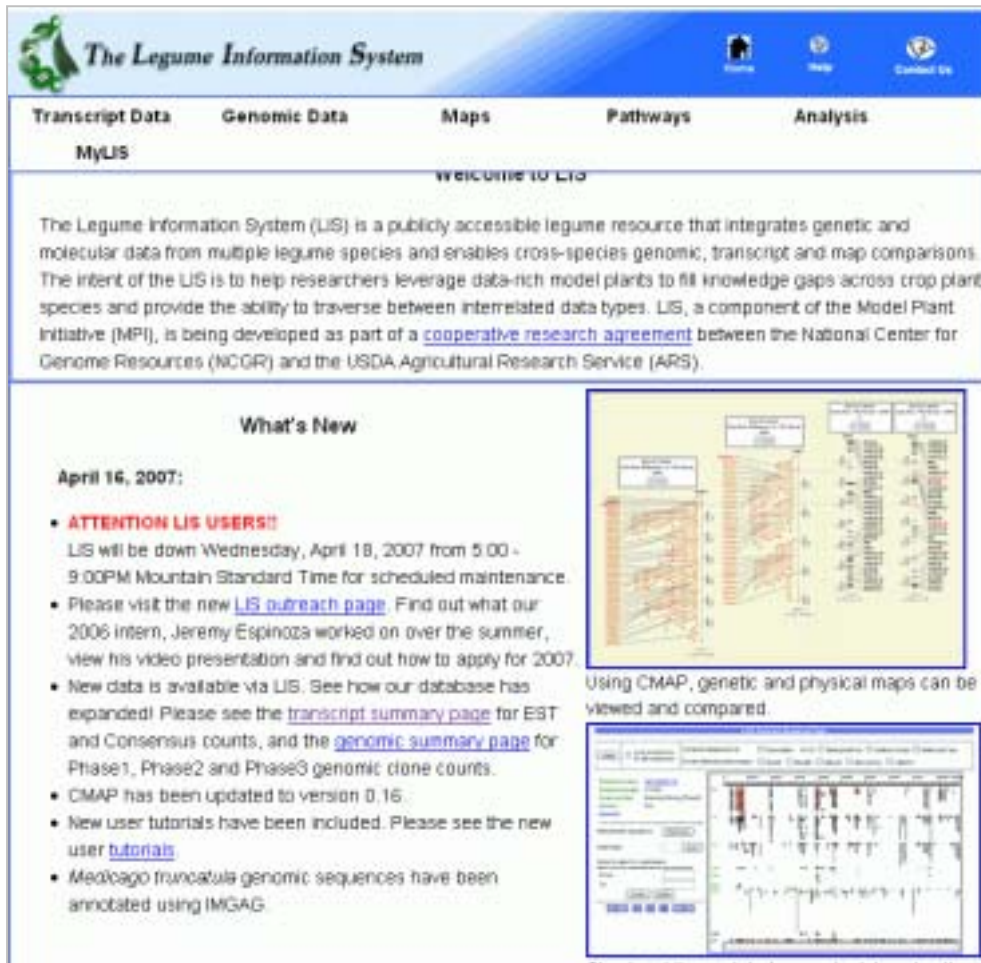
Search the [ILDIS World Database of Legumes](#) (version 9.00, dated January 2005) using the [LegumeWeb](#) on-line database search service

Browse the [ILDIS Legumes of the World](#) draft checklist created by the [AlexWeb](#) HTML report generator from the ILDIS World Database of Legumes (version 6.00, 11 June 2001)

Contains:

- To document and catalogue the world's legume species diversity
- Legume web
- taxonomy
- accepted/common names
- synonyms
- descriptors
- Use and notes
- geographics records
- sources
- literature references

Legume Information System (LIS)



The screenshot shows the homepage of The Legume Information System (LIS). The header features the LIS logo and navigation links: Home, Help, and Contact Us. Below the header is a menu bar with links to Transcript Data, Genomic Data, Maps, Pathways, and Analysis. A 'MyLIS' link is also present. The main content area includes a 'Welcome to LIS' message and a paragraph describing the system as a publicly accessible legume resource that integrates genetic and molecular data from multiple legume species. It mentions the intent to help researchers leverage data-rich model plants to fill knowledge gaps across crop plant species and provide the ability to traverse between interrelated data types. LIS is noted as a component of the Model Plant Initiative (MPI), being developed as part of a cooperative research agreement between the National Center for Genome Resources (NCGR) and the USDA Agricultural Research Service (ARS).

What's New

April 16, 2007:


- **ATTENTION LIS USERS!!**
LIS will be down Wednesday, April 18, 2007 from 5:00 - 9:00PM Mountain Standard Time for scheduled maintenance.
- Please visit the new [LIS outreach page](#). Find out what our 2006 intern, Jeremy Espinoza worked on over the summer, view his video presentation and find out how to apply for 2007.
- New data is available via LIS. See how our database has expanded! Please see the [transcript summary page](#) for EST and Consensus counts, and the [genomic summary page](#) for Phase1, Phase2 and Phase3 genomic clone counts.
- CMAP has been updated to version 0.16.
- New user tutorials have been included. Please see the new user [tutorials](#).
- *Medicago truncatula* genomic sequences have been annotated using IMGAG.

Two screenshots are included: the top one shows a CMAP (Comparative Map) interface with genetic and physical maps, and the bottom one shows a detailed genomic map with various data tracks.

Contains:

- Integrate genetic and molecular data of legumes to enables cross-species comparison
- Transcript data
- Genomic data
- Maps
- Pathways
- Analysis
- Forum
- Link to the Legume information Network (LIN)

Medicago sequencing project



Medicago truncatula SEQUENCING RESOURCES

An organizational center for the NSF/EU Medicago truncatula genome sequencing project

Minnesota — N. Young et al	Oklahoma — B. Roe et al	TIGR — C. Town et al
Minnesota — E. Reibel et al	INRA-Medicago	UrMeLDB
Noble Foundation	NSF Plant Genome	LISNCOR

[About this site/FAQs](#) [About this project >>](#) [Data release policy >>](#)

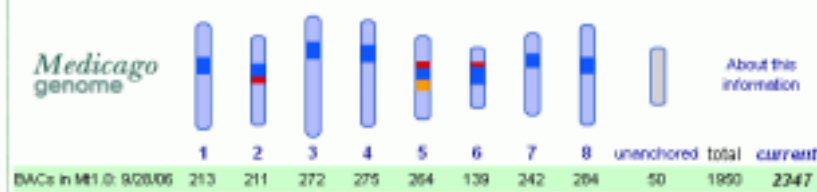
Search databases for:

in [all data](#) [GO>](#) [HELP?](#)

Project home

- About this project
- Genome statistics
- BAC registry
- Downloads
- Genetic map
- Genome links & viewers
- Blast & search
- Gene annotation
- News
- Literature
- Participants
- Report data errors
- Web site comments

www.medicago.org



Medicago genome

Chromosome	1	2	3	4	5	6	7	8	unanchored	total	current
BACs in Mt1.0	213	211	272	275	264	139	242	264	50	1890	2247

Mt1.0 release information

[Medicago genome release version 1.0](#) — Assembly, annotation and related files for Mt1.0.

[Genome assembly browser](#) — A Java visualization tool used to browse the assembly.

[Genome assembly table](#) — Data underlying the Java applet above in table format.

[CVIT-Blast](#) — Visualized blast result on the genome. ([? CVIT ?](#))

[CVIT-BACs](#) — Visualized BACregion search result on the genome.

[Genome snapshots](#) — Some CVIT pictures about Mt1.0.

[Build statistics](#) — Some statistics on Mt1.0

Get other information

[IMGAG](#) — International Medicago Genome Annotation Group gene annotation

[Medicago sequences download](#) — get the current BACs, markers or BES sequences

[UMN BAC passport](#) — specific information related to a BAC

[UMN BAC registry](#) — check BACs status, claim BACs to sequence

Other sequence data sites

[Oklahoma](#) — BACs & annotations views — chromosomes 1, 4, 6, 8

[TIGR](#) — BACs & annotation views — chromosomes 2, 7

Contains:

- About sequencing the Medicago truncatula genome
- Genome views
- Blast searches
- Links: Medicago, Legumes
- Phonebook



Conclusions

- more *presentations*, since only few groups and individuals are visible online
- more *collaborations*
- a *common virtual meeting point* to present results, discuss together, find funding partners



Thanks

- **Phaseolus Seed Protein Group (PSPG)**
 - Dr. Roberto Bollini
 - Dr. Francesca Sparvoli
 - Dr. Incoronata Galasso
- Links at: www.nenno.it/Beanref/
- My blog: www.nenno.it/brameoblog/