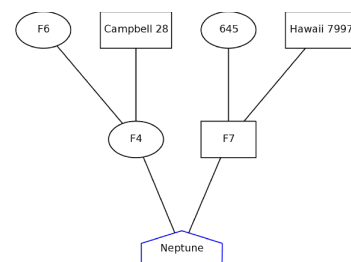


Breeder's Toolbox

The breeders portal aggregates all breeder-relevant tools, data, and tutorials, including tools like the pedigree viewer and the SNP tool. It also contains other useful resources like SolCAP data, markers and phenotypes.



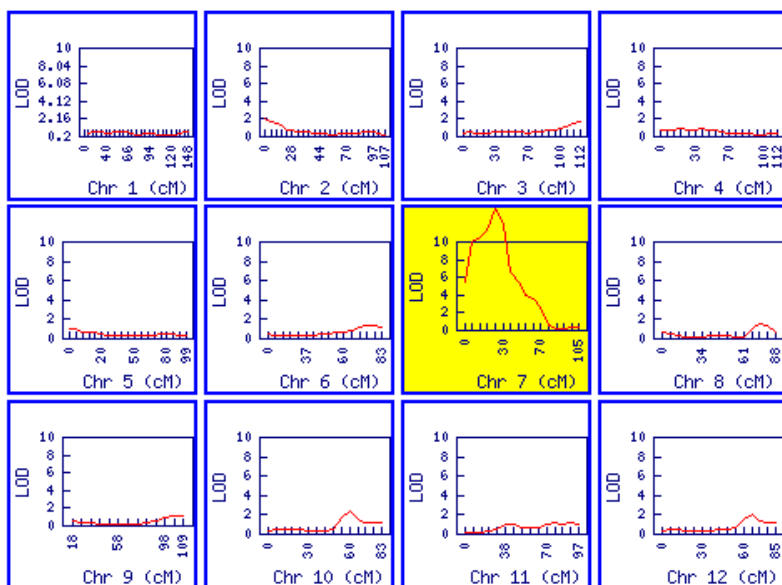
Data uploading compatible with the Android Field Book application



Example of the Pedigree viewer display

SolQTL solgenomics.net/qtl

A tool for predicting QTLs and linking them to genomic annotations



Dynamic QTL plots for an example fruit shape QTL located on chromosome 7 of tomato.

Breeders Databases

The SGN code was also used to develop other clade oriented databases for breeders

- CassavaBase: www.cassavabase.org
- SweetPotatoBase: www.sweetpotatobase.org
- MusaBase: www.musabase.org
- YamBase: www.yambase.org

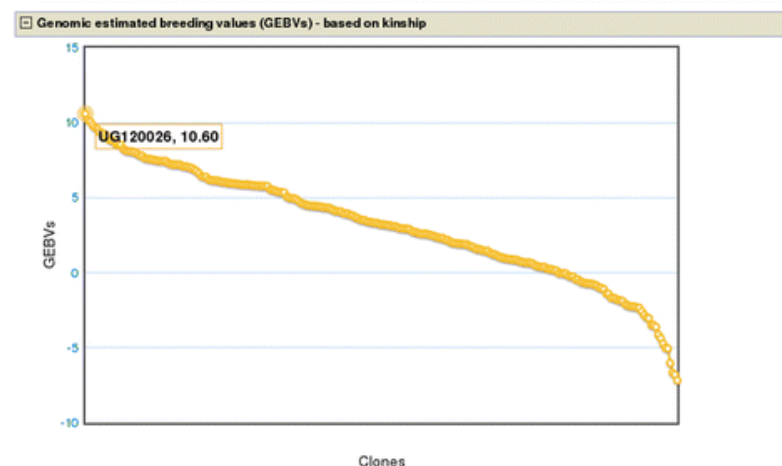


CassavaBase

SolGS

<http://cassavabase.org/solgs>

SolGS enables breeders to store raw data and estimate breeding values of individuals online in an intuitive and interactive workflow. Currently available on CassavaBase only.



Useful Links

- FTP Site: <ftp://ftp.solgenomics.net>
- Bulk Download: solgenomics.net/bulk/input.pl
- SGN Code: github.com/solgenomics
- SGN SlideShare: www.slideshare.net/solgenomics

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Contact Us

<https://solgenomics.net/contact/form/>



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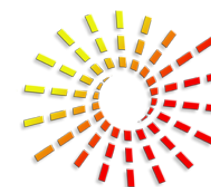


www.facebook.com/solgenomics

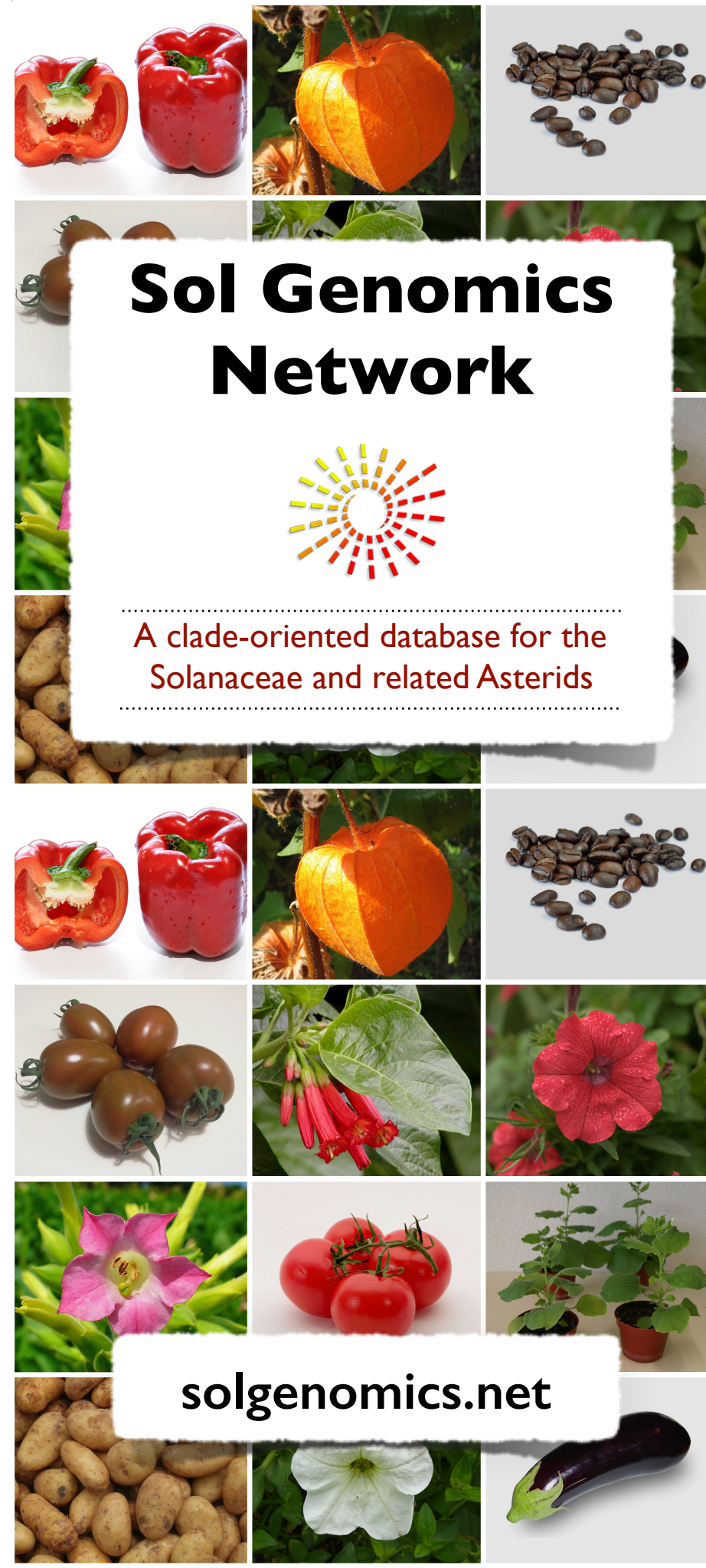


www.twitter.com/solgenomics

Sol Genomics Network



A clade-oriented database for the
Solanaceae and related Asterids



solgenomics.net

Genomes

SGN is a resource for genetic, genomic, and phenotypic information for the Solanaceae family and other Asterids. SGN is the bioinformatics hub for the tomato genome, as well as other genomes, including:

- *Solanum tuberosum*
- *Capsicum annuum*
- *Solanum melongena*
- *Solanum pimpinellifolium*
- *Solanum pennellii*
- *Coffea canephora*
- *Nicotiana benthamiana*
- *Nicotiana tabacum*
- *Nicotiana spp.*
- Tomato 150 genomes
- Tomato 360 genomes
- *Petunia spp.*

Loci

The SGN locus database is a community-curated repository for gene information. Each locus can be assigned a locus editor from the research community who can edit and add to the information.

Locus details		Download GMOD XML Note to Editors Annotation guidelines
[New] [Edit] [Delete]		
Locus		
Locus name	sun	
Symbol	sun	
Gene activity	putative calmodulin binding protein	
Description	Belongs to the IQ67 domain family of proteins. Controls elongated and pointed fruit shape. Note that this locus is not present in the Heinz 1706 reference sequence (Heinz 1706 has round fruits). The most closely related sequence in the reference is Solyc10g079240, the presumptive origin of the transposition.	
Chromosome	7	
Arm	short	

Locus page for tomato SUN locus.

Phenotype Data

The SGN phenotype database is linked to both the loci and genome databases and contains information on plant accessions, such as mapping populations, breeder lines, and segregating populations.



Fruit color	Average	Min	Max	Lines/repeats
Cross section average 'a' value	39.09	33.91	41.60	5
Cross section average 'b' value	22.86	21.20	23.96	5
Cross section average L value	36.57	35.73	38.87	5
Fruit cross section	Average	Min	Max	Lines/repeats
fruit lobedness degree	2.01	1.15	4.09	5
pericarp area (square centimeter)	0.45	0.44	0.45	5
pericarp thickness (centimeter)	0.26	0.25	0.26	5

Tools at SGN

BLAST

solgenomics.net/tools/blast

New BLAST interface including databases for the most important public data from Solanaceae species and a new application to search sequences by description and gene name in the BLAST databases.

Input parameters

Categories: Popular datasets

Database: Tomato Genome cDNA (TAG release 2.40)

Program: blastn (nucleotide to nucleotide db)

Query: autodelect

BLAST

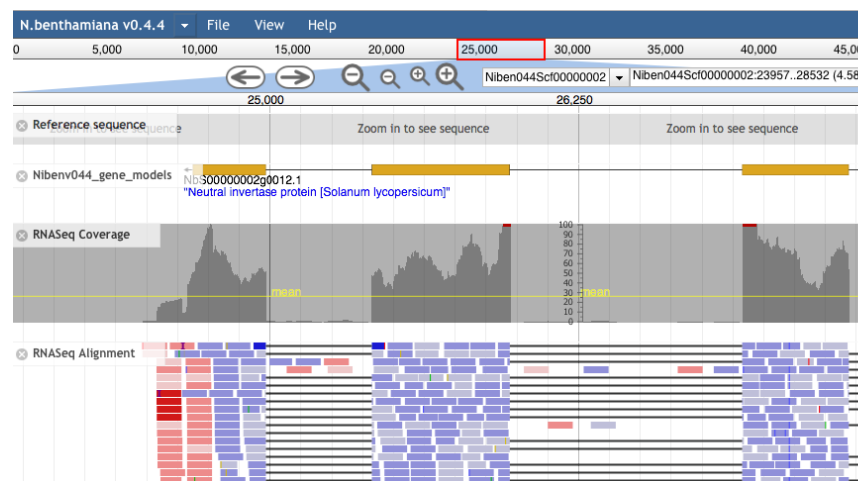
Advanced Options

Extract sequences from BLAST databases

JBrowse

solgenomics.net/jbrowse

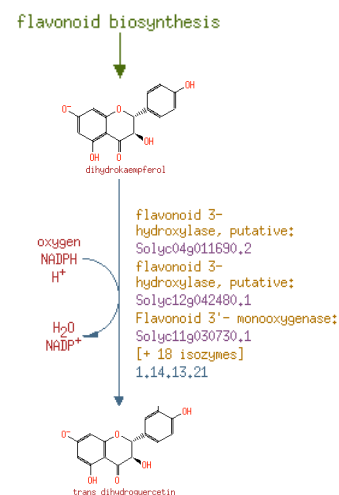
A fast and modern genome browser with genomic data for Solanaceae species



SolCyc

solcyc.solgenomics.net

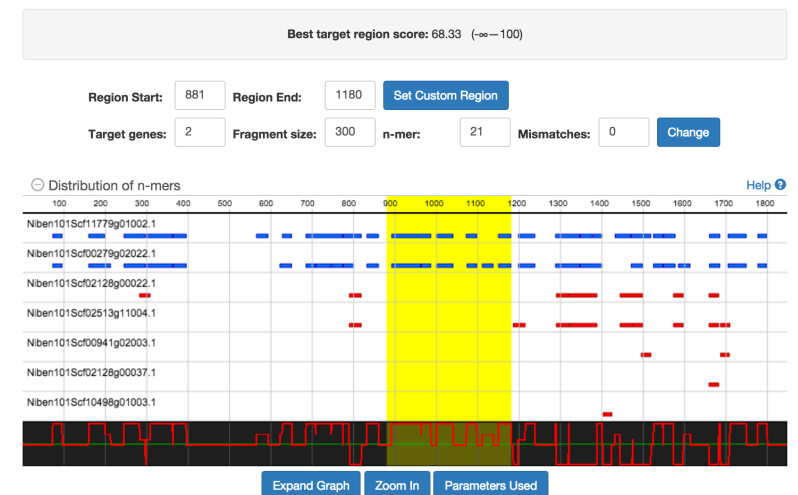
The SolCyc collection of pathway/genome databases represents the metabolism of a collection of Solanaceae species.



SGN VIGS Tool

vigs.solgenomics.net

This SGN web tool facilitates the design of VIGS constructs minimizing off-targets.



Tomato Expression Atlas

tea.solgenomics.net

Tomato expression data from specific cell types using laser dissection will be displayed in our upcoming interactive expression atlas.

