



PULSE CROP DATABASE

Genomic, Genetic, and Breeding Resources
for Pulse Crop Improvement

Issue 7 | April 2023

What's new in PCD?

Tool Improvements

- MapViewer updated to display GWAS and adjust colors
- MegaSearch updated to query GWAS, search records with empty fields
- Gene annotation template and loader created
- Links to [Fruit and Nut Cultivars Database](#)
- Ortholog page added to gene/mRNA pages

Outreach

- [Marker Search Video Tutorial](#) (2.39 mins)
- [Genetic Map and Genome Correspondence Video Tutorial](#) (2.47 mins)

Data

- Major new data is being added soon, stay tuned for updates

Viewing traits and descriptors

We curate the trait and trait descriptors from QTL and phenotype data. The curation process links all the similar traits together under a unified ontology and provides easy access to all the data associated with that trait (QTL, Phenotype Data, Publications). There are multiple ways to view the trait information. We have already covered the QTL Search in a [video](#) on our YouTube channel so let's focus on the other ways to explore traits.

Abbreviations. This opens an expandable interface with a list of all the trait categories. The second is from the Search Menu, Search → Trait Search. This search allows for filtering by keyword or trait category and the data can be downloaded in a table format. Click on a category to see all the traits. All of the trait searches have hyperlinks to the Trait Overview page which allows for easy access to all the QTLs and manuscripts associated with the trait.

The first is from the Data menu, Data → Trait

Trait Search

Category:

Keyword:

Links to all associated QTLs and publications

Trait Overview

QTLs/MTLs

Publications

Trait	Boron concentration
Trait Category	Biochemical trait
Abbreviation	BCONC
Definition	Boron concentration in the seed
QTLs	[view all 27]

55 records were returned Download Table

#	Category	Abbreviation	Trait	Definition
1	Biochemical trait	BCONC	Boron concentration	Boron concentration in the seed
2	Biochemical trait	BCXC	Beta-cryptoxanthin content	Methods not specified
3	Biochemical trait	CACONC	Calcium concentration	Calcium concentration in the seed
4	Biochemical trait	CARC	Carotenoid content	Methods not specified
5	Biochemical trait	CO2ACO2	Carbon dioxide assimilation rate at increasing carbon dioxide concentration	umol*CO2/m2*s, measured using LI-6400XT (LI-COR Inc., USA) on plants 60-90 days after sowing
6	Biochemical trait	CO2ALUX	Carbon dioxide assimilation rate at increasing light intensity	umol*CO2/m2*s, measured using LI-6400XT (LI-COR Inc., USA) on plants 60-90 days after sowing
7	Biochemical trait	CUCONC	Copper concentration	Copper Concentration in the seed

Search Markers by Locus

Did you know? You can search for markers near the marker locus of your interest? For example, you can search SNPs that are near an SSR or search for SSRs near a SNP of interest. Access the search via the tool bar, Search → Marker Search by Locus.

Marker Search by Locus

Search for markers in PCD. In search nearby markers site, users can obtain a list of all loci that are within a specified distance of the particular locus on any genetic map. | [Text tutorial](#) | [Email us with problems and suggestions](#)

Locus: to file (e.g., chickpea-10000-F2)

Distance: cM

Marker Type:

Limit the search by locus name(s), distance or marker type

Download the results

140554 records were returned

[Download](#) [Table](#)

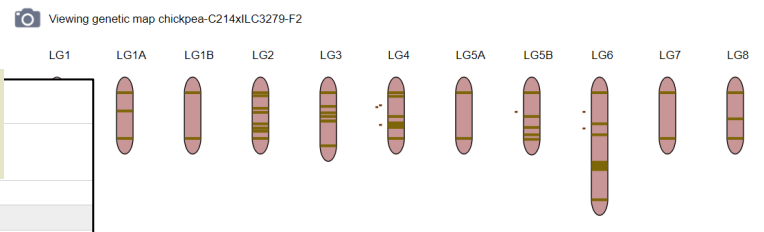
#	Locus	Map	Linkage Group	Position	Neighbor	Position	Marker Type
1	TA96	chickpea-C214xILC3279-F2	LG2	37.10	H2B061	37.40	SSR
2	H4G11	chickpea-C214xILC3279-F2	LG4	34.20	CaM2049	35.10	SSR
3	NCPGR6	chickpea-C214xILC3279-F2	LG4	35.40	CaM2049	35.10	SSR
4	N16	chickpea-C214xILC3279-F2	LG4	35.40	CaM2049	35.10	SSR
5	H4G11	chickpea-C214xILC3279-F2	LG4	34.20	H1G20	33.60	SSR
6	CaM2049	chickpea-C214xILC3279-F2	LG4	35.10	H4G11	34.20	SSR
7	H1G20	chickpea-C214xILC3279-F2	LG4	33.60	H4G11	34.20	SSR
8	CaM038	chickpea-C214xILC3279-F2	LG5B	0.00	CaM0038	0.00	SSR
9	CaM0464	chickpea-C214xILC3279-F2	LG6	79.90	CaM0317	80.60	SSR
10	CaM0677	chickpea-C214xILC3279-F2	LG6	80.60	CaM0317	80.60	SSR

chickpea-C214xILC3279-F2

- Map Overview
- View Map
- Contact
- Map Loci
- Map QTL
- Publication

Map Overview

Click on any linkage group to explore this map further. You will be taken to MapViewer and leave this page.



CaM0753, CaM0753 (genetic map)

Links to view the map and marker details

- Marker Overview
- Contact
- Germplasm
- Map Positions
- Publications
- References

Name	CaM0753
Genbank ID	EI863632
Type	SSR
Species	Cicer arietinum
Germplasm	ICC4958
Repeat Motif	(TTA) ₂₃
Primer 1	CaM0753.Forward primer: AATTGCGGCGAGAGAAGATA
Primer 2	CaM0753.Reverse primer: TCAGTTCTCTTTTCGATTCTTTC
Product Length	221
Publication	[view all]
Contact	Vincent Vadez

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