

Pulse Crop Database

Genomic, Genetic, and Breeding Resources for Pulse Crop Improvement

Issue 4 | July 2022

What is PCD?

PCD is a centralized database containing genomics, genetics, and breeding data and analysis tools for pulse crops. Annotated genome sequences are available to view and search and there is also information about genetic maps, molecular markers, and QTL. If you are a breeder who needs to manage private breeding program data, access to the Breeding Information Management System (BIMS) can be requested. Visit us at <u>www.pulsedb.org</u> to see everything that is available. Each issue of the newsletter will focus on a different type of data and what features are available. Short monthly how-to videos are available from the site.

PCD Crops - Data -	Search Tools General
PULSE C Genomic, Gene for Pulse Crop I	Gene and Transcript Search Germplasm Search Map Search Marker Search Marker Search by Locus Publication Search QTL Search Sequence Search MegaSearch Ortholog/Paralog Search
Crops Quick Start	Trait Descriptor Search Trait Search

Either click on the individual data search links, or select MegaSearch to start a search

New PCD search interfaces

A couple years ago, we added <u>MegaSearch</u> to PCD. MegaSearch was an additional way for users to search the data in PCD and also allowed further refinement to the displayed/downloaded search results over the traditional searches on PCD.

Since MegaSearch works so well, we have decided to transition all searches within PCD to MegaSearch. Not only is this an improvement in database usability, but also helps PCD run more efficiently which will help with performance.

If you have used some of the PCD searches in the past month, you probably noticed a change in the interfaces. We are still working on some of the searches, but MegaSearch is being used for the following data types:

- Genes and Transcripts
- Germplasm
- Genetic Maps
- Genetic Markers
- Publications
- QTL

	Tripal Meg	aSearch						
	Tripal MegaSearch is a tool for downloading biological data. (Current limit per download: Video tutorial: 2020 presentation 2021 tutorial (Gene/Transcript) 2022 tutorial (QTL)							
:	Select a data type to start building your own query and download data in bulk:							
	Data Type [Select a Data Type] V Reset							
	Data Summary:							
	Data Type	Number of Records	Last Updated					
	Contact	275	01/10/2022					
	Gene/Transcript	2051460	06/23/2022					
	Germplasm	3149	10/06/2021					
	Мар	341	07/14/2022					
	Marker	922684	06/23/2022	-				
	Publication	10194	07/14/2022					
	QTL	5451	12/23/2021	-				

,460 Gene/Transcript. N	lote: actual rows in downloaded file depend on t	ne selected neids.	VVULLI			
iery				the video!		
quence Type	Any v	CI	lear Refresh Count	View FASTA CSV TSV		
Genome				Sequence retrie	· · ·	
Genome Name	Any Cajanus cajan Asha genome v1.0 Cicer arietinum CDC Frontier genome v1.0 Cicer arietinum ICC 4958 genome v2	Data Type Germplas 3,149 Germplasm. Note:	sm Reset catual rows in downloaded file depend on		Germplasm	
Chromosome/Scaffold	Any ~	Query			Downloadable Field	ls
Start	> ~	Organism	Any	Clear	Refresh Count All Fields V	/lew CSV TS
Stop	< v		Cajanus cajan Cajanus scarabaeoides		NameOrganism	
Transcriptome/Other Da	ataset	Germplasm name	Cajanus spp.		Unique Name	
Transcriptome/Dataset	Anv	Name			Accession Maternal Parent	
Organism	5,451 QTL. Note: actual ro	ws in downloaded file depei	na on the selected fields.			
Genome	Any ~			QTL	dable Fields	
Chromosome/Scaffold	Any ~ Type Any ~				lool ^{Is} View CS	SV TSV
				htch tho vud		
Start	> ✓ Organism			atch the vid	ime ime	
	> v Organism < v Any Cajanus	cajan		itch the vid	Trait Name	
Start Stop - Gene/Transcript name	> v Organism < v	cajan spp.		atch the vid	ime	
Stop	Crganism Crganism Cajanus Cajanus Cajanus Cicer ari Contains	cajan spp. etinum	<u>Wa</u>	atch the vid	Trait Name C Organism Type C Published Symbol	
Stop - Gene/Transcript name	Contains contains chosen	cajan spp. etinum		atch the vid	Trait Name Organism Type	
Stop Gene/Transcript name Name	> v Organism < v Organism < v Cajanus Cajanus Cicer and Contains Trait Trait Category	cajan spp. etinum		STCN THE VIO	Ime Image: Trail Name Organism Type Published Symbol LOD R2	
Stop Gene/Transcript name Name Choose File No file	> v Organism < v Organism < v Any Cajanus Cicer ari Contains Contains Trait Trait Category Trait Name	cajan spp. etinum			Ime Image: Trail Name Organism Type Published Symbol LOD R2	
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro	> v Organism < v Any Cajanus Cajanus Cicer ari Trait contains Trait Category Trait Name	cajan spp. etinum	922,684 Marker. Note: a Query		the selected fields.	
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro	> v Organism < v	cajan spp. etinum	922,684 Marker. Note: a Query	nctual rows in downloaded file depend on	Ime Trait Name	Refresh Count
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro Query Organism	Corganism Any Cajanus Cajanus Cicer art Trait Contains chosen Trait Category Trait Name Genetic Ma	cajan spp. etinum	922,684 Marker. Note: a Query Note: Some of the SNP p Marker Type Marker Name	inctual rows in downloaded file depend on a solutions in the genome are >1 when the alignment Any Contains	Ime Trait Name	Refresh Count
Stop Gene/Transcript name Name Choose File No file I Map. Note: actual ro Query Organism Any Cajani	Corganism Any Cajanus Cajanus Cajanus Cicer ari Trait Category Trait Category Trait Name Genetic Ma	cajan spp. etinum	V 922,684 Marker. Note: e Query Note: Some of the SNP p Marker Type Marker Type Marker Name Choose File No	in the genome are >1 when the alignment and a set of the set of the alignment and a set of the set of the alignment and a set of	Ime	Refresh Count
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro Query Organism Any Cajani Cajani Cajani	Contains contains chosen Genetic Ma Genetic Ma	cajan spp. etinum	922,684 Marker. Note: a Query Note: Some of the SNP p Marker Type Marker Name	inctual rows in downloaded file depend on a solutions in the genome are >1 when the alignment Any Contains	Ime Trait Name	Refresh Count
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro Query Organism Any Cajan Cajan Cajan Cajan Cajan	Corganism Cajanus Cajanus Cajanus Cajanus Cicer ari Trait Category Trait Category Trait Name Genetic Ma us cajan us spp. arietinum	cajan spp. etinum	Some of the SNP p Marker Type Marker Name Choose File No SNP Array Name	In contains in the genome are >1 when the alignment of the genome are >1 when the alignment of the contains v	Ime	Refresh Count
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro Query Organism Any Cajan Cajan Cajan Cajan Cajan		cajan spp. etinum	SVP Array Name Organism	In clual rows in downloaded file depend on astions in the genome are >1 when the alignment any contains Tile chosen Any a	Ime	Refresh Count
Stop Gene/Transcript name Name Choose File No file I Map. Note: actual ro Query Organism Any Cajan Cicar Cajar Cajar Cicar Cajar Cicar Cic		cajan spp. etinum	SVP Array Name Organism	In the genome are >1 when the alignment astions in the genome are >1 when the alignment Any Contains Any Ism Any	Ime Trait Name Organism Type Published Symbol LOD R2 the selected fields. It was done using flanking sequences. Clear V	
Stop Gene/Transcript name Name Choose File No file I Map. Note: actual ro Query Organism Any Cajan Caj	Corganism Cajanus Caj	cajan spp. etinum	SVP Array Name Organism	Ite chosen Any Ite chosen Any Ite chosen Any Ite chosen Any Ite chosen Any Ite chosen Any Ite chosen Any Ite chosen Any Ite chosen Any	Ime	
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro Query Organism Any Cajan Cicer Map Name Any Mapping populatie Population		cajan spp. etinum	Some of the SNP p Marker Type Marker Type Marker Name Choose File No SNP Array Name Organism Mapped in Organ	antsm	Ine Ine Organism Organism Type Published Symbol Incol R2 Interselected fields. It was done using flanking sequences. Clear	ic
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro Query Organism Any Cajan Caj		cajan spp. etinum	Some of the SNP p Marker Type Marker Type Marker Name Choose File No SNP Array Name Organism Mapped in Organ	anism	Ime Trait Name Organism	ic
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro Query Organism Any Cajan Cicar Map Name Any Mapping populati Population Maternal Parent Paternal Parent		cajan spp. etinum	Some of the SNP p Marker Type Marker Type Marker Type Marker Name Choose File No SNP Array Name Organism Mapped in Organ Developed in Organ	anism	Ine Ine Organism Organism Type Published Symbol Incol R2 Interselected fields. It was done using flanking sequences. Clear	ic
Stop Gene/Transcript name Name Choose File No file 1 Map. Note: actual ro Query Organism Any Cajan	organism organism Any Cajanus Cajanus Cajanus Cajanus Cajanus Cortains Contains	cajan spp. etinum	Superior Source of the SNP point of the SNP Array Name Choose File No SNP Array Name Organism Mapped in Organ Developed in Organ Genome location	In downloaded file depend on astions in the genome are >1 when the alignment Any contains Itle chosen Any anism Any Cajanus cajan Cajanus cajan Cajanus cajan Cicer primatifidum Cicer primatifidum Cicer primatifidum	Ine Ine Organism Organism Type Published Symbol Incol R2 Interselected fields. It was done using flanking sequences. Clear	ic

Join the <u>PCD Mailing List</u> and follow us on <u>Twitter</u>

<u>Funded by:</u> USDA National Research Project (NRSP10), USA Dry Pea & Lentil Council, Northern Pulse Growers Association, and WSU.

PCD Newsletter | www.pulsedb.org