



PULSE CROP DATABASE

Genomic, Genetic, and Breeding Resources
for Pulse Crop Improvement

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What's new in PCD?

New Training Videos

- [Finding a marker associated with a trait](#) (2:30 mins)
- [Downloading markers from a map region](#) (2:12 mins)

New Data and Functionality

- 3,299 genetic markers, 7 genetic maps, 97 QTL, and 234 GWAS added in last quarter
- Additional permission levels added to Breeding Information Management System

New data added during first quarter of 2024

We are making a dent in the backlog of papers to curate and adding new data every week. These data are now available to search within the database and also can be viewed in MapViewer.

Bean

- Ariza-Suarez et al. [Genetic analysis of resistance to bean leaf crumple virus identifies a candidate LRR-RLK gene.](#)
- Keller et al. [Improving Association Studies and Genomic Predictions for Climbing Beans With Data From Bush Bean Populations.](#)
- Li et al. [QTL mapping and identification of genes associated with the resistance to *Acanthoscelides obtectus* in cultivated common bean using a high-density genetic linkage map.](#)
- Saballos et al. [Multiple Genomic Regions Govern Tolerance to Sulfentrazone in Snap Bean \(*Phaseolus vulgaris* L.\).](#)
- Zia et al. [Genome-Wide Association Study and Genomic Prediction for Bacterial Wilt Resistance in Common Bean \(*Phaseolus vulgaris*\) Core Collection.](#)

Chickpea

- Lal et al. [Validation of molecular markers linked to Fusarium wilt resistance \(Foc 1\) in recombinant inbred lines of chickpea \(*Cicer arietinum*\).](#)

Cowpea

- Hoh et al. [Genetically-determined variations in photosynthesis indicate roles for specific fatty acid species in chilling responses.](#)
- Kpoviessi et al. [Application of multi-locus GWAS for the detection of bruchid resistance loci in cowpea \(*Vigna unguiculata*\).](#)
- Angira et al. [Construction of a single nucleotide polymorphism linkage map and identification of quantitative trait loci controlling heat tolerance in cowpea, *Vigna unguiculata* \(L.\) Walp.](#)

New data continued

Faba bean

- Gela et al. [Genomic regions associated with chocolate spot \(*Botrytis fabae* Sard.\) resistance in faba bean \(*Vicia faba* L.\)](#).

Lentil

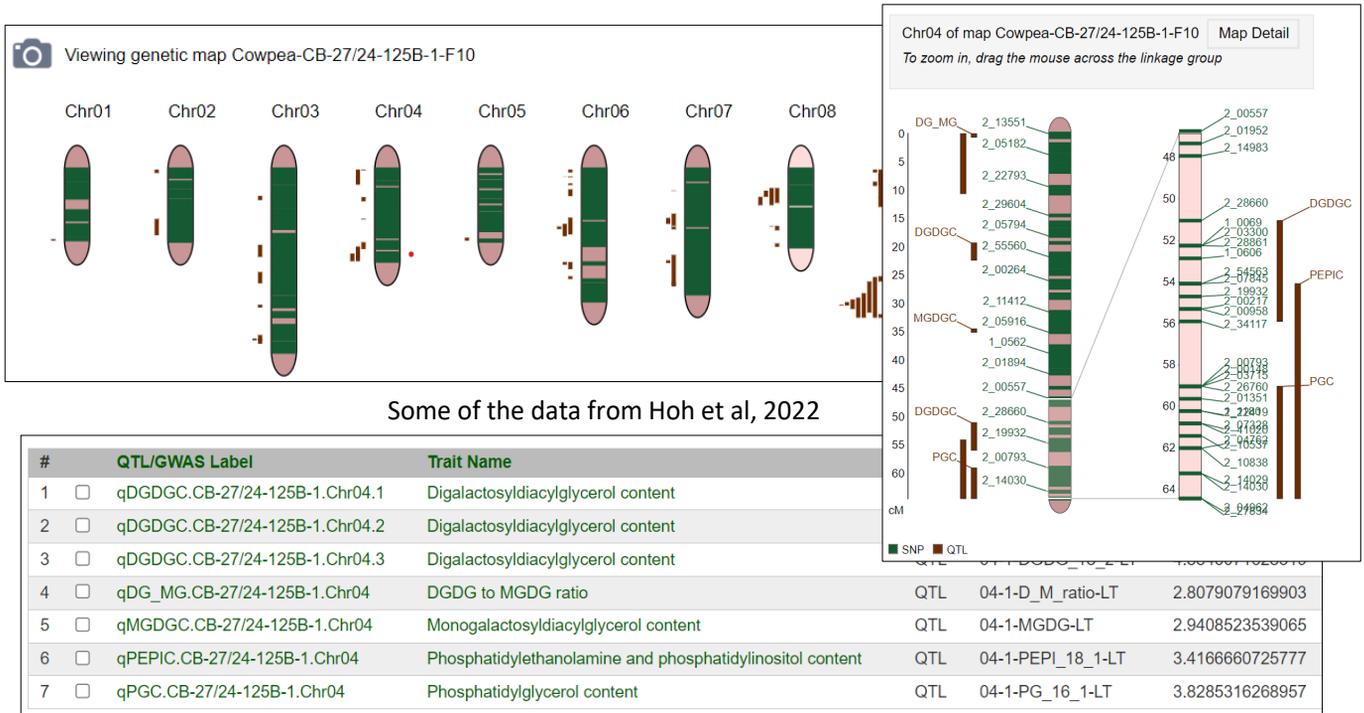
- Heineck et al. [Phenotypic and genetic characterization of the Lentil Single Plant-Derived core collection for resistance to root rot caused by *Fusarium avenaceum*](#).

Pea

- Martins et al. [Genome-wide association study for morphological traits and resistance to *Peyronella pinodes* in the USDA pea single-plant plus collection](#).
- Lee et al. [Field pea \(*Pisum sativum* L.\) germplasm screening for seedling ascochyta blight resistance and genome wide association studies reveal loci associated with resistance to *Peyronella pinodes* and *Ascochyta koolunga*](#).

Vigna sp.

- Singh et al. [Genome-wide Association Study for Yield and Yield-Related Traits in Diverse Blackgram Panel \(*Vigna mungo* L. Hepper\) Reveals Novel Putative Alleles for Future Breeding Programs](#).
- Rathnayaka et al. [Tandemly duplicated genes encoding polygalacturonase inhibitors are associated with bruchid \(*Callosobruchus chinensis*\) resistance in moth bean \(*Vigna aconitifolia*\)](#).



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