

## GENOME DATABASE FOR VACCINIUM

Genomics, genetics, and breeding resources for blueberry, cranberry, bilberry, and lingonberry research

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### What's new in GDV?

### **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 <u>Fruit and Nut Cultivars Database</u>
- Ortholog page added to gene/mRNA pages

#### Outreach

- Marker Search Video Tutorial (2.39 mins)
- Genetic Map and Genome Correspondence <u>Video Tutorial</u> (2.47 mins)

#### New Data

 Blueberry Crop Ontology in BIMS and searchable in GDV

## Viewing traits and descriptors

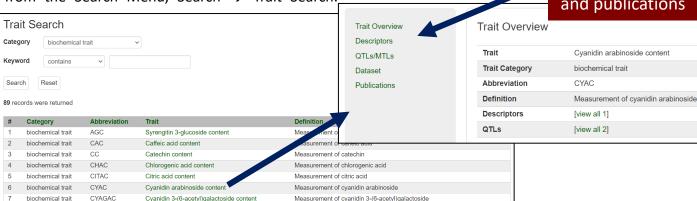
We curate the trait and trait descriptors from QTL and phenotype data. The curation process links all the similar traits together under a unified ontology and provides easy access to all the data associated with that trait (QTL, Phenotype Data, Publications). There are multiple ways to view the trait 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 and trait descriptors.

The first is from the Data menu, Data  $\rightarrow$  Trait Abbreviations. This opens an expandable interface with a list of all the trait categories. The second is from the Search Menu, Search  $\rightarrow$  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. Trait Descriptors for phenotypic data are also stored and searched using Search —> Trait Descriptor Search. You can also download the results in a table format.

All of these trait and trait descriptor searches have hyperlinks to the Trait Overview page which allows for easy access to all the QTLs and manuscripts associated with the trait. The Descriptor Overview has links to datasets and germplasm associated with the descriptor.

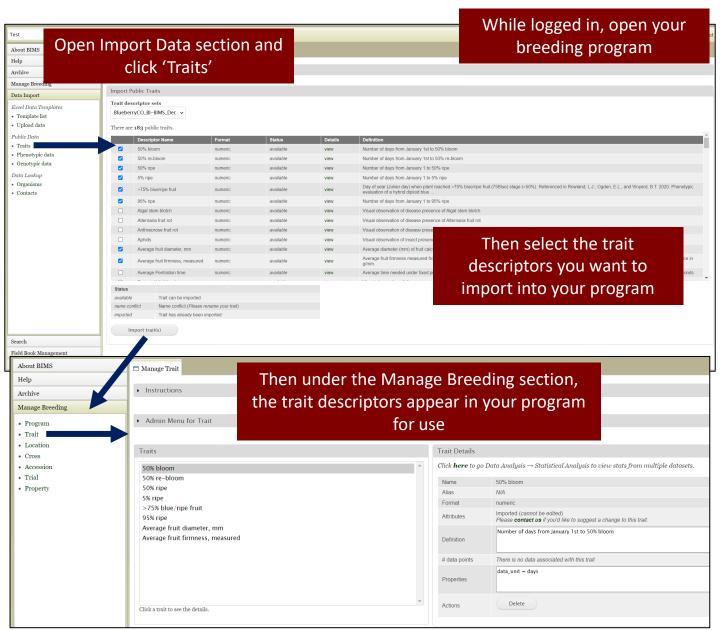
Links to all associated QTLs and publications



# Add the Blueberry Crop Ontology Descriptors to BIMS program

GDV worked with Breeding Insight to develop a set of blueberry trait descriptors to assist breeders in sharing phenotype data by using a common blueberry trait ontology. These descriptors and associated information are now available on BIMS and can be imported into any breeding program.

The descriptors are also available to search and view under the Trait Descriptor search. Go to the toolbar, Search → Trait Descriptor Search. The select the 'Blueberry Crop Ontology BI BIMS Dec2020' group. You can then retrieve all descriptors and download the table, or further refine the search.



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