

To Contribute Crop Traits Lists Using the New Online GCP Crop Ontology Curation and Annotation Tool

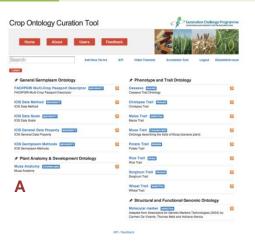
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The objectives

- Compile validated names, definitions and relationships for traits of crops in the form of trait dictionaries.
- Enable the curation of the ontology content and data annotation by the curators, researchers, breeders, students etc.
- Synchronize the trait dictionaries with the crop field books of the Integrated Breeding Platform.
- hosted on Google App Engine and the versioned code is hosted on GitHub.

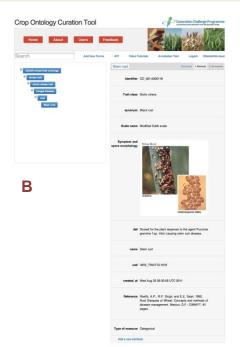
Access the crop trait names and methods for the field books

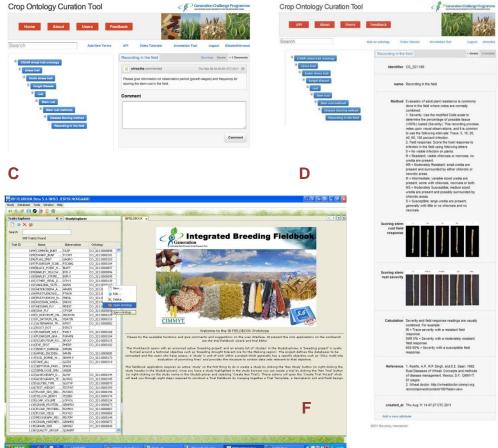


Crop Ontology Curation Tool

Upload an OBO File or Create an Ontology

Search







- (A) Online GCP Crop ontology & working place for curators
- (B) Login and post comment on a term
- (C) Consult a trait information

- (D) Open the measurement method for scoring stem rust
- (E) Submit new trait names to the ontology web site
- (F) Access target trait information from the Integrated Breeding Field Book disease

Annotation of phenotypic data with the validated terms of the GCP crop ontology

- The Annotation feature matches validated terms from the ontology with the content of the data file and suggest to replace where necessary the local term leading to the harmonization of the annotation.
- The result can be downloaded as comma separated file that can be uploaded into Excel of a database.
- Still at the prototype level.

Key actions in 2011

- Develop the groundnut and cowpea ontologies.
- Develop trait dictionaries for each crop focusing on methods for trait measurement and scales.
- Finalize the online curation and annotation tools according to the users' feedback and promote it.
- Develop an API accessible to any application that provides the ability to automatically create, read, update and delete terms.
- Synchronize the GCP crop ontology curation tool with IB Field Book using the web service API.
- Replace the current crop ontology look-up service (OLS) by the new web site to build a single working place.
- The curation and annotation tool are on the cloud to improve the access performance.



Reference

Shrestha R, Arnaud E, Mauleon R, Senger M, Davenport GF, Hancock D, Morrison N, Bruskiewich R, and McLaren G. Multifunctional crop trait ontology for breeders' data: field book, annotation, data discovery and semantic enrichment of the literature. AoB Plants(2010) Vol. 2010 plq008 first published online May 27, 2010 doi:10.1093/aobpla/plq008.











