

# AgroPortal

## a proposition for ontology-based services in the agronomic domain

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## The challenge

Biologists have adopted ontologies (knowledge representation, annotation, data integration)... But ontologies are: spread out, in different formats, of different size, with different structures.

- How to enable straightforward use of agronomic ontologies?
- Develop and support a reference ontology repository for the agronomic domain

<http://agroportal.lirmm.fr>

The screenshot shows the AgroPortal interface. The top navigation bar includes links for Browse, Search, Mappings, Recommender, Annotator, and Projects. The main content area has sections for "Latest Notes" and "Latest Mappings". Below this are two tabs: "Ontology Visits (December 2015)" and "Statistics". The "Browse" tab is selected, displaying a list of ontologies such as Biorefinery (BIOREFINERY), Plant Trait Ontology (PTO), IBP Rice Trait Ontology (CO\_320), Wheat Trait Ontology (WHEATPHENOTYPE), and Banana Anatomy (CO\_125). On the left, there are filters for "Entry Type" (Ontology, Ontology View, CML Model, NLM Value Set), "Uploaded in the Last" (days), "Category" (e.g., 010-089 General Germplasm, 100-299 Plant Anatomy and De...), "Group" (CROP, LOVINA, RICE, WHEAT), and "Format" (OBO, OWL, UMLS). The right side shows detailed information for the Biorefinery ontology, including its summary, properties, notes, mappings, and widgets.

- Search
  - Mapping
  - Versioning
  - Peer review
  - Community notes
  - Multiple formats
  - Projects
- Resources
  - Annotation
  - Recommendation
  - Metadata
  - Slices
  - REST API
  - SPARQL endpoint

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SIFR project THE NATIONAL CENTER FOR BIOMEDICAL ONTOLOGY [www.lirmm.fr/sifr](http://www.lirmm.fr/sifr)

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## Reuse NCBO technology

NCBO Bioportal : a web repository for biomedical ontologies:

- Users can publish, download, browse, search, comment, align ontologies and use them for annotations both online and via a web services API.
- <http://bioportal.bioontology.org>
- Domain independent & open source
- Fully semantic web compliant
- Focus on biomedicine
- Many plant/agronomy related ontologies are not covered



## Driving Uses-Cases

- IBC Rice Genomics & AgroLD project (<http://agrold.org>) : RDF data integrated from a variety of plant resources and ontologies
- RDA Wheat Data Interoperability working group: common framework for describing, representing, linking and publishing wheat data with respect to open standards
- INRA Linked Open Vocabularies, (<http://lovinra.inra.fr>): publish vocabularies produced or co-produced by INRA scientists and foster their reuse beyond the original researchers
- The Crop Ontology ([www.cropontology.org](http://www.cropontology.org)): publishes ontologies required for describing crop germplasm, traits and evaluation trials



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