Managing Phenotypic Data through the IBP’s Breeding Management System

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by Graham McLaren and Rebecca Berrigan
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The IBDB Phenotyping Data Model

IBDBV2 – Data Model

STUDY AND DATASET INFORMATION
- study labels and levels
- define data labels and measurement variates

TRIAL ENVIRONMENT
- geography
- location names
- environment levels
- link to LMM

TRIAL DESIGN
- observation units
- sampling plans
- experimental design

GERMPLASM ENTRY
- germplasm identifiers
- characterization levels
- link to GMS

ONTOLOGY
- properties
- methods
- scales
- standard variables
- valid values

OBSERVATION
- variate values
- links to valid values

MAPPING TO THE CHADO NATURAL DIVERSITY SCHEMA

Data Annotation

Community curated trait dictionaries for each crop at www.cropontology.org

Data Access - API
API: Application Programming Interface

- Protects data consumers from data storage changes
- Allows data to be provided in forms that are easier to consume

Let's see an API

http://api.leafnode.io:8080/

http://api.leafnode.io:8080/study/10104

{"id":10104,
"name":"basicNurseryTemplate",
"type":"N",
"dataset": [{
"measuredTraits": 
"environment": ...
}]"}