

Barley Coordinated Agricultural Project Work Plan FY06 (4/1/07 – 3/31/08)
Jennifer Kling, Oregon State University

1) Describe the research, education, and outreach activities you are planning for the next year (4/1/07 – 3/31/08)

Research: I will serve as a Data Curator/Validation Coordinator for the project. In the next 12 months, I expect to:

- Continue to work with collaborators to implement protocols and standardize spreadsheets for phenotypic data collection, as outlined in the CAP Participants Guide.
- Review the data as it is received, address any concerns about quality or statistical methodologies, and ensure that annotations to the data are complete.
- Monitor pedigree information for accuracy and consistency.
- Compile all of the pedigree and phenotypic data into appropriate formats for uploading into the database.
- Serve as liaison between the NSF-sponsored Plant Ontology Consortium (POC) and the Barley CAP, to promote development of robust Triticeae ontologies and broader utility of THT.

List specific outcomes and deliverables that will be accomplished in the first 6 months (4/1 – 9/30). These will be used as benchmarks for your bi-annual progress report.

- Compile all pedigree data on 2007 genotypes submitted by collaborators by June 30.
 - Review and upload phenotypic data on disease and quality characteristics from 2006 lines by July 31.
- 2) List specific outcomes and deliverables that will be accomplished in the second 6 months (10/1 – 3/31). These will be used as benchmarks for the bi-annual progress report.**
- Review and compile phenotypic data from 2007 trials. Data on agronomic traits should be finalized by Dec. 31. Disease and quality data will be processed as it is received.

Barley Coordinated Agricultural Project Annual Progress Report
FY06 (4/1/06 – 3/31/07)
Jennifer Kling, Oregon State University

1) Describe the research, education, and outreach activities you completed in FY06 (4/1/06 – 3/31/07)

Research

- I worked with collaborators to develop standardized spreadsheets for phenotypic data collection, as outlined in the CAP Participants Guide. I developed formats for reporting check means and standard errors for each testing site.
- I developed and circulated a list of standardized annotations for data sets, in consultation with staff at GrainGenes. This list was circulated and presented to project collaborators at the annual work planning meeting in January. Further modifications were proposed to include GIS coordinates and climatic data for all testing sites.
- I attended a workshop in Ithaca organized by the NSF-sponsored Plant Ontology Consortium (POC), to ensure that trait descriptions used by the Barley CAP are compatible with defined Triticeae ontologies and to promote broader utility of THT. The workshop included hands-on practicals in data curation using Gramene.
- I liaised with Barley CAP breeders and those involved with development of THT and QTL miner to establish a robust system for pedigree input into the THT database. Staff involved with development of TASSEL and GERMINATE (SCRI) were also consulted in this process. The system accounts for the use of partially inbred parents in crosses, which is a common practice in barley breeding programs.
- Pedigree files for all of the CAP Core genotypes were created for uploading into THT. Input of the pedigrees for the 960 CAP lines for 2006 is close to completion.
- Agronomic data from most collaborators for the 2006 cropping season has been received and checked for outliers, and use of standard units, variable names, and CAP entry codes. Data from disease nurseries and malting quality evaluations are still being received and processed.

Outreach

- I made a presentation entitled “The Hordeum Toolbox - A public resource for integrating pedigree, SNP, EST, and phenotypic data from breeding germplasm” at the Plant Ontology Consortium Workshop in Ithaca in May, 2006.

2) List specific outcomes and deliverables accomplished in FY06 (4/1/06 – 3/31/07)

- Developed standard spreadsheet formats for phenotypic data collection and annotations with collaborators.
- Attended a Plant Ontology Consortium workshop in May, and reviewed status of Barley CAP trait descriptions in relation to established Triticeae ontologies.
- Developed system for pedigree data entry and compiled data for CAP Core genotypes and CAP lines for 2006.
- Received and assessed quality of agronomic data from collaborators for the 2006 cropping season, and verified use of standard units, variable names, and CAP entry codes.

