

**Barley Coordinated Agricultural Project Work Plan FY06 (3/1/06 – 2/29/07)**  
**Rex Bernardo, University of Minnesota**

**1) Describe the research, education, and outreach activities you are planning for the next year (3/1/06 – 2/29/07)**

Research A computer programmer and I will develop a graphical user interface and program code for a pre-release version of QTL Miner. We will coordinate with the developers of THT with regards to pedigree and phenotypic data files needed for QTL Miner.

Education None

Outreach None

**2) List specific outcomes and deliverables that will be accomplished in the first 6 months (3/1 – 8/31). These will be used as benchmarks for your bi-annual progress report.**

- Identify a computer programmer (half-time research assistant from the Department of Computer Science) to write the program code for QTL Miner
- Create flowcharts for QTL Miner; identify modules to be written for the program; identify specific formats for input files; and identify information to be included in output files
- Begin writing code for different program modules

**3) List specific outcomes and deliverables that will be accomplished in the second 6 months (9/1 – 2/29). These will be used as benchmarks for the bi-annual progress report.**

- Continue writing code for different program modules
- Begin writing graphical user interface
- Test program modules with small data sets

**Barley Coordinated Agricultural Project Biannual Progress Report**  
**FY06 (4/1/06 – 9/30/06)**  
**Rex Bernardo, University of Minnesota**

**Describe the research, education, and outreach activities you completed in the first half of the FY06 (4/1/06 – 9/30/06)**

Research

Discussed (with Kevin Smith, Roger Wise, Julie Dickerson, Jean-Luc Jannick, and Peter Bradbury) database issues pertaining to pedigree, marker, and phenotypic data in THT, and how the needed data will be made available to QTL Miner

Discussed, via email, different aspects of the required input files with Barley CAP collaborators

Provided computer programmer (Srikanth Srinivasan) with technical background information on mixed-model QTL mapping

Education None

Outreach None

**List specific outcomes and deliverables accomplished in the first half of FY06 (4/1 – 9/30).**

- Hired a computer programmer, Mr. Srikanth Srinivasan, to write and develop QTL Miner software
- Identified specific formats for input files, and identified possible outputs of the software
- Identified software-development platform for QTL Miner (C++ for analysis code and Microsoft Visual Basic for user interface)
- Started writing program code; finished writing module for calculating coefficients of coancestry