

Barley Coordinated Agricultural Project Biannual Progress Report
FY08 (4/1/08 to 9/30/08)
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Objective 5: Education and Outreach – Educate students, scientists, producers, and processors in use of genomics technology for gene discovery and crop improvement.

1) Describe research, education, and extension activities you completed in the first half of FY08 (4/1/08 to 9/30/08)

Research: The mandate of Objective 5 only includes education and extension activities.

Education: Nine graduate students, two post-doctoral research associates, two technicians and seven undergraduate students have or are currently actively working on the Barley CAP project. Additionally, CAP principles and approaches have been incorporated into graduate and undergraduate courses at several participating universities. The specific objectives accomplished during this period are as follows.

- Developed educational display modules.
- Tested and improved beta versions of QTL-Miner and The Hordeum Toolbox.
- Continued giving oral and poster presentations at scientific meetings.
- Held workshop on association mapping and marker assisted selection in conjunction with Wheat CAP.
- Held a statistical experimental design short course.
- Organized and conducted second “Combine to Kitchen” events in collaboration with Wheat CAP that were held in both MN and CA.
- Published Barley CAP research in refereed journals.
- Facilitated assessment of educational activities through the extension/education evaluator.

Extension: Peggy Lemaux and Brian Steffenson are team leaders for Barley CAP extension and education; however, all project members participate in extension activities that include the following.

- Barley CAP participants disseminated information on the project and its scientific achievements through various newsletters (Barley CAP Newsletter, IBMS Newsletter) that were distributed via the Institute for Barley and Malt Sciences, American Malting Barley Association, and various barley and grain grower councils.
- Held an Extension Team Leader Meeting in conjunction with IBMS that brought together barley producers, users and extension leaders from barley-producing areas of the U.S.
- Printed materials, including the brochure and fact sheets were evaluated by members of the IBMS Extension Team Leaders.
- Explored possibility of producing a podcast or breeze presentation on efforts to identify resistance to stem rust race Ug99 that can be used in various educational venues and placed on YouTube.
- Oral and poster presentations were made at various grower meetings, field days, etc.
- Coordinated, in cooperation with the IBMS, a “Barley Production and Management for Profits” meeting.
- Developed new posters, PowerPoint presentations, etc. as needed, particularly with respect to needs of extension educators and grant recipients.
- Explored collaborations with CSREES on developing website materials for eXtension on MAS and association mapping.
- Developed statewide extension teams of producers, end users, and extension educators.
- Expanded extension educator grant competition.
- Facilitated assessment of extension activities through the extension/education evaluator.

List specific outcomes and deliverables accomplished in first half of FY08 (4/1/08 to 9/30/08).

- Leveraged extension and education efforts with complementary Wheat CAP and Rice CAP efforts.
- Continued to develop statewide extension teams of producers, end users and extension educators.
- Through feedback from extension teams, identified needs for future barley research and topics that should be covered in future Barley CAP educational materials.
- Continued to hold extension small grants program competition for extension educators.
- Worked with various educators to develop customized educational/extension materials for specific venues.
- Provided state-of-the-art instruction on association mapping and marker assisted selection to plant breeders and the next generation of plant breeders (graduate students and post-doctoral associates) from Barley CAP, Wheat CAP, and Rice CAP.
- Continued making improvements in the beta version of user-friendly “QTL Miner” software, user guide, and tutorials
- Continued making improvements in the beta version of The Hordeum Toolbox
- Continued publishing results of scientific research in scholarly journals
- Continued evaluation of extension/education activities through the extension/education evaluator to determine impact of materials and presentations.