

WHAT IS BARLEY CAP?

Coordinated Agricultural Project for Barley



The Barley Coordinated Agricultural Project (CAP) is a community effort of 30 researchers at 19 institutions who are identifying molecular markers to dramatically speed breeding efforts to improve barley for food, feed and brewing.

Today, U.S. consumers spend less than 10% of their income on food compared to 22% in 1929. This difference is largely due to increases in farm productivity made possible in part through breeding improvements. Plant breeding is an inexpensive way to develop new crop varieties and most U.S. crops have been improved this way.



But are breeding efforts important today? The answer is a resounding yes. They are critical for increasing yields and improving various characteristics addressing crop production – issues like drought and disease, and expanding end uses, such as for biofuels and food.

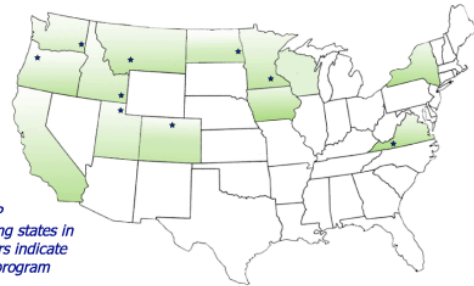
Today, breeding crops like corn, cotton and soybean is largely done in the private sector. But breeding barley, wheat and many small acreage crops is still primarily done in the public sector.



in recent years, but investments, like those of Barley CAP, are key to the future of public plant breeding.

Breeding requires many generations to achieve goals, so long-term commitments are needed. Coordination among breeding programs is also critical. Funding for applied breeding has declined dramatically

Funding shortfalls greatly affect land grant universities, a major contributor to public sector breeding, profoundly impacting their ability to develop improved varieties. Recently, USDA CSREES (Coordinated State Research, Education and Extension Service) initiated Coordinated Agriculture Programs, or CAPs, to foster multistate efforts to gather and utilize new genomic information to speed breeding.



Barley CAP participating states in green; stars indicate breeding program sites.

Barley CAP brings together data from 10 breeding programs and 30 researchers from 13 states (www.barleycap.org). Sharing this data allows breeders to better coordinate research to speed efforts to solve biologically and economically important problems in barley.

Availability of CAP funding creates a means to continue long-term breeding efforts by leveraging physical and intellectual resources from all participating organizations. CAPs provide a new streamlined model for this regional, not state-oriented, approach to breeding that leverages efforts of a diverse group of individuals and institutions.

WHAT IS BARLEY CAP DOING?

Improvements through classical breeding require many years. Efforts of Barley CAP are aimed at simplifying and streamlining the process. This will be accomplished through the identification of genetic markers linked to traits of interest that can be used in a Marker Assisted Selection approach. This technology speeds breeding efforts to identify plants with desired traits. Barley CAP leverages the multidisciplinary efforts of many researchers at diverse institutions focused on improving barley

To see more fact sheets, please visit <http://barleycap.cfans.umn.edu/outreach.htm>