



# American Malting Barley Association, Inc.

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American Malting Barley Association, Inc. (AMBA) is a 501c(6) nonprofit trade association.

## REGULAR MEMBERS

AB-InBev	Malteurop North America
Bell's Brewery	MillerCoors
Boston Beer	New Belgium Brewing
Briess Malt & Ingredients	New Glarus Brewing
Cargill Malt	Rahr Malting
Great Western Malting	Sierra Nevada
InteGrow Malt	Summit Brewing

## ASSOCIATE MEMBERS

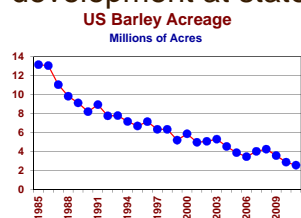
Boulevard Brewing	Rogue Ales
Dogfish Head Craft Brewery	Schlafly Beer
Gambrinus Company	

**MISSION:** *The primary purpose of AMBA is to encourage and support an adequate supply of high quality malting barley for the malting and brewing industry and increase our understanding of malting barley.*

**VISION:** *To be the leader in improvement, development, and understanding of malting barley in the US.*

**PRIMARY OBJECTIVE:** *Develop six-row and two-row malting barley varieties broadly adapted for the barley production areas of North America with suitable agronomic, malting, and brewing performance.*

**Barley is primarily a public sector non-GM crop**, with most barley research and development at state universities and USDA-ARS facilities.



**Little interest by biotechnology seed companies** in barley research & variety development.

\* Low acreage = limited seed sale potential

**Barley is facing stiff competition from corn, soybeans, canola, and other crops** that are receiving substantial private sector investment, including GM variety development, and that

have more favorable federal farm program provisions.

## MEETING AMBA'S MISSION, OBJECTIVES & CHALLENGES

**RESEARCH** – To keep barley competitive with other crops requires an adequate national barley research infrastructure of personnel, facilities, and operating funds to conduct appropriate research.

AMBA research funding of state university and USDA Agricultural Research Service (ARS) researchers = \$450,000/year to programs in eleven states (CA, CO, ID, MN, MT, NE, ND, OK, OR, WA, WI)

## National Barley Research Program AMBA Strategic Goals

### Malting Barley Variety Development

Spring 2-Row & 6-Row

**Winter 2-Row - Higher grain yield, less water use, earlier harvest than spring types.**

*Priority AMBA goal & research area*

- Improved technology & methodology to accelerate variety development
- Increased yield
- Resistance to abiotic stress (drought, heat, cold)
- Management practices to improve production and product quality

### Quality

National quality evaluation program to evaluate barley breeding lines

USDA-ARS Cereal Crops Research Unit, Madison, WI (federal/AMBA support)

- Preharvest sprouting – genetics/biology; measurement; resistant varieties
- Fermentability prediction
- Glucanase assays
- Flavor screening of barley

### Pest Resistance

#### **Insects**

Russian wheat aphid and Bird cherry-oat aphid = crop damage, virus transmission

#### **Diseases**

Ug99 African Stem Rust	Bacterial leaf streak
Net Blotch – <i>Spot &amp; Net forms</i>	Stripe Rust
Cereal yellow dwarf virus	Root diseases
Fusarium Head Blight (Scab)	Spot blotch
Septoria speckled leaf blotch	

**Increased secondary uses** – Additional markets for barley not used or accepted for malting & straw to bolster grower returns

Animal Feed          Biofuels          Food

### AMBA leads the National Barley Improvement Committee (NBIC)

Barley growers, researchers, malting, brewing, and cereal food end-users

NBIC has successfully lobbied Congress & USDA for barley research funding

- **\$20 million in one-time funding for new ARS research facilities**
- **\$10.2 million increase in annual base barley research funding** last 15 years at various ARS research locations
- Major research initiatives to address disease challenges & enhance genomic research

**\$3.0 million/year** Ug99 African Stem Rust

**\$5.0 million/year** Fusarium Head Blight (scab)

**\$2.5 million/year** – Small Grains Genotyping Labs (KS, ND, NC, WA)

- **\$9.4 million cumulative** funding – Congressional earmark for USDA National Institute of Food & Agriculture (NIFA) **US Barley Genome Project** (USBGP; 1990-2010)
- USBGP led to award of NIFA competitive grant of **\$5 million for the Barley Agricultural Coordinated Agricultural Project** (Barley CAP; 30 scientists from 19 institutions, genomic research; 2006-2010)
- Barley CAP led to award of NIFA competitive grant of **\$25 million for the Triticeae (barley & wheat) Coordinated Agricultural Project** (T-CAP; 56 scientists from 28 institutions, genomic research; 2011-2015)

In addition to securing federal funding, AMBA also has substantial input into how funding is utilized with its connections to state and federal research programs and service on oversight committees.

### **AMBA Quality Evaluation Program**

Early generation malting quality screening at ARS Cereal Crops Res. Unit, Madison, WI (5,000 + lines a year from public sector breeding programs)

Most promising lines submitted to AMBA collaborative member pilot scale evaluation program (30 lines per year; 2 years per line)

Satisfactory pilot lines may be advanced to AMBA plant scale malting and brewing evaluations by member companies (6-12 lines/year; 1-2 crop year evaluation)

Satisfactory results from plant scale evaluation by at least one member moves a variety to the **AMBA list of recommended malting barley varieties** at that member's request. The annually updated list informs growers of which varieties AMBA members prefer, encouraging their planting.

### **Federal Farm Programs**

Planting decisions of growers are influenced by US farm policies. Policies range from federal support when prices fall to crop insurance when adverse weather conditions impact yields or quality.

AMBA works with the National Barley Growers Association (NBGA) and state organizations lobbying Congress and USDA to put barley on an equal basis with other crops so that barley growers respond to market signals and not government programs.

### **The Farm Bill**

- Helped increase the barley loan rate and target prices relative to other crops in the 2008 Farm Bill.
- Currently advocating, that whenever possible, grower subsidies are not tied to current production (coupled payments). Subsidies tied to production have the potential to distort planting decisions.

## **Crop Insurance**

- Established a new “Specialty Barley” insurance program that covers yield losses for malting and specialty food barleys with affordable premiums.
- Convinced the USDA Risk Management Agency (RMA) to change the way they calculate the coverage rate for barley insurance reducing the risk of growing malting barley.
- Established accurate testing methods for quality specifications used in insuring malting barley against quality losses.

## **Legislation, Regulation and Liaison**

AMBA works with the American Society of Brewing Chemists (ASBC), the Brewers Association (BA), the Beer Institute (BI), NBGA and other organizations on issues of common interest.

AMBA serves as a liaison between growers and the industry.

- Encouraged grower opposition to the CARE Act and beer tax increases, and support for continuation of the IR-4 Crop Protection Program and H.R. 4278.
- Ran collaborative testing programs through the ASBC and the USDA Federal Grain Inspection Service (FGIS) that established accurate measurements of deoxynivalenol (DON) in barley and malt, and preharvest sprouting in barley.
- Worked with a broad coalition during debates on the new Food Safety Bill to ensure realistic traceability requirements for comingled commodities such as malting barley.
- Provides an annual recommended malting barley variety list to growers.
- Provides periodic releases on industry concerns with specific crop protectants or crop year specific issues (eg. proper storage conditions).
- Distributes information on barley acreage, production, stocks, and varieties.