

**Oregon State University winter barley nurseries.** The summary is divided into “Malting”, “Food”, and “Genetics”. In reality, the three areas of endeavor are tightly integrated. For example, the T-CAP FAC Association mapping panel is comprised of elite malting germplasm. Likewise, some malting germplasm has potential food applications, and vice versa. The emphasis of the program is on facultative growth habit in order to provide maximum flexibility in planting date (for growers) and breeding (for research and variety development). The list does not include 2012 spring-planted trials, as these are still under development.

### **Winter malting barley**

**Overview: Number of populations/families in early generations:**

- 27 F1's
- 28 F2's

**Number of head rows:**

- 3492 (F3 to F5)

**Number of purification head rows:**

- 294 (two genotypes)

**Number of advanced and fixed lines = 229**

- 160 in yield trial plots
- 69 in single or double row plots (doubled haploids)

**Details: OSU AMBA Drill strips**

**(Charles (check), OR818, and OR101)**

- Corvallis, OR
- Pendleton, OR
- Hermiston, OR
- Aberdeen, ID
- Pullman, WA
- Burley, ID

**OSU AMBA Drill strips: OR818 only**

- Lewis Brown Farm, organic
- Willamette Valley, OR On farm – Scott Sayer
- Willamette Valley, OR On farm – Tom Hunton

**Oregon Barley Elite Trial; 30 entries**

- WV1, OR On farm                    3 rep, Rectangular Lattice
- WV2, OR On farm                    3 rep, Rectangular Lattice
- Corvallis, OR                        3 rep, Rectangular Lattice
- Hermiston, OR                       3 rep, Rectangular Lattice
- Pendleton, OR                       3 rep, Rectangular Lattice
- Aberdeen, ID                         3 rep, Rectangular Lattice
- Pullman, WA                         3 rep, Rectangular Lattice
- Ft. Collins, CO                      3 rep, Rectangular Lattice
- Burley, ID                             3 rep, Rectangular Lattice
- Mt. Vernon, WA                     1 rep, Unreplicated Nursery
- St. Paul, MN                         observation

**European Winter 2 Row Malting Trial; selections from Europe**

- Corvallis, OR- replicated                    RCBD, 3 rep, 9 entries
- Corvallis, OR - unreplicated                1 rep, 18 entries
- Hermiston, OR                                RCBD, 3 rep, 21 entries

**Winter Malting Barley Trial; 28 entries from US and International Cooperators**

- Corvallis, OR            3 rep, RCB

**Winter Barley Preliminary Yield Trial; 107 entries; selections from F6 bulks**

- Corvallis, OR            1 rep, Type 2 Modified Augmented design

**Doubled Haploid HRBIN 2-row plots (Corvallis)**

- 47 lines. Unreplicated nursery with checks

**Doubled haploid single rows (Corvallis)**

- 22 lines. Unreplicated nursery with checks

**Head Rows (Corvallis) 3492 segregating head rows total**

- F3 Head Rows            12 families, 542 rows
- F4 (club) Head Rows    17 families, 306 rows
- F4 (lax) Head Rows    68 families, 1156 rows
- F5 Head Rows            70 families, 1488 rows

**F2 (Corvallis)**

- 28 populations

**F1 (Corvallis)**

- 27 pedigrees

**Purification Head Rows (all at Corvallis)**

- OR818                    150 rows
- OR101                   144 rows

**Oregon Sampler Elite Lines – 12 entries**

- International
  - Spain, 2 locations
  - France
- Domestic
  - St. Albans, VT
  - Wooster, OH

**Winter food barley**

**Overview: Number of populations/families in early generations:**

- 16 F2's

**Number of segregating head rows:**

- 2100 (F3 to F5)

**Number of purification head rows:**

- 1290

**Number of advanced and fixed lines: 364**

- 19 in yield trial plots
- 345 in single or double row plots (doubled haploids)

**Details: Oregon Winter Food Barley Trial; 16 entries**

- Corvallis, OR            3 rep, RCBD
- LB Farm (organic), OR   3 rep, RCBD
- Hermiston, OR           3 rep, RCBD
- Pendleton, OR           3 rep, RCBD
- Pullman, WA            3 rep, RCBD
- Aberdeen, ID            3 rep, RCBD
- Genesse, ID (WSU)      3 rep, RCBD
- Parma, ID                3 rep, RCBD

- Mt. Vernon, WA 3 rep, RCBD

**Doubled haploid HRBIN (2 row plots); 96 lines total**

- Corvallis, OR Waxy; 60 lines. Unreplicated nursery with checks
- Corvallis, OR Non-waxy 36 lines. Unreplicated nursery with checks

**Doubled haploid single rows; 249 lines total**

- Corvallis, OR Hull-less; 130 lines. Unreplicated nursery with checks
- Corvallis, OR Food; 5 lines. Unreplicated nursery with checks
- Corvallis, OR Hulled Waxy Food; 12 lines. Unreplicated nursery with checks
- Corvallis, OR Hulled non-waxy; 102 lines. Unreplicated nursery with checks

**Head Rows (Corvallis) 2100 segregating head rows**

- F3 Food Hulless 6 row Head Rows 8 entries, 180 rows
- F4 Food Hulless 2 row Head Rows 18 entries, 828 rows
- F4 Food Hulless colored SSD 156 entries, 936 rows
- F3 Food Hulless colored SSD 156 entries, 156 rows

**Purification Head Rows (Corvallis)**

- OR85, blue 120 rows
- 8 pedigrees 1170 rows

**Streaker mix increase (Corvallis)**

- OR85 + OR86 + OR911

**Introductions; 3 entries; Varieties from K.J. Mueller, Germany**

- Corvallis, OR Observation strip
- Hermiston, OR 1 plot each

**Genetics**

**Number of advanced and fixed lines tested: 2837**

- 54 in yield trial plots
- 2783 in single or double row plots

**OSU-TCAP Facultative 6 row trial; NUE; Hi, Lo N, 396 entries**

- Corvallis, OR–fall planted. Type 2 Modified Augmented design

**OSU-TCAP NSGC Winter Barley Core; LTT, 414 entries**

- Pendleton, OR–fall planted Augmented design

**OSU-TCAP NSGC Barley core; BSR, 2583 entries**

- Corvallis, OR–fall planted. Type 2 modified augmented design

**Denso gene fertility Trial; 6 entries**

- Corvallis, OR 3 rates

**Uniform Barley Winter Hardiness Nursery; 30 entries**

- Pendleton, OR 2 rep, RCBD

**Oregon/ Nebraska (OrNe) Marker Assisted Selection (MAS) HRBIN**

- Corvallis, OR 48 entries. Unreplicated nursery with checks

**F2 (Corvallis)**

- UG99 resistance 16 populations