

Oregon State University barley nurseries: 2015-2016. The summary is divided into “Malting”, “Food”, “Forage/Feed”, and “Genetics”. In reality, these areas of endeavor are tightly integrated. This is especially true for feed barley as we generally don’t breed specifically for this end-use however feed barley lines may stem from any of the other breeding areas. 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).

Malting Barley

Overview:

Number of advanced and fixed lines: 679

- 217 in yield trial plots
- 462 in single rows or mini-plots (doubled haploids)

Details:

Oregon Winter/Facultative Barley Elite Yield Trial

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|------------------|--------------|----------------------------|
| • Corvallis, OR | Fall-planted | 30 entries, 3 rep, RCBD |
| • Mt. Vernon, WA | Fall-planted | 30 entries, 3 rep, RCBD |
| • Logan, UT | Fall-planted | 30 entries, 3 rep, Lattice |
| • Aberdeen, ID | Fall-planted | 30 entries, 3 rep |
| • Wooster, OH | Fall-planted | 30 entries, 3 rep |
| • Rupert, ID | Fall-planted | 30 entries, 2 rep |
| • St. Paul, MN | Fall-planted | 30 entries, 2 rep |
| • Ithaca, NY | Fall-planted | 30 entries, 2 rep |
| • Lebanon, OR | Fall-planted | 30 entries, unreplicated |

Oregon Malting Barley Advanced Line Yield Trial

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|-----------------|--------------|------------------------------|
| • Corvallis, OR | Fall-planted | 47 entries, 2 rep, RCBD |
| • Logan, UT | Fall-planted | 44 entries, 3 rep, Lattice |
| • Lebanon, OR | Fall-planted | 44 entries, unreplicated |
| • St. Paul, MN | Fall-planted | 44 entries, observation rows |

Oregon Malting Barley Preliminary Yield Trial

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| • Corvallis, OR | Fall-planted | 63 entries, unreplicated |
| • St. Paul, MN | Fall-planted | 63 entries, observation rows |

Oregon Facultative Barley Yield Trial

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| • Madras, OR* | Spring-planted | 33 entries, 2 rep, RCBD |
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Oregon Promise Yield Trial

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| • Lebanon, OR | Winter-planted | 26 entries, 2 rep, RCBD |
| • Madras, OR* | Spring-planted | 26 entries, 2 rep, RCBD |

Winter Malting Barley Trial (US and International Cooperators)

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| • Corvallis, OR | Fall-planted | 28 entries, 3 rep, RCBD |
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Winter Barley Germplasm Nursery (US Cooperators)

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| • Corvallis, OR | Fall-planted | 20 entries, 2 rep, RCBD |
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AMBA Drill Strips

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|-----------------|--------------|-----------------------------|
| • Corvallis, OR | Fall-planted | 29 entries (OSU & USDA-ARS) |
| • Lebanon, OR | Fall-planted | 29 entries (OSU & USDA-ARS) |
| • Pendleton, OR | Fall-planted | 12 entries (OSU & USDA-ARS) |
| • Pullman, WA | Fall-planted | 8 entries |
| • Aberdeen, ID | Fall-planted | 6 entries |

• Rupert, ID	Fall-planted	3 entries
Observational Drill Strips/Seed Increase		
• Hermiston, OR	Fall-planted	2 entries
Oregon Promise Drill Strips		
• Madras, OR*	Spring-planted	4 entries
Purification Head Rows		
• Corvallis, OR	Fall-planted	2 entries, 432 rows each
Malt Doubled Haploid Mini-Plots		
• Corvallis, OR	Fall-planted	312 lines, unreplicated w/checks
Malt Doubled Haploid Single Rows		
• Corvallis, OR	Fall-planted	150 lines, unreplicated w/checks
2-row Spring Barley Fertility Trial (BOBB)		
• Willamette Valley	Winter-planted	3 entries, 3 treatments, 4 rep, RCBD
• Klamath Basin*	Spring-planted	3 entries, 3 treatments, 4 rep, RCBD
• Grande Ronde Valley*	Spring-planted	3 entries, 3 treatments, 4 rep, RCBD

*Not yet planted as of 2/29/16

Food Barley

Overview:

Number of advanced and fixed lines: 61

- 55 in yield trial plots
- 6 mini-plots (doubled haploids)

Details:

Oregon Food Barley Elite Yield Trial

• Corvallis, OR	Fall-planted	23 entries, 3 rep, RCBD
• Lebanon, OR	Fall-planted	23 entries, Unreplicated
• Mt. Vernon, WA	Fall-planted	23 entries, 3 rep, RCBD
• St. Paul, MN	Fall-planted	23 entries, 2 rep
• Ithaca, NY	Fall-planted	23 entries, 2 rep

Oregon Food Barley Preliminary Yield Trial

• Corvallis, OR	Fall-planted	18 entries, unreplicated
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Black Beaut Yield Trial

• Madras, OR*	Spring-planted	14 entries, 2 rep, RCBD
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Observational Drill Strips/Seed Increase

• Corvallis, OR	Fall-planted	2 entry
• Lebanon, OR	Fall-planted	2 entry
• Pendleton, OR	Fall-planted	1 entry
• Pullman, WA	Fall-planted	1 entry

Food Mini-Plots

• Corvallis, OR	Fall-planted	6 lines, unreplicated
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*Not yet planted as of 2/22/16

Forage & Feed[^]

Overview:

Number of advanced and fixed lines: 54

- 44 in yield trial trial plots/drill strips
- 10 in mini-plots (doubled haploids)

Details:

On-Farm Strip Trial (Morrow County)

- Jepsen Farm Fall-planted 8 entries, 4 rep, RCBD
- Starvation Farm Fall-planted 7 entries, 4 rep, RCBD

Hooded Barley Yield Trial

- Corvallis, OR Fall-planted 32 entries, 2 rep, RCBD

Observational Drill Strips/Seed Increase

- Corvallis, OR Fall-planted 4 entries
- Pendleton, OR Fall-planted 3 entries
- Hermiston, OR Fall-planted 3 entries
- Pullman, WA Fall-planted 3 entries

Purification Head Rows

- Corvallis, OR Winter-planted 1 entries, 108 rows

Hooded Mini-Plots

- Corvallis, OR Fall-planted 10 lines, unreplicated

[^]Not an inclusive list as feed lines are integrated within other breeding classes. All lines grown have potential as a possible feed variety.

Genetics

Overview:

Number of advanced and fixed lines: 579

- 579 in single, double or mini-plots

Details:

Barley Stripe Rust Nursery (Corvallis); Winter-planted

- Barley Stripe Rust Screening Trial 73 entries, 2 reps, RCBD
- FacWin 2-row TP 139 entries, 2 reps, RCBD
- UG99 Germplasm Array 94 entries, 2 reps, RCBD
- 95SR316A/GZ Population 165 entries, 2 reps, RCBD
- Uniform Barley Winter-hardiness Nursery 17 entries, 2 reps, RCBD
- BARI BSR Nursery 50 entries, 2 reps, RCBD

Low Temperature Tolerance Mini-Plots

- Corvallis, OR Fall-planted 24 entries, unreplicated

UG99 Mini-Plots

Corvallis, OR Winter-planted 17 entries, unreplicated

Other

Adaptive Symbiotic Technologies Drill Strips

- Corvallis, OR Fall-planted 3 entries, 2 Trtmnts, 8 rep, Split Plot
- Lebanon, OR Fall-planted 3 entries, 2 Trtmnts, 8 rep, Split Plot