

# 2025 Small Grain Variety Trial Report

University of California  
Agriculture and Natural Resources



Research and Extension Center System

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## Introduction

This report summarizes grain yield and agronomic characteristics for public and private entries evaluated at IREC in 2025. Grain variety trials were a cooperative effort between IREC and Oregon State University's Cereal Variety Testing organized by Dr. Ryan Graebner. Entries included varieties from UC Davis Smalls Grains Breeding program organized by Dr. Xiaofei Zhang and Dr. Josh Hegarty. Funding support was provided by the California Wheat Commission.

Grain yield and agronomic data were collected by IREC staff. Grain protein and test weights were generated in collaboration with Ryan Graebner, Oregon State University. OSU grain tables can be viewed online at:

<https://cropandsoil.oregonstate.edu/wheat/variety-trials/2025>



## 2025 General Trial Information for all trials

<b>Location:</b>	Intermountain Research and Extension Center, Tulelake, CA
<b>Soil Type:</b>	Tulebasin mucky silty clay loam
<b>Weed Control:</b>	Rhomene MCPA @ 1 pt. /Acre; Detonate @ 2 fl oz./Acre; Express 0.5 oz./Acre
<b>Replicated Plot size:</b>	75ft <sup>2</sup>
<b>Seeding Rate:</b>	100 lbs./Acre
<b>Row Spacing:</b>	6 Inches
<b>Trial Design:</b>	3-Replicate Alpha-Lattice

## **2025 Hard Winter Wheat Trial**

**Planting Date:** 10/8/2024  
**Previous Crop:** Sudan Grass  
**Spring 2025 Soil Test N:** 3.2 ppm (11lbs. N/Acre)  
**Nitrogen Fertilizer:** Season total applied Nitrogen was 180 lbs per acre applied through the season. 50 lbs. N/A at planting (10/7/2024), 50 lbs. N/A early through late tillering (4/22/2025), 50 lbs. N/A through stem elongation (5/8/2025). 30 lbs. N/A flowering (6/3/2025)  
**Irrigation Quantity:** Solid-set sprinklers 12.6 acre inches (final irrigation 6/14/2025)  
**Harvest Date:** 8/21/2025

**Variety Highlights:** Trying to boost protein, winter hard wheat (HRW) varieties were fertilized with an additional 30 lbs. of nitrogen applied at flowering. Unfortunately, this late season N application did not increase grain protein over 11% for any variety. Low grain protein is yearly problem for winter hard red wheat grown in Tulelake. Low protein for winter hard red wheat seems related to several factors including high yield potential of winter varieties, plant genetics, and our unique soil and growing conditions. Further testing is needed to determine if additional nitrogen applied at flowering would be able to achieve proteins above 12%. As alternative, it is much easier to obtain higher grain protein over 13% with spring planted hard red wheat varieties. The HRW variety, Keldin had the highest grain yield in the 2025 trial at 226 bu/acre. The three varieties with the highest 4-Year average yield were Millie, LCS Blackbird and LCS Jet. Millie was rated as having most desirable baking quality and an average 4-year yield of 173 bu/a.



## 2025 Oregon Hard Winter Wheat Yield Trials

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Herbicide Traits	Quality	Class	Current Yield	Year Rank	2-Year Average Yield (bu/acre)	3-Year Average Yield (bu/acre)	4-Year Average Yield (bu/acre)	5-Year Average Yield (bu/acre)	Best Estimate
OR3230010H	AX		HRW	224	2	199				191+-15
WB4640			HRW	220	3					184+-21
LCS Top Gun (LWH20-0490)			HRW	211	5					175+-21
Keldin		D	HRW	226	1	183	179			174+-12
Millie		MD	HWW	198	11	174	175	173		173+-10
WB4510 CLP	CL+	A	HRW	212	4	181				173+-15
LCS Blackbird		LD	HRW	190	17	165	169	168		168+-10
LCS Jet		A	HRW	201	7	181	175	167		167+-10
OR2190064R			HRW	198	10	175	171			167+-10
LCS Missile		MD	HRW	206	6	183	171	165		165+-10
Scorpio		MD	HRW	201	8	179	172	162		162+-10
OR3230008H	AX		HRW	198	12					162+-21
OR2190160R			HRW	200	9	169				161+-15
Irv		MD	HWW	193	15					157+-12
WA8399			HRW	190	16	164				156+-15
WA8401			HRW	194	14	162				154+-15
CS Bridger CLP	CL+		HRW	189	18					154+-21
OR2190165R			HRW	197	13	161				153+-15
Average				203		175	173	167		167
LSD (0.05)				15						
CV (%)				5.2						

- Quality rating assigned by the USDA Western Wheat Quality Laboratory.
- Quality ratings: MD=Most Desirable; D=Desirable; A=Acceptable; LD=Least Desirable; UCS=Unacceptable Except Customer-Specific Uses
- Best linear unbiased estimators (BLUEs) are best estimators of variety performance relative to other varieties, based on up to five years of data.

## 2025 Oregon Hard Winter Wheat Yield Trials

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Class	Height (in)	Test Weight (lb/bu)	Protein (%)	Heading date
OR3230010H	HRW	44.2	59.9	9.6	6/6
WB4640	HRW	39.1	62.0	9.7	6/6
LCS Top Gun (LWH20-0490)	HRW	35.4	59.4	9.6	6/6
Keldin	HRW	42.0	61.1	9.7	6/6
Millie	HWW	37.9	61.9	9.5	6/5
WB4510 CLP	HRW	42.4	61.8	9.5	6/5
LCS Blackbird	HRW	33.3	57.3	10.7	6/6
LCS Jet	HRW	38.3	59.3	10.1	6/6
OR2190064R	HRW	37.1	59.3	10.0	6/6
LCS Missile	HRW	40.9	60.5	9.5	6/6
Scorpio	HRW	35.2	59.1	10.2	6/5
OR3230008H	HRW	42.3	57.5	9.3	6/6
OR2190160R	HRW	36.5	60.3	10.5	6/5
Irv	HWW	37.8	60.2	10.2	6/5
WA8399	HRW	37.4	58.0	9.2	6/5
WA8401	HRW	36.7	57.9	9.3	6/5

CS Bridger CLP	HRW	39.4	60.7	10.1	6/6
OR2190165R	HRW	38.7	61.2	10.0	6/5
Average		38.6	59.9	9.8	6/6
LSD (0.05)		1.9	0.7	0.3	0.4
CV (%)		3.6	0.9	2.3	



**2025 Soft White Winter Wheat Trial**

**Planting Date:** 10/18/2024  
**Previous Crop:** Sudan Grass  
**2024 Soil Test N:** 3.2 ppm (11 lbs. N/Acre)  
**Nitrogen Fertilizer:** Season total applied Nitrogen was 150 lbs per acre applied through the season. 50 lbs. N/A at planting (10/7/2024), 50 lbs. N/A early through late tillering (4/22/2025), 50 lbs. N/A through stem elongation (5/8/2025).  
**Irrigation Quantity:** Solid-set sprinklers 12.6 acre inches (final irrigation 6/14/2025)  
**Harvest Date:** 8/14/2025



**Variety Highlights:** Winter wheats consistently produce 20% higher grain yield compared to spring planted types in our region. Under full irrigation, the average yield for all varieties in the Soft White Winter Wheat trial was 189 bushels/acre. Wheat is a cool season grass, and winter varieties mature earlier than spring planted types. This usually means winter wheat can more effectively utilize winter/spring soil moisture and avoid maturing during the hottest part of the growing season. 17-995133B (216 bu/A) was the highest yielding variety in 2025. AP Exceed (183 bu/A), LCS Blackjack (178 bu/A) and LCS Jet (168 bu/A) were the highest yielding varieties for the 5-year trial average. LCS Blackjack has the advantage of being awnless, making it a dual-purpose type which can be desirable for hay harvest. The downside to awnless types is the risk of them having lower test weights compared to awned types. This is driven by green awns continuing to photosynthesize during grain fill. This was apparent in 2025 when Blackjack had an average test weight of 58.4 and AP Exceed was 59.8. Low test weight can reduce grain revenue due to quality/price differences between US Grade 1 grain versus US Grade 2 with lower test weights.

## 2025 Oregon Soft Winter Wheat Yield Trials

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Herbicide Traits	Quality	Class	Current Yield	Year Rank	2-Year Average Yield (bu/acre)	3-Year Average Yield (bu/acre)	4-Year Average Yield (bu/acre)	5-Year Average Yield (bu/acre)	Best Estimate
17-995133B			SWW	216	1					187+-22
VI Gem (UIL 13-046145A)		MD	SWW	212	3	186				185+-12
AP Exceed		MD	SWW	206	7	184	182	184	183	183+-10
LWWC21-5070 CL+	CL+		SWW	208	5					179+-22
LCS Blackjack		D	SWW	204	8	183	184	180	178	178+-10
LWW22-2425			SWW	204	9					176+-22
Bobtail		MD	SWW	206	6					174+-12
LWW20-2867			SWW	195	17	179				174+-15
LCS Scorpion AX	AX		SWW	209	4	178	175			173+-12
WFX69113			SWW	200	11					171+-22
Sockeye CL+	CL+	MD	SWW	203	10	180	172			170+-12
OR5180072			Club	191	22	174	171			169+-12
AP Olympia		D	SWW	199	13	174				169+-15
LWW22-1232			SWW	197	14					168+-22
LCS Jefe		D	SWW	213	2	185	173	175	168	168+-10
LWW22-2864			SWW	195	18					166+-22
WB1621		MD	SWW	199	12	176	172	168		165+-11
PN18M604566			SWW	194	19					165+-22
OR2180149			SWW	187	29	171				165+-12
LCS Shine		MD	SWW	196	15	159	162	166	164	164+-10
LCS Hydra AX	AX		SWW	183	36	157	165			162+-12
OR2180350			SWW	179	43	167				162+-15
ARS14X1114RS-3CBW			Club	190	23					162+-22
LCSMazama (LWW20-2383)			SWW	194	20	166				162+-15
WB1922		D	SWW	176	47	159	167	163		161+-11
Stephens		D	SWW	195	16	170	164			161+-12
Nova AX (WA8346 AX)	AX	MD	SWW	182	38	160	162			160+-12
LCS Nessie AX (LWWA22-S22 AX)	AX		SWW	182	27					159+-22
OR2200083 CL+	CL+		SWW	189	25	168	161			159+-12
Piranha CL+	CL+	D	SWW	191	21	162	161			158+-12
OR3230026 AX	AX		SWW	189	26	163				158+-15
WA8404			SWW	185	32	163				158+-15
LCS Kamiak		A	SWW	188	28	165	156	158	158	158+-10
TMC M-Pire		D	SWW	185	31	164	160			157+-12
Rosalyn		A	SWW	189	24	157	159	159	156	156+-10
OR5180071			Club	184	33	161	165	162	155	155+-10
Mallory CL+(OR12190025 CL=)	CL+	D	SWW	186	30	170	161	157		155+-11
WA8420 AX	AX		SWW	183	37					154+-22
WA8405			SWW	182	40	158				153+-15
VI Voodoo CL+	CL+	D	SWW	183	35	155	155			152+-12
Gale (OR2180377)		MD	SWW	169	52	158	158	154		152+-11
TMC M-Press		D	SWW	181	41	150	154			152+-11
Nimbus		MD	SWW	177	45	156	155	151	151	151+-10
OR3230013 AX	AX		SWW	179	44					150+-22

OR2170559			SWW	184	34	159	154	154	149	149+-10
WFX69333			SWW	176	46					148+-22
OR5190014			Club	182	39	152				147+-15
ARS Crescent		MD	Club	181	42	152				147+-15
OR2190671			SWW	173	50					145+-22
Appleby CL+	CL+	D	SWW	174	49	158	146			144+-12
WB1720		D	SWW	171	51					143+-12
VI Encore CL+ (UIL 17-7706 CL+)	CL+	D	SWW	166	53	146	145			142+-12
LCS ReaperII AX	AX		SWW	176	48	140				135+-15
OR5210096			Club	156	54					127+-22
Average				189		165	163	164	162	160
LSD (0.05)				13						
CV (%)				4.9						

- Quality rating assigned by the USDA Western Wheat Quality Laboratory.
  - Quality Rating; MD=Most Desirable; D=Desirable; A=Acceptable, LD=Least Desirable; UCS=Unacceptable Except Customer-Specific Uses
- Best linear unbiased estimators (BLUEs) are best estimators of variety performance relative to other variety, based on up to five years of data.

## 2025 Oregon Soft Winter Wheat Yield Trials

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Class	Height (in)	Test Weight (lb/bu)	Protein (%)	Heading Date	Lodging (%)
17-995133B	SWW	38.1	61.0	8.9	6/6	0.0
VI Gem (UIL 13-046145A)	SWW	42.4	60.8	8.4	6/6	0.0
AP Exceed	SWW	40.5	59.8	9.2	6/5	0.0
LWWC21-5070 CL+	SWW	35.5	58.9	9.2	6/8	0.0
LCS Blackjack	SWW	37.4	58.4	9.2	6/8	0.0
LWW22-2425	SWW	33.4	59.9	9.1	6/5	0.0
Bobtail	SWW	37.4	58.4	9.0	6/8	0.0
LWW20-2867	SWW	38.7	59.0	8.7	6/7	0.0
LCS Scorpion AX	SWW	39.6	60.2	8.9	6/4	1.7
WFX69113	SWW	31.9	57.2	9.4	6/5	0.0
Sockeye CL+	SWW	43.5	58.5	8.8	6/7	45.0
OR5180072	Club	37.1	56.9	9.3	6/10	0.0
AP Olympia	SWW	37.9	60.6	9.4	6/7	0.0
LWW22-1232	SWW	37.0	56.2	9.0	6/7	0.0
LCS Jefe	SWW	40.3	61.1	9.0	6/7	1.7
LWW22-2864	SWW	36.1	58.4	9.2	6/5	0.0
WB1621	SWW	40.7	61.1	9.8	6/7	0.0
PN18M604566	SWW	34.8	60.3	9.3	6/6	0.0
OR2180149	SWW	40.3	58.0	9.4	6/6	0.0
LCS Shine	SWW	34.2	59.9	9.2	6/5	3.3
LCS Hydra AX	SWW	42.6	60.2	9.3	6/6	15.0
OR2180350	SWW	34.7	57.9	9.1	6/6	0.0
ARS14X1114RS-3CBW	Club	38.2	58.8	8.9	6/9	0.0
LCSMazama (LWW20-2383)	SWW	38.1	60.1	9.0	6/6	0.0
WB1922	SWW	42.1	62.1	9.8	6/9	1.7
Stephens	SWW	41.2	59.2	9.2	6/6	5.0

Nova AX (WA8346 AX)	SWW	43.9	58.1	9.7	6/8	23.3
LCS Nessie AX (LWWA22-S22 AX)	SWW	38.3	58.0	9.5	6/7	0.0
OR2200083 CL+	SWW	37.8	58.9	9.5	6/6	0.0
Piranha CL+	SWW	43.3	59.0	9.2	6/7	46.7
OR3230026 AX	SWW	38.7	59.8	9.0	6/6	0.0
WA8404	SWW	38.6	59.2	9.4	6/8	0.0
LCS Kamiak	SWW	38.5	60.9	9.4	6/5	0.0
TMC M-Pire	SWW	33.3	61.1	9.5	6/8	0.0
Rosalyn	SWW	38.5	56.3	9.1	6/8	0.0
OR5180071	Club	38.2	58.7	9.3	6/9	0.0
Mallory CL+(OR12190025 CL+)	SWW	37.7	58.5	9.8	6/6	0.0
WA8420 AX	SWW	39.3	59.2	9.7	6/6	0.0
WA8405	SWW	40.5	59.8	9.4	6/9	4.0
VI Voodoo CL+	SWW	35.6	58.2	9.2	6/8	0.0
Gale (OR2180377)	SWW	37.6	57.5	9.8	6/8	0.0
TMC M-Press	SWW	35.7	59.3	9.6	6/7	0.0
Nimbus	SWW	44.3	60.0	9.3	6/6	0.0
OR3230013 AX	SWW	36.1	58.4	9.2	6/6	0.0
OR2170559	SWW	43.6	60.3	9.3	6/6	0.0
WFX693333	SWW	40.1	59.8	9.5	6/9	0.0
OR5190014	Club	37.6	59.1	9.0	6/10	0.0
ARS Crescent	Club	42.9	59.7	8.5	6/12	19.3
OR2190671	SWW	38.4	59.0	9.1	6/8	0.0
Appleby CL+	SWW	39.5	60.1	9.9	6/6	0.0
WB1720	SWW	35.0	61.4	9.9	6/6	0.0
VI Encore CL+ (UIL 17-7706 CL+)	SWW	37.5	60.0	8.9	6/8	1.7
LCS ReaperII AX	SWW	40.3	61.9	9.8	6/2	26.7
OR5210096	Club	34.6	57.6	9.7	6/6	0.0
Average		38.5	59.3	9.3	6/7	3.6
LSD (0.05)		1.8	1.1	0.4	1.5	
CV (%)		3.3	1.3	2.9		

## 2025 Spring Hard Grain Trial

**Planting Date:** 4/24/2025  
**Previous Crop:** Sudan Grass  
**2025 Soil Test N:** 5.9 ppm (21 lbs. N/Acre)  
**Nitrogen Fertilizer:** Season total applied Nitrogen was 180 lbs per acre applied through the season. 50 lbs. N/A at planting (4/30/2025) urea, 100 lbs. N/A early tillering through late tillering (6/1/2025), 30 lbs. N/A at flowering to increase protein (7/8/2025).  
**Irrigation Quantity:** Solid-set sprinklers 14.5 acre inches (final irrigation 7/8/25)  
**Harvest Date:** 9/5/2025



**Trial information and Variety Highlights:** The research team is very grateful to the California Wheat Commission for funding spring wheat trials in 2025. Their funding allowed us to re-start growing regional, replicated spring grain variety trials after two years absence. All hard spring types were fertilized with an additional 30# nitrogen per acre at flowering to increase kernel protein. Along with entries provided by Oregon State University, IREC entered several varieties of local interest in the spring trials. This data was not included in the analysis provided in the tables due to trial design, so results are presented in the bar graphs within each spring grain trial summary.

For 2025, IDO2105S (182 bu/a) and UC1988 (181 bu/a) were the best performing hard spring wheat varieties. WB9668 (141 bu/a), UI Gold (139 bu/a) and WB9303 (134 bu/a) were the highest yielding released varieties based on 4-year averages. Protein levels for WB9668 and WB9303 were 14.8 where UI Gold was lower at 13.1. The trial average for grain protein was 13.8, suggesting the additional 30# of nitrogen applied at flowering was successful at increasing grain protein over 13% for most varieties.

LCS Hammer AX performed excellently at IREC. This variety had an average yield of 171 bushels/acre and a protein of 14.3 in 2025. The AX in the name signifies this variety contains the non-GMO trait for herbicide tolerance to control grassy weeds using Agressor AX herbicide which is a Group 1 (ACCCase) mode of action. Currently, this technology isn't labeled in California, but it is labeled in Oregon and offers growers another tool to control difficult grassy weeds such as quackgrass, volunteer grains, and foxtail.

The bar graph below compares released varieties within the trial to ones of local interest. Yecora Rojo has been the predominant hard red wheat type produced in the Tulelake region for decades due to its short plant height and consistently high grain protein. WB9668 had similar protein and yield to Yecora Rojo 515 in 2025. Also, WB9215 produced roughly a half ton more yield than Yecora Rojo 515 and a percent protein of 13.91.

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Variety	Herbicide Traits	Quality	Class	Current Yield	Year Rank	2-Year Average Yield (bu/acre)	3-Year Average Yield (bu/acre)	4-Year Average Yield (bu/acre)	5-Year Average Yield (bu/acre)	Best Estimate
IDO2105S			HRS	182	1					164+-17
UC 1988			HRS	181	2					162+-17
UC1991			HWS	176	4					157+-17

LCS Hammer AX	AX		HRS	171	5					153+-17
UC 1989			HWS	171	6					152+-17
OR2200252H			HWS	164	7					145+-17
XH9033			HRS	160	8					141+-17
WB9668		D	HRS	152	15	133	138	141		141+-9
WB9636			HRS	159	9					141+-17
UI Gold			HWS	179	3	150	138	139		139+-9
Hale		MD	HRS	156	10	135				138+-10
IDO2202CL2	CL+		HRS	155	11	134				136+-12
WA8406			HRS	154	13					135+-17
WA8431			HRS	154	14					135+-17
WB9662		LD	HRS	149	17					134+-12
WB9303		D	HRS	143	21	129	133	134		134+-9
UC-Central White			HWS	145	19	132				134+-12
WB9623			HRS	154	12	132				133+-12
WB9990			HRS	150	16					132+-17
OR2220207H			HWS	149	18					130+-17
MT Carlson			HRS	145	20					126+-17
Kelse		D	HRS	140	24	121	123			125+-10
HSG Timberline			HRS	143	22					124+-17
WA8436 CL+	CL+		HRS	139	25					120+-17
Glee		MD	HRS	143	23	121	117			119+-10
Net CL+	CL+	MD	HRS	136	26	118	114			116+-10
Lanning			HRS	134	27					108+-12
ORS227913			HRS	122	28					103+-17
Chet		MD	HRS	118	29					100+-17
OR2210097R			HRS	108	30					89+-17
Average				151		130	127	138		132
LSD (0.05)				13						
CV (%)				6.3						

- Quality rating assigned by the USDA Western Wheat Quality Laboratory.
  - Quality Rating; MD=Most Desirable; D=Desirable; A=Acceptable, LD=Least Desirable; UCS=Unacceptable Except Customer-Specific Uses
- Best linear unbiased estimators (BLUEs) are best estimators of variety performance relative to other variety, based on up to five years of data.

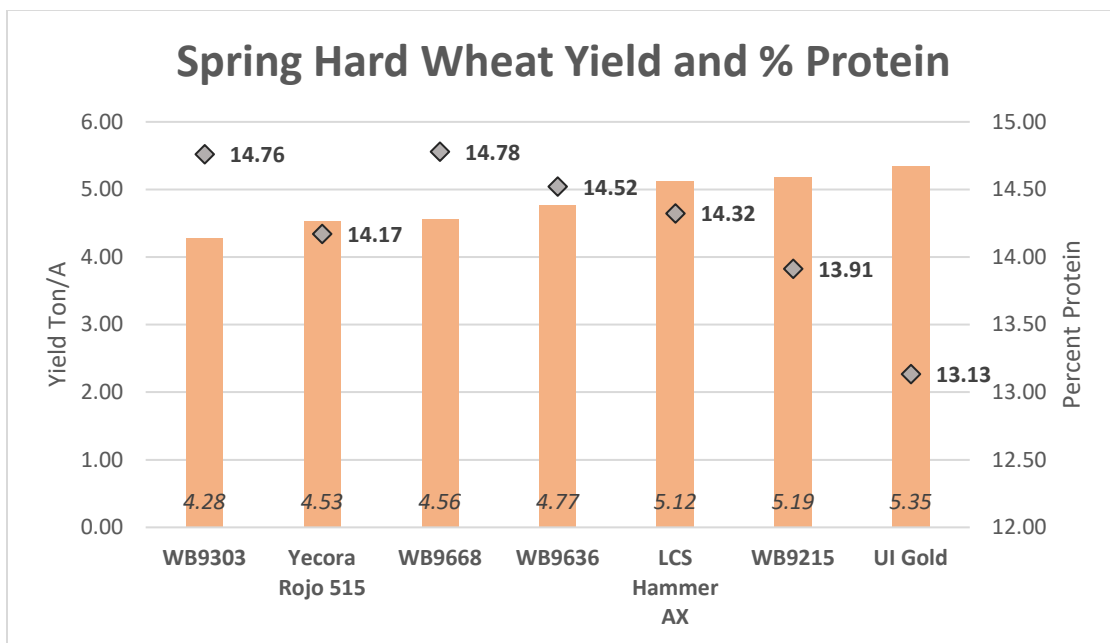
### 2025 Oregon Hard Spring Wheat Yield Trials

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Class	Height (in)	Test Weight (lb/bu)	Protein (%)	Lodging (%)	Heading Date
IDO2105S	HRS	38.0	62.1	13.1	0	6/27
UC 1988	HRS	37.6	60.7	12.9	0	7/2
UC1991	HWS	34.3	61.7	12.5	0	6/23
LCS Hammer AX	HRS	39.4	62.1	14.3	0	6/27
UC 1989	HWS	39.2	60.4	12.9	0	7/2
OR2200252H	HWS	38.7	60.9	11.6	0	7/6
XH9033	HRS	36.9	60.7	14.6	2	6/25
WB9668	HRS	33.2	61.8	14.8	0	6/26
WB9636	HRS	36.0	61.4	14.5	0	6/30
UI Gold	HWS	39.1	61.4	13.1	3	7/2
Hale	HRS	38.5	62.2	14.0	20	6/27
IDO2202CL2	HRS	40.0	62.0	13.1	0	6/23
WA8406	HRS	38.2	61.2	13.8	2	6/28
WA8431	HRS	39.0	61.6	14.0	2	6/27

WB9662	HRS	36.2	61.8	14.6	0	7/2
WB9303	HRS	39.3	61.3	14.8	0	6/15
UC-Central White	HWS	36.6	60.8	14.1	0	6/25
WB9623	HRS	39.7	60.9	13.9	8	6/30
WB9990	HRS	36.0	59.5	12.3	0	6/29
OR2220207H	HWS	34.7	61.2	12.4	2	7/9
MT Carlson	HRS	39.4	60.7	14.8	10	6/24
Kelse	HRS	39.4	61.3	14.2	0	6/27
HSG Timberline	HRS	38.0	60.2	14.6	0	6/30
WA8436 CL+	HRS	42.1	61.9	14.6	53	6/27
Glee	HRS	36.7	61.5	13.3	30	6/25
Net CL+	HRS	41.5	61.9	13.2	30	6/29
Lanning	HRS	39.0	60.2	15.3	15	6/22
ORS227913	HRS	44.9	60.1	16.0	35	6/22
Chet	HRS	46.1	62.1	14.9	68	6/29
OR2210097R	HRS	32.1	59.2	13.1	0	7/6
Average		38.3	61.2	13.8	9	6/28
LSD (0.05)		2.2	0.3	0.2	12.4	4.1
CV (%)		4.1	0.4	1.2	94.6	0.0





**2025 Spring Soft Wheat Trial**

**Planting Date:** 4/24/2025  
**Previous Crop:** Sudan Grass  
**2025 Soil Test N:** 5.9 ppm (21 lbs. N/Acre)  
**Nitrogen Fertilizer:** Season total applied Nitrogen was 150 lbs per acre applied through the season. 50 lbs. N/A at planting (4/30/2025) urea, 100 lbs. N/A early tillering through late tillering (6/1/2025).  
**Irrigation Quantity:** Solid-set sprinklers 14.5 Acre inches (final irrigation 7/7/2025)  
**Harvest Date:** 9/5/2025

**Trial information and Variety Highlights:** Soft white wheat is the predominant wheat raised in the Klamath Basin. While winter types produce higher grain yields than spring types over the last decade, 2025 weather created perfect growing conditions for both winter and spring planted grains. We had

minimal frost events during early-summer when grain was flowering and summer temperatures rarely exceeded 90 degrees as the grain was maturing. Under these conditions, soft spring wheat varieties averaged 160 bushels/acre (4.8 tons/a) in the trial. The highest yielding varieties were WA8327 (177 bu/a) and UI Stone (176 bu/a) in 2025. For entries evaluated over a 5-year period, UI Cookie has performed well with an average yield of 160 bu/a. Another advantage of UI Cookie is it was one of three varieties in the trial with zero lodging. It is a fine balancing act to maximize grain yield in Tulelake as irrigation and nitrogen applications after flowering can increase grain yield, but they also promote crop lodging.

Over the past 10 years, Alpowa has been a popular variety grown in the region due to its high yield potential, but it tends to lodge on our dark soils. Alternatives for Alpowa include UI Stone, WB6430 and UI Cookie which have high yield potential and less susceptibility to lodging.



## 2025 Oregon Soft Spring Wheat Yield Trials

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Herbicide Traits	Quality	Class	Current Yield	Year Rank	2-Year Average Yield (bu/acre)	3-Year Average Yield (bu/acre)	4-Year Average Yield (bu/acre)	5-Year Average Yield (bu/acre)	Best Estimate
WA8327			SWS	177	1					162+-17
UI Stone		MD	SWS	176	2					161+-17
UI Cookie		MD	SWS	165	7	153	156	160		160+-9
UI Warrior (IDO 19025)			SWS	174	3	158	155			158+-10
WA8453			SWS	171	4					156+-17
WA8408			SWS	166	6					151+-17
Bush			SWS	163	8					148+-17
Tekoa		MD	SWS	162	9	141	141	147		147+-9
WA8433			SWS	161	10					147+-17
IDO1702S			SWS	150	20	137	144	146		146+-9
IDO2301S			SWS	160	12					145+-17
WB6211 CLP	CL+	A	SWS	155	14	138	140			143+-10
WA8454			Club	155	13					140+-17
Ryan		MD	SWS	168	5	139	136	139		139+-9
TMC Lochaven		D	SWS	151	16					137+-17
WA8434			SWS	151	17					136+-17
WA8384			SWS	151	18					136+-17
WA8452			SWS	151	19					136+-17
Seahawk		MD	SWS	154	15	140	132			136+-10
Roger		MD	Club	161	11	134	132			135+-10
LWHA21-5188 AX	AX		SWW	148	21					133+-17
Average				160		142	142	148		145
LSD (0.05)				10						
CV (%)				4.5						

- Quality rating assigned by the USDA Western Wheat Quality Laboratory.
  - Quality Rating; MD=Most Desirable; D=Desirable; A=Acceptable, LD=Least Desirable; UCS=Unacceptable Except Customer-Specific Uses
- Best linear unbiased estimators (BLUEs) are best estimators of variety performance relative to other variety, based on up to five years of data.

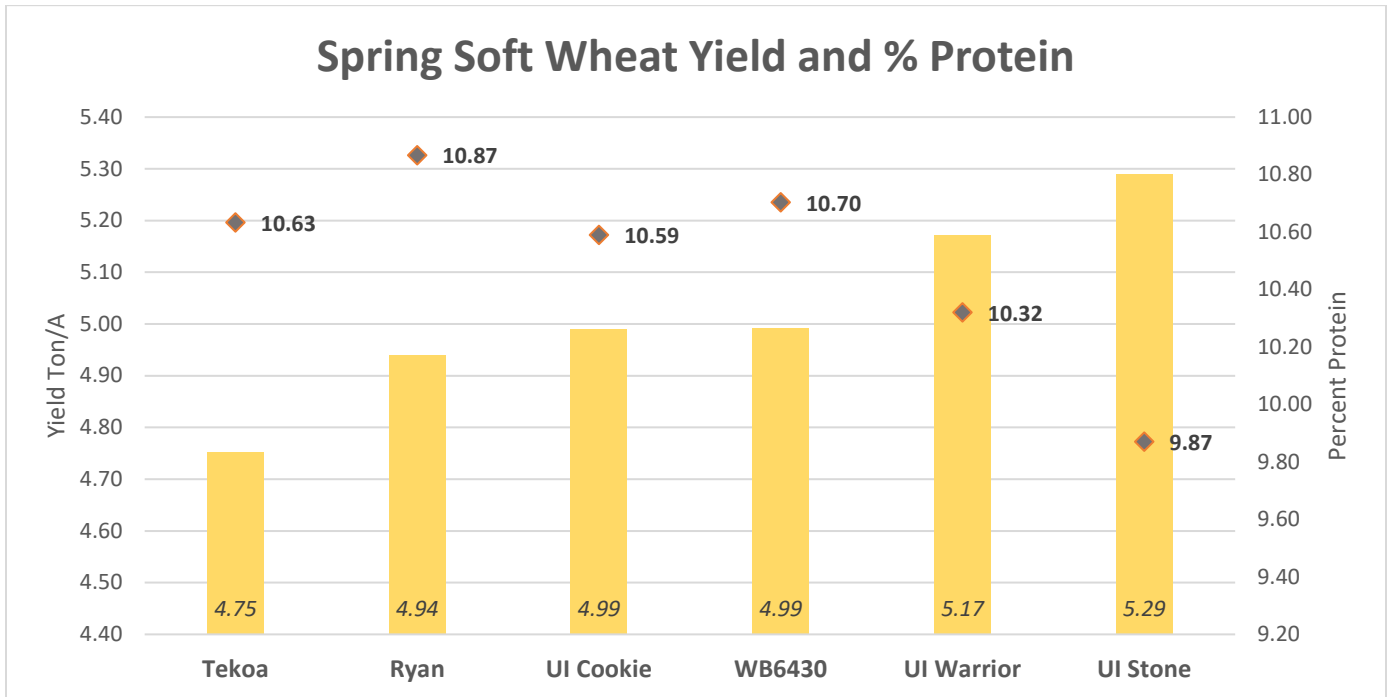
## 2025 Oregon Soft Spring Wheat Yield Trials

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Class	Height (in)	Test Weight (lb/bu)	Protein (%)	Lodging (%)	Heading Date
WA8327	SWS	41.9	61.9	10.6	0	6/27
UI Stone	SWS	41.1	60.8	10.0	28	6/27
UI Cookie	SWS	41.2	59.8	10.7	0	6/26
UI Warrior (IDO 19025)	SWS	40.3	61.2	10.2	18	6/28
WA8453	SWS	42.5	61.6	11.0	22	6/26
WA8408	SWS	40.3	61.4	10.7	7	6/26
Bush	SWS	40.2	62.0	10.3	0	6/27
Tekoa	SWS	43.0	61.9	10.5	3	6/30
WA8433	SWS	43.0	61.0	10.6	10	6/27
IDO1702S	SWS	38.1	61.0	10.8	28	6/25
IDO2301S	SWS	42.9	61.5	10.2	38	7/1
WB6211 CLP	SWS	38.7	59.2	11.1	12	6/26

WA8454	Club	40.7	61.8	10.9	22	6/29
Ryan	SWS	40.9	60.2	10.8	37	6/25
TMC Lochaven	SWS	40.0	60.2	10.6	3	6/27
WA8434	SWS	45.7	62.6	10.7	20	6/24
WA8384	SWS	41.7	61.2	10.7	40	6/26
WA8452	SWS	37.9	60.6	10.7	5	6/26
Seahawk	SWS	41.9	59.6	10.9	15	6/30
Roger	Club	40.2	61.1	10.1	17	6/26
LWHA21-5188 AX	SWW	38.2	60.7	11.0	17	6/26
Average		41.0	61.0	10.6	17	6/27
LSD (0.05)		1.6	1.2	0.2	36	1.9
CV (%)		2.9	1.3	1.3	154	





**2025 Spring Barley Grain Trial**

**Planting Date:** 4/24/2025  
**Previous Crop:** Sudan Grass  
**2025 Soil Test N:** 11.4 ppm (41 lbs. N/Acre)  
**Nitrogen Fertilizer:** Season total applied Nitrogen was 50 lbs per acre applied at planting (4/23/2025) in the form of urea.  
**Irrigation Quantity:** Solid-set sprinklers 11.5 acre inches (final irrigation 6/25/2025)  
**Harvest Date:** 8/29/2025

**Trial information and Variety Highlights:** Winter barley in our region often experiences frost damage or winter-kill (more susceptible than wheat), thus spring barley is the preferred planting time. Malt and feed barleys typically perform well in our region with the predominant end use currently being animal feed. Barley has the advantage of producing good yield with lower amounts of irrigation and nitrogen fertilizer when compared to wheat. For the 2025 trial, five varieties produced over 10,000 lbs. per acre with 50 lbs. of nitrogen applied pre-plant. The 5 highest yielding varieties were LGBU17-1320-A, KWS Ancantis, LG Caruso, LCS Odyssey and KWS Enduris 2. The variety Oreana is a feed barley with a high 4-year average yield of 8,540 lbs/a. Lodging can be very problematic with high yielding barley varieties. LG Caruso was an outlier and had zero lodging in 2025. The barley graph shows a comparison of Claymore (popular variety) compared to other barley varieties evaluated in 2025.

**2025 Oregon Spring Barley Yield Trials**

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Class	Current Yield	Year Rank	2-Year Average Yield (bu/acre)	3-Year Average Yield (bu/acre)	4-Year Average Yield (bu/acre)	5-Year Average Yield (bu/acre)	Best Estimate
LGBU17-1320-A	Malt	10720	1					9699+-903
KWS Ancantis	Malt	10471	2					9450+-903
LG Caruso	Malt	10354	3					9333+-903
KWS Enduris 2	Malt	10028	5					9007+-903
KWS Kayis	Malt	9972	6					8951+-903
LCS Odyssey	Malt	10172	4	9112				8872+-627
BC Lexy	Malt	9645	9	9048				8808+-627
Carleton	Feed	9786	7					8765+-903
BC Marietta	Malt	9583	10					8562+-903
Oreana	Feed	9112	12	8680	8546	8540		8540+-443
LC Slovan	Malt	9303	11					8283+-903
LC Diablo	Malt	8881	14					8166+-634
Alterado	Feed	9722	8	8472	8330	8049		8049+-443
Successor (DH190481)	Feed	9081	13	8221				7982+-627
Lenetah	Feed	8829	15	7516	7505			7293+-515
Ascent	Feed	8217	16					7196+-903
Survivor	Feed	7764	17	7284	7214			7002+-515
Average		9506		8333	7898	8294		8468
LSD (0.05)		534						
CV (%)		4.0						

- Best linear unbiased estimators (BLUEs) are best estimators of variety performance relative to other variety, based on up to five years of data.

### 2025 Oregon Spring Barley Yield Trials

Tulelake (Irrigated)

This trial was collaboration between OSU and the UC-Davis Intermountain Research and Extension Center.

Variety	Class	Height (in)	Lodging (%)	Heading Date
LGBU17-1320-A	Malt	33.6	10.0	6/30
KWS Ancantis	Malt	33.5	11.7	6/29
LG Caruso	Malt	34.4	0.0	6/30
KWS Enduris 2	Malt	37.9	5.0	6/28
KWS Kayis	Malt	35.3	6.7	6/27
LCS Odyssey	Malt	34.9	11.7	6/30
BC Lexy	Malt	34.9	11.7	6/30
Carleton	Feed	41.3	1.7	6/29
BC Marietta	Malt	32.7	6.7	6/28
Orena	Feed	35.5	10.0	6/30
LC Slovan	Malt	36.1	1.7	6/27
LC Diablo	Malt	34.3	0.0	6/30
Alterado	Feed	41.9	23.3	6/26
Successor (DH190481)	Feed	36.0	13.3	6/17
Lenetah	Feed	42.5	28.3	6/29
Ascent	Feed	44.7	3.3	6/29
Survivor	Feed	41.2	53.3	6/27
Average		37.1	11.1	6/28
LSD (0.05)		2.1	10.7	3.7
CV (%)		4.0	69.0	

