2023 WSCIA CERTIFIED SEED Buying Guide

Spring Barley

Spring Wheat

Winter Wheat

Washington State University

Department of Crop and Soil Sciences

in cooperation with

Washington State Crop Improvement Association

2575 NE Hopkins Ct. Pullman, WA 99163

509-334-0461 washingtoncrop.com

WINTER WHEAT

SOFT WHITE COMMON

VARIETY	ORIGINATOR	RELEASE DATE	PRECIPITATION ZONE (INCHES) <12"	12-16"	16"-20"	>20"	Irrig.	TEST WEIGHT (LBS/BU)	% PROTEIN	PLANT HEIGHT
			------Yield as a % of 2-Yr Trial Mean------							
AP Exceed	Agripro/Syngenta		--	--	103	102	110	61.4	10.5	Medium
AP Iliad	Agripro/Syngenta	2020	--	--	96	101	--	60.3	11.3	Medium
Curiosity CL+	WSU	2013	98	91	--	--	--	60.3	11.2	Med.-Tall
Devote	WSU	2019	101	103	--	--	--	61.7	10.8	Medium
LCS Artdeco	Limagrain Cereal	2011	--	--	--	--	108	59.9	10.1	Med.-Short
LCS Blackjack	Limagrain Cereal	2019	--	--	108	106	--	58.5	11.2	Medium
LCS Hulk	Limagrain Cereal	2017	97	101	102	98	105	60.9	11.4	Medium
LCS Hydra AX	Limagrain Cereal	2022	--	--	--	--	--	--	--	--
LCS Kraken AX	Limagrain Cereal	2022	--	--	--	--	--	--	--	--
LCS Shine	Limagrain Cereal	2019	110	106	111	104	112	60.3	10.8	Short
Mela CL+	WSU	2013	99	88	--	--	--	60.4	11.5	Med.-Tall
Norwest Duet	OSU/LCS	2015	102	107	99	103	--	60.7	10.8	Tall
Norwest Tandem	OSU/LCS	2016	107	109	103	101	97	59.9	10.9	Short
Otto	WSU	2011	95	95	--	--	--	59.7	11.3	Med.-Tall
Piranha CL+	WSU	2020	108	107	104	107	--	60.5	10.6	Med.-Tall
Puma	WSU	2013	--	--	--	--	--	--	--	Med.-Tall
Purl	WSU	2017	--	--	104	96	94	60.7	11.1	Medium
Resilience CL+	WSU	2016	--	--	101	98	--	60.9	11.3	Medium
Sockeye CL+	WSU	2020	--	--	107	105	91	60.6	10.5	Med.-Tall
Stingray CL+	WSU	2018	100	104	101	104	--	59.9	11.4	Medium
SY Assure	Agripro/Syngenta	2016	--	--	--	--	--	--	--	Short
SY Dayton	Agripro/Syngenta	2017	--	--	104	102	104	60.9	11.0	Medium
TMC M-Pire	The McGregor Co.	2022	--	--	--	--	--	--	--	Short
TMC M-Press	The McGregor Co.	2017	102	110	100	96	96	60.7	10.9	Medium
UI Magic CL+	University of Idaho	2014	--	90	97	94	--	61.1	11.1	Med.-Short
VI Presto CL+	Varsity Idaho	2020	92	96	94	91	--	62.5	11.2	Medium
VI Voodoo CL+	Varsity Idaho	2020	--	91	104	104	--	59.9	11.0	Short
	Trial Mean (BU/A)		***44***	***78***	***104***	***95***	***137***	***60.4***	***11.0***	

SOFT WHITE CLUB WINTER WHEAT----------COMPARABL

Castella	USDA-ARS/WSU	2017	103	102	--	90	--	59.9	11.6	Medium
ARS-Crescent	USDA-ARS/WSU	2012	95	99	89	92	--	58.5	11.3	Medium
Pritchett	USDA-ARS/WSU	2015		104	93	98	--	59.8	11.4	Medium
	Trial Mean (BU/A)		***44***	***78***	***104***	***95***	***137***	***60.4***	***11.0***	

HARD RED

VARIETY	ORIGINATOR	RELEASE DATE	PRECIPITATION ZONE (INCHES) <12"	12-16"	>16"	Irrig.	<12"	12-16"	>16"	WEIGHT (LBS/BU)	PLANT HEIGHT
			--Yield as a % of 2-Yr Trial Mean--				---------% Protein---------				
Keldin	Bayer/WestBred	2011	99	104	101	101	12.0	11.4	12.6	61.4	Medium
LCS Helix AX	Limagrain Cereal	2020	--	--	--	--	--	--	--	--	Medium
LCS Jet	Limagrain Cereal	2014	104	106	106	107	11.9	11.4	12.3	59.7	Short
LCS Rocket	Limagrain Cereal	2017	--	--	109	110	--	--	11.7	57.9	Short-Med.
Scorpio	WSU	2019	116	109	105	--	11.8	11.4	13.1	59.1	Medium
Sequoia	WSU	2015	--	--	--	--	--	--	--	--	Tall
WB4303	Bayer/WestBred	2016	100	102	105	106	12.0	11.5	12.4	58.9	Medium
	Trial Mean (BU/A)		***43***	***80***	***88***	***138***	***11.9***	***11.4***	***12.6***	***59.7***	

KEY

≠: Winter Survival Index based on Variety Testing field observations and laboratory studies conducted by USDA-ARS, Pullman, WA.

--: Information not available or variety was not common to data set.

©: Variety contains BASF-patented Clearfield trait for Beyond resistance. Clearfield® varieties were not treated with Beyond® herbicide since experiments were designed to compare each entry under uniform conditions. Applying Beyond® to Clearfield® varieties could create bias in the trials since all entries would not be managed the same.

For Quality Rating key, see Spring Wheat page in this guide.

LE CHARACTERISTICS----------

RATINGS (1 = Best to 9 = Poorest)[†]

MATURITY	AWN	EMERG-ENCE RATING	WINTER SURVIVAL INDEX[‡]	STRIPE RUST RATING**	CEPH. STRIPE TOLERANCE RATING	STRAW-BREAKER RATING	SNOW MOLD RATING	FALLING NUMBER RATING[F]	QUALITY RATING	VARIETY
Early-Med.	Awned	5	5	2	--	--	4	4	MD	AP Exceed
Early-Med.	Awned	--	7	1	6	6	--	3	A	AP Iliad
Med.-Late	Awned	3	2	7	5	7	2	7	A	Curiosity CL+
Medium	Awned	2	4	2	6	4	3	6	D	Devote
Early-Med.	Awned	--	7	5	4	9	--	6	A	LCS Artdeco
Medium	Awnletted	--	4	1	5	1	7	6	D	LCS Blackjack
Medium	Awned	6	4	1	7	9	5	3	A	LCS Hulk
--	Awned	--	--	--	--	--	7*	--	--	LCS Hydra AX
--	Awned	--	--	--	--	--	6*	--	--	LCS Kraken AX
Early-Med.	Awnletted	8	6	1	4	--	6	5	MD	LCS Shine
Med.-Late	Awned	2	4	7	5	7	1	7	A	Mela CL+
Medium	Awned	6	4	1	3	8	6	2	D	Norwest Duet
Early-Med.	Awned	5	4	1	4	3	7	3	A	Norwest Tandem
Med.-Late	Awned	2	4	5	5	4	2	4	D	Otto
Medium	Awned	6	3	3	4	6	5*	6	D	Piranha CL+
Medium	Awned	--	4	4	5	4	7	5	MD	Puma
Early-Med.	Awned	--	4	1	8	6	--	7	A	Purl
Medium	Awned	--	5	1	5	3	--	3	D	Resilience CL+
Medium	Awned	4	2	1	5	5	5*	7	MD	Sockeye CL+
Medium	Awned	7	7	1	4	5	7*	1	D	Stingray CL+
Early-Med.	Awned	5	7	1	5	9	--	6	D	SY Assure
Medium	Awned	5	6	2	5	7	--	7	A	SY Dayton
Early-Med.	Awned	6	--	2	--	--	7*	--	--	TMC M-Pire
Medium	Awned	6	6	1	8	4	7	7	D	TMC M-press
Early-Med.	Awned	5	7	8	2	4	6	5	D	UI Magic CL+
Medium	Awned	6	3	1	7	7	6*	5	D	VI Presto CL+
Medium	Awned	--	9	5	6	6	--	7	D	VI Voodoo CL+

--COMPARABLE CHARACTERISTICS----------

Medium	Awnletted	6	4	1	5	5	7	4	MD	Castella
Med.-Late	Awned	7	3	4	6	6	7	2	MD	ARS-Crescent
Medium	Awned	5	4	3	4	4	5	8	D	Pritchett

RATINGS (1 = Best to 9 = Poorest)*

MATURITY	AWN	EMERG-ENCE RATING	WINTER SURVIVAL INDEX[‡]	STRIPE RUST RATING**	CEPH. STRIPE TOLERANCE RATING	STRAW-BREAKER RATING	SNOW MOLD RATING	FALLING NUMBER RATING	QUALITY RATING	VARIETY
Early-Med.	Awned	5	3	6	7	8	6	4	D	Keldin
Early	Awned	7	3	6	--	--	6*	--	A	LCS Helix AX
Early-Med.	Awned	5	5	7	6	1	6	4	A	LCS Jet
Early-Med.	Awned	--	8	1	6	6	8	5	A	LCS Rocket
Medium	Awned	6	6	5	4	7	6*	5	MD	Scorpio
Med.-Late	Awned	5	5	5	7	8	5	7	D	Sequoia
Early	Awned	5	4	9	8	6	5	6	A	WB4303

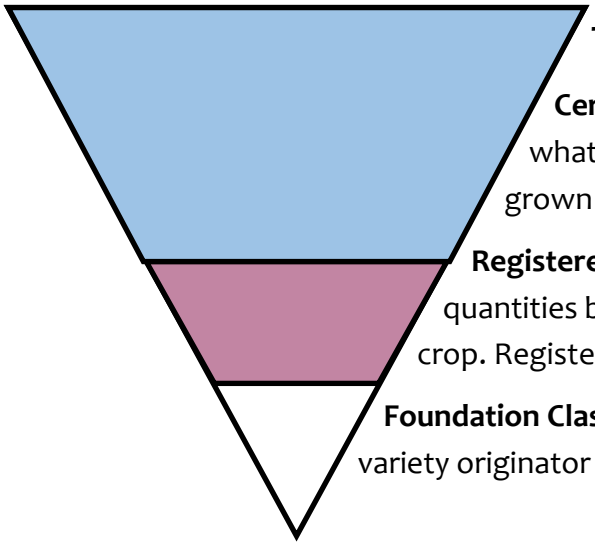
[†]: Disease Scale Key: 1,2 = Resistant; 3,4 = Moderately Resistant; 5 = Moderate; 6,7 = Moderately Susceptible; 8,9 = Susceptible. Disease ratings are based on recently observed disease symptoms but data are limited in scope. Disease ratings can change and should be used as relative comparisons.

*: Snow mold rating based on data from single year only (2023)

**: Stripe rust ratings are based on data from Dr. Xianming Chen at USDA-ARS, Pullman, WA.

[F]: Falling number rankings are based on all data collected 2015-2022, , though some varieties were not in WSU variety trials during all years. Environments with no falling numbers below 290 were eliminated as no-event. Falling number (FN) data above 330 was truncated, because variation above 330 is not associated with alpha amylase. Varieties more resistant to FN reduction due to preharvest sprouting or late-maturity alpha amylase are ranked 1-5.; varieties ranked 6-7 are intermediate, and varieties ranked 8+ will frequently have low FN in event environments. For more information about Falling Number events and data, visit steberlab.org.

WHAT IS CERTIFIED SEED?



There are three recognized classes of Certified Seed:

Certified Class (blue tag), is most widely available and is typically what a farmer will plant to produce a commercial crop. It is usually grown from

Registered Class (purple tag), which is available in moderate quantities but is not usually directly available to produce commercial crop. Registered seed is usually grown from

Foundation Class (white tag) is available in the lowest quantities, from the variety originator or their designated agent.

Certification is administered by designated authorities providing field and seed inspection services for seed growers and dealers. Nearly every state in the U.S. has an entity designated to certify seed, and they are part of a global organization to administer uniform seed standards. In Washington, there are two entities offering seed certification services:

Washington State Department of Agriculture (WSDA) certifies grass, vegetables, canola, corn, wildflowers, hemp, and many other crops. Learn more: https://agr.wa.gov/services/inspections-and-investigations/inspections/seed, or 509-249-6950.

Washington State Crop Improvement Association (WSCIA) certifies wheat, triticale, barley, oats, rye, peas, chickpeas, lentils, buckwheat, sorghum, and forest reproductive material. Learn more: washingtoncrop.com, or 509-334-0461.

Does all seed have to be certified?

No, not all seed has to be certified, but some varieties require it. Uncertified seed is often referred to as "common." All seed, certified or common, must be labeled with germination, purity, other required analysis results, and other information (see WAC 16-301-015).

How do I know if a variety must be certified?

Varieties with PVP Title V protection can only be sold as certified seed (not common). Certification may also be required as a contract term in agreements made with seed companies. If you are unsure if a variety must be certified or if you can save seed, it is best to check with your seed dealer and/or the variety owner.

Each class of seed is held to specific standards throughout the certification process.

All Washington certification standards can be found in Washington Administrative Code (WAC) 16-302.

Each **field** producing certified seed is:

- Planted from an approved higher-class seed lot known to represent the variety
- Held to specific standards for past crop history
- Inspected by designated agency at least once prior to harvest

Seed from inspected fields is:

- Conditioned only at approved facilities
- Tested by WSDA Seed Program
- Evaluated by designated agency to confirm it meets standards for purity, germination, and other required analyses.

Seed is only "certified" when conditioning, sampling, testing, and labeling are complete. Seed that has only been field inspected is not certified seed.

PUBLISHED BY WASHINGTON STATE CROP IMPROVEMENT ASSOCIATION, 2575 NE HOPKINS COURT, PULLMAN, WA 99163. 509-334-0461.

SPRING BARLEY

----------COMPARABLE CHARACTERISTICS----------

VARIETY	ORIGINATOR	RELEASE DATE	PRECIPITATION ZONE (INCHES) <16" Yield as a % of 3-Yr Trial Mean	16"-20"	>20"	TEST WEIGHT (LBS/BU)	PLANT HEIGHT INCHES	MATURITY	STRIPE RUST**	LODGING RATING
Altorado	Highland Specialty Grains	2017	101	102	101	50.2	Medium	Early-Med.	5	3
Claymore	Highland Specialty Grains	2015	97	101	102	49.6	Med.-Tall	Medium	7	1
LCS Odyssey [M]	Limagrain Cereal Seeds	2015	101	99	102	49.0	Medium	Medium	2	1
LCS Opera [M]	Limagrain Cereal Seeds	2019	98	100	101	48.5	Medium	Med.-Late	1	1
Lenetah	UI	2007	103	94	96	51.1	Medium	Medium	5	3
Oreana	Highland Specialty Grains	2015	103	105	106	50.7	Medium	Medium	6	1
Palmer [M]	WSU	2019	93	92	88	49.3	Med.-Tall	Medium	6	4
Survivor	WSU	2017	94	84	88	50.8	Medium	Medium	4	3
	Trial mean (lb/ac)		***4280***	***4330***	***3240***	***49.9***				

[F]: Food barley
[M]: Malting barley
**Stripe rust ratings are based on data from Dr. Xianming Chen, USDA-ARS, Pullman, WA. Disease Scale Key: 1,2 = Resistant; , 4 = Moderately Resistant; 5 = Moderate; 6, 7 = Moderately Susceptible; 8, 9 = Susceptible.
--: Information not available or not relevant to data set.

VARIETY PERFORMANCE RESULTS: The information provided in this buying guide is the result of a cooperative effort among WSCIA, WSU, USDA-ARS and private seed companies. Plant height and test weight are averages of all test sites. Unless otherwise noted, yield data displayed for wheat and barley is based on averages of 2020 through 2022 data from testing sites of WSU's Extension Cereal Variety Testing Program. The % protein (12% moisture basis) and yield performance are summarized within several precipitation zones including irrigated.

Yield values are listed as a percent of the trial mean. Actual average yield values are listed for the trial mean at the bottom of each market class section. Information on variety performance at specific locations in individual years can be found at: **http://smallgrains.wsu.edu/variety.**

An additional method of comparing variety performance is the Variety Selection Tool, located on the wheat and small grains website: **http://smallgrains.wsu.edu**. The Variety Selection Tool lets you choose your precipitation zone and market class of grain, then populates an interactive table with a two-year average of agronomic data, as well as disease ratings and other variety characteristics. Columns of information are moveable, sortable, and can be filtered to display only varieties that meet your chosen criteria.

WHERE TO BUY CERTIFIED SEED

Most of the varieties included in this guide are available as Certified class seed to plant to produce a commercial crop. Newer releases (dated 2021 and 2022) may only be available as Foundation or Registered for the first couple of years, as seed dealers increase their supplies in order to commercialize the variety.

If you are interested in a particular variety, you can use the WSCIA Seed Source List to find out what dealers of certified seed may have it available this season. The lists from the 2022 production year, and prior years, can be accessed at

SPRING WHEAT

----------COMPARA

SOFT WHITE COMMON		RELEASE	PRECIPITATION ZONE (INCHES)					FALL PLANT	
			<12"	12"-16"	16"-20"	>20"	IRRIGATED	IRRIGATED	<12"
VARIETY	ORIGINATOR	DATE	Yield as a % of 2-Yr TRIAL MEAN						
AP Coachman	Agripro/Syngenta	2019	113	105	106	98	--	--	11.1
AP Mondovi CL2	Agripro/Syngenta	2019	103	103	97	93	--	--	13.6
Louise	WSU	2004	105	103	97	95	--	--	11.9
Ryan	WSU	2015	106	108	109	108	--	--	12.3
Seahawk	WSU	2014	101	99	105	105	--	--	11.8
Tekoa	WSU	2015	112	99	103	106	101	--	12.4
WB6211CLP	WestBred/Bayer	2021	96	93	92	96	96	--	12.7
WB6121	WestBred/Bayer	2013	92	101	99	94	101	--	13.0
SOFT WHITE CLUB			Yield as a % of 2-Yr TRIAL MEAN						
Melba	WSU	2015	104	96	97	98	--	--	11.7
Hedge CL+	WSU	2021	97	97	97	98	--	--	12.5
	TRIAL MEAN		***20***	***33***	***45***	***61***	***132***	***--***	***12.3***
HARD RED			Yield as a % of 3-Yr TRIAL MEAN					2-Yr Trial Mean	
Alum	WSU	2014	111	100	98	96	88	--	13.8
AP Renegade	Agripro/Syngenta	2018	101	104	104	100	102	99	14.5
AP Venom	Agripro/Syngenta	2020	--	--	--	--	105	106	--
Chet	WSU	2014	110	97	95	97	--	--	14.5
Glee	WSU	2012	101	104	106	103	97	--	14.1
Kelse	WSU	2008	104	100	99	91	99	93	14.8
Net CL+	WSU	2019	109	97	101	98	--	--	14.3
SY Gunsight	Agripro/Syngenta	2017	--	--	--	--	107	109	--
WB9303	WestBred/Bayer	2021	68	93	87	99	--	--	16.3
WB9662	WestBred/Bayer	2018	--	--	--	--	103	95	--
WB9668	WestBred/Bayer	2014	84	95	94	99	99	86	16.9
		TRIAL MEAN	***21***	***41***	***51***	***62***	***114***	***132***	***14.8***

KEY

*: Disease Scale 1,2 = Resistant; 3,4 = Moderately Resistant; 5 = Moderate; 6,7 = Moderately Susceptible; 8,9 = Suscpetible. Disease ratings are based on recently observed disease symptoms but data are limited in scope. Disease ratings can change and should be used as relative comparisons.

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BLE CHARACTERISTICS----------

---PRECIPITATION ZONE (INCHES)----------							DISEASE REACTIONS *				
12-16"	16"-20"	>20"	IRRIGATED	TEST WEIGHT (LBS/BU)	PLANT HEIGHT	MATURITY	STRIPE RUST**	HESSIAN FLY	FALLING NUMBER RATING[F]	QUALITY RATING	VARIETY
---------- % Protein ----------											
11.3	11.3	10.9	--	57.6	Med.-Tall	Med.-Late	8	3	--	A	AP Coachman
13.6	13.8	12.8	--	58.7	Med.-Tall	Medium	6	4	--	MD	AP Mondovi CL2
12.0	12.1	11.3	--	58.7	Med.-Tall	Med.-Late	4	3	3	MD	Louise
12.1	12.0	10.9	--	59.6	Medium	Early	4	1	4	MD	Ryan
12.3	12.2	11.7	--	60.4	Medium	Med.-Late	1	1	5	MD	Seahawk
12.6	12.3	11.5	12.4	60.4	Medium	Med.-Late	1	1	4	MD	Tekoa
12.9	12.9	12.0	13.1	57.7	Medium	Early-Med.	2	1	--	--	WB6211CLP
13.3	13.1	12.1	12.8	60.0	Short-Med.	Early-Med.	1	1	8	D	WB6121
---------- % Protein ----------											
12.5	12.0	11.8	--	59.5	Short-Med.	Med.-Late	2	9	5	MD	Melba
12.6	12.6	11.9	--	61.2	Med.-Tall	Med.-Late	1	9	4	MD	Hedge CL+
12.4	***12.4***	***11.6***	***12.3***	***59.9***							
---------- % Protein ----------											
14.3	14.5	13.5	15.2	60.2	Medium	Medium	3	1	3	MD	Alum
14.6	14.6	13.7	14.4	59.3	Medium	Medium	1	1	2	D	AP Renegade
--	--	--	14.4	57.5	Medium	Medium	1	9	--	--	AP Venom
14.8	15.3	14.0	--	61.1	Tall	Medium	3	1	9	MD	Chet
14.1	14.2	13.0	14.5	60.4	Medium	Early-Med.	2	1	7	MD	Glee
14.8	14.9	14.1	15.6	59.9	Med.-Tall	Medium	7	2	3	D	Kelse
14.7	14.7	13.8	--	60.9	Medium	Med-Late	6	1	1	MD	Net CL+
--	--	--	14.0	60.3	Short-Med.	Medium	2	9	3	MD	SY Gunsight
15.7	16.0	14.3	--	61.1	Medium	Early	1	1	--	--	WB9303
--	--	--	15.1	--	Short-Med.	Medium	1	8	8	LD	WB9662
15.9	16.3	15.0	15.7	60.4	Short	Early	1	1	1	D	WB9668
14.8	***14.9***	***13.8***	***14.9***	***60.6***							

Quality Ratings:

Most Desirable (MD)—These varieties generally have high test weights, appropriate protein content (kernel properties), and excellent milling and end-use properties.

Desirable (D)—The kernel, milling, and end-use qualities of these varieties range from good to very good. The quality attributes of these varieties are desirable in international trade.

Acceptable (A)—The kernel, milling, and end-use qualities of these varieties range from acceptable to good. Individual varieties may possess minor flaws. The quality attributes of these varieties are acceptable in international trade.

Least Desirable (LD)—One or more critical flaws in quality are present in these varieties. The intrinsic quality of PNW wheat will be improved if these varieties are not planted.

Unacceptable Except Customer-Specific Uses (UCS) --- One or more critical flaws in quality are present in these varieties and will not make suitable products for this class of wheat. Production of these varietes should be targeted to specific end-uses and kept stricly segregated from general commercial channels.