

The background of the entire page is a light green color with a subtle, artistic illustration of wheat stalks. The stalks are arranged in a circular, wreath-like pattern, with some stalks extending from the top and others from the bottom, framing the central text.

2022 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**

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WINTER WHEAT

WINTER WHEAT

SOFT WHITE COMMON		COMPARABLE CHARACTERISTICS																			
		PRECIPITATION ZONE (INCHES)										RATINGS (1 = Best to 9 = Poorest)*									
		RELEASE E DATE	<12"	12-16"	16"-20"	>20"	Irrig.	TEST WEIGHT (LBS/BU)	% PROTEIN	PLANT HEIGHT	MATURITY	AWN	EMERG- ENCE RATING	WINTER SURVIVAL INDEX*	STRIPE RUST RATING**	STRIPE TOLERANCE RATING	STRAW- BREAKER RATING	SNOW MOLD RATING	FALLING NUMBER RATING ^F	QUALITY RATING	VARIETY
			Yield as a % of Trial Mean																		
AP Iliad	Agripro/Syngenta	2020	—	—	102	102	100	59.9	11.0	Medium	Early-Med.	Awne	—	7	2	—	6	—	—	A	AP Iliad
Curiosity CL+	WSU	2013	98	91	—	—	—	59.5	10.8	Med.-Tall	Med.-Late	Awne	3	1	5	5	7	3	8	A	Curiosity CL+
Devote	WSU	2019	105	100	—	—	—	60.8	10.8	Medium	Medium	Awne	1	1	2	6	4	3	7	D	Devote
LCS Ardeco	Limagrain Cereal	2011	—	—	104	104	107	59.3	10.3	Med.-Short	Early-Med.	Awne	—	7	5	4	9	—	6	A	LCS Ardeco
LCS Blackjack	Limagrain Cereal	2019	—	—	101	103	107	57.2	10.7	Medium	Medium	Awne	—	5	1	—	1	7	7	D	LCS Blackjack
LCS Ghost	Limagrain Cereal	2018	—	—	—	—	—	—	—	Medium	Early-Med.	Awne	—	7	2	5	9	—	9	MD	LCS Ghost
LCS Hulk	Limagrain Cereal	2017	107	104	102	100	104	60.6	11.2	Medium	Medium	Awne	7	2	1	7	9	5	4	A	LCS Hulk
LCS Shark	Limagrain Cereal	2017	—	—	—	—	—	—	—	Med-Short	Early-Med.	Awne	—	5	1	7	6	—	7	D	LCS Shark
LCS Shine	Limagrain Cereal	2019	107	105	115	103	—	59.5	10.2	Short	Early-Med.	Awne	8	6	1	4	—	5	6	MD	LCS Shine
LCS Sonic	Limagrain Cereal	2017	102	105	—	—	—	59.2	10.9	Med.-Tall	Early-Med.	Awne	7	4	2	—	—	6	—	D	LCS Sonic
Mela CL+	WSU	2013	100	93	—	—	—	60.0	10.8	Med.-Tall	Med.-Late	Awne	3	2	4	5	7	2	9	A	Mela CL+
Norwest Duet	OSU/LCS	2015	105	105	104	103	97	59.6	10.6	Tall	Medium	Awne	6	4	1	5	8	5	3	D	Norwest Duet
Norwest Tandem	OSU/LCS	2016	105	99	98	100	96	59.6	10.8	Short	Early-Med.	Awne	5	4	1	4	3	6	4	A	Norwest Tandem
Otto	WSU	2011	98	95	—	—	—	59.3	11.2	Med.-Tall	Med.-Late	Awne	1	3	2	5	4	3	6	D	Otto
Piranha CL+	WSU	2020	110	109	103	112	98	60.3	10.5	Med.-Tall	Medium	Awne	6	3	2	—	6	—	—	D	Piranha CL+
PNW Hailey	PNW Farmers Coop	2017	—	—	—	—	100	—	—	Medium	Medium	Awne	—	4	1	5	5	—	6	—	PNW Hailey
Puma	WSU	2013	100	100	99	98	97	59.9	11.1	Med.-Tall	Medium	Awne	—	4	4	9	4	7	5	MD	Puma
Purl	WSU	2017	100	101	102	100	102	60.3	10.8	Medium	Early-Med.	Awne	—	5	1	8	6	—	7	A	Purl
Resilience CL+	WSU	2016	95	96	93	96	97	60.3	11.2	Medium	Medium	Awne	—	5	1	5	3	—	3	D	Resilience CL+
Sockeye CL+	WSU	2020	—	—	104	110	102	60.0	10.4	Med.-Tall	Medium	Awne	4	2	1	—	5	—	—	MD	Sockeye CL+
Stingray CL+	WSU	2018	100	104	97	101	96	59.2	11.5	Medium	Medium	Awne	8	7	2	4	5	6	2	D	Stingray CL+
SY Assure	Agripro/Syngenta	2016	—	—	—	—	—	—	—	Short	Early-Med.	Awne	—	7	1	7	9	—	6	D	SY Assure
SY Dayton	Agripro/Syngenta	2017	—	—	104	101	106	60.2	10.7	Medium	Medium	Awne	—	7	2	5	7	—	8	A	SY Dayton
M-press	The McGregor Co.	2017	105	108	104	101	99	59.6	10.6	Medium	Medium	Awne	6	6	2	8	4	7	8	D	M-press
UI Magic CL+	University of Idaho	2014	93	101	90	91	96	60.3	11.3	Med.-Short	Early-Med.	Awne	—	6	6	2	4	6	7	D	UI Magic CL+
Trial Mean (BU/A)		42	76	102	100	138	59.5	10.9													

SOFT WHITE CLUB WINTER WHEAT										COMPARABLE CHARACTERISTICS													
Castella	USDA-ARS/WSU	2017	98	97	99	98	—	59.4	10.9	Medium	Medium	Awneletted	7	4	2	5	5	6	5	MD	Castella		
ARS-Crescent	USDA-ARS/WSU	2012	105	103	100	94	—	57.9	10.8	Medium	Med.-Late	Awne	7	3	3	6	6	7	5	MD	ARS-Crescent		
Pritchett	USDA-ARS/WSU	2015	102	103	100	98	—	58.6	10.9	Medium	Medium	Awne	5	4	1	4	4	5	9	D	Pritchett		
Trial Mean (BU/A)			42	76	102	100	138	59.5	10.9														

HARD RED

HARD RED		PRECIPITATION ZONE (INCHES)										RATINGS (1 = Best to 9 = Poorest)*											
VARIETY	ORIGINATOR	RELEASE DATE	<12"	12-16"	>16"	<12"	12-16"	>16"	TEST WEIGHT (LBS/BU)	% PROTEIN	PLANT HEIGHT	MATURITY	AWN	EMERG-ENCE RATING	WINTER SURVIVAL INDEX*	STRIPE RUST RATING**	STRIPE TOLERANCE RATING	STRAW-BREAKER RATING	SNOW MOLD RATING	FALLING NUMBER RATING	QUALITY RATING	VARIETY	
Keldin	Bayer/WestBred	2011	108	107	98	13.2	11.9	11.7	60.7	12.7	Medium	Early-Med.	Awne	5	4	6	7	8	6	4	D	Keldin	
LCS Helix AX	Limagrain Cereal	2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LCS Helix AX	
LCS Jet	Limagrain Cereal	2014	108	106	107	13.5	11.5	11.6	57.9	12.8	Short	Early-Med.	Awne	5	7	5	6	1	6	4	A	LCS Jet	
LCS Rocket	Limagrain Cereal	2017	--	--	112	--	--	11.2	57.7	11.8	Short-Med.	Early-Med.	Awne	--	8	4	6	8	--	5	A	LCS Rocket	
Scorpio	WSU	2019	108	101	113	13.3	11.8	11.8	58.3	12.6	Medium	Medium	Awne	6	7	1	4	7	--	5	MD	Scorpio	
Sequoia	WSU	2015	--	--	--	--	--	--	--	--	Tall	Med.-Late	Awne	5	5	4	7	8	5	8	D	Sequoia	
WB4303	Bayer/WestBred	2016	93.0	89.0	83	14.1	12.9	12.4	59.1	12.4	Medium	Early	Awne	5	1	5	8	6	7	6	A	WB4303	
WB4311	Bayer/WestBred	2017	98.0	96.0	95	13.9	12.6	12.6	60.8	13.0	Short-Med.	Early	Awne	7	4	6	7	5	2	7	D	WB4311	
WB4394	Bayer/WestBred	2018	98.0	108.0	99	13.7	11.8	11.9	60.1	12.7	Med.-Tall	Early-Med.	Awne	5	5	6	--	9	--	--	A	WB4394	
Trial Mean (BU/A)			40	72	98	13.5	12.0	12.0	59.1	12.7													

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.

CL/CL+: 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.

AX: CoAXium® variety contains patented AXigen® trait for Aggressor® resistance. CoAXium® varieties were not treated with Aggressor® herbicide since experiments were designed to compare each entry under uniform conditions. Applying Aggressor® to CoAXium® varieties would create bias in the trials since all entries would not be managed the same.

*: 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.

** : 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 2013-2021, excluding 2015, 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.

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

COMPARABLE CHARACTERISTICS																							
PRECIPITATION ZONE (INCHES)									PRECIPITATION ZONE (INCHES)					DISEASE REACTIONS *									
SOFT WHITE COMMON			RELEASE DATE	<12"	12"-16"	16"-20"	>20"	IRRIGATED	FALL PLANT IRRIGATED	<12"	12-16"	16"-20"	>20"	IRRIGATED	TEST WEIGHT (LBS/BU)	PLANT HEIGHT INCHES	MATURITY	STRIPE RUST**	HESSIAN FLY	FALLING NUMBER RATING†	QUALITY RATING	VARIETY	
VARIETY	ORIGINATOR	DATE	Yield as a % of TRIAL MEAN							% Protein													
AP Coachman	Agripro/Syngenta	2019	108	100	105	102	--	--		10.8	10.9	10.5	9.5	--	58.3	28	Med.-Late	5	3	--	A	AP Coachman	
AP Mondovi CL2	Agripro/Syngenta	2019	92	90	95	95	--	--		13.2	12.9	12.5	11.0	--	59.3	30	Medium	5	4	--	MD	AP Mondovi CL2	
Louise	WSU	2004	104	108	103	95	--	--		11.3	11.1	10.8	9.7	--	59.2	29	Med.-Late	4	3	3	MD	Louise	
Ryan	WSU	2015	100	108	105	105	94	--		11.7	11.4	11.0	9.7	12.4	59.6	27	Early	4	1	4	MD	Ryan	
Seahawk	WSU	2014	96	98	107	105	91	--		11.4	11.6	10.9	10.0	12.9	60.6	26	Med.-Late	1	1	5	MD	Seahawk	
Tekoa	WSU	2015	108	102	110	107	106	--		11.7	11.6	10.9	9.7	12.4	61.1	28	Med.-Late	3	1	4	MD	Tekoa	
WB6211CLP	WestBred/Bayer	2021	--	--	--	--	--	--		--	--	--	--	--	--	--	Early-Med.	2	1	--	--	WB6211CLP	
WB6121	WestBred/Bayer	2013	88	94	98	97	101	--		12.7	12.5	12.1	10.7	13.0	60.5	25	Early-Med.	1	1	8	D	WB6121	
SOFT WHITE CLUB			Yield as a % of TRIAL MEAN							% Protein													
Melba	WSU	2015	104	102	95	98	--	--		11.3	11.6	11.1	9.9	--	58.9	25	Med.-Late	2	9	5	MD	Melba	
JD	WSU	2009	92	98	93	92	--	--		12.0	11.8	11.8	10.3	--	60.7	28	Med.-Late	2	9	4	MD	JD	
TRIAL MEAN			25	49	59	61	127	--		11.7	11.6	11.2	10.4	12.1	59.9	27							
HARD RED			Yield as a % of TRIAL MEAN							% Protein													
Alum	WSU	2014	116	103	102	102	88	--		13.5	14.6	14.7	13.5	15.3	59.6	27	Medium	3	1	3	MD	Alum	
AP Renegade	Agripro/Syngenta	2018	100	105	106	100	97	109		13.6	14.7	14.3	13.4	14.3	58.6	26	Medium	3	1	2	D	AP Renegade	
AP Venom	Agripro/Syngenta	2020	--	--	--	--	110	110		--	--	--	--	14.4	58.3	27	Medium	5	9	--	--	AP Venom	
Chet	WSU	2014	111	97	96	96	--	--		14.2	15.1	15.5	14.2	--	60.3	31	Medium	3	1	9	MD	Chet	
Glee	WSU	2012	100	105	106	104	95	--		13.9	14.3	14.4	13.1	14.4	60.4	27	Early-Med.	5	1	7	MD	Glee	
Kelse	WSU	2008	105	95	100	93	96	94		14.5	15.0	15.2	14.3	15.5	59.3	28	Medium	7	2	3	D	Kelse	
Net CL+	WSU	2019	116	97	102	102	--	94		14.0	15.0	15.0	13.8	--	59.9	27	Med-Late	4	1	1	MD	Net CL+	
SY Gunsight	Agripro/Syngenta	2017	111	105	94	104	108	104		13.6	14.4	14.8	13.2	14.1	59.5	24	Medium	2	9	3	MD	SY Gunsight	
WB9303	WestBred/Bayer	2021	63	90	88	93	95	93		16.4	16.0	16.3	14.5	15.6	60.6	25	Early	1	1	--	--	WB9303	
WB9662	WestBred/Bayer	2018	89	100	94	91	101	97		15.3	15.2	15.9	14.3	15.3	59.8	24	Medium	1	8	8	LD	WB9662	
WB9668	WestBred/Bayer	2014	84	97	98	95	100	91		16.7	16.1	16.6	14.9	15.8	60.1	24	Early	1	1	1	D	WB9668	
TRIAL MEAN			19	39	50	57	113	139		14.5	15.0	15.2	13.8	14.8	59.9	26							

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CL/CL+: 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.

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.

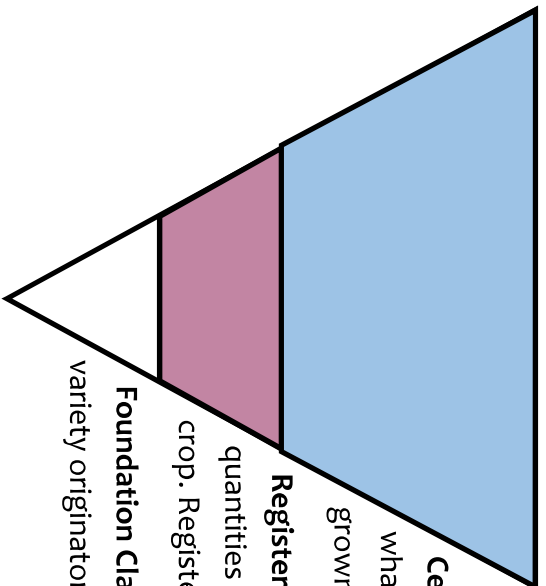
Acceptable (A)—The kernel, milling, and end-use qualities of these varieties range from acceptable to good. Individual varieties may possess minor flaws. The quality attributes of these varieties are acceptable in international trade.

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 varieties should be targeted to specific end-uses and kept stricky segregated from general commercial channels.

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.