

# PACIFIC NORTHWEST SEED GUIDE



EDITION ONE



## Nice to meet you!

My family has been involved in agriculture since the 1800s, so getting an Agricultural Science degree from Oregon State University was a natural fit for me. Since graduation, I've focused on bringing the latest technology to growers in irrigated and dryland regions across Oregon. I'm excited to expand my outreach to Washington and Idaho.

The varieties LCS brings to the table are top-notch. In this seed guide, you'll see the results of hard work and dedication from our R&D team to bring you value, profit and great genetics. I look forward to learning from you. If we haven't met, I'm only a phone call or email away!

### Bailey Jenks

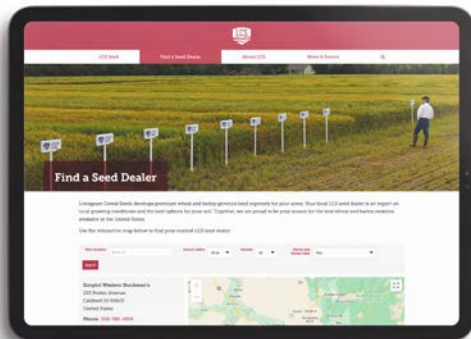
Regional Commercial Manager

☎ 509.520.5661 ✉ [bailey.jenks@limagrains.com](mailto:bailey.jenks@limagrains.com)



# Bred to thrive

<b>DATA SOURCES</b> .....	4
<b>GMG GROUP PARTNERSHIP</b> .....	5
<b>SOFT WHITE WINTER WHEAT, CONVENTIONAL</b>	
LCS Jefe .....	6
LCS Kamiak .....	8
LCS Shine .....	10
LCS Blackjack .....	12
LCS Hulk .....	14
LCS Drive .....	16
LCS Artdeco .....	17
<b>SOFT WHITE WINTER WHEAT, COAXIUM</b>	
LCS Scorpion AX .....	18
LCS Reaper AX .....	20
LCS Kraken AX .....	22
LCS Hydra AX .....	24
LCS Dagger AX .....	26
LCS Mani AX .....	28
LCS Sol AX .....	29
<b>HARD RED WINTER WHEAT, COAXIUM</b>	
LCS Eclipse AX .....	30
<b>HARD RED WINTER WHEAT, CONVENTIONAL</b>	
LCS Blackbird .....	32
LCS Missile .....	34
LCS Jet .....	36
LCS Evina .....	37
<b>HARD WHITE WINTER WHEAT, CONVENTIONAL</b>	
LCS White Lightning .....	38
<b>WHEAT QUALITY</b> .....	39

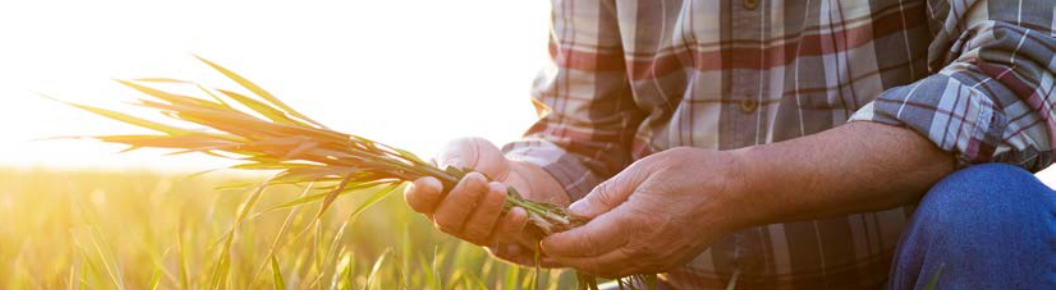


## Visit us 24/7

### LimagrainsCerealSeeds.com

is home to the best wheat genetics in the Pacific Northwest. Stop by anytime to find your next high-performance variety, get the most up-to-date data and contact your local seed dealer.





## The latest technical data

To obtain the most accurate data possible, all available public and private multi-year data are used to compile agronomic, disease and yield scores. Quality data are obtained from the LCS Quality Laboratory. All agronomic, disease and yield scores published in this guide are based on the most recent data available at the time of publication (November 1, 2023).

**For updated PNW data and variety information, visit [LimagrainCerealSeeds.com](https://LimagrainCerealSeeds.com) year-round.**

Agronomic performance, disease scores and yield performance data from universities are available in their entirety at:

**University of Idaho – Southern:**  
[uidaho.edu/extension/cereals/scseidaho](https://uidaho.edu/extension/cereals/scseidaho)

**University of Idaho – Northern:**  
[uidaho.edu/extension/cereals/nidaho](https://uidaho.edu/extension/cereals/nidaho)

**Oregon State University:**  
[cropandsoil.oregonstate.edu/wheat/osu-wheat-variety-trials](https://cropandsoil.oregonstate.edu/wheat/osu-wheat-variety-trials)

**Washington State University:**  
[smallgrains.wsu.edu](https://smallgrains.wsu.edu)

The results presented in this guide may not be an indicator of results you may obtain in your individual location, as local growing conditions — including soil type and weather — may vary. All growers are advised to evaluate data from multiple locations and years whenever possible.

## PNW-strong. Together.

Partnership has always been a vital part of the Limagrain Cereal Seeds success story. We are proud to partner with the **Genetics Marketing Group (GMG)** to bring industry-leading varieties to market through our LCS brand.

GMG is an alliance between Northwest Grain Growers, HighLine Grain Growers, Mid-Columbia Producers, Pacific Northwest Farmers Cooperative and CHS Primeland.

GMG members work together to provide first access to top-of-the-line small grains, oilseed and other seed crops to Pacific Northwest growers. LCS shares this goal, and for more than a decade the GMG has had exclusive access to Foundation seed of LCS branded varieties.

Companies outside the Genetics Marketing Group also have access to LCS genetics through GMG sublicenses, meaning growers have a variety of locations to purchase premium LCS wheat seed.

**Get in touch with one of these elite partners for the latest premium LCS branded wheat varieties.**





# Take charge with the boss



**Stable yield**  
during diverse  
production years



**Improved**  
stripe rust tolerance  
compared to  
LCS Artdeco



**Heavy**  
test weight



**Low protein**  
lowest in WSU  
2021 > 20", 16-20"  
& 12-16" trials

SOFT WHITE WINTER WHEAT

## El(CS) Jefe

ADAPTATION



YIELD			
	BU/AC	◆ LCS Jefe ◆ Trial Avg.	MEAN
3-Year WSU SVT 12-16"	87		107% of mean
	81		
2-Year WSU SVT 12-16"	92		106% of mean
	87		
3-Year WSU SVT 16-20"	105		104% of mean
	101		
4-Year OSU Int. Rain	108		109% of mean
	99		
4-Year OSU High Rain	134		107% of mean
	125		
3-Year WSU SVT > 20"	104		103% of mean
	101		
2-Year WSU SVT > 20"	121		102% of mean
	119		

AGRONOMIC FEATURES					
	LCS Jefe	AP Iliad	LCS Artdeco	SY Assure	M-Press
Test Weight	60.4	60.4	59.6	61.2	60.1
Protein %	11.0	12.0	11.3	12.0	12.0
Winter-Hardiness	Very Good	Below Avg.	Below Avg.	Below Avg.	Average
Heading (Julian)	154	153	151	149	155
Plant Height (in.)	33	34	31	32	34
Coleoptile Length (in.)	3.7	3.1	3.3	2.9	3.1
Straw Strength	Excellent	Excellent	Excellent	Excellent	Excellent

All available public and private data used in compiling scores

DISEASE TOLERANCE			
	Susceptible	Intermediate	Resistant
Stripe Rust			
Septoria			
Strawbreaker Foot Rot			
Crown Rot			
C-Stripe			
Soil-Borne Mosaic			

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Desirable	Desirable	Desirable	Desirable

Data obtained from LCS Quality Laboratory





# Set the scene for an early harvest



**Ideal**  
for intermediate to high  
rainfall zones



**Promising yield**  
potential



**Excellent tolerance**  
to stripe rust



**Very early**  
maturing, similar  
to LCS Artdeco

## SOFT WHITE WINTER WHEAT LCS Kamiak

ADAPTATION



YIELD			
	BU/AC	LCS Kamiak	Trial Avg. MEAN
3-Year WSU 16-20"	110		109% of mean
3-Year OSU Int. Rain	106		107% of mean
2023 WSU 16-20"	111		114% of mean
3-Year WSU > 20"	104		103% of mean
3-Year WSU Irrigated	142		103% of mean

AGRONOMIC FEATURES					
	LCS Kamiak	AP Iliad	M-Press	SY Ovation	SY Assure
Test Weight	61.3	60.9	60.3	60.2	61.3
Protein %	11.1	11	10.7	10.9	11
Winter-Hardiness	Very Good	Below Avg.	Average	Average	Below Avg.
Heading (Julian)	157	161	162	162	156
Plant Height (in.)	37.4	38	39	37	36
Straw Strength	Good	Good	Good	Very Good	Very Good

WSU Cereal Variety Testing

DISEASE TOLERANCE			
	Susceptible	Intermediate	Resistant
Stripe Rust			
Septoria			
Strawbreaker Foot Rot			
Crown Rot			
C-Stripe			

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Desirable	Acceptable	Acceptable	Desirable

Data obtained from LCS Quality Laboratory



# Outshine the competition

**Bin Buster**  
National Wheat Yield Contest, 2021-2023

**Low protein variety**

**Broadly adapted**  
across the PNW

**Trial-topping**  
yield in OSU, WSU and UI trials

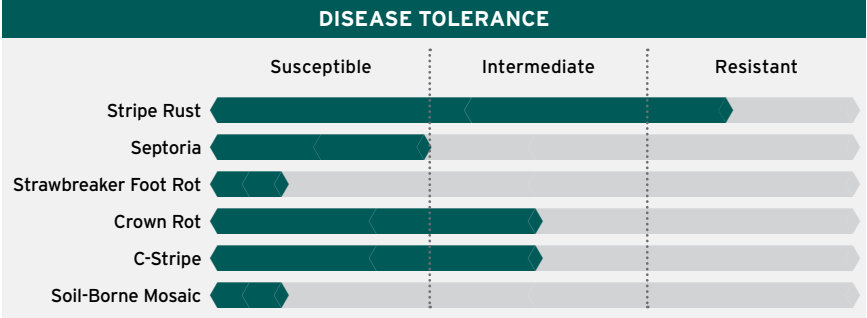
## SOFT WHITE WINTER WHEAT LCS Shine



YIELD			
	BU/AC	LCS Shine	Trial Avg. MEAN
4-Year WSU < 12"	50	47	106% of mean
4-Year WSU 12-16"	87	82	106% of mean
4-Year WSU 16-20"	113	107	106% of mean
4-Year WSU > 20"	114	110	104% of mean
5-Year OSU Low Rain	64	58	110% of mean
5-Year OSU High Rain	143	125	114% of mean
5-Year OSU Irrigated	131	120	109% of mean
5-Year OSU Int. Rain	105	99	106% of mean

AGRONOMIC FEATURES					
	LCS Shine	Bobtail	SY Ovation	LCS Artdeco	NW Tandem
Test Weight	59.7	57.7	60.4	59.6	59.7
Protein %	11.3	11.8	12.2	11.3	11.7
Winter-Hardiness	Average	Very Good	Good	Below Avg.	Average
Heading (Julian)	151	155	154	151	151
Plant Height (in.)	30	34	33	31	32
Coleoptile Length (in.)	3.1	3.3	3.5	3.3	3.4
Straw Strength	Very Good	Very Good	Excellent	Excellent	Excellent

All available public and private data used in compiling scores



All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Most Desirable	Most Desirable	Most Desirable	Desirable

Data obtained from LCS Quality Laboratory





## Double down on yield



**Defensive disease package:** tolerant to stripe rust, crown rot and strawbreaker foot rot



**Ideal agronomics** for wheat variety blends



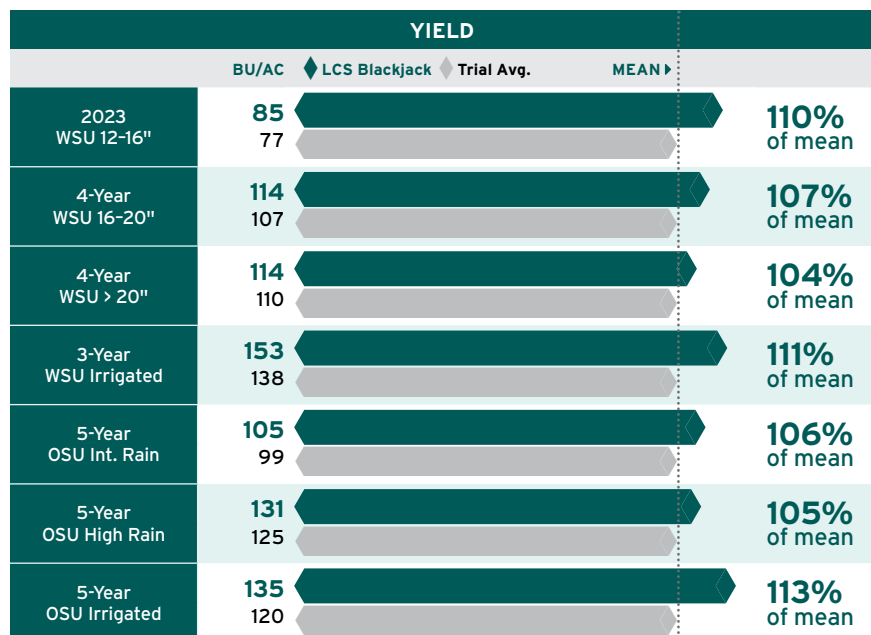
**Preferred option** for high rainfall and irrigated production



**Solid straw strength**  
A variety you can push for yield!

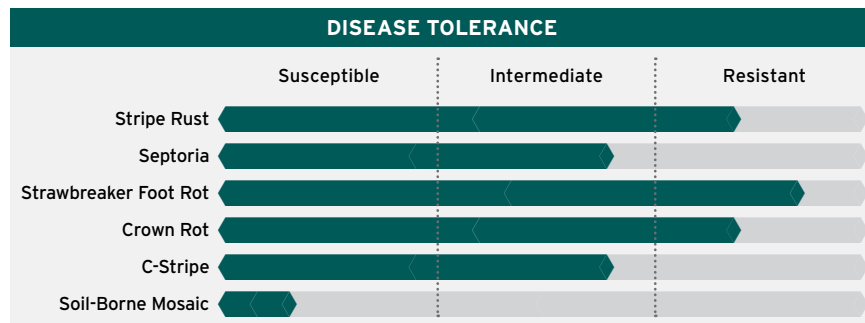
## SOFT WHITE WINTER WHEAT LCS Blackjack

ADAPTATION



AGRONOMIC FEATURES					
	LCS Blackjack	AP Iliad	LCS Artdeco	SY Assure	M-Press
Test Weight	58.1	60.4	59.6	61.2	60.1
Protein %	12.2	12.0	11.3	12.0	12.0
Winter-Hardiness	Average	Below Avg.	Below Avg.	Below Avg.	Below Avg.
Heading (Julian)	155	153	151	149	155
Plant Height (in.)	33	34	31	32	34
Coleoptile Length (in.)	3.0	3.1	3.3	2.9	3.1
Straw Strength	Excellent	Excellent	Excellent	Excellent	Excellent

All available public and private data used in compiling scores



All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Most Desirable	Most Desirable	Acceptable	Most Desirable

Data obtained from LCS Quality Laboratory



## Incredible yields



**High falling numbers**



**Heavy test weight**



**Excellent yield**  
across a broad range of adaptation plus good winter-hardiness



**Well-rounded variety**, a workhorse in blends

SOFT WHITE WINTER WHEAT

# LCS Hulk

ADAPTATION



YIELD			
	BU/AC	LCS Hulk	MEAN
		◆ Trial Avg.	
3-Year WSU < 12"	44		105% of mean
	42		
3-Year WSU 12-16"	82		101% of mean
	81		
3-Year WSU 16-20"	103		102% of mean
	101		
3-Year WSU > 20"	101		100% of mean
	101		
3-Year WSU Irrigated	144		104% of mean
	138		
3-Year UI South Irrigated	156		106% of mean
	147		
3-Year UI South Dryland	43		113% of mean
	38		

AGRONOMIC FEATURES					
	LCS Hulk	Norwest Duet	Bobtail	SY Ovation	M-Press
Test Weight	60.8	58.6	57.7	60.4	60.1
Protein %	12.5	10.5	11.8	12.2	12.0
Winter-Hardiness	Average	Good	Very Good	Good	Below Avg.
Heading (Julian)	155	154	155	154	155
Plant Height (in.)	35	35	34	33	34
Coleoptile Length (in.)	3.4	3.4	3.3	3.5	3.1
Straw Strength	Excellent	Average	Very Good	Excellent	Excellent

All available public and private data used in compiling scores

DISEASE TOLERANCE			
	Susceptible	Intermediate	Resistant
Stripe Rust			
Septoria			
Strawbreaker Foot Rot			
Crown Rot			
C-Stripe			
Soil-Borne Mosaic			

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Most Desirable	Most Desirable	Less Desirable	Acceptable

Data obtained from LCS Quality Laboratory





SOFT WHITE WINTER WHEAT

# LCS Drive

Hit the long ball on your acreage

ADAPTATION

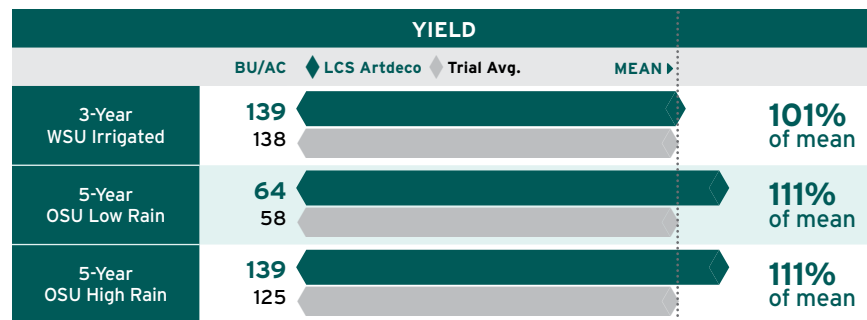
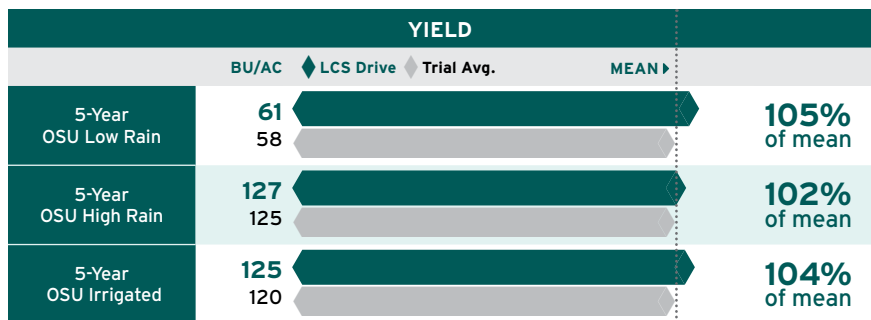


SOFT WHITE WINTER WHEAT

# LCS Artdeco

Excels in high rainfall areas

ADAPTATION



AGRONOMIC FEATURES					
	LCS Drive	SY Ovation	NW Tandem	LCS Artdeco	M-Press
Test Weight	57.7	60.4	59.7	59.6	60.1
Protein %	11.6	12.2	11.7	11.3	12.0
Winter-Hardiness	Below Avg.	Good	Average	Below Avg.	Below Avg.
Heading (Julian)	150	154	151	151	155
Plant Height (in.)	28	33	32	31	34
Coleoptile Length (in.)	3.1	3.5	3.4	3.3	3.1
Straw Strength	Excellent	Excellent	Excellent	Excellent	Excellent

All available public and private data used in compiling scores

AGRONOMIC FEATURES					
	LCS Artdeco	Bobtail	M-Press	SY Ovation	AP Iliad
Test Weight	59.6	57.7	60.1	60.4	60.4
Protein %	11.3	11.8	12.0	12.2	12.0
Winter-Hardiness	Below Avg.	Very Good	Below Avg.	Good	Below Avg.
Heading (Julian)	151	155	155	154	153
Plant Height (in.)	31	34	34	33	34
Coleoptile Length (in.)	3.3	3.3	3.1	3.5	3.1
Straw Strength	Excellent	Very Good	Excellent	Excellent	Excellent

All available public and private data used in compiling scores



# Stinging grassy weed control



**Top yielder**  
in WSU trials



**Improved straw strength** vs. other CoAXium lines



**Good**  
stripe rust tolerance



**Medium height**  
similar to LCS Hulk

SOFT WHITE WINTER WHEAT

# LCS Scorpion AX

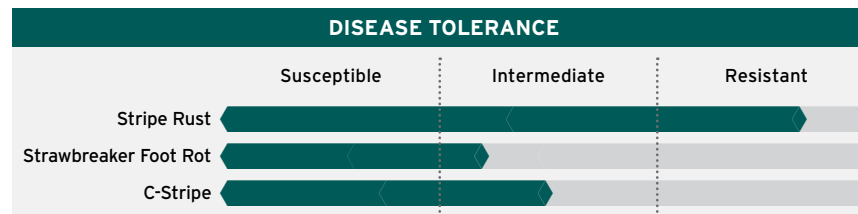
ADAPTATION



YIELD			
	BU/AC	LCS Scorpion AX	Trial Avg. MEAN
2023 WSU < 12"	45		102% of mean
	44		
2023 WSU 12-16"	77		101% of mean
	76		
2023 WSU 16-20"	96		107% of mean
	90		
2023 WSU > 20"	105		100% of mean
	105		

AGRONOMIC FEATURES				
	LCS Scorpion AX	LCS Hydra AX	Piranha CL+	SY Ovation
Test Weight	61	62.2	58.6	60.4
Protein %	11.7	11.3	10.5	12.2
Heading (Julian)	148	147	147	146
Plant Height (in.)	35	36	36	35
Coleoptile Length (in.)	3.8	3.0	3.4	3.5
Straw Strength	Very Good	Good	Average	Excellent

All available public and private data used in compiling scores



All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Acceptable	Less Desirable	Acceptable	Desirable

Data obtained from LCS Quality Laboratory







# Reap what you sow, not weeds

**Improved** stripe rust resistance

**Shorter plant** height with excellent straw strength

**Targeted** for high production zones

**Early** maturity

## SOFT WHITE WINTER WHEAT LCS Reaper AX

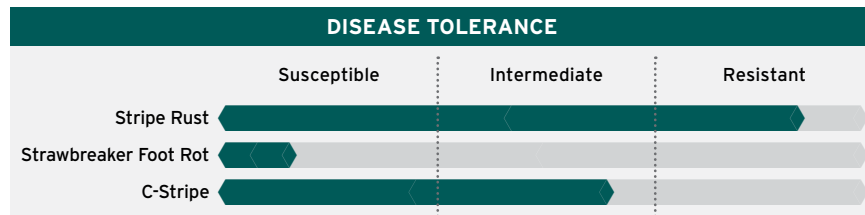
ADAPTATION



YIELD			
	BU/AC	LCS Reaper AX	Trial Avg. MEAN
2023 WSU Irrigated	116		93% of mean
2023 WSU 16-20"	93		103% of mean
2023 WSU > 20"	101		96% of mean
2023 WSU 12-16"	73		96% of mean
2023 WSU < 12"	43		98% of mean

AGRONOMIC FEATURES				
	LCS Reaper AX	LCS Dagger AX	VI Voodoo CL+	LCS Artdeco
Test Weight	62.6	62.2	58.6	59.6
Protein %	12.3	12.2	11.0	11.3
Heading (Julian)	141	142	145	141
Plant Height (in.)	34	36	32	31
Coleoptile Length (in.)	3.6	3.3	4.0	3.3
Straw Strength	Average	Good	Excellent	Excellent

All available public and private data used in compiling scores



All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Desirable	Acceptable	Less Desirable	Acceptable

Data obtained from LCS Quality Laboratory





# Release the Kraken!



**Broad adaptation**  
with medium-early  
maturity



**Good**  
end-use quality



**Very good**  
winter-hardiness



**Taller plant**  
type with good  
straw strength

SOFT WHITE WINTER WHEAT

## LCS Kraken AX

ADAPTATION



YIELD			
	BU/AC	LCS Kraken AX	Trial Avg. MEAN
2023 WSU < 12"	48		109% of mean
	44		
2023 WSU 12-16"	77		101% of mean
	76		
2023 WSU 16-20"	90		100% of mean
	90		
2023 WSU > 20"	105		100% of mean
	105		

AGRONOMIC FEATURES				
	LCS Kraken AX	LCS Hydra AX	Piranha CL+	Norwest Duet
Test Weight	61.3	62.2	58.6	59.9
Protein %	12.1	11.3	10.5	12.2
Heading (Julian)	148	147	147	148
Plant Height (in.)	39	36	36	41
Coleoptile Length (in.)	3.8	3.0	3.4	4.1
Straw Strength	Average	Good	Average	Very Good

All available public and private data used in compiling scores

DISEASE TOLERANCE			
	Susceptible	Intermediate	Resistant
Stripe Rust			
Strawbreaker Foot Rot			
C-Stripe			

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Most Desirable	Most Desirable	Acceptable	Most Desirable

Data obtained from LCS Quality Laboratory







# Monstrous strength and yield



**Top yielder** in LCS high rainfall trials



**Heavy** test weight



**Fullest maturity** of the CoAXium SWWWs



**Moderate** stripe rust resistance

## SOFT WHITE WINTER WHEAT LCS Hydra AX

ADAPTATION



YIELD			
	BU/AC	LCS Hydra AX	Trial Avg. MEAN
2023 WSU < 12"	46		105% of mean
	44		
2023 WSU 12-16"	75		99% of mean
	76		
2023 WSU 16-20"	87		97% of mean
	90		
2023 WSU > 20"	102		97% of mean
	105		
2023 WSU Irrigated	123		98% of mean
	125		

AGRONOMIC FEATURES				
	LCS Hydra AX	LCS Kraken AX	VI Voodoo CL+	SY Ovation
Test Weight	62.2	61.3	58.6	60.4
Protein %	11.3	12.1	11.0	12.2
Heading (Julian)	147	148	145	146
Plant Height (in.)	36	39	32	35
Coleoptile Length (in.)	3.0	3.8	4.0	3.5
Straw Strength	Good	Average	Excellent	Excellent

All available public and private data used in compiling scores

DISEASE TOLERANCE			
	Susceptible	Intermediate	Resistant
Stripe Rust			
Strawbreaker Foot Rot			
C-Stripe			

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Desirable	Desirable	Acceptable	Acceptable

Data obtained from LCS Quality Laboratory





## Targeted weed destruction



**Broadly adapted**  
with early maturity and  
SBWMV allele



**Ideal for**  
southern Washington  
and Oregon



**Improved straw  
strength** compared to  
previous CoAXium lines



**Medium height**  
similar to LCS Hulk

SOFT WHITE WINTER WHEAT

# LCS Dagger AX

ADAPTATION



YIELD			
	BU/AC	LCS Dagger AX	Trial Avg. MEAN
2023 WSU < 12"	36 44		82% of mean
2023 WSU 12-16"	72 76		95% of mean
2023 WSU 16-20"	83 90		92% of mean
2023 WSU > 20"	102 105		97% of mean
2023 WSU Irrigated	120 125		96% of mean

AGRONOMIC FEATURES				
	LCS Dagger AX	LCS Mani AX	VI Voodoo CL+	LCS Artdeco
Test Weight	62.2	62.1	58.6	59.6
Protein %	12.2	12.8	11.0	11.3
Heading (Julian)	142	141	145	141
Plant Height (in.)	36	37	32	31
Coleoptile Length (in.)	3.3	4.0	4.0	3.3
Straw Strength	Good	Average	Excellent	Excellent

All available public and private data used in compiling scores

DISEASE TOLERANCE			
	Susceptible	Intermediate	Resistant
Stripe Rust			
Strawbreaker Foot Rot			
C-Stripe			
Soil-Borne Mosaic			

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Acceptable	Acceptable	Less Desirable	Acceptable

Data obtained from LCS Quality Laboratory







SOFT WHITE WINTER WHEAT  
**LCS Mani AX**

ADAPTATION



SOFT WHITE WINTER WHEAT  
**LCS Sol AX**

ADAPTATION



**Very early**  
maturing, similar  
to LCS Helix AX



**Best stripe rust**  
tolerance



**Very early**  
maturing, similar  
to LCS Helix AX



**Heavy**  
test weight and  
carries SBWMV allele

AGRONOMIC FEATURES			
	LCS Mani AX	LCS Hulk	LCS Artdeco
Test Weight	Very Good	Very Good	Average
Protein	Above Avg.	Average	Below Avg.
Maturity	Very Early	Medium	Early
Plant Height	Medium	Medium	Short
Straw Strength	Below Avg.	Very Good	Very Good
Stripe Rust	Very Good	Very Good	Average

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
<b>Acceptable</b>	Acceptable	Less Desirable	Acceptable

Data obtained from LCS Quality Laboratory

AGRONOMIC FEATURES			
	LCS Sol AX	LCS Hulk	LCS Artdeco
Test Weight	Very Good	Very Good	Average
Protein	Average	Average	Below Avg.
Maturity	Very Early	Medium	Early
Plant Height	Medium	Medium	Short
Straw Strength	Below Avg.	Very Good	Very Good
Stripe Rust	Below Avg.	Very Good	Average

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
<b>Most Desirable</b>	Most Desirable	Acceptable	Most Desirable

Data obtained from LCS Quality Laboratory





## Eclipse the competition

**Excels**  
under irrigation

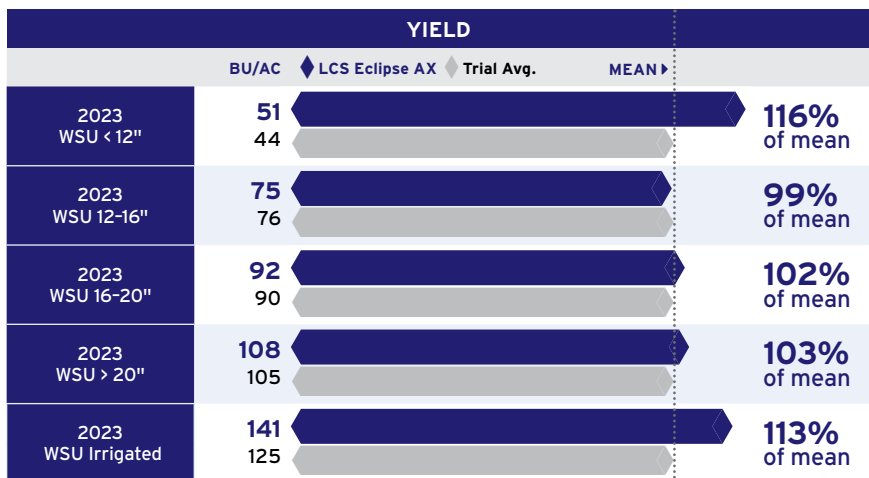
**Good straw**  
strength

**First HRWW**  
with PNW pedigree

**Medium height**  
and early  
heading date

### HARD RED WINTER WHEAT LCS Eclipse AX

ADAPTATION



AGRONOMIC FEATURES			
	LCS Eclipse AX	LCS Helix AX	LCS Jet
Test Weight	59.3	63.9	59.8
Protein %	11.6	11.7	12.5
Heading (Julian)	150	144	149
Plant Height (in.)	37	36	32
Coleoptile Length (in.)	3.5	3.9	4.3
Straw Strength	Good	Average	Excellent

All available public and private data used in compiling scores



All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Desirable	Desirable	Acceptable	Acceptable

Data obtained from LCS Quality Laboratory







## Tactical, long-range yield



**Broadly adapted**  
same maturity as LCS  
Jet and SBWMV allele



**Preferred** option  
for high rainfall and  
irrigated production



**Excellent**  
straw strength



**Excellent yield**  
similar to LCS Jet

## HARD RED WINTER WHEAT LCS Blackbird

ADAPTATION



YIELD			
	BU/AC	LCS Blackbird	MEAN
3-Year WSU Irrigated	145		103% of mean
3-Year WSU > 16"	101		103% of mean
3-Year OSU Low Rain	61		107% of mean
3-Year OSU Int. Rain	103		106% of mean
3-Year OSU Irrigated	131		107% of mean

AGRONOMIC FEATURES					
	LCS Blackbird	LCS Jet	WB Keldin	Scorpio	Norwest 553
Test Weight	61.3	61.1	63	60.3	61.1
Protein %	11.3	10.8	10.9	11.1	11.6
Winter-Hardiness	Average	Average	Very Good	Average	-
Heading (Julian)	148	149	153	152	152
Plant Height (in.)	40	41	42	39	42
Straw Strength	Very Good	Very Good	Good	Very Good	Very Good

All available public and private data used in compiling scores

DISEASE TOLERANCE		
	Susceptible	Resistant
Stripe Rust		
Septoria		
Strawbreaker Foot Rot		
Crown Rot		
C-Stripe		

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Acceptable	Less Desirable	Acceptable	Acceptable

Data obtained from LCS Quality Laboratory



# Launch your yield



**Strong tolerance**  
to Fusarium crown rot



**Top-end yield**  
across diverse PNW  
production zones



**Excellent**  
straw strength



**Broadly adapted**  
leader in WSU  
dryland trials

## HARD RED WINTER WHEAT LCS Missile

ADAPTATION



YIELD			
	BU/AC	LCS Missile	Trial Avg. MEAN
2-Year WSU < 12"	38		103% of mean
	37		
3-Year WSU 12-16"	85		106% of mean
	80		
3-Year WSU > 16"	103		105% of mean
	98		
2-Year WSU Irrigated	138		100% of mean
	138		
3-Year OSU Low Rain	61		107% of mean
	57		
3-Year OSU Int. Rain	100		103% of mean
	97		
3-Year OSU Irrigated	128		104% of mean
	123		

AGRONOMIC FEATURES					
	LCS Missile	LCS Jet	WB Keldin	Scorpio	Norwest 553
Test Weight	62	61.1	63	60.3	61.1
Protein %	10.7	10.8	10.9	11.1	11.6
Winter-Hardiness	Average	Average	Very Good	Average	-
Heading (Julian)	153	149	153	152	152
Plant Height (in.)	44	41	42	39	42
Straw Strength	Very Good	Very Good	Good	Very Good	Very Good

All available public and private data used in compiling scores

DISEASE TOLERANCE			
	Susceptible	Intermediate	Resistant
Stripe Rust			
Septoria			
Strawbreaker Foot Rot			
Crown Rot			
C-Stripe			

All available public and private data used in compiling scores

END-USE QUALITY			
Overall Quality	Baking Quality	Flour Protein	Milling Quality
Desirable	Acceptable	Less Desirable	Desirable

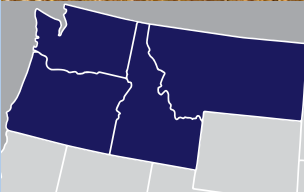
Data obtained from LCS Quality Laboratory








HARD RED WINTER WHEAT  
**LCS Jet**  
Supersonic yield potential

ADAPTATION



YIELD			
	BU/AC	LCS Jet	MEAN
5-Year WSU Irrigated	149		102% of mean
5-Year OSU Irrigated	132		107% of mean
3-Year UI South Irrigated	153		106% of mean

AGRONOMIC FEATURES				
	LCS Jet	Keldin	Scorpio	Norwest 553
Test Weight	59.8	62.3	60.6	61.5
Protein %	12.5	12.4	12.7	12.8
Winter-Hardiness	Average	Good	Average	Below Avg.
Heading (Julian)	149	151	152	151
Plant Height (Inches)	32	36	32	32
Coleoptile Length	4.3	3.0	3.2	3.3
Straw Strength	Excellent	Average	Good	Excellent








HARD RED WINTER WHEAT  
**LCS Evina**  
Wheat – organic, pure and simple

ADAPTATION

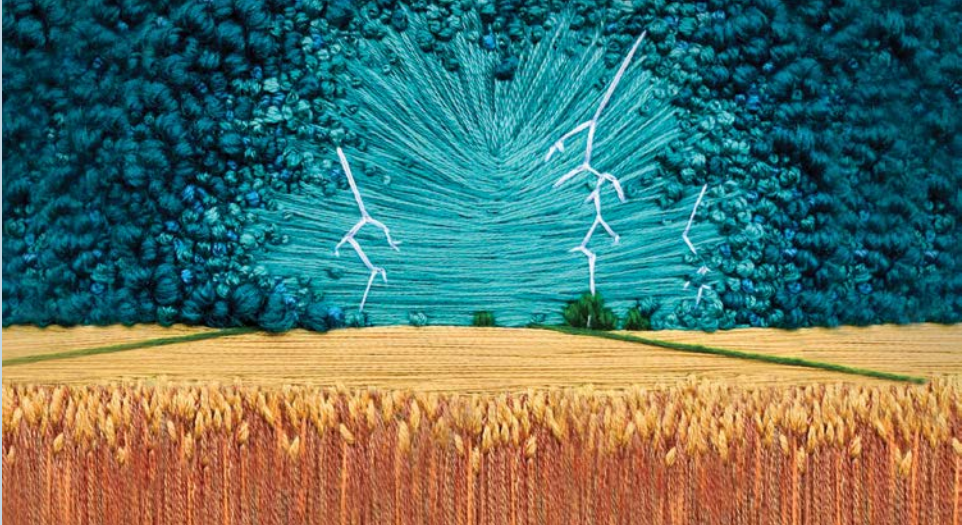


AGRONOMIC FEATURES			
	LCS Evina	Keldin	SY Clearstone CL+
Test Weight	62.2	63.6	61.7
Protein %	11.5	11.0	11.9
Winter-Hardiness	Average	Excellent	Excellent
Heading (Julian)	153	154	151
Plant Height (in.)	37	34	38
Straw Strength	Excellent	Average	Below Avg.
Head Type	Awnless	Awned	Awned

All available public and private data used in compiling scores

DISEASE TOLERANCE			
	Susceptible	Intermediate	Resistant
Stripe Rust			
Septoria			
Strawbreaker Foot Rot			
Crown Rot			
C-Stripe			

All available public and private data used in compiling scores



HARD WHITE WINTER WHEAT

# LCS White Lightning

Striking seed, strong straw



**New hard white**  
winter wheat genetics



**Wide area**  
of adaptation



**Solid disease**  
package



**Huge seed with**  
high protein

	YIELD			MEAN
	BU/AC	LCS White Lightning	Trial Avg.	
2023 KSU Larned Dryland	44			100% of mean
2023 KSU Garden City Irrigated	68			94% of mean
2022 LCS Trials Hugoton, KS	106			104% of mean
2022 LCS Trials Enid, OK	69			108% of mean

LCS White Lightning trial testing in the PNW is underway. Visit our website for the latest data.

## Superior wheat quality

**Limagrain Cereal Seeds is the only private breeding program with a dedicated, state-of-the-art quality lab.** The LCS Quality Laboratory utilizes a comprehensive set of data, compiled over multiple years, to determine the end-use quality of all wheat varieties we release. Key attributes include:

**Baking quality**, including loaf volume, cookie diameter and dough rheology.

**Milling quality**, including flour yields and protein loss from grain to flour.

**Flour protein**, including water absorption, gluten strength and percentage of protein content.

These characteristics are weighted and combined into a single score: baking quality (30%), dough properties (20%), milling quality (40%), test weight (5%) and flour protein (5%). Overall end-use quality is classified in one of four categories:

**Most Desirable.** Elite varieties with excellent intrinsic (kernel) qualities and a superior combination of milling, baking and dough properties.

**Desirable.** High-demand varieties with strong intrinsic qualities and very good to good milling, baking and dough properties.

**Acceptable.** One or more quality parameters may have minor flaws. Overall, these varieties are acceptable to end users.

**Less Desirable.** Varieties with quality parameters that are less than adequate for current end-user standards or a single critical flaw.



# Game-changing new wheat genetics



LCS Scorpion AX



LCS Reaper AX



LCS Kamiak



LCS Missile

[LimagrainCerealSeeds.com/PNW](http://LimagrainCerealSeeds.com/PNW)

☎ 509.520.5661

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