

# Bread-Baking Quality of Kansas Hard Winter Wheat Varieties — 2017

Kansas produces more wheat than any other state, growing nearly 20 percent of U.S. wheat. Of that, 98 percent is hard winter wheat, which is used primarily for making yeast bread and rolls.

Wheat quality is affected by genetics (variety) and environment (location, temperature, rainfall, diseases, soil type, pests, and farming practices). Although wheat producers cannot control many environmental factors, they can choose which wheat varieties to grow.

Quality has different meanings within the wheat industry. Hard winter wheat producers are paid for the amount of grain they sell, making yield and test weight the most important aspects of wheat quality to the producer. Flour millers define hard wheat quality as large, uniform kernels with high test weight and a hard kernel texture. Good quality to a bread baker means flour with high protein and strong gluten.

More than 50 percent of Kansas hard winter wheat is exported. Hard winter wheat also competes with hard spring wheat. If hard winter wheat protein level and baking quality are poor, hard spring wheat or winter/spring blends may be used.

Variety selection is a crucial decision for a wheat producer. Understandably, high-yielding varieties are more profitable. Given a choice between varieties with similar agronomic characteristics and grain yield potential, choosing wheat varieties with a higher quality ranking improves the overall value of Kansas wheat. Flour millers and bread bakers demand good wheat from the end-use perspective. It is vital for wheat producers to provide varieties with better milling and bread-baking quality to ensure that Kansas hard winter wheat remains competitive in both the domestic and international markets.

Popular varieties planted in Kansas in crop year 2017 and several newly released varieties were evaluated. The Kansas Crop Performance Tests provided wheat grown in multiple Kansas locations. Milling and bread-baking analysis was done by K-State's Wheat Quality Lab.

Bread baking quality was judged based on the Recommended Hard Winter Wheat Quality Targets of the Wheat Quality Council and categorized as most desirable, desirable, acceptable, and less desirable.

## Milling and Bread Baking Quality

<i>Most Desirable</i>	<i>Desirable</i>	<i>Acceptable</i>		<i>Less Desirable</i>
Bentley*	Byrd	1863	Larry*	T158
Jagger	Danby	Antero	LCS Chrome*	TAM 111
	Doublestop CL+	AP503 CL2	LCS Pistol	TAM 112
	KanMark	Armour	PostRock	Tatanka
	LCS Mint	Denali	SY Gold*	WB-Cedar
	SY Flint*	Endurance	SY Monument	WB-Grainfield
	TAM 113	Fuller	SY Sunrise*	WB4458
	TAM 114	Gallagher	SY Wolf	Winterhawk
	WB4303*	Joe*	T154	Zenda*
	WB4721*			
				Everest

Varieties are listed alphabetically within category. Listing order does not indicate relative differences in quality.

*\*newly released*

*Most Desirable:* These varieties *greatly improve* the quality of Kansas wheat.

*Desirable:* These varieties *improve* Kansas wheat quality

*Acceptable:* These varieties *maintain* the quality of Kansas wheat.

*Less Desirable:* These varieties *lower* the quality of Kansas wheat.

Hard winter wheat varieties planted on 0.3 percent or more of the seeded acres in Kansas in crop year 2017 and newly released varieties suited for large regions in Kansas were evaluated.

Differences in category assignment compared to other ranking sources may be due to different evaluation criteria or environmental factors such as growing location, farming methods, and weather conditions.

For more information on agronomic performance, contact your local K-State Research and Extension office or view the Kansas State University Kansas Crop Performance Wheat Test Report available in the Kansas Wheat Seed Book or online at: [agronomy.k-state.edu/services/crop-performance-tests/](http://agronomy.k-state.edu/services/crop-performance-tests/)

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