head blight (head scab). Tatanka is susceptible to wheat streak mosaic virus and Hessian fly. A summary of pest resistance for Tatanka is presented in Table 1.

Area of Adaptation. Tatanka performed well across Kansas and eastern Colorado during the 2014, 2015, and 2016 seasons, with its strongest performance under dryland production in western Kansas (Table 2). Tatanka has good drought tolerance according to its dryland performance in the dry years 2013 and 2014. It is expected that Tatanka is well adapted to semiarid areas in western Kansas and eastern Colorado. Tatanka is not recommended for production under irrigation or in high-rainfall areas because of its below-average straw strength.

Milling and Baking Characteristics. Tatanka has an above-average test weight and good milling and baking quality. In general, its grain protein content is about 13 percent, which is about a half percent less than TAM 111. Its flour extraction rate is about 3 percent more than TAM 111. Tatanka has good mixing tolerance. Its water absorption and loaf volume are similar to TAM 111.

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Tatanka Hard Red Winter Wheat

Tatanka is a new hard red winter wheat variety developed and released by the Kansas Agricultural Experiment Station. Foundation seed was distributed to Kansas registered seed producers in 2016. Registered/certified seed will be available in the fall of 2017.

Origin and Development. Tatanka is selected from a two-way cross of KS07HW81/T151 through a modified bulk breeding method. In its pedigree, KS07HW81 is a hard white experimental line developed by the K-State wheat breeding program at Hays. KS07HW81 was derived from a two-way cross of KS02HW25(Trego/Jagger 8W)/KS00HW114-1-1(94HW117//Jagger/94HW301). T151 is a hard red wheat variety developed by Trio Research Inc. The cross of KS07HW81/T151 was made in the fall of 2006 and its F_1 was planted in spring of 2007 in the greenhouse. The F_2 and F_3 populations were grown in the field at Hays, Kansas, in 2008 and 2009, respectively. The F_4 head rows were grown in the field at Hays, Kansas, in 2010. Tatanka has been tested in yield trials since 2011. Tatanka has been tested in replicated yield trials since 2013. Tatanka was tested in the Kansas Intrastate Nursery in 2014, 2015, and 2016. In 2016, Tatanka was tested in the Kansas Winter Wheat Performance Test. Tatanka was released in September 2016. The development of Tatanka was partially supported by the Kansas Wheat Commission and Kansas Wheat Alliance.

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Agronomic Characteristics. Tatanka is an awned, white-glumed, hard-red-seed winter wheat. It has a medium maturity with a heading date similar to KanMark and 2 to 3 days earlier than TAM 111. It has a medium height, which is about 1 inch shorter than Byrd. Its straw strength is similar to TAM 112, which is considered as below average. Tatanka has good winter-hardiness and its coleoptile length is medium. It has good tolerance to grain shattering. Tatanka has good tolerance to preharvest sprouting and is moderately tolerant to acid soil. Ratings for agronomic characteristics of Tatanka and other varieties are given in Table 1.

Resistance to Pests. Tatanka has good resistance to stripe rust and soilborne mosaic virus. It also has moderate resistance to leaf rust. It has intermediate reactions to barley yellow dwarf virus and *Fusarium*

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Table 2. *Yield (bu/a) summary for Tatanka and selected check varieties in Kansas Intrastate Nursery locations in western Kansas.*

Entry	Class	2014 Dryland	2015 Dryland	2016 Dryland	3-Year Dryland Avg	Irrigated Avg*
Tatanka	HRW	63.2	70.2	92.9	77.5	114.6
Joe	HWW	64.9	76.3	93.8	80.6	116.3
Antero	HWW	68.1	66.8	90.4	76.3	110.3
Byrd	HRW	66.4	60.6	80.2	69.5	101.4
Danby	HWW	57.3	61.6	80.6	68.0	100.0
TAM 111	HRW	55.4	46.3	61.6	60.2	97.1
Trial Mean		56.7	57.6	84.5	67.9	102.4
Locations		4	7	7	18	3

*Irrigation tests were conducted in 2014, 2015, and 2016, at Colby, Kansas.

Table 1. *Agronomic and pest resistance characteristics for Tatanka and other varieties.*

Variety	Class[1]	Coleoptile length	Winter hardiness	Maturity	Lodging resistance	Grain shattering	Sprouting tolerance	Test weight	Acid soil	SBMV[3]	WSMV[4]	BYDV[5]	Stripe rust	Leaf rust	Stem rust	Head scab	Tan spot	Powdery mildew	Hessian fly
Tatanka	HRW	5[2]	2	5	6	2	2	3	3	2	7	5	2	4	2	6	7	7	9
KanMark	HRW	6	2	5	1	2	4	4	7	2	7	6	2	2	3	8	6	7	9
Byrd	HRW	3	2	6	3	2	3	4	3	2	7	7	8	7	8	7	7	--	9
TAM 111	HRW	3	5	8	3	2	2	3	7	8	7	7	8	8	3	7	6	6	5
Joe	HWW	5	3	7	3	2	7	4	7	8	2	5	2	2	2	6	--	4	9
Danby	HWW	5	3	8	4	2	3	2	7	7	5	8	5	8	2	7	8	7	9
Antero	HWW	5	3	6	3	2	5	4	--	4	8	7	3	7	2	--	5	--	6
Tiger	HWW	5	4	8	4	3	9	4	--	2	6	7	9	2	3	8	7	5	2

[1]HRW: hard red winter; HWW: hard white winter
[2]Ratings are based on 1-9 scale where 1=longest, most resistance or the best and 9=shortest, most susceptible or poorest, except for maturity where 1=earliest and 9=latest.
[3]SBMV – Soilborne mosaic virus.
[4]WSMV – Wheat streak mosaic virus.
[5]BYDV – Barley yellow dwarf mosaic virus.
-- not rated.