



2145 Hard Red Wheat

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2145 is a new hard red winter wheat variety developed cooperatively by K-State Research and Extension and the Agricultural Research Service (USDA-ARS). It was tested and evaluated as HBK0630-4-5, KS97P0630-4-5. 2145 has been released as a public variety. Foundation seed of 2145 was distributed in the fall of 2001. Foundation and certified seed will be available to producers for fall planting in 2002. 2145 was selected directly from segregating material donated to Kansas State University by Pioneer Hi-Bred International, Inc. in 1989. The name "2145" was chosen to recognize the continuing contributions of the former Pioneer hard winter wheat program to the wheat industry.

Origin and development. 2145 is a direct selection from an F2 population given to K-State by Pioneer in 1989. The pedigree of 2145 is HBA142A/HBZ621A//Abilene. HBA142A and HBZ621A were Pioneer experimental lines and their pedigrees are unknown. Abilene is a hard red winter wheat cultivar released by AgriPro in 1987. 2145 was selected as an F5 head row in 1994. Agronomic, as well as milling and baking characteristics of 2145 were evaluated in field trials from 1995-2001. 2145 was tested in the USDA Southern Regional Performance Nursery in 1998-1999 and the Kansas Wheat Variety Performance Tests in 1999 and 2000.

Agronomic characteristics. 2145 is an awned, white chaffed, semi-dwarf hard red winter wheat with good straw strength. It is similar to 2137 for maturity and it is slightly shorter than Jagger. Similar to 2137, 2145 is a medium maturity variety. 2145 has average winter hardiness. The coleoptile length of 2145 is medium.

Resistance to pests. 2145 is resistant to leaf rust, soil-borne mosaic virus and spindle streak mosaic virus and moderately resistant to speckled leaf blotch and stem rust. 2145 is susceptible to acid soils, powdery mildew, tan spot, wheat streak mosaic and scab. 2145 has a heterogeneous reaction to Hessian fly.

Area of adaptation. 2145's best performance will be in central Kansas, along the I-135-US-Hwy 81 corridor. During testing, its best performance has been from McPherson north. Because of its susceptibility to tan spot, 2145 is not recommended for planting in a continuous wheat system.

Milling and baking quality. 2145 has good milling characteristics, with test weight patterns similar to 2137. Its protein concentration, dough mixing time and tolerance, loaf volume potential, crumb grain, and texture are most similar to Jagger. Overall, 2145 represents an improvement over 2137 for milling and baking characteristics.

Tables 1 through 4 are courtesy of the Kansas Crop Performance Testing Program, Kraig Roozeboom, Coordinator.
Table 5 courtesy of R.L. Bowden and H. Leroy Brooks.

Table 3. 2000 Variety Performance Test Results for Test Weight (lb/bu)

	Western Average	Central Average	Eastern Average	Irrigated Average
2145	58	60	58	56
2137	57	58	58	56
Jagger	57	57	59	54

Table 4. 2001 Variety Performance Test Results for Test Weight (lb/bu)

	Western Average	Central Average	Eastern Average	Irrigated Average
2145	58	57	57	56
2137	59	58	58	56
Jagger	60	58	58	57

Table 1. 2000 Variety Performance Test Results for Yield (bu/a)

	Western				Central								Eastern		Irrigated			Irrigated Average		
	Ellis	Thomas	Finney	Average	Republic	Smith	Harvey	Reno	Stafford	Sumner	Average	Brown	Riley	Franklin	Labette	Average	Stafford		Thomas	Finney
2145	69	42	36	49	76	86	44	52	48	53	60	39	65	55	51	53	56	60	57	58
2137	59	43	38	47	74	77	41	35	57	50	56	38	56	57	53	51	53	65	64	61
Jagger	60	41	31	44	73	71	46	32	48	46	53	44	54	43	56	49	60	63	54	59

Table 2. 2001 Variety Performance Test Results for Yield (bu/a)

	Western				Central								Eastern		Irrigated			Irrigated Average
	Thomas	Greeley	Finney	Average	Republic	Smith	Harvey	Reno	Average	Brown	Riley	Franklin	Labette	Average	Thomas	Finney	Stevens	
2145	70	46	26	47	46	75	30	51	51	47	71	35	47	50	62	37	58	52
2137	71	47	26	48	50	73	39	47	52	50	69	61	55	59	61	38	44	48
Jagger	82	47	32	54	65	87	46	61	65	50	63	63	53	57	65	37	72	58

Table 5. Agronomic, disease and insect ratings for 2145, 2137 and Jagger.

	Maturity	Test Weight	Winter-hardiness	Coleoptile Length	Lodging	Soil Borne Mosaic	Wheat Streak Mosaic	Barley Yellow Dwarf	Leaf Rust	Stem Rust	Stripe Rust	Speckled Leaf Blotch	Tan Spot	Powdery Mildew	Scab	Hessian Fly	Russian Wheat Aphid
2145	4	5	6	6	3	1	9	6	2	3	4	4	8	7	8	5	9
2137	4	4	3	7	2	1	4	6	7	7	8	4	4	4	9	2	9
Jagger	1	5	6	6	5	1	4	7	8	3	1	3	3	7	7	9	9

Maturity: 1 = early, 9 = late

Test weight: 1 = High, 9 = Low

Winterhardiness: 1 = winterhardy, 9 = tender

Coleoptile length: 1 = long, 9 = short

Lodging: 1 = stand well, 9 = tends to lodge

Disease and Insect Ratings; 1 = Resistant, 9 = Susceptible