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G73-24 Winter Wheat Varieties

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Winter Wheat Varieties

This NebGuide provides brief descriptions of selected winter wheat varieties released since 1984.

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- [Variety Descriptions](#)

The University of Nebraska Institute of Agriculture and Natural Resources conducts wheat variety trials in all parts of Nebraska. Private companies enter their varieties or hybrids in the test voluntarily. Public entries are chosen by the agronomy staff at the University. The current copy of the annual Extension Circular, *Nebraska Fall-Sown Small Grain Variety Tests*, includes detailed yield, bushel weight, other performance data, and period of years data. Nebraska Cooperative Extension and the University's Agricultural Research Division jointly publish these circulars which are available from Extension offices throughout the state.

Table I in this NebGuide lists groupings of non-complementary varieties based on their parentage. This list includes proprietary varieties grown on significant acreage in Nebraska.

Table II lists the characteristics of many winter wheat varieties. These descriptions are for Experiment Station releases. Further information about privately developed varieties or hybrids is available by contacting the originator or distributor.

Variety Descriptions

Arapahoe is a medium maturity, medium height variety with very good winter hardiness and tillering ability. It performs well on most dryland sites in the northern and western Hard Red Winter Wheat (HRWW) region. It has a medium length coleoptile and fair to good straw strength. The grain has good test weight patterns and milling/baking qualities. The University's Agricultural Research Division (ARD) and the USDA-ARS developed and released Arapahoe from the cross Brule/3/ Parker*4 /Agent/ /Belot.198/ Lancer. ***Plant Variety Protection (PVP) applied for.***

Cody is a moderately early maturing, tall variety with good straw strength. It performs well in dryland production statewide in Nebraska where Centurk-type wheats have been successful. Cody has good tolerance to cephalosporium stripe and good winter hardiness. The grain has good test weight patterns and milling/baking qualities. Cody is a release of the University's ARD and the USDA-ARS from the cross Warrior*5/Agent//Centurk 78. ***Plant Variety Protected -- Certificate No. 8700167.***

Karl is a very early maturing variety with good tolerance to high temperature stress. Under Nebraska conditions, it is best adapted wherever Arkan has been successful. The grain has very good test weight patterns and excellent milling/baking qualities. Karl has medium length coleoptile, moderately short height, fair tillering ability, and fair winter hardiness. It is a product of the Kansas State Experiment Station and the USDA-ARS from the cross Plainsman V/3/Kaw/Atlas 50//Parker*5/Agent. ***Plant Variety Protection applied for.***

Lamar is a medium maturity, tall variety with fair straw strength. It has a combination of characteristics that provide

good drought tolerance. Lamar has a long coleoptile, good tillering ability, and good winter hardiness. Lamar performs better in the southwest and west cropping districts under specific stress environments. The grain has good test weight patterns and fair milling/baking qualities. Colorado State Experiment Station developed Lamar from the cross 74F878/Wings//Vona.

Norkan is a moderately early maturing, medium height variety with good straw strength. It has a medium length coleoptile, fair tillering ability, and fair winter hardiness. Norkan performs better south of the Platte River. The grain has good test weight patterns and milling/baking qualities. Norkan is a product of the Kansas State Experiment Station and the USDA-ARS from the cross Plainsman V/3/2*Larned/Eagle//Sage. ***Plant Variety Protected -- Certificate No. 8800033.***

Rawhide is an early maturing, medium height variety with good tolerance to heat/drought stress. It has statewide adaptation, especially in most areas where TAM 107 is grown. Rawhide has good winter hardiness and test weight patterns, short coleoptile, very good tillering ability, moderately strong straw, and acceptable milling/baking qualities. The University's ARD and the USDA-ARS developed Rawhide from the cross Warrior*5/ Agent/ /Kavkaz/4 /Parker *4/Agent/ /Belot.198/Lancer /3/Vona. ***PVP applied for.***

Redland is a medium maturity, medium height variety. It has a short coleoptile, very good tillering ability, good straw strength, and good winter hardiness. Redland has statewide adaptation. The grain has only fair test weight but good milling/baking qualities. Redland is a release of the University's ARD and the USDA-ARS from selections made in the variety Brule. ***Plant Variety Protected -- Certificate No. 8700168.***

Siouxland 89 is a composite of selections made from Siouxland to improve the uniformity of its plant type and seed vernalization requirement. It is nearly the same as Siouxland in appearance and performance under Nebraska conditions. Texas A&M and the USDA-ARS selected Siouxland 89. ***PVP for Siouxland 89 is pending.***

TAM 107 is a very early maturing variety, moderately short in height with good straw strength and fair tillering ability. At maturity, plants are red-brown in color. TAM 107 has a long coleoptile, very good early spring regrowth, and fair to good winter hardiness. TAM 107 has statewide adaptation, but performs better in southern Nebraska than in other parts of the state. The grain has good test weight patterns but less desirable milling/baking qualities. Texas A&M and the USDA-ARS released TAM 107 from the backcross of TAM 105 with Amigo. ***Plant Variety Protected -- Certificate No. 8500181.***

TAM 200 is a moderately early maturing variety, short in height with fair to good straw strength. It has a short coleoptile and very good tillering ability. Under Nebraska conditions, it performs well wherever Vona has been successful. The winter hardiness of TAM 200 is poor. The grain is small, yet has very good test weight patterns but less desirable milling/baking qualities. TAM 200 is a product of Texas A&M and the USDA-ARS from the cross TX71A1039-V1*3/Amigo. The pedigree includes Tascosa, Centurk, and Sturdy.

2163 is a moderately early maturity variety specifically adapted for production under high management. It has a medium length coleoptile, short height, fair tillering ability, and fair to poor winter hardiness. The grain has fair test weight patterns. In some years and production areas, kernels may look like soft red wheat. Pioneer Hi-bred developed 2163 and donated it to the Kansas Agricultural Experiment Station. ***PVP applied for.***

Variety Selection and Complementation

According to the most recent Nebraska wheat drill-box surveys, the average wheat producer plants up to four varieties each year. Some producers plant as many as six to eight varieties. Variety selection is an important key to the success and stability of the wheat production system.

Variety complementation is a simple method many wheat producers use to select proper varieties from a long list of choices. Complementation encourages the producer to select adapted varieties that differ in parentage, maturity or specific factors of adaptation. Because there is no single perfect variety, complementation allows the producer to counterbalance the potential weaknesses in each variety. This compensation improves the opportunity for yield stability of the entire production system.

There are four steps in selecting complementary varieties:

1. **Identify your 'workhorse' varieties** -- These are varieties now being grown on most of your acres with a good record of performance over time.
2. **Genetic complementation** -- Select varieties that have 50 percent or less similar parentage to the workhorse variety and other varieties being grown.
3. **Maturity complementation**-- Select varieties that bloom and mature earlier or later than the workhorse variety. This will reduce the risk from weather (heat, hail, etc.) and spread out harvest.
4. **Complement production needs and limits** -- Select varieties that have specific characteristics needed for your production conditions or area. This can include diseases and pest resistance, winter hardiness, response to management and cultural practices or other special needs.

There are no rules for the number of varieties a producer should grow or the acres planted per variety. It will depend entirely upon the production conditions and needs of the producer.

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Centura	Centura	Arkan	Arapahoe	Karl	Abilene
Cody	Centurk	Baca	Brule	Lamar	Bronco
Rawhide	Centurk 78	Buckskin	Gage	Lindon	Sierra
Siouxland	Cody	Eagle	Rawhide	Rawhide	TAM 107
Siouxland 89	Rocky	Hawk	Redland	Vona	TAM 200
Warrior	Sandy	Larned		Wings	
		Norkan			
		Sage			
		Scout 66			
Unclassified					
Thunderbird, 2163, Victory					

Table II. Hard Red Winter Wheat characteristics

Agronomic Characteristics ¹							Reactions ²							
Variety	Maturity	Winter Hardiness	Straw Strength	Plant Height ⁴	Coleoptile Length ³	Seed Size ⁴	Hessian Fly	Leaf Rust	Stem Rust	Soil Borne Mosaic	Wheat Streak Mosaic	Origin	Year Released	PVP ⁵
Arapahoe	med	good	med strong	med	med	med	MR	MR-MS	R	S	MT	NE	1988	yes
Arkan	very early	fair	strong	med short	long	med	R	MS	R	R	B	LS	1982	yes
Brule	med	good	strong	med	short	med	R	MS-MR	MR	S	MT	NE	1984	no
Buckskin	med early	fair	med strong	tall	long	med small	MR	S	MS	MR	LT	NE	1973	no
Centura	med early	fair	med strong	tall	long	med	S	MS	MR	MS	MS	NE	1983	yes
Cody	med early	good	med strong	tall	long	med	S	MS	MR	MS-MR	MS	NE	1985	yes
Colt	med	good	strong	short	short	med large	MR	S	MR	MS	S	NE	1983	yes
Karl	very early	fair	strong	med short	med	med large	S	MS-MR	MS	R	MS	KS	1988	yes
Lamar	med	good	med	tall	long	med large	S	MS	MR-MS	S	-	CO	1988	no

Norkan	med early	fair	med strong	med	med	med	R	S	R	R	S	KS	1985	yes
Rawhide	early	good	med strong	med	med	med large	MR	S	MR	S	MS	NE	1990	yes
Redland	med	good	strong	med	short	med	R	MS-MR	MR	S	LT	NE	1985	yes
Scout 66	early	fair	med	tall	long	med large	S	MS	MR	S	LT	NE	1966	no
Siouxland	med early ⁶	fair	med strong	med tall	long	med large	S	MS	MR	MS	MT	NE	1984	yes
Siouxland 89	med early ⁶	fair	med strong	med	long	med large	S	MS	MR	MS	MT	TX	1990	yes
TAM 107	very early	fair	very strong	med short	long	med large	S	S	MR-MS	S	MT	TX	1984	yes
TAM 200	med early	poor	med strong	short	short	small	S	MS-MR	MR-MS	S	MT	TX	1987	no
Vona	early	poor	strong	short	short	small	S	S	MR-MS	S	S	CO	1976	yes
2163	med early	poor	very strong	med	med	med large	R	MR	MS	R	LT	PIO-KSU	1989	yes

1. These comparative ratings are based on each variety's average performance within its area of adaptation under normal Nebraska growing conditions and cultural practices. This chart is updated annually. Plant appearance may be influenced by soil, weather, pest, and other production conditions. For purposes of yield comparisons between varieties, see the current year Extension Circular, *Nebraska Fall-Sown Small Grain Variety Tests*.
2. R=resistant; S=susceptible, MR=moderately resistant; MS=moderately susceptible. The reaction may vary depending on how favorable conditions are for disease or insect development management practices and/or plant growth or deviations in genetic resistance with the variety. Sources used to compile this information include: field and greenhouse observations and other state university materials. (a) Relative varietal reaction to wheat streak mosaic virus is based upon actual Nebraska yield data from the 1988 and 1989 crop years or other comparable tests. MT=moderate tolerance, LT=low tolerance, MS=moderately susceptible, S=susceptible.
3. If "short," stand uniformity and establishment will be reduced by sowing seed more than 2 inches deep. Deep seeding may also reduce stand of medium and long coleoptile varieties.
4. Actual height and seed size will vary widely with season, location, and production conditions. General seed size ratings: Large=less than 14,000 seeds/lb; small=more than 18,000 seeds/lb. General height ratings under optimum moisture: short=30-35"; medium=35-40"; tall=40-45".
5. If "yes," the U.S. Plant Variety Protection act prohibits unauthorized seed production. Seed may be legally sold for planting purposes only when produced and labeled as Certified Quality Seed.
6. Maturity may become later compared to other varieties as Siouxland and Siouxland 89 move north or west due to response to available heat units.

File G24 under: FIELD CROPS

D-1, Small Grains

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