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EC03-103 Nebraska Fall-Sown Small Grain Variety Tests, 2003

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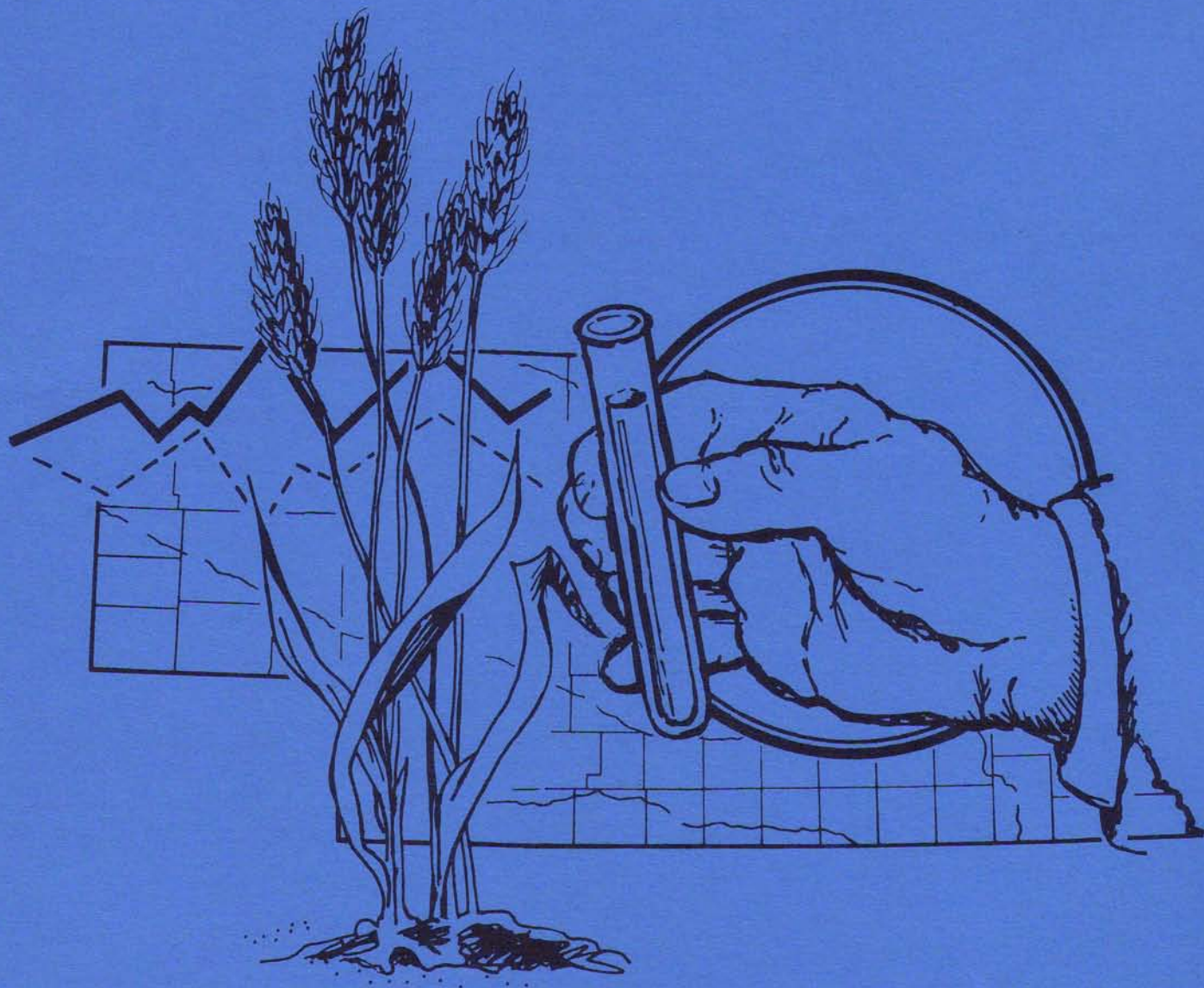
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NEBRASKA FALL-SOWN SMALL GRAIN VARIETY TESTS 2003



**University of Nebraska–Lincoln
Institute of Agriculture and Natural Resources
Agricultural Research Division
Cooperative Extension**

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EXTENSION CIRCULAR 03-103

NEBRASKA FALL-SOWN SMALL GRAIN

VARIETY TESTS

August 2003

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Special acknowledgment is made to farmer cooperators who furnished land for experiments; also to Extension Educators and others who assisted with the tests.

METRIC EQUIVALENTS

| | | | |
|-----------------------|--------------------------------|------|----------------|
| 1 centimeter = | 0.394 inches | cm = | inches x 2.54 |
| 1 hectare = | 2.471 acres | ha = | acres x 0.405 |
| 1 kilogram = | 2.205 pounds | kg = | pounds x 0.454 |
| 1 hectoliter = | 2.838 bushels | hl = | bushels x 0.35 |
| Kilogram/hectoliter = |lb/bu x 1.287 | | |
| Kilogram/hectare = |bu/A x 53.81 (48# bushel) | | |
| Kilogram/hectare = |bu/A x 67.26 (60# bushel) | | |

EXTENSION CIRCULAR 03-103

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NEBRASKA WINTER WHEAT PRODUCTION

| Year | <u>Planted</u> 000 acres (hectares) | <u>Harvested</u> 000 acres (hectares) | <u>Average</u> yield bu/a (kg/ha) |
|--------|---|---|---|
| 1980 | 3000 (1215) | 2850 (1154) | 38.0 (2556) |
| 1985 | 2600 (1053) | 2300 (932) | 39.0 (2623) |
| 1990 | 2400 (975) | 2250 (911) | 38.0 (2556) |
| 1991 | 2350 (952) | 2000 (810) | 32.0 (2152) |
| 1992 | 2350 (952) | 1950 (790) | 31.0 (2085) |
| 1993 | 2350 (952) | 2100 (851) | 35.0 (2354) |
| 1994 | 2200 (891) | 2100 (851) | 34.0 (2287) |
| 1995 | 2150 (870) | 2100 (851) | 41.0 (2758) |
| 1996 | 2300 (932) | 2100 (851) | 35.0 (2354) |
| 1997 | 2000 (809) | 1900 (769) | 37.0 (2489) |
| 1998 | 1900 (769) | 1800 (729) | 46.0 (3093) |
| 1999 | 2000 (809) | 1800 (729) | 48.0 (3228) |
| 2000 | 1750 (709) | 1650 (668) | 36.0 (2421) |
| 2001 | 1800 (728) | 1700 (688) | 39.0 (2623) |
| 2002 | 1650 (668) | 1520 (615) | 32.0 (2152) |
| 2003 * | 1800 (728) | 1700 (688) | 49.0 (3290) |

*August 1 estimate.

NEBRASKA FALL-SOWN SMALL GRAIN VARIETY TESTS 2003

The 2003 estimated winter wheat yield for Nebraska was 49 bushels per acre from 1,700,000 harvested acres. The total production of winter wheat for the state was 83,300,000 bushels. This is much higher than 2002.

This circular reports data from winter wheat trials conducted throughout Nebraska. Entries included varieties and promising experimental strains from Nebraska and surrounding states and private breeders. This was the twenty second year for privately developed varieties. The state has been divided

into four districts for purposes of variety testing. Locations of the 2003 variety tests are shown on the map on page 16.

Trials were located on Research Centers and private farms. Names of cooperators, dates of planting and harvest are shown in Table A. Soil type, soil test data, and fertilizer applications are shown in Table B. Plot sizes varied with location. Nursery-type plots six rows wide and 15 to 35 feet long were planted at other locations. All tests were direct combined. Entries were replicated 4 to 6 times.

New Winter Wheat Varieties

GOODSTREAK Goodstreak is medium in maturity about 1 day earlier than Buckskin and 2 days later than Pronghorn. It has a long coleoptile similar in length to Pronghorn and slightly shorter than Buckskin. The mature plant height of Goodstreak is 38 inches. It has moderate straw strength better than Arapahoe, Buckskin, and Pronghorn, but not as good as Wesley. The winter hardiness of Goodstreak is good to very good and comparable to other winter wheat cultivars adapted and commonly grown in Nebraska. Goodstreak is moderately resistant to stem and stripe rust and Hessian fly (better than Buckskin). It is susceptible to leaf rust and wheat streak mosaic virus. Goodstreak was evaluated as NE97465 in Nebraska yield nurseries.

HARRY Harry is late in maturity about 2-3 days later than Arapahoe and Wesley. Harry is a semi-dwarf wheat cultivar with a short coleoptile similar to Arapahoe. It is shorter than Arapahoe with a mature height of 32 inches. Harry has moderate straw strength similar to Arapahoe, but less than Wesley. The winterhardiness of Harry is good to very good,

similar to Abilene and comparable to other winter wheat cultivars adapted and commonly grown in Nebraska. Harry is moderately resistant to stem and leaf rust. It is susceptible to wheat soilborne mosaic virus and wheat streak mosaic virus but may contain a low level of tolerance to barley yellow dwarf virus.

NuPride EMPIRE brand Empire is late maturing, 1-2 days later than Arapahoe and Wesley. Empire has moderate straw strength with a short coleoptile. The mature plant height is 35 inches. It is moderately resistant to stem rust, leaf rust, and Hessian fly. Empire is susceptible to wheat soilborne mosaic virus and wheat streak mosaic virus, but demonstrates a low level of tolerance to barley yellow dwarf virus. Empire is a brand name for NE97638 which was developed by the Nebraska Agricultural Experiment Station.

ANKOR Ankor is a Russian wheat aphid (RWA) resistant backcross derivative of the popular variety 'Akron'. Ankor carries the same RWA resistance gene (Dn4) as other CSU variety releases (e.g., Halt, Yumar, Prowers,

Prairie Red, Prowers 99) while preserving the desirable features of Akron, including good fall and spring growth characteristics, excellent row closure, good shattering tolerance, and high dryland yields.

ABOVE Above is the first publicly developed Clearfield™ winter wheat variety, carrying tolerance to the imidazolinone class of herbicides. Clearfield™ is a unique production system from BASF Corporation that involves an herbicide-tolerant variety and the new imazamox-based herbicide, Beyond (not yet registered), for selective control of jointed goatgrass, cheat grass, feral rye and other tough grasses, as well as many broadleaf weeds.

AVALANCHE Avalanche is the first hard white winter wheat variety released by CSU for production in eastern Colorado. Hard white wheat is the newest wheat market class in the U.S. and promises to become a mainstay of central Great Plains winter wheat production.

AgriPro brand DUMAS Dumas is a medium early maturing, short variety with excellent straw strength. It has average winterhardiness (equal to Jagger) with a short coleoptile. It has resistance to stem rust and is moderately susceptible to leaf rust and wheat streak mosaic. Dumas is recommended for irrigated and high production dryland areas. Dumas is a good quality wheat with very good test weight.

AgriPro Brand JAGALENE Jagalene is a medium maturing variety with excellent straw strength. It is resistant to stem rust, leaf rust and soilborne wheat mosaic virus. It is moderately resistant to wheat streak mosaic virus and is susceptible to Hessian fly. Jagalene is widely adapted and demonstrates good disease resistance and drought tolerance. Jagalene was selected from the cross Abilene/Jagger.

2145 2145 is an awned, white chaffed, semi-dwarf wheat with good straw strength. It is similar to 2137 for maturity and is slightly shorter than Jagger. 2145 is a medium maturity variety with average winterhardiness. It has resistance to leaf rust, soil-borne mosaic virus and moderate resistance to stem rust. 2145 was developed cooperatively by Kansas State Research & Extension and the Agricultural Research Service.

LAKIN Lakin is a medium maturing variety. It is moderately resistant to stem rust and wheat streak mosaic virus. It is resistant to soilborne mosaic virus but is susceptible to leaf rust and Hessian fly and has very little sprouting tolerance. Lakin is the first white wheat released by Kansas Agricultural Experiment Station that has excellent noodle quality along with above average bread quality.

Winter Wheat Performance

Yield, bushel weight, and other agronomic data from each district are listed on pages 17-39. Each district is listed on separate tables with yields of individual locations, average agronomic data, and a summary of the last five years. Page 40 summarizes the yield of each variety at each of the locations where it was entered. Page 41 summarizes the protein data for each location and page 42 summarizes bushel weights.

Yielding ability of different varieties cannot be measured with absolute accuracy because of variations in soil fertility, moisture, and other factors. For this reason, small differences in yield have no significance. Unless the difference in yield of two varieties is greater than the difference required for significance shown in the tables, little confidence can be placed in the superiority of the one over the other in that particular test. These differences are shown at the 5% level,

meaning that differences as large or larger could be expected through chance alone in 1 of 20 trials (5%). Even though two varieties are not statistically different, there may be other factors which influence the choice of one over the other.

Such factors as their ability to complement other varieties, disease resistance, or availability of seed may influence that decision. Complementary varieties are important when selecting additional varieties to grow on your farm. One definition of complementary varieties is that they come from diverse parentages. A more in depth discussion of variety complementation is found on page 12. In order to help select varieties with diverse parentages, the related families of many varieties are included in the characteristics chart (table C) on page 14-15.

There was one trial conducted in the Southeast district, one in Saunders County. The Saunders County test was planted September 19th and harvested July 8th and average 74 bushels per acre. Conditions were good throughout the year. Herbicide was one pint of Ally. There was no lodging and diseases were limited to stripe rust.

The one trial in South Central Nebraska was in Clay County. The Clay County plot was located at the South Central Research & Extension Center, Clay Center. The soil type was a Hastings Silt Loam that was fallow in 2002 and corn in 2001. Field preparation disked once then field cultivated two times. Had timely rains this spring otherwise it was very dry this year. We had a major wind storm on June 22nd with winds at 80 mph. This caused some sever lodging in the wheat trial. We had another wind storm on July 6th which compounded the lodging problem. The 36 varieties were planted on September 24th at a rate of 75 lbs/acre. Wheat was harvested on July 7th and finished on July 11th. Plot averaged 73 bushels per acre. The average moisture was 10.3%.

Four trials were conducted in the West Central district. These were located in Keith, Furnas, Red Willow and Lincoln County. The Keith County test was planted September 16th with 40-33-0 (30 N preplant as anhydrous, 8.5 gal 10-34-0 starter). Herbicide applied was 0.18 oz Amber + 8 oz 2,4-D LV6. 2002 fallow, 2001 corn. Test was harvested July 10th and averaged 58.8 bushels per acre. The Furnas County test was planted September 20th and was no-tilled into corn stubble 2002, 2001 wheat. Fertilizer: 30-0-0. Herbicide: 3 Oz Peak + 0.33 pt 2,4-D LV6. This plot was harvested July 3rd and averaged 43 bushels per acre. The Red Willow County test was planted September 28th with (Fall: 30 N + 40 P; Spring: 40 N + 5.75 Sulfur + 1.5 Zn). Herbicide: 2.5 oz Rave. This test averaged 49 bushels per acre and was harvested July 1st. The Lincoln County test was planted September 23rd into 2002 Fallow, 2001 Corn. Fertilizer: 60 lb N as 32-0-0 in fall. Herbicide: 0.28 oz Amber. This test was harvested July 7 and averaged 72 bushels per acre.

Six locations were planted in the Panhandle. The test in Box Butte County was abandoned due to poor emergence in the fall. This was the result of dry soil conditions at planting and no rain following planting.

Cheyenne fallow plots were harvested July 14th. This plot received over five inches of rain in August before planting. Precipitation was less than average after that, but the winter was mild. Spring and summer rains were about average, along with average weather. Cool temperatures in June helped the crop finish up in good shape, and yields were much higher than normal. Longitude-latitude of the plot is N 41.24626 W 102.99349.

Kimball Co. dryland had 44 entries. Conditions at planting were good. Rains at planting time helped to get this plot off to a good start. The winter was dry, but mild. Adequate spring rains, and then a cool may and June helped to make yields a little above average. Longitude-latitude of the plot is N 41.14800 W 103.4846

Scotts Bluff Co. dryland had good moisture at planting time, followed by average moisture and a mild winter. Early varieties suffered quite a bit from a late frost in May, while later varieties probably weren't affected much. Average rainfall and below average temperatures in May and June helped the plot to finish well. Longitude-latitude of the plot is N 41.81384 W 103.98174.

Sheridan Co. had 44 entries. Planting was delayed due to 2.5 inches precipitation from fall rains. Moisture through the fall was far above average. The was followed by adequate snow in the winter, and then above average rainfall again in the spring. Combined with cool weather in May and June, this all helped to make yields well above average. Longitude-latitude of the plot is N. 42.76275 W. 102.45990.

Cheyenne Co. no-till had 44 entries. This plot was planted into a continuous cropped field. Due to extreme drought through July 2002, there was no subsoil moisture. Above average rainfall in August got the crop off to a good start. This was followed by below average fall and winter moisture. The winter was mild, and May and June were cool, so yields were about average. Longitude-latitude of the plot is N 41.24626 W 102.99349

Two irrigated tests were planted. The one in Scotts Bluff Co. had 41 entries This was planted late because it followed potato harvest. It suffered some from an open winter, but good weather in the spring, followed by cool temperatures in May and June, helped to make good yields. Longitude-latitude of the plot is N 41.89097 W 103.67815

The test planted at Albin Wyoming was irrigated immediately after planting with .75 inch of water followed by .7 inches of rain. The plot received 6.2 inches of irrigation and 6.15 inches of rainfall in the spring. Harmony Extra + 2,4-D was used for weed control.

Protein and seed size data were collected from two replicates of each location. The seed size data are reported as thousands of seeds per pound. Thus, a larger number represents smaller seed size. The protein data were combined within each district and reported in the district tables. They are also summarized on page 41. Protein was determined from whole grain using a Near Infrared Spectrometer. The protein analysis was done by the Soil and Plant Analysis Lab at the University of Nebraska.

Table A. Nebraska winter wheat variety tests 2003.

| County | Cooperator | Planted | Harvested |
|------------------|-----------------------------------|----------|-----------|
| Saunders | Agricultural Res & Dev Center | Sept. 19 | July 8 |
| Clay | South Central Res & Ext Center | Sept. 24 | July 7 |
| Keith | Jim Welsh & Larry Chandler, Brule | Sept. 16 | July 10 |
| Furnas | Dennis Gardner, Edison | Sept. 20 | July 3 |
| Red Willow | Doug & Todd Koetter, McCook | Sept. 28 | July 1 |
| Lincoln | West Central Res & Ext Center | Sept. 23 | July 7 |
| Cheyenne | High Plains Ag Lab | Sept. 11 | July 14 |
| Kimball | Bryce Halstead, Kimball | Sept. 12 | July 19 |
| Scotts Bluff | Kenneth Hall, Lyman | Sept. 17 | July 15 |
| Sheridan | Jim & Adam Woods, Rushville | Sept. 19 | July 23 |
| Box Butte | Jim Jelinek, Alliance | Sept. 11 | * |
| Cheyenne No till | High Plains Ag Lab | Sept. 13 | July 12 |
| Scotts Bluff Irr | Panhandle Research & Ext. Center | Oct 7 | July 14 |
| Albin, WY Irr | Theron Anderson, Albin, WY | Sept. 23 | Aug. 4 |

*** Not Harvested**

Privately developed winter wheats were included in these trials. Entries were on a voluntary basis. A fee was charged to pay a portion of the testing costs. Entries and areas were selected by the seed producer.

The following made entries as indicated:

AgriPro Seeds Inc.
6515 Ascher Road
Junction City, KS 66441

Platte, Thunderbolt, Dumas,
Jagalene, AP 502CL

Novartis Seed Treatment
#29 Rolling Hills Rd
Kearney, NE 68847

'Alliance' - Non Treated, Dividend Extreme,
Maxim 4FS Cruiser, Raxil MD, CGA301940

General Mills Operations Inc. NuFrontier, NuHorizon
P.O. Box 5022
Great Falls, MT 59403

NuPride Genetics Network Empire
P.O. Box 83091
Lincoln, NE 68583

The entrant should be contacted for information on
seed availability, adaptation and agronomic characteristics.

**Table B. Soil series, previous crop, and fertilizers applied.
Nebraska Winter Wheat Variety Tests - 2003.**

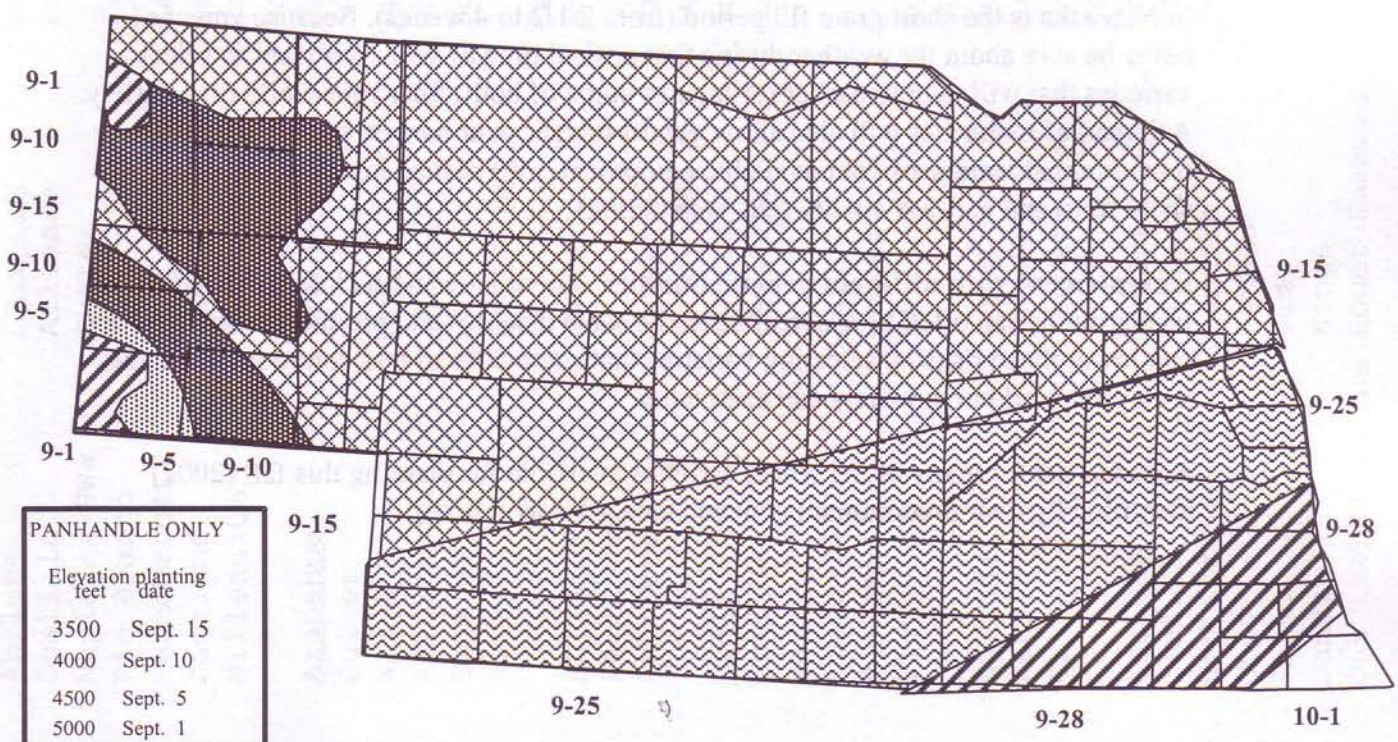
| County | Soil Type | 2002 Crop | pH | Nitrate lbs/a | P ppm | Organic matter % | N+P2O5+K lbs/a |
|--------------------|----------------------------|--------------|-----|------------------|----------|---------------------|-------------------|
| Saunders | Sharpsburg silty clay loam | Soybeans | --- | --- | --- | --- | 60-0-0 |
| Clay | Hastings silt loam | Fallow | --- | --- | --- | --- | 74-58-0 |
| Keith | Keith loam | Fallow | 6.4 | 210.0 | 30.0 | 1.6 | 40-33-0 |
| Red Willow | Keith & Holdrege silt loam | Fallow | 6.5 | 46.0 | 22.0 | 1.5 | 70-40-0+S+ZN |
| Furnas | Holdrege silt loam | Corn | 6.3 | 60.0 | 30.0 | 1.8 | 30-0-0 |
| Lincoln | Hall silt loam | Fallow | 6.5 | 101.0 | 49.0 | 1.6 | 60-0-0 |
| Cheyenne | Kuma loam | Fallow | 6.2 | 318.0 | 37.0 | 2.9 | 58-28-0 |
| Kimball | Rosebud loam | Fallow | 7.2 | 74.0 | 13.0 | 1.9 | 8-28-0 |
| Scotts Bluff | Keith silt loam | Fallow | 7.2 | 94.0 | 15.0 | 2.2 | 8-28-0 |
| Sheridan | Alliance loam | Fallow | 6.7 | 62.0 | 40.0 | 2.7 | 8-28-0 |
| Box Butte | Alliance loam | Fallow | 7.0 | 106.0 | 33.0 | 1.9 | 0-0-0 |
| Cheyenne No till | Alliance loam | Proso Millet | 6.8 | 106.0 | 38.0 | 3.1 | 8-28-0 |
| Albin WY irrigated | Sandy loam | Beans | --- | --- | --- | --- | 110-20-0+S |
| Scotts Bluff Irr. | Tripp fine sandy loam | Potatoes | 8.1 | 253.0 | 22.0 | 1.5 | 60-0-0 |

The planting date of winter wheat varies substantially as we move across the state. Research to show the best planting date began many years ago. Each year producers verify these dates through observation of fields planted earlier or later than the ideal date. Some years an earlier planting may have an advantage and some years a later date may have an advantage. In the long term, however, the suggested seeding dates will give the highest average yield.

We also recognize that as the number of acres increase, the length of time to plant increases. More of the wheat planting is both before and after the suggested seeding date because of increased planting time. As a starting point, you should try to have half the wheat seeded by the ideal date. You can improve on the average by planting the higher elevation fields and those containing sandy soil first. Leave the lower fields and those with higher clay content until last.

The dates listed on the map below weigh several factors. In the Panhandle, the dates depend on elevation. Using this method, producers can find the ideal date for each field by knowing the elevation. Using a starting point of September 15 for 3500 feet, add one day for each 100 feet lower and subtract one day for each 100 feet higher in elevation. For the rest of the state, the dates September 25 and later are set to avoid Hessian fly infestation. The date is after flies lay their eggs. Other reasons for delaying planting include avoidance of wheat streak mosaic virus, Russian Wheat Aphid, crown and root rot, and too much fall growth. Excessive fall growth causes excessive moisture use and stress. There are several other reasons for planting early. One is to get adequate ground cover to avoid erosion from wind or water. Another is to get adequate plant growth to assure winter hardiness. A third reason is to quicken maturity the following summer and avoid excessive heat stress.

The following map is a guide rather than an absolute deadline. Each producer should make changes to ensure the planting dates fit the conditions of his or her farm.



WHEAT VARIETY SELECTION & COMPLEMENTATION

prepared by

Roger H. Hammons

Stone Creek Enterprises, Lincoln, Nebraska

Because there is no single perfect wheat variety for all production systems or in all years, using a simple variety complementation technique will enable you to realize the greatest benefit from its array of strengths and offset to a high degree the potential weaknesses (production limitations) found in each variety. This compensation improves the opportunity for yield stability and profitability of your entire wheat production system.

The number of complementary varieties that you grow as part of your wheat farming enterprise and the acres planted to each variety will depend entirely on your specific production conditions and any special needs (common diseases or insects, etc.).

There are four steps to use in developing and updating your wheat farm's variety complementation strategy:

1. **Identify your workhorse varieties.** These are the varieties you now grow on a majority of your wheat acres because they have a reliable and proven record of performance over a period of years in your preferred production management system.
2. **Complement your production need and limits.** Select a variety or varieties that have characteristics needed for your specific production practices (e.g. straw strength, height) and typical soil conditions or offer the best level of protection you need from expected diseases and other yield limiting factors common to your growing conditions/area.
3. **Complement with a range in maturity.** The major limiting factor to wheat production in Nebraska is the short grain fill period (from 2 1/2 to 4 weeks). Because you can never be sure about the weather during that critical time of year, you want to select varieties that will mature earlier (or later or come of both) than your workhorse variety. A spread of maturities will also allow you to stagger your harvest schedule and take maximum advantage of your available equipment, plus reduce losses in yield (e.g. shattering) and end-use quality (e.g. weathering).
4. **Complement with different genetic families.** Varieties with closely related genetic backgrounds can often be susceptible to the same diseases and production stresses. You can lower those risks by selecting varieties that share 50% or less common parentage with your workhorse variety and each other.

A partial list for many of the wheat varieties available for planting this fall (2002) identified by their predominant genetic "family" is as follows:

Table 1. Partial Lists of Wheat Variety Families that Share 50% Common Parentage

| <u>Abilene</u> | <u>Chisholm</u> | <u>Pawnee</u> | <u>Siouxland</u> | <u>Vona</u> |
|------------------|------------------|--------------------|--------------------|----------------------------|
| Ogallala | Alliance | Ponca | Millennium | Lamar |
| Nuplains HWW | Custer | | Rawhide | Yuma |
| Rio Blanco | | <u>Plainsman V</u> | Windstar | Yumar |
| Thunderbolt | <u>Colt</u> | Karl | | |
| Jagalene | Goodstreak | Karl 92 | <u>Sumner</u> | <u>2163</u> |
| Millennium | Ike | Heyne HWW | Wesley | 2137 |
| | Loredo | Norman | | |
| <u>Arapahoe</u> | Pronghorn | Wesley | <u>TAM 105</u> | <u>2165</u> |
| Culver | | | TAM 107 | 2174 |
| Wahoo | <u>Hail</u> | <u>Ponca</u> | | |
| Arrowsmith | Akron | Scout | <u>TAM 107</u> | <u>Unrelated (UR)</u> |
| Empire | | Scout 66 | Akron | <u>or Undisclosed (UD)</u> |
| Harry | <u>Homestead</u> | | Halt | 2145 (UR) |
| | Bennett | <u>Pronghorn</u> | Nekota | Big Dawg (UD) |
| <u>Arlin HWW</u> | Culver | Antelope HWW | Niobrara | Coronado (UD) |
| Lakin HWW | | | Prairie Red | Dumas (UR) |
| Antelope | <u>Jagger</u> | <u>Rio Blanco</u> | Thunderbolt | Golden Spike HWW (UR) |
| | Betty HWW | Avalanche HWW | | Hondo (UR) |
| <u>Brule</u> | Cutter | Intrada HWW | <u>TAM 110</u> | Tomahawk (UR) |
| Arapahoe | Jagalene | Trego HWW | Above | Venango (UD) |
| Harry | | | AP502CL | |
| Niobrara | <u>Karl</u> | | | |
| Redland | Jagger | <u>Scout</u> | <u>TAM 200</u> | |
| Vista | Karl 92 | Agate | Intrada HWW | |
| | | Buckskin | | |
| <u>Buckskin</u> | <u>Lamar</u> | Jules | <u>Thunderbird</u> | |
| Bennet | Prowers | Larned | Cougar | |
| Culver | Prowers 99 | Newton | Longhorn | |
| | | Sage | Ponderosa | |
| <u>Centurk</u> | <u>Lancer</u> | Scout 66 | | |
| Centura | HiPlains | TAM 105 | <u>Victory</u> | |
| Centurk 78 | Lancota | Trego HWW | Loredo | |
| Cody | Linden | | Tomahawk | |
| Rocky | Vona | | | |
| Sandy | Wings | | | |

Our thanks to the Roger Hammons, Stone Creek Enterprises, for the information in this article.

Table C. Hard Red Winter Wheat Characteristics.

| Variety | Origin | Year of Release | PVP ¹ | Family most closely related to | Agronomic Characteristics ² | | | | | Reactions | | | | | Grain Quality | |
|--------------|--------|-----------------|------------------|--------------------------------|--|--------------------------|-------------------|-----------------|--|---------------------|--------------|--------------|-------------------------|---------------------------|-------------------------------|--------------------|
| | | | | | Mat- urity | Winter Hardi- ness | Straw Strength | Plant Height | Col- eoptile Length ⁴ | Hes- sian Fly | Leaf Rust | Stem Rust | Soil Borne Mosaic | Wheat Streak Mosaic | Bushel Weight ³ | Protein Content |
| 2145 | KS | 2002 | yes | Ale | | | | | | | | | | | | |
| 2137 | KS | 1995 | yes | 2163 | 2 | 4 | 5 | 3 | 3 | 5 | 3 | 2 | 5 | 2 | 6 | 9 |
| Above | CO | 2002 | yes | TAM110 | | 3 | 6 | 7 | | 1 | 1 | 5 | 1 | 3 | 5 | 7 |
| Akron | CO | 1994 | yes | TAM 107, Hail | 3 | 2 | 5 | 6 | 3 | 1 | 1 | 3 | 1 | 1 | 6 | 9 |
| Alliance | NE | 1993 | yes | Chisholm | 3 | 2 | 5 | 6 | 2 | 4 | 1 | 4 | 1 | 2 | 6 | 9 |
| Ankor | CO | 2002 | | TAM 107, Hail | | | | | | | | | | | | |
| Antelope | ARS-NE | 2002 | | Arlin, Pronhorn | | | | | | | | | | | | |
| AP502CL | ASI | 2002 | yes | TAM 110 | 2 | 3 | 5 | 3 | 3 | | 1 | 4 | 2 | 3 | 5 | |
| Arapahoe | NE | 1988 | yes | Brule | 4 | 4 | 4 | 7 | 2 | 4 | 3 | 5 | 3 | 1 | 6 | 3 |
| Arrowsmith | ARS-NE | 2002 | | Arapahoe | | | | | | | | | | | | |
| Avalanche | CO | 2002 | | Rio Blanco | | | | | | | | | | | | |
| Betty | KS | 1998 | yes | Jagger | 3 | 2 | 6 | 5 | 1 | 1 | 2 | 3 | 5 | 2 | 3 | 1 |
| Buckskin | NE | 1973 | no | Scout | 3 | 2 | 3 | 9 | 9 | 4 | 1 | 2 | 4 | 2 | 4 | 3 |
| Cougar | NE | 1999 | yes | Thunderbird | 4 | 3 | 6 | 8 | 8 | 1 | 2 | 4 | 2 | 1 | 3 | 2 |
| Culver | NE | 1998 | yes | Arapahoe | 4 | 3 | 5 | 6 | 2 | 1 | 3 | 4 | 1 | 1 | 7 | 6 |
| Dumas | ASI | 2001 | yes | | 2 | 1 | 5 | 3 | 3 | 1 | 3 | 5 | 1 | 3 | 6 | 4 |
| Empire | NE | 2002 | | Brule | | | | | | | | | | | | |
| Golden Spike | GM | 1999 | yes | | 3 | 3 | 5 | 7 | 4 | | | | | | 8 | 7 |
| Goodstreak | NE | 2002 | | Colt | | | | | | | | | | | | |
| Halt | CO | 1994 | yes | TAM 107 | 2 | 3 | 5 | 2 | 4 | 1 | 1 | 3 | 1 | 1 | 6 | 2 |
| Harry | NE | 2002 | | Arapahoe, Brule | | | | | | | | | | | | |
| Heyne | KS | 1998 | yes | Plainsman V | 3 | 3 | 6 | 2 | 3 | 1 | 4 | 5 | 5 | 1 | 5 | 1 |
| Hondo | ASI | 1998 | yes | | 3 | 4 | 6 | 4 | 3 | 4 | 5 | 3 | 5 | 3 | 5 | 3 |
| Jagalene | ASI | 2002 | yes | Jagger, Abilene | 3 | 4 | 6 | 3 | 3 | | 5 | 5 | 5 | 3 | 2 | |
| Jagger | KS | 1994 | yes | Karl | 1 | 1 | 5 | 3 | 3 | 1 | 4 | 4 | 5 | 3 | 5 | 2 |
| Karl 92 | KS | 1992 | yes | Plainsman V | 1 | 2 | 5 | 3 | 2 | 1 | 1 | 2 | 5 | 1 | 1 | 1 |
| Lakin | KS | 2000 | yes | Arlin | 4 | 4 | 5 | 3 | 2 | 1 | 1 | | 1 | 2 | 5 | 5 |
| Millennium | NE | 1999 | yes | Abilene, Arapahoe | 4 | 3 | 5 | 7 | 3 | 5 | 2 | 4 | 1 | 1 | 3 | 5 |
| Nekota | NE | 1994 | no | Tam 107 | 3 | 4 | 4 | 7 | 3 | 1 | 2 | 4 | 1 | 1 | 3 | 3 |
| Niobrara | NE | 1994 | yes | Tam 107, Brule | 4 | 4 | 5 | 7 | 4 | 1 | 2 | 4 | 1 | 2 | 6 | 7 |
| Nu Frontier | GM | 2002 | yes | | 3 | 3 | 6 | 6 | 4 | | | | | 3 | 5 | 3 |
| Nu Horizon | GM | 2002 | yes | | 4 | 3 | 5 | 1 | 4 | | | | | 3 | 4 | 5 |

Continued on second page

Table C. Hard Red Winter Wheat Characteristics. (Continued)

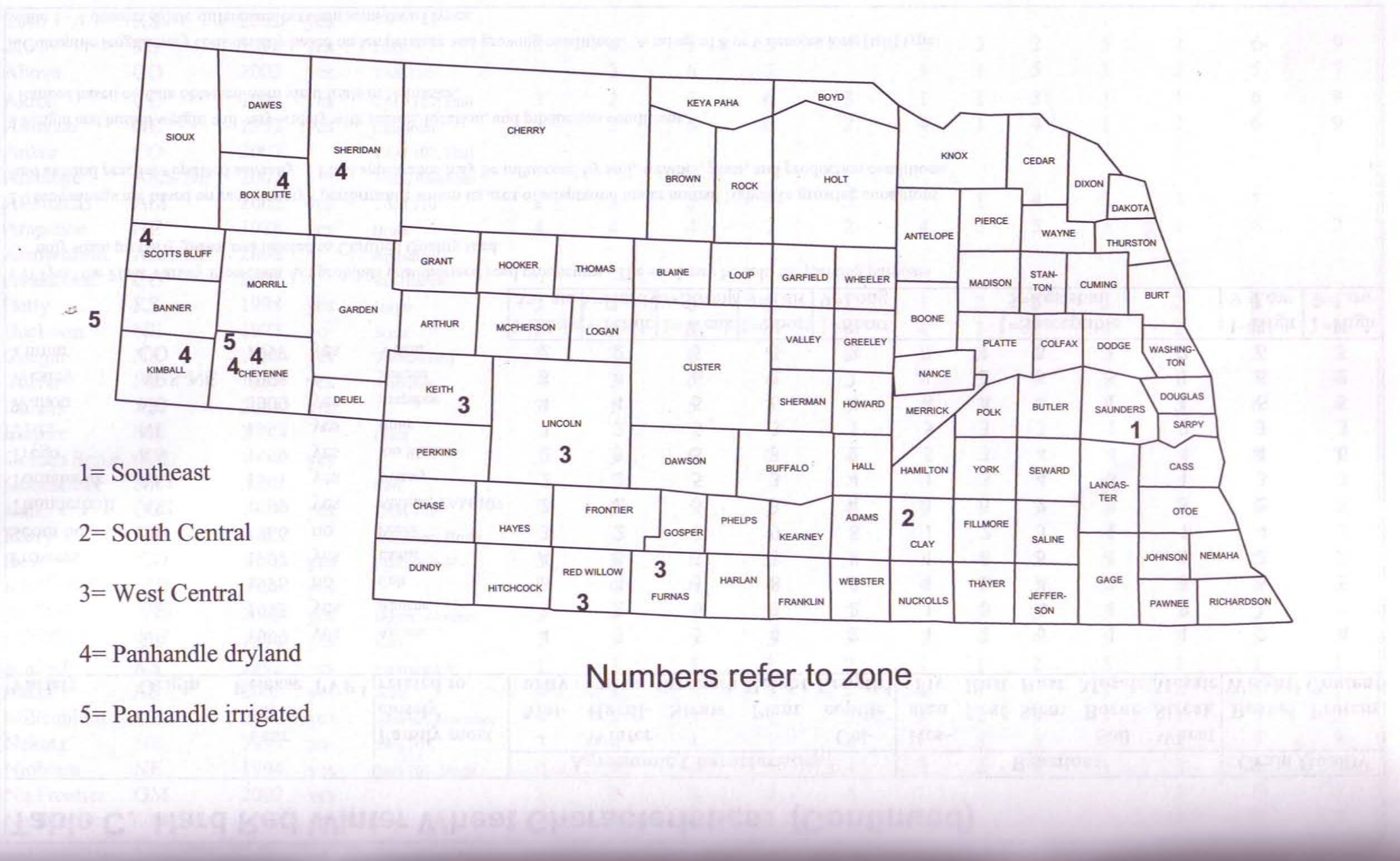
| Variety | Origin | Year of Release | PVP ¹ | Family most closely related to | Agronomic Characteristics ² | | | | | Reactions | | | | | Grain Quality | |
|-------------|--------|-----------------|------------------|--------------------------------|--|--------------------------|--------------------|-------------------|--|------------------------------|--------------|--------------|-------------------------|---------------------------|-------------------------------|--------------------|
| | | | | | Mat- urity | Winter Hardi- ness | Straw Strength | Plant Height | Col- eoptile Length ⁴ | Hes- sian Fly | Leaf Rust | Stem Rust | Soil Borne Mosaic | Wheat Streak Mosaic | Bushel Weight ³ | Protein Content |
| Nuplains | NE | 1999 | yes | Abilene | 4 | 3 | 5 | 4 | 2 | 1 | 1 | 5 | 1 | 1 | 2 | 4 |
| Ogallala | ASI | 1993 | yes | Abilene | 3 | 2 | 6 | 3 | 2 | 1 | 3 | 4 | 1 | 3 | 1 | 1 |
| Pronghorn | NE | 1996 | no | Colt | 3 | 4 | 3 | 8 | 8 | 1 | 2 | 4 | 1 | 3 | 5 | 5 |
| Prowers | CO | 1997 | yes | Lamar | 4 | 3 | 3 | 8 | 8 | 1 | 3 | 3 | 1 | 1 | 2 | 3 |
| Scout 66 | NE | 1966 | no | Ponca | 3 | 2 | 1 | 9 | 8 | 1 | 2 | 3 | 1 | 1 | 4 | 5 |
| Thunderbolt | ASI | 1999 | yes | Abilene, TAM 107 | 2 | 2 | 5 | 3 | 4 | 1 | 5 | 2 | 1 | 3 | 2 | 3 |
| Tomahawk | ASI | 1991 | yes | Victory | 2 | 2 | 5 | 3 | 4 | 1 | 3 | 4 | 5 | 1 | 3 | 3 |
| Trego | KS | 1999 | yes | Rio Blanco | 2 | 3 | 5 | 3 | 2 | 5 | 3 | 4 | 4 | 4 | 4 | 6 |
| Vista | NE | 1992 | yes | Brule | 3 | 2 | 5 | 3 | 1 | 5 | 3 | 3 | 1 | 2 | 3 | 3 |
| Wahoo | NE | 2000 | yes | Arapahoe | 4 | 4 | 5 | 6 | 4 | 4 | 4 | 4 | 1 | 1 | 6 | 5 |
| Wesley | ARS-NE | 1998 | - | Sumner | 3 | 4 | 6 | 2 | 1 | 1 | 2 | 5 | 5 | 1 | 6 | 2 |
| Yumar | CO | 1997 | yes | Vona | 2 | 2 | 5 | 5 | 3 | 1 | 1 | 3 | 1 | 2 | 6 | 5 |
| | | | | | 1=Early 5=Late | =Tender 5=Hardy | 1=Weak 6=Strong | 1=Short 9=Tall | 1=Short 9=Long | 1=Susceptible 5=Resistant | | | | | 1=High 9=Low | 1=High 9=Low |

1 If "yes" the Plant Variety Protection Act prohibits unauthorized seed production. The seed may be sold for planting purposes only when properly grown and labeled as Certified Quality seed.

2 These ratings are based on each variety's performance within its area of adaptation under normal Nebraska growing conditions and cultural practices updated annually. Plant appearance may be influenced by soil, weather, pests, and production conditions.

3 Height and bushel weight will vary widely with season, location, and production conditions.
Ranked based on data obtained from yield trials in Nebraska.

4 Coleoptile lengths vary considerably based on temperature and growing conditions. A rating of 8 or 9 denotes long (tall) type while 1 - 4 denotes subtle differences between semi-dwarf types.



5= Panhandle irrigated

Saunders Co. dryland Winter Wheat Variety Test - 2003



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| BRAND | VARIETY | Grain yield bu/a | Grain moisture pct | Bushel weight lb/bu | Plant height inches | Seed weight 000/lb | Grain protein pct |
|---------------------------------|----------------|------------------------|--------------------------|---------------------------|---------------------------|--------------------------|-------------------------|
| ---- | NE98471 | 85.0 | 12.1 | 58.4 | 44.5 | 13.1 | 11.1 |
| ---- | Trego (W) | 84.0 | 12.1 | 62.4 | 41.1 | 12.4 | 11.1 |
| ---- | NI98439 | 83.1 | 12.0 | 59.6 | 44.5 | 12.0 | 11.2 |
| Gen Mills | NuFrontier (W) | 82.9 | 12.3 | 60.0 | 42.6 | 14.9 | 11.5 |
| ---- | Betty (W) | 81.0 | 12.2 | 60.1 | 41.5 | 14.1 | 12.0 |
| ---- | 2145 | 80.9 | 12.2 | 60.4 | 39.5 | 12.6 | 11.3 |
| ---- | NW99L7068 (W) | 80.4 | 11.9 | 57.9 | 39.6 | 12.4 | 11.1 |
| ---- | Harry | 79.7 | 12.2 | 58.3 | 41.0 | 13.3 | 10.6 |
| ---- | Jagger | 79.3 | 12.5 | 59.9 | 38.6 | 13.0 | 11.7 |
| ---- | Wesley | 79.0 | 11.9 | 58.6 | 40.6 | 12.7 | 11.4 |
| ---- | NE98466 | 78.8 | 11.9 | 58.6 | 43.0 | 14.6 | 11.1 |
| ---- | Arrowsmith (W) | 77.2 | 12.3 | 58.4 | 44.6 | 13.9 | 11.3 |
| ---- | Millennium | 77.0 | 12.3 | 59.3 | 45.4 | 14.3 | 11.3 |
| ---- | NE97V121 | 77.0 | 12.0 | 59.8 | 42.9 | 14.1 | 11.3 |
| ---- | NH01046 | 76.8 | 12.1 | 60.3 | 45.5 | 13.2 | 11.3 |
| ---- | Heyne (W) | 76.7 | 12.1 | 59.2 | 41.0 | 14.6 | 12.3 |
| NuPride | Empire | 76.5 | 11.9 | 58.4 | 45.0 | 14.2 | 11.2 |
| ---- | 2137 | 76.2 | 12.1 | 59.8 | 41.4 | 13.0 | 10.8 |
| ---- | NE98632 | 76.0 | 12.2 | 59.4 | 44.0 | 13.8 | 10.9 |
| AGRIPRO | Jagalene | 75.6 | 12.2 | 60.3 | 40.5 | 13.0 | 11.4 |
| ---- | NW99L7171 (W) | 75.5 | 12.3 | 59.8 | 47.3 | 13.9 | 11.2 |
| ---- | NW99L7083 (W) | 74.1 | 11.9 | 58.3 | 38.7 | 13.8 | 11.0 |
| ---- | Alliance | 73.5 | 12.3 | 59.6 | 43.4 | 13.8 | 10.5 |
| ---- | Arapahoe | 73.4 | 12.3 | 58.7 | 47.5 | 14.6 | 11.6 |
| ---- | NE99543 | 72.8 | 11.9 | 58.9 | 42.8 | 13.2 | 10.4 |
| ---- | Nuplains (W) | 72.1 | 12.2 | 60.3 | 40.5 | 15.5 | 11.2 |
| ---- | Wahoo | 71.7 | 12.2 | 58.0 | 43.4 | 13.8 | 10.9 |
| ---- | Goodstreak | 69.8 | 12.3 | 61.0 | 48.3 | 13.2 | 11.8 |
| ---- | Antelope (W) | 69.6 | 12.3 | 58.4 | 42.5 | 13.6 | 11.2 |
| ---- | NE99495 | 67.1 | 12.0 | 58.7 | 41.5 | 14.6 | 10.9 |
| ---- | Culver | 67.0 | 11.8 | 58.7 | 45.1 | 13.5 | 11.4 |
| Gen Mills | NuHorizon (W) | 66.3 | 12.3 | 59.5 | 37.0 | 14.2 | 11.0 |
| ---- | Scout66 | 58.7 | 12.2 | 60.6 | 50.1 | 12.7 | 12.1 |
| ---- | Lakin (W) | 58.1 | 12.4 | 59.0 | 42.9 | 12.9 | 10.6 |
| ---- | Turkey | 47.6 | 12.0 | 58.8 | 50.0 | 15.0 | 12.2 |
| Average all entries | | 74.3 | 12.1 | 59.4 | 43.1 | 13.6 | 11.3 |
| Difference required for sig. 5% | | 14.4 | 0.4 | 1.2 | 2.4 | NS | 0.8 |
| (W) Indicates Hard White Wheat | | | | | | | |

Southeast Wheat Variety Tests

2000 - 2003



| Brand | Variety | Grain Yield bu/a | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|----------------|------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Two year averages | | | | | | |
| ---- | NE98471 | 69.8 | 14.3 | 11.7 | 58.8 | 40.3 |
| ---- | Trego (W) | 68.5 | 13.0 | 11.7 | 62.1 | 37.3 |
| ---- | NI98439 | 67.0 | 13.1 | 11.5 | 60.0 | 38.0 |
| ---- | Millennium | 64.8 | 14.8 | 11.9 | 60.2 | 41.3 |
| ---- | 2145 | 64.8 | 13.4 | 12.2 | 61.4 | 35.0 |
| ---- | NE98466 | 64.8 | 15.3 | 11.9 | 60.1 | 38.8 |
| AGRI PRO | Jagalene | 64.3 | 13.4 | 11.9 | 61.7 | 36.8 |
| ---- | 2137 | 64.3 | 13.8 | 11.5 | 60.7 | 37.5 |
| ---- | Harry | 64.3 | 15.2 | 11.2 | 57.9 | 37.0 |
| Gen Mills | NuFrontier (W) | 64.0 | 16.6 | 11.9 | 60.7 | 39.3 |
| ---- | Wesley | 63.8 | 13.6 | 12.0 | 59.6 | 36.0 |
| ---- | NE97V121 | 63.5 | 15.0 | 12.0 | 60.1 | 38.0 |
| NuPride | Empire | 63.5 | 15.4 | 11.4 | 58.8 | 40.3 |
| ---- | Betty (W) | 61.8 | 15.0 | 12.5 | 60.8 | 38.3 |
| ---- | Alliance | 61.5 | 15.2 | 11.1 | 59.4 | 38.8 |
| ---- | Wahoo | 61.3 | 14.8 | 11.5 | 58.5 | 39.3 |
| ---- | Arrowsmith (W) | 61.3 | 15.6 | 12.0 | 59.8 | 40.8 |
| ---- | NE98632 | 60.8 | 15.5 | 11.4 | 59.1 | 39.8 |
| ---- | Goodstreak | 60.8 | 14.6 | 12.3 | 61.6 | 43.5 |
| ---- | Nuplains (W) | 60.3 | 15.3 | 12.0 | 61.6 | 36.3 |
| ---- | Jagger | 59.5 | 14.5 | 12.1 | 60.2 | 35.3 |
| ---- | Arapahoe | 59.5 | 15.7 | 12.2 | 59.3 | 42.0 |
| ---- | Culver | 57.5 | 14.3 | 11.8 | 59.4 | 39.8 |
| ---- | Heyne (W) | 56.8 | 15.0 | 12.6 | 60.2 | 36.3 |
| ---- | Antelope (W) | 55.8 | 15.5 | 12.0 | 58.9 | 37.8 |
| ---- | Lakin (W) | 55.3 | 13.6 | 11.1 | 60.4 | 38.5 |
| Gen Mills | NuHorizon (W) | 54.8 | 15.1 | 11.9 | 60.1 | 34.0 |
| ---- | Scout66 | 49.8 | 15.1 | 12.1 | 60.6 | 45.0 |
| ---- | Turkey | 44.0 | 15.8 | 12.6 | 60.3 | 45.0 |
| Average all entries | | 61.0 | 14.7 | 11.9 | 60.1 | 38.8 |
| Difference required for sig. 5% | | 11.6 | 1.6 | 0.6 | 1.6 | 2.0 |
| Three year averages | | | | | | |
| ---- | Millennium | 59.0 | 14.6 | 11.6 | 60.4 | 39.2 |
| NuPride | Empire | 57.7 | 15.4 | 11.1 | 58.7 | 37.8 |
| ---- | Trego (W) | 57.7 | 13.2 | 11.6 | 61.5 | 34.0 |
| ---- | Goodstreak | 57.5 | 14.2 | 11.8 | 61.5 | 41.0 |
| ---- | Wahoo | 57.0 | 14.5 | 11.2 | 58.7 | 37.0 |
| ---- | Harry | 56.3 | 15.0 | 11.0 | 57.5 | 35.2 |
| ---- | Alliance | 56.0 | 14.8 | 10.8 | 59.1 | 36.5 |
| ---- | Arrowsmith (W) | 55.8 | 14.8 | 11.9 | 60.0 | 39.3 |
| ---- | Nuplains (W) | 54.8 | 15.0 | 11.6 | 60.5 | 35.8 |
| ---- | Arapahoe | 53.8 | 15.2 | 11.9 | 59.4 | 39.7 |
| Gen Mills | NuFrontier (W) | 53.5 | 16.6 | 11.7 | 60.0 | 36.7 |
| ---- | 2137 | 53.5 | 14.1 | 11.2 | 60.2 | 33.8 |

Continued on second page

Southeast Wheat Variety Tests

2000 - 2003 Second page



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| Brand | Variety | Grain Yield bu/a | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|---------------|------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Three year averages (Continued) | | | | | | |
| ---- | Wesley | 53.3 | 13.6 | 11.7 | 59.1 | 34.0 |
| ---- | Culver | 52.3 | 14.4 | 11.6 | 59.1 | 37.5 |
| ---- | Antelope (W) | 49.7 | 15.7 | 11.8 | 59.1 | 35.8 |
| ---- | Scout66 | 47.2 | 14.6 | 11.8 | 60.5 | 42.3 |
| ---- | Betty (W) | 47.2 | 15.7 | 12.4 | 60.4 | 35.3 |
| Gen Mills | NuHorizon (W) | 47.2 | 15.6 | 11.6 | 59.9 | 32.2 |
| ---- | Jagger | 44.7 | 14.9 | 12.0 | 59.5 | 32.3 |
| ---- | Heyne (W) | 44.3 | 15.0 | 12.4 | 60.2 | 33.5 |
| ---- | Turkey | 44.2 | 15.2 | 12.3 | 60.5 | 43.3 |
| ---- | Lakin (W) | 44.2 | 14.4 | 11.3 | 59.9 | 34.7 |

| | | | | | |
|---------------------------------|------|------|------|------|------|
| Average all entries | 52.1 | 14.8 | 11.7 | 59.8 | 36.7 |
| Difference required for sig. 5% | NS | 1.5 | 0.5 | 1.3 | 2.4 |

| | | | | | | |
|--------------------|----------------|------|------|------|------|------|
| Four year averages | | | | | | |
| ---- | Millennium | 58.5 | 14.4 | 11.5 | 59.8 | 38.1 |
| ---- | Trego (W) | 58.3 | 13.2 | 11.4 | 60.8 | 33.4 |
| ---- | Wahoo | 57.9 | 14.7 | 11.2 | 58.2 | 36.4 |
| ---- | Goodstreak | 57.0 | 14.2 | 11.8 | 60.9 | 40.1 |
| ---- | Alliance | 55.4 | 14.8 | 10.8 | 58.6 | 35.5 |
| ---- | Arrowsmith (W) | 55.3 | 14.6 | 11.8 | 59.2 | 38.1 |
| ---- | Nuplains (W) | 55.1 | 14.9 | 11.5 | 60.0 | 34.6 |
| ---- | Wesley | 54.0 | 13.6 | 11.7 | 58.5 | 33.4 |
| ---- | Culver | 53.8 | 14.2 | 11.4 | 58.7 | 36.5 |
| ---- | Arapahoe | 53.6 | 15.0 | 11.8 | 58.8 | 38.1 |
| ---- | 2137 | 53.4 | 13.9 | 11.0 | 59.4 | 33.0 |
| ---- | Antelope (W) | 50.9 | 15.3 | 11.6 | 58.5 | 34.8 |
| ---- | Betty (W) | 49.0 | 15.5 | 12.2 | 59.6 | 34.8 |
| ---- | Scout66 | 46.5 | 14.1 | 11.7 | 60.0 | 41.5 |
| ---- | Heyne (W) | 46.4 | 14.8 | 12.3 | 59.6 | 32.8 |
| ---- | Jagger | 45.1 | 14.7 | 11.9 | 59.2 | 32.6 |
| ---- | Turkey | 43.4 | 14.9 | 12.2 | 59.9 | 42.9 |

| | | | | | |
|---------------------------------|------|------|------|------|------|
| Average all entries | 52.6 | 14.5 | 11.6 | 59.4 | 36.3 |
| Difference required for sig. 5% | 10.2 | 1.2 | 0.3 | 1.0 | 2.0 |

(W) Indicates Hard White Wheat

Clay Co. Dryland Winter Wheat Variety Test - 2003

[illegible]

South Central Wheat Variety Tests



1999 - 2003

| Brand | Variety | Grain Yield bu/a | Plant Lodging 1-5 | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|----------------|------------------------|-------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Two year averages | | | | | | | |
| AGRIPRO | Jagalene | 95.0 | 2.5 | 15.4 | 11.9 | 61.3 | 37.3 |
| ---- | Wesley | 88.5 | 1.5 | 16.1 | 12.0 | 58.8 | 37.0 |
| ---- | 2145 | 87.3 | 2.3 | 15.1 | 12.3 | 59.8 | 37.0 |
| ---- | Millennium | 85.5 | 2.0 | 15.9 | 11.7 | 59.9 | 42.3 |
| ---- | NI98439 | 83.0 | 2.3 | 15.8 | 11.5 | 59.0 | 41.0 |
| ---- | NE97V121 | 81.5 | 2.5 | 16.0 | 11.7 | 59.3 | 38.8 |
| ---- | 2137 | 81.0 | 2.0 | 16.5 | 11.5 | 59.7 | 38.5 |
| ---- | NE98466 | 80.3 | 1.8 | 17.5 | 12.1 | 59.0 | 39.8 |
| ---- | Heyne (W) | 80.3 | 2.0 | 16.7 | 12.6 | 60.2 | 37.3 |
| ---- | NE98471 | 80.3 | 3.5 | 16.5 | 12.1 | 57.5 | 41.8 |
| ---- | Trego (W) | 79.5 | 3.0 | 17.2 | 12.0 | 59.7 | 37.5 |
| ---- | Jagger | 78.8 | 2.3 | 17.1 | 12.0 | 59.3 | 37.0 |
| ---- | Wahoo | 78.5 | 2.8 | 17.4 | 11.7 | 58.2 | 40.5 |
| Gen Mills | NuHorizon (W) | 76.3 | 1.0 | 17.6 | 11.7 | 60.1 | 34.5 |
| ---- | Culver | 75.0 | 3.3 | 17.1 | 11.5 | 57.8 | 40.5 |
| ---- | Betty (W) | 74.5 | 2.8 | 17.9 | 12.3 | 60.3 | 39.3 |
| ---- | Alliance | 74.3 | 3.5 | 18.4 | 11.6 | 58.1 | 40.8 |
| Gen Mills | NuFrontier (W) | 73.8 | 2.8 | 19.3 | 12.1 | 59.8 | 42.0 |
| ---- | Antelope (W) | 73.3 | 2.8 | 18.0 | 12.1 | 58.4 | 38.8 |
| ---- | Arrowsmith (W) | 72.8 | 2.5 | 17.8 | 12.1 | 58.1 | 42.3 |
| ---- | Arapahoe | 72.5 | 3.3 | 18.2 | 12.5 | 58.1 | 42.0 |
| ---- | NE98632 | 72.5 | 1.5 | 19.4 | 11.4 | 57.0 | 37.8 |
| NuPride | Empire | 72.3 | 2.3 | 18.3 | 12.0 | 56.2 | 40.5 |
| ---- | Harry | 71.0 | 2.3 | 18.2 | 11.8 | 55.3 | 38.5 |
| ---- | Goodstreak | 67.8 | 2.8 | 16.8 | 12.8 | 60.3 | 45.0 |
| ---- | Lakin (W) | 67.5 | 1.5 | 18.0 | 12.2 | 58.1 | 38.3 |
| ---- | Nuplains (W) | 66.5 | 1.8 | 17.2 | 12.2 | 58.9 | 37.5 |
| ---- | Cougar | 65.5 | 1.0 | 16.1 | 12.5 | 58.9 | 42.8 |
| ---- | Scout66 | 61.5 | 4.3 | 15.4 | 12.6 | 60.4 | 44.3 |
| ---- | Turkey | 48.8 | 4.5 | 17.5 | 13.0 | 59.0 | 44.5 |
| Average all entries | | 75.5 | 2.5 | 17.1 | 12.1 | 58.9 | 39.8 |
| Difference required for sig. 5% | | 16.5 | 1.2 | 1.8 | 0.5 | 2.1 | 2.7 |
| (W) Indicates Hard White Wheat | | | | | | | |

Continued on second page

South Central Wheat Variety Tests



1999 - 2003 Second page

| Brand | Variety | Grain Yield bu/a | Plant Lodging 1-5 | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|----------------|------------------------|-------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Three year averages | | | | | | | |
| ----- | Wesley | 83.0 | 1.3 | 15.2 | 12.2 | 58.2 | 34.3 |
| ----- | Millennium | 81.7 | 1.8 | 15.4 | 11.8 | 59.4 | 40.3 |
| ----- | Wahoo | 79.5 | 2.3 | 16.5 | 11.9 | 57.3 | 38.3 |
| ----- | Jagger | 76.3 | 2.0 | 16.1 | 12.1 | 58.7 | 34.2 |
| ----- | Alliance | 74.5 | 3.2 | 17.3 | 11.5 | 57.7 | 38.7 |
| ----- | Arrowsmith (W) | 74.0 | 2.2 | 16.2 | 12.2 | 58.1 | 41.0 |
| ----- | Heyne (W) | 73.7 | 1.7 | 15.7 | 12.8 | 59.8 | 34.5 |
| Gen Mills | NuHorizon (W) | 73.5 | 1.0 | 16.6 | 11.9 | 59.3 | 32.5 |
| ----- | Antelope (W) | 73.2 | 2.3 | 16.6 | 12.2 | 58.3 | 36.7 |
| ----- | Trego (W) | 72.2 | 2.5 | 16.3 | 11.8 | 59.3 | 34.8 |
| Gen Mills | NuFrontier (W) | 71.2 | 2.2 | 17.9 | 12.2 | 59.3 | 39.2 |
| ----- | Arapahoe | 70.5 | 3.0 | 17.1 | 12.5 | 57.4 | 40.0 |
| ----- | Harry | 70.5 | 2.0 | 17.1 | 11.7 | 54.8 | 36.5 |
| ----- | 2137 | 70.3 | 1.8 | 16.2 | 11.2 | 58.3 | 35.7 |
| ----- | Betty (W) | 70.0 | 2.2 | 16.7 | 12.7 | 60.0 | 37.0 |
| ----- | Goodstreak | 69.3 | 2.5 | 16.0 | 12.7 | 59.9 | 43.8 |
| ----- | Culver | 69.3 | 2.8 | 16.5 | 11.7 | 56.5 | 38.5 |
| NuPride | Empire | 69.0 | 2.0 | 17.2 | 12.0 | 55.8 | 38.8 |
| ----- | Cougar | 64.0 | 1.0 | 15.2 | 12.6 | 58.5 | 40.8 |
| ----- | Scout66 | 61.0 | 3.8 | 15.0 | 12.7 | 59.5 | 42.2 |
| ----- | Lakin (W) | 59.5 | 1.5 | 17.3 | 12.3 | 57.1 | 35.3 |
| ----- | Nuplains (W) | 58.2 | 1.5 | 17.2 | 12.3 | 58.6 | 35.8 |
| ----- | Turkey | 51.0 | 4.0 | 16.5 | 13.2 | 58.7 | 43.8 |
| Average all entries | | 70.2 | 2.2 | 16.4 | 12.2 | 58.3 | 37.9 |
| Difference required for sig. 5% | | 14.7 | 0.8 | 1.5 | 0.3 | 1.6 | 1.9 |
| Four year averages | | | | | | | |
| ----- | Wesley | 77.1 | 1.8 | 13.5 | 12.3 | 57.9 | 33.6 |
| ----- | Millennium | 75.4 | 2.4 | 13.7 | 12.0 | 59.1 | 38.9 |
| ----- | Wahoo | 74.9 | 2.8 | 14.6 | 12.0 | 57.2 | 37.3 |
| ----- | Jagger | 70.3 | 2.3 | 14.5 | 12.3 | 58.4 | 33.6 |
| ----- | Alliance | 69.5 | 3.1 | 15.3 | 11.6 | 57.2 | 37.0 |
| ----- | Trego (W) | 69.3 | 2.6 | 14.3 | 11.9 | 59.4 | 34.0 |
| ----- | Arrowsmith (W) | 68.6 | 2.4 | 14.3 | 12.4 | 58.0 | 39.9 |
| ----- | Antelope (W) | 68.5 | 2.5 | 14.9 | 12.2 | 57.9 | 35.0 |
| ----- | Heyne (W) | 68.5 | 2.0 | 13.9 | 12.9 | 59.4 | 33.4 |
| ----- | Culver | 67.6 | 3.1 | 14.4 | 11.9 | 56.7 | 37.3 |
| ----- | 2137 | 67.4 | 2.1 | 14.3 | 11.5 | 57.9 | 34.6 |
| ----- | Betty (W) | 66.5 | 2.4 | 15.0 | 12.6 | 57.4 | 36.1 |

Continued on third page

South Central Wheat Variety Tests

1999 - 2003 Third page

| Brand | Variety | Grain Yield bu/a | Plant Lodging 1-5 | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|--------------|------------------------|-------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Four year averages (Continued) | | | | | | | |
| ---- | Arapahoe | 66.5 | 3.3 | 14.7 | 12.8 | 59.6 | 38.3 |
| ---- | Cougar | 61.3 | 1.3 | 13.3 | 12.8 | 58.7 | 39.6 |
| ---- | Nuplains (W) | 58.8 | 1.9 | 14.9 | 12.4 | 58.9 | 34.6 |
| ---- | Scout66 | 56.0 | 3.6 | 13.3 | 12.6 | 59.5 | 40.6 |
| ---- | Turkey | 47.5 | 3.8 | 14.6 | 13.3 | 58.5 | 42.4 |
| Average all entries | | 66.7 | 2.5 | 14.3 | 12.3 | 58.3 | 36.3 |
| Difference required for sig. 5% | | 11.8 | 0.8 | 1.1 | 0.5 | 1.4 | 1.7 |
| Five year averages | | | | | | | |
| ---- | Wesley | 73.3 | 1.8 | 13.5 | 12.3 | 57.9 | 33.6 |
| ---- | Millennium | 72.7 | 2.4 | 13.7 | 12.0 | 59.1 | 38.9 |
| ---- | Wahoo | 70.9 | 2.8 | 14.6 | 12.0 | 57.2 | 37.3 |
| ---- | Jagger | 67.0 | 2.3 | 14.5 | 12.3 | 58.4 | 33.6 |
| ---- | Trego (W) | 67.0 | 2.6 | 14.3 | 11.9 | 59.4 | 34.0 |
| ---- | Culver | 65.9 | 3.1 | 14.4 | 11.9 | 56.7 | 37.3 |
| ---- | 2137 | 65.5 | 2.1 | 14.3 | 11.5 | 57.9 | 34.6 |
| ---- | Heyne (W) | 64.6 | 2.0 | 13.9 | 12.9 | 59.4 | 33.4 |
| ---- | Betty (W) | 64.6 | 2.4 | 14.7 | 12.8 | 59.6 | 36.1 |
| ---- | Alliance | 64.2 | 3.1 | 15.3 | 11.6 | 57.2 | 37.0 |
| ---- | Arapahoe | 62.6 | 3.3 | 15.0 | 12.6 | 57.4 | 38.3 |
| ---- | Cougar | 58.4 | 1.3 | 13.3 | 12.8 | 58.7 | 39.6 |
| ---- | Nuplains (W) | 58.0 | 1.9 | 14.9 | 12.4 | 58.9 | 34.6 |
| ---- | Scout66 | 51.2 | 3.6 | 13.3 | 12.6 | 59.5 | 40.6 |
| ---- | Turkey | 43.0 | 3.8 | 14.6 | 13.3 | 58.5 | 42.4 |
| Average all entries | | 63.3 | 2.6 | 14.3 | 12.3 | 58.4 | 36.8 |
| Difference required for sig. 5% | | 10.0 | 0.8 | 1.0 | 0.4 | 1.3 | 1.5 |
| (W) Indicates Hard White Wheat | | | | | | | |

| BRAND | HYBRID | Average Yield Bu/a | Keith Yield Bu/a | Red W. Yield Bu/a | Lincoln Yield Bu/a | Bushel weight lb/bu | Plant height inches | Seed weight 000/lb | Plant lodg. pct | Grain protein pct |
|--------------------------------|----------------|--------------------------|------------------------|-------------------------|--------------------------|---------------------------|---------------------------|--------------------------|-----------------------|-------------------------|
| ----- | Wahoo | 68 | 62 | 60 | 81 | 58.5 | 34 | 14.3 | 0 | 10.0 |
| ----- | NW99L7068(W) | 65 | 60 | 55 | 80 | 58.4 | 35 | 14.4 | 6 | 9.7 |
| ----- | NE99543 | 65 | 65 | 56 | 75 | 58.7 | 36 | 14.4 | 0 | 10.5 |
| ----- | NH01046 | 65 | 60 | 55 | 79 | 59.3 | 35 | 14.9 | 0 | 10.8 |
| ----- | Alliance | 65 | 66 | 51 | 77 | 59.1 | 35 | 15.2 | 1 | 10.1 |
| ----- | Millennium | 65 | 59 | 59 | 78 | 58.9 | 36 | 14.6 | 0 | 11.0 |
| ----- | Jagger | 64 | 58 | 54 | 80 | 59.3 | 33 | 14.6 | 0 | 10.8 |
| Gen Mills | NuFrontier (W) | 64 | 57 | 56 | 80 | 59.8 | 38 | 15.5 | 2 | 10.3 |
| ----- | Goodstreak | 64 | 61 | 56 | 76 | 60.2 | 40 | 14.5 | 9 | 10.8 |
| ----- | Harry | 63 | 61 | 54 | 75 | 56.5 | 32 | 16.1 | 0 | 10.4 |
| ----- | Wesley | 63 | 57 | 51 | 82 | 58.3 | 31 | 14.1 | 0 | 11.6 |
| ----- | NW99L7083(W) | 63 | 59 | 53 | 78 | 58.3 | 33 | 15.0 | 2 | 9.8 |
| ----- | Vista | 63 | 58 | 57 | 74 | 57.8 | 31 | 14.3 | 2 | 11.2 |
| ----- | Above | 63 | 66 | 48 | 75 | 58.5 | 33 | 14.2 | 0 | 10.5 |
| ----- | Halt | 62 | 67 | 48 | 70 | 57.7 | 33 | 16.4 | 1 | 11.1 |
| ----- | Arapahoe | 62 | 58 | 54 | 74 | 58.8 | 35 | 15.8 | 1 | 10.4 |
| AGRIPRO | Jagalene | 62 | 62 | 51 | 74 | 60.0 | 32 | 14.4 | 0 | 10.6 |
| NuPride | Empire | 62 | 60 | 51 | 75 | 57.0 | 34 | 15.3 | 0 | 10.3 |
| ----- | Trego (W) | 62 | 60 | 52 | 74 | 59.7 | 33 | 13.9 | 1 | 10.6 |
| ----- | Arrowsmith (W) | 61 | 60 | 51 | 73 | 59.4 | 36 | 13.8 | 1 | 10.0 |
| ----- | NE98471 | 61 | 60 | 49 | 74 | 57.9 | 36 | 14.7 | 3 | 10.9 |
| ----- | Pronghorn | 61 | 55 | 51 | 76 | 60.4 | 42 | 13.9 | 10 | 10.8 |
| ----- | NE97V121 | 61 | 59 | 51 | 73 | 58.2 | 34 | 14.9 | 0 | 10.6 |
| ----- | NI98439 | 60 | 54 | 53 | 74 | 58.8 | 34 | 13.2 | 0 | 10.6 |
| ----- | Betty (W) | 60 | 53 | 51 | 75 | 59.5 | 34 | 15.4 | 0 | 11.9 |
| ----- | 2137 | 60 | 60 | 50 | 70 | 58.3 | 33 | 15.4 | 1 | 10.1 |
| ----- | Lakin (W) | 59 | 66 | 42 | 68 | 57.8 | 35 | 14.9 | 0 | 10.3 |
| ----- | Antelope (W) | 59 | 63 | 45 | 70 | 58.2 | 34 | 14.8 | 1 | 10.3 |
| AGRIPRO | AP502CL | 58 | 60 | 45 | 68 | 57.5 | 33 | 14.8 | 0 | 10.4 |
| ----- | NW99L7171(W) | 57 | 61 | 46 | 65 | 59.9 | 37 | 15.7 | 0 | 10.5 |
| Gen Mills | NuHorizon (W) | 57 | 58 | 45 | 67 | 59.1 | 30 | 14.7 | 1 | 10.7 |
| ----- | NE98466 | 57 | 58 | 45 | 69 | 58.6 | 34 | 16.1 | 0 | 10.8 |
| ----- | Niobrara | 56 | 61 | 42 | 66 | 57.9 | 35 | 14.6 | 1 | 10.2 |
| ----- | Heyne (W) | 56 | 52 | 47 | 68 | 60.4 | 33 | 14.0 | 0 | 11.7 |
| ----- | 2145 | 56 | 49 | 50 | 69 | 58.7 | 31 | 14.9 | 0 | 10.8 |
| ----- | Akron | 56 | 59 | 48 | 62 | 57.4 | 34 | 15.3 | 0 | 10.1 |
| ----- | Culver | 56 | 59 | 43 | 66 | 57.2 | 35 | 15.1 | 1 | 10.6 |
| AGRIPRO | Thunderbolt | 55 | 52 | 41 | 71 | 60.4 | 33 | 14.0 | 0 | 11.1 |
| ----- | NE99495 | 55 | 57 | 43 | 66 | 58.1 | 34 | 16.0 | 0 | 10.0 |
| ----- | Scout66 | 54 | 56 | 40 | 66 | 60.7 | 41 | 13.9 | 10 | 10.8 |
| ----- | NE98632 | 54 | 60 | 38 | 63 | 57.4 | 33 | 16.3 | 1 | 10.0 |
| ----- | Cougar | 52 | 53 | 40 | 63 | 58.8 | 38 | 13.4 | 0 | 11.7 |
| ----- | Turkey | 49 | 47 | 41 | 58 | 59.6 | 41 | 15.0 | 9 | 12.4 |
| ----- | Nuplains (W) | 48 | 54 | 36 | 53 | 59.0 | 31 | 15.6 | 1 | 11.3 |
| Average all entries | | 60 | 59 | 49 | 72 | 58.7 | 35 | 14.8 | 1.5 | 10.7 |
| Dif. req. for sig. 5% | | 6 | 5 | 6 | 5 | 1.6 | 2 | 1.3 | 5 | 0.9 |
| (W) Indicates Hard White Wheat | | | | | | | | | | |

West Central Wheat Variety Tests 1999 - 2003



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| Brand | Variety | Grain Yield bu/a | Plant Lodging pct | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|----------------|------------------------|-------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Two year averages | | | | | | | |
| AGRIPRO | Jagalene | 60.2 | 0.0 | 16.1 | 12.0 | 60.4 | 30.8 |
| ---- | Wahoo | 59.3 | 0.0 | 16.2 | 12.1 | 57.9 | 31.3 |
| ---- | Millennium | 58.7 | 0.0 | 16.6 | 12.4 | 59.0 | 33.2 |
| ---- | Trego (W) | 58.7 | 0.3 | 15.5 | 12.0 | 59.5 | 30.5 |
| ---- | Above | 57.8 | 0.2 | 15.7 | 11.8 | 58.7 | 30.8 |
| ---- | Jagger | 57.8 | 0.2 | 16.9 | 12.4 | 59.1 | 31.3 |
| ---- | Alliance | 57.3 | 0.5 | 17.9 | 11.9 | 58.6 | 31.7 |
| Gen Mills | NuFrontier (W) | 57.0 | 1.0 | 18.1 | 12.1 | 58.9 | 34.3 |
| ---- | Wesley | 57.0 | 0.0 | 16.4 | 12.8 | 57.7 | 28.7 |
| ---- | Vista | 57.0 | 1.2 | 16.3 | 12.5 | 57.4 | 29.3 |
| ---- | NI98439 | 55.8 | 0.2 | 15.0 | 11.8 | 58.8 | 30.8 |
| ---- | Goodstreak | 55.8 | 4.8 | 17.0 | 12.6 | 59.6 | 36.8 |
| ---- | NE98471 | 55.7 | 1.5 | 16.5 | 12.0 | 57.5 | 32.7 |
| ---- | Arapahoe | 55.5 | 0.7 | 17.4 | 12.3 | 58.3 | 32.5 |
| ---- | Halt | 55.3 | 0.5 | 17.9 | 12.5 | 57.9 | 30.3 |
| ---- | 2137 | 55.2 | 0.3 | 17.6 | 11.8 | 57.8 | 30.7 |
| NuPride | Empire | 55.0 | 0.2 | 17.2 | 12.0 | 56.3 | 31.5 |
| AGRIPRO | Thunderbolt | 55.0 | 0.2 | 16.1 | 12.8 | 60.6 | 31.2 |
| ---- | Harry | 54.8 | 0.2 | 18.1 | 12.1 | 55.4 | 29.8 |
| AGRIPRO | AP502CL | 54.0 | 0.2 | 15.8 | 11.9 | 57.6 | 30.0 |
| ---- | NE97V121 | 53.8 | 0.2 | 16.8 | 12.2 | 57.6 | 31.2 |
| ---- | Arrowsmith (W) | 53.7 | 0.7 | 15.8 | 12.5 | 58.7 | 33.8 |
| ---- | NE98466 | 53.3 | 0.2 | 17.7 | 12.5 | 58.8 | 31.7 |
| ---- | Culver | 53.3 | 0.3 | 16.5 | 12.0 | 57.1 | 31.7 |
| ---- | 2145 | 53.2 | 0.2 | 16.7 | 12.3 | 58.5 | 29.7 |
| ---- | Akron | 53.2 | 0.0 | 17.2 | 11.7 | 57.7 | 31.3 |
| ---- | Lakin (W) | 53.2 | 0.0 | 16.3 | 11.9 | 58.5 | 31.8 |
| ---- | Niobrara | 53.0 | 0.5 | 16.5 | 12.0 | 57.6 | 32.7 |
| ---- | Betty (W) | 53.0 | 0.0 | 17.4 | 13.1 | 59.4 | 32.3 |
| ---- | Pronghorn | 52.7 | 6.5 | 16.0 | 12.6 | 59.9 | 37.3 |
| ---- | Antelope (W) | 52.3 | 0.7 | 17.2 | 12.0 | 57.5 | 30.3 |
| ---- | NE98632 | 50.2 | 0.5 | 18.3 | 11.7 | 57.5 | 31.2 |
| Gen Mills | NuHorizon (W) | 49.3 | 0.5 | 17.1 | 12.1 | 59.6 | 28.0 |
| ---- | Heyne (W) | 48.7 | 0.0 | 15.9 | 13.4 | 60.0 | 29.7 |
| ---- | Nuplains (W) | 48.7 | 0.5 | 17.6 | 12.8 | 59.3 | 28.5 |
| ---- | Cougar | 47.8 | 0.0 | 15.8 | 13.2 | 59.2 | 33.8 |
| ---- | Scout66 | 47.0 | 8.2 | 15.9 | 12.2 | 60.0 | 36.5 |
| ---- | Turkey | 43.3 | 8.5 | 17.2 | 13.5 | 58.9 | 37.3 |
| Average all entries | | 54.0 | 1.0 | 16.7 | 12.3 | 58.5 | 31.8 |
| Difference required for sig. 5% | | 6.5 | 2.6 | 1.0 | 0.8 | 1.2 | 2.3 |

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1999 - 2003 Second page

| | | | | Four year averages | | | |
|-------|------------|------|-----|--------------------|------|------|------|
| ----- | Alliance | 58.4 | 0.3 | 16.9 | 11.4 | 58.5 | 32.0 |
| ----- | Trego (W) | 57.4 | 0.2 | 15.7 | 11.6 | 59.2 | 30.0 |
| ----- | Wahoo | 57.1 | 0.0 | 16.8 | 11.7 | 57.1 | 31.5 |
| ----- | Millennium | 56.8 | 0.0 | 16.3 | 12.1 | 58.4 | 33.7 |
| ----- | Jagger | 56.6 | 0.1 | 16.4 | 12.1 | 58.7 | 30.8 |
| ----- | Vista | 55.5 | 1.1 | 16.6 | 12.1 | 57.2 | 29.3 |
| ----- | Culver | 54.8 | 0.2 | 15.9 | 11.7 | 57.2 | 31.9 |

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West Central No-Till Wheat Variety Tests 2000 - 2003

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West Central No-Till Wheat Variety Tests

2000 - 2003 Second page

| Brand | Variety | Grain Yield bu/a | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|----------------|------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Three year averages | | | | | | |
| ----- | Alliance | 42.8 | 18.7 | 12.2 | 58.0 | 30.5 |
| ----- | Trego (W) | 41.0 | 17.5 | 12.4 | 58.9 | 28.5 |
| ----- | Wahoo | 40.8 | 17.5 | 12.8 | 57.0 | 30.5 |
| ----- | Jagger | 40.2 | 16.9 | 13.3 | 58.2 | 28.3 |
| ----- | Harry | 40.2 | 18.5 | 12.5 | 56.2 | 29.3 |
| ----- | 2137 | 40.0 | 17.9 | 12.2 | 58.7 | 29.3 |
| ----- | Millennium | 39.8 | 18.1 | 12.3 | 58.1 | 30.8 |
| NuPride | Empire | 38.8 | 19.2 | 12.5 | 55.7 | 30.5 |
| ----- | Above | 38.2 | 17.7 | 12.3 | 57.2 | 27.5 |
| ----- | Wesley | 37.8 | 16.6 | 12.9 | 57.4 | 27.0 |
| ----- | Betty (W) | 37.7 | 17.6 | 13.5 | 58.5 | 30.0 |
| ----- | Culver | 37.2 | 18.3 | 12.9 | 56.6 | 30.7 |
| ----- | Niobrara | 37.2 | 18.5 | 12.8 | 57.0 | 31.5 |
| ----- | Vista | 37.2 | 18.8 | 12.9 | 57.2 | 28.0 |
| AGRIPRO | Thunderbolt | 36.5 | 16.8 | 13.1 | 59.7 | 30.3 |
| ----- | Arrowsmith (W) | 36.3 | 18.0 | 13.0 | 57.1 | 33.0 |
| ----- | Arapahoe | 36.0 | 18.4 | 13.0 | 57.6 | 31.5 |
| ----- | Akron | 35.7 | 18.2 | 12.4 | 57.3 | 30.0 |
| ----- | Antelope (W) | 35.5 | 19.2 | 12.6 | 57.6 | 29.0 |
| ----- | Halt | 35.3 | 19.7 | 12.8 | 57.3 | 27.7 |
| ----- | Pronghorn | 35.0 | 17.5 | 12.5 | 59.3 | 34.8 |
| ----- | Lakin (W) | 34.3 | 17.3 | 12.4 | 57.9 | 30.5 |
| ----- | Goodstreak | 34.0 | 18.6 | 13.6 | 58.6 | 35.5 |
| Gen Mills | NuFrontier (W) | 33.8 | 20.2 | 12.9 | 57.5 | 30.7 |
| ----- | Heyne (W) | 33.7 | 17.8 | 13.8 | 57.7 | 27.8 |
| ----- | Scout66 | 33.7 | 16.6 | 12.7 | 59.2 | 35.3 |
| ----- | Cougar | 33.2 | 16.7 | 13.6 | 58.0 | 32.5 |
| Gen Mills | NuHorizon (W) | 31.8 | 19.0 | 12.7 | 56.2 | 27.3 |
| ----- | Turkey | 30.0 | 19.3 | 13.5 | 58.1 | 35.2 |
| ----- | Nuplains (W) | 29.8 | 19.4 | 13.1 | 58.7 | 27.5 |
| Average all entries | | 36.5 | 18.1 | 12.8 | 57.8 | 30.4 |
| Difference required for sig. 5% | | 6.5 | 1.6 | 0.6 | 1.7 | 2.2 |

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West Central No-Till Wheat Variety Tests 2000 - 2003 Third page

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Panhandle Dryland Wheat Variety Tests - 2003

Cheyenne Fallow, Kimball, Scotts Bluff, Sheridan & Cheyenne NT



| | | Average Cheyenne F | Kimball | Scotts Bluff | Sheridan | Cheyenne NT | Bushel | Plant | Seed | Grain | |
|-----------|----------------|--------------------|---------|--------------|----------|-------------|--------|--------|--------|---------|------|
| Brand | Variety | Yield | Yield | Yield | Yield | Yield | weight | height | weight | protein | |
| | | Bu/a | Bu/a | Bu/a | Bu/a | Bu/a | lb/bu | inches | 000/lb | pct | |
| ---- | Harry | 60 | 84 | 53 | 54 | 67 | 43 | 58.2 | 29 | 14.0 | 9.9 |
| ---- | Wahoo | 60 | 93 | 51 | 48 | 66 | 43 | 58.6 | 31 | 13.6 | 10.4 |
| Gen Mills | NuFrontier (W) | 59 | 88 | 53 | 49 | 63 | 44 | 62.0 | 31 | 13.9 | 10.2 |
| ---- | Ankor | 59 | 84 | 52 | 54 | 64 | 39 | 60.3 | 30 | 13.5 | 10.1 |
| ---- | Millennium | 58 | 90 | 48 | 46 | 61 | 44 | 61.2 | 31 | 13.5 | 10.6 |
| ---- | Akron | 58 | 86 | 51 | 51 | 61 | 39 | 60.2 | 30 | 13.8 | 10.2 |
| ---- | NW99L7083(W) | 58 | 94 | 52 | 30 | 68 | 45 | 59.9 | 28 | 13.1 | 10.1 |
| ---- | Pronghorn | 58 | 84 | 52 | 50 | 63 | 43 | 62.2 | 35 | 12.9 | 10.4 |
| ---- | NH01046 | 58 | 87 | 51 | 44 | 65 | 41 | 59.9 | 31 | 13.4 | 11.0 |
| AGRIPRO | Jagalene | 57 | 90 | 50 | 42 | 64 | 40 | 61.8 | 28 | 13.0 | 10.9 |
| ---- | Trego (W) | 57 | 87 | 52 | 47 | 60 | 41 | 60.3 | 28 | 13.1 | 10.3 |
| ---- | NW99L7068(W) | 57 | 91 | 56 | 27 | 66 | 43 | 59.8 | 28 | 13.1 | 10.4 |
| ---- | Goodstreak | 57 | 80 | 49 | 53 | 63 | 42 | 62.0 | 35 | 14.2 | 10.9 |
| ---- | Arrowsmith (W) | 56 | 88 | 47 | 48 | 61 | 35 | 60.7 | 33 | 13.8 | 10.8 |
| ---- | Antelope (W) | 56 | 86 | 50 | 46 | 57 | 39 | 61.3 | 29 | 13.4 | 10.4 |
| ---- | Buckskin | 56 | 80 | 48 | 52 | 57 | 42 | 61.0 | 37 | 13.2 | 10.7 |
| ---- | Alliance | 56 | 88 | 52 | 40 | 67 | 35 | 60.2 | 30 | 14.0 | 10.3 |
| ---- | NE99543 | 56 | 84 | 52 | 42 | 64 | 40 | 60.6 | 31 | 12.8 | 10.6 |
| Gen Mills | NuHorizon (W) | 56 | 85 | 49 | 44 | 60 | 40 | 61.7 | 27 | 13.8 | 10.7 |
| ---- | Above | 55 | 82 | 50 | 38 | 63 | 42 | 58.9 | 29 | 13.0 | 10.6 |
| ---- | NE97V121 | 55 | 86 | 47 | 40 | 60 | 41 | 60.2 | 29 | 13.7 | 10.6 |
| ---- | Wesley | 55 | 89 | 47 | 37 | 64 | 40 | 59.8 | 28 | 12.9 | 11.2 |
| ---- | NE98632 | 55 | 75 | 49 | 53 | 61 | 39 | 60.2 | 30 | 14.3 | 9.9 |
| ---- | Lakin (W) | 54 | 80 | 51 | 42 | 57 | 41 | 60.7 | 30 | 13.7 | 10.5 |
| ---- | NE98471 | 54 | 82 | 52 | 36 | 60 | 38 | 58.5 | 31 | 13.3 | 10.7 |
| ---- | Arapahoe | 54 | 82 | 47 | 42 | 61 | 39 | 59.4 | 31 | 14.2 | 11.0 |
| ---- | NI98439 | 54 | 85 | 49 | 36 | 61 | 39 | 60.4 | 29 | 12.4 | 10.4 |
| ---- | Culver | 54 | 84 | 49 | 42 | 57 | 39 | 58.6 | 31 | 13.7 | 10.6 |
| ---- | Betty (W) | 54 | 83 | 45 | 43 | 55 | 44 | 61.2 | 30 | 13.9 | 11.5 |

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Panhandle Dryland Wheat Variety Tests - 2003 Second page **Cheyenne Fallow, Kimball, Scotts Bluff, Sheridan & Cheyenne NT**



| Cheyenne Fallow, Kimball, Scotts Bluff, Sheridan Cheyenne NT | | | | | | | | | | | |
|--|--------------|--------------------------|-----------------------------|--------------------------|-------------------------------|---------------------------|------------------------------|---------------------------|---------------------------|--------------------------|-------------------------|
| Brand | Variety | Average Yield Bu/a | Cheyenne F Yield Bu/a | Kimball Yield Bu/a | Scotts Bluff Yield Bu/a | Sheridan Yield Bu/a | Cheyenne NT Yield Bu/a | Bushel weight lb/bu | Plant height inches | Seed weight 000/lb | Grain protein pct |
| ---- | NE98466 | 53 | 84 | 47 | 37 | 60 | 38 | 60.6 | 30 | 14.5 | 11.2 |
| ---- | NE99495 | 53 | 78 | 50 | 34 | 63 | 42 | 60.0 | 30 | 14.1 | 10.7 |
| ---- | Halt | 53 | 86 | 53 | 30 | 58 | 38 | 58.2 | 28 | 14.7 | 11.6 |
| ---- | Niobrara | 53 | 77 | 49 | 41 | 58 | 39 | 58.4 | 31 | 13.8 | 10.4 |
| ---- | 2145 | 53 | 81 | 46 | 41 | 57 | 40 | 61.0 | 28 | 13.6 | 10.8 |
| ---- | Nuplains (W) | 52 | 78 | 44 | 48 | 53 | 38 | 62.9 | 27 | 14.3 | 10.5 |
| ---- | Scout66 | 52 | 72 | 48 | 47 | 56 | 38 | 60.6 | 37 | 12.7 | 10.7 |
| ---- | NW99L7171(W) | 52 | 71 | 46 | 53 | 57 | 35 | 62.0 | 32 | 15.1 | 10.9 |
| ---- | Avalanche | 52 | 81 | 46 | 38 | 56 | 40 | 61.0 | 29 | 12.9 | 10.8 |
| ---- | 2137 | 52 | 76 | 48 | 43 | 59 | 36 | 59.7 | 29 | 13.6 | 10.4 |
| ---- | Jagger | 52 | 88 | 49 | 25 | 59 | 38 | 59.4 | 29 | 13.1 | 11.5 |
| ---- | Cougar | 51 | 69 | 43 | 45 | 56 | 40 | 61.1 | 33 | 13.0 | 11.2 |
| ---- | Turkey | 50 | 71 | 43 | 45 | 52 | 38 | 61.6 | 37 | 13.8 | 11.0 |
| AGRI | PRO AP502CL | 50 | 77 | 50 | 31 | 56 | 38 | 57.7 | 28 | 12.5 | 10.9 |
| ---- | Heyne (W) | 48 | 71 | 43 | 33 | 53 | 39 | 60.7 | 28 | 12.8 | 12.0 |
| Average all entries | | 55 | 83 | 49 | 42 | 60 | 40 | 60.3 | 30 | 13.5 | 10.7 |
| Dif. req. for sig. 5% | | 6 | 4 | 4 | 3 | 3 | 2 | 1.4 | 2 | 0.9 | 0.7 |
| (W) indicates hard white wheat | | | | | | | | | | | |

Panhandle Dryland Wheat Variety Tests



1999 - 2003

| Brand | Variety | Grain Yield bu/a | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|----------------|------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Two year averages | | | | | | |
| ----- | Harry | 48.1 | 17.19 | 11.5 | 55.9 | 26.2 |
| Gen Mills | NuFrontier (W) | 47.9 | 17.42 | 11.6 | 59.8 | 26.7 |
| ----- | Pronghorn | 47.9 | 15.85 | 11.9 | 60.3 | 29.8 |
| ----- | Millennium | 47.4 | 15.90 | 12.0 | 59.6 | 27.6 |
| AGRIPRO | Jagalene | 47.4 | 15.24 | 12.1 | 60.9 | 25.2 |
| ----- | Wahoo | 47.3 | 15.93 | 11.8 | 57.7 | 26.6 |
| ----- | Alliance | 46.4 | 17.07 | 11.6 | 58.4 | 26.2 |
| ----- | Ankor | 46.4 | 16.18 | 11.6 | 58.4 | 26.2 |
| ----- | Trego (W) | 46.4 | 15.26 | 11.7 | 59.2 | 24.2 |
| ----- | Goodstreak | 46.4 | 17.37 | 12.2 | 59.9 | 30.4 |
| ----- | Above | 45.8 | 15.12 | 11.8 | 57.4 | 25.3 |
| ----- | Akron | 45.6 | 16.16 | 11.5 | 58.4 | 26.1 |
| ----- | Buckskin | 45.4 | 15.93 | 11.9 | 59.1 | 31.9 |
| ----- | Wesley | 45.2 | 15.34 | 12.5 | 58.3 | 24.5 |
| ----- | NE98471 | 45.0 | 16.02 | 11.8 | 57.4 | 26.9 |
| ----- | NI98439 | 44.8 | 14.64 | 11.5 | 59.4 | 24.9 |
| ----- | NE98632 | 44.6 | 17.76 | 11.4 | 58.4 | 26.7 |
| ----- | Niobrara | 44.3 | 15.93 | 11.7 | 57.6 | 27.2 |
| ----- | NE97V121 | 44.3 | 15.97 | 12.0 | 58.4 | 25.9 |
| ----- | Antelope (W) | 44.3 | 15.97 | 12.1 | 59.2 | 25.5 |
| ----- | Culver | 44.2 | 15.50 | 11.9 | 57.8 | 26.8 |
| ----- | Lakin (W) | 44.1 | 15.19 | 11.8 | 60.1 | 26.0 |
| ----- | Halt | 44.0 | 16.93 | 12.5 | 57.5 | 24.3 |
| ----- | 2137 | 43.7 | 16.58 | 12.0 | 58.1 | 25.4 |
| ----- | Arrowsmith (W) | 43.7 | 15.98 | 12.3 | 59.4 | 28.5 |
| ----- | Arapahoe | 43.4 | 16.57 | 12.5 | 58.6 | 27.2 |
| ----- | Scout66 | 43.3 | 15.22 | 11.7 | 59.3 | 31.0 |
| ----- | Betty (W) | 43.3 | 16.53 | 12.7 | 59.8 | 26.5 |
| ----- | Jagger | 43.0 | 15.39 | 12.5 | 58.9 | 26.0 |
| Gen Mills | NuHorizon (W) | 42.8 | 15.83 | 12.0 | 60.6 | 23.6 |
| ----- | 2145 | 42.7 | 16.39 | 12.3 | 59.3 | 24.2 |
| ----- | Nuplains (W) | 42.2 | 17.28 | 12.2 | 60.8 | 23.9 |
| ----- | NE98466 | 42.1 | 16.15 | 12.6 | 59.4 | 26.5 |
| AGRIPRO | AP502CL | 42.1 | 14.93 | 11.9 | 56.6 | 24.6 |
| ----- | Cougar | 41.6 | 15.24 | 12.4 | 59.5 | 28.7 |
| ----- | Turkey | 41.0 | 16.98 | 12.2 | 59.6 | 30.9 |
| ----- | Heyne (W) | 36.1 | 15.46 | 13.4 | 59.1 | 24.4 |
| Average all entries | | 44.4 | 16.06 | 12.0 | 58.9 | 26.6 |
| Difference required for sig. 5% | | 3.6 | 1.30 | 0.6 | 1.4 | 1.9 |

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Panhandle Dryland Wheat Variety Tests



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1999 - 2003 Second page

| Brand | Variety | Grain Yield bu/a | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|----------------|------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Three year averages | | | | | | |
| ---- | Harry | 50.1 | 17.24 | 11.8 | 56.1 | 28.2 |
| ---- | Wahoo | 49.5 | 16.70 | 12.4 | 57.4 | 30.3 |
| ---- | Millennium | 49.4 | 16.30 | 12.5 | 59.4 | 32.4 |
| Gen Mills | NuFrontier (W) | 48.6 | 18.75 | 12.1 | 59.2 | 33.3 |
| ---- | Pronghorn | 48.6 | 16.17 | 12.4 | 59.9 | 26.2 |
| ---- | Goodstreak | 47.9 | 17.90 | 12.8 | 59.8 | 28.5 |
| ---- | Trego (W) | 47.8 | 16.38 | 12.1 | 59.2 | 27.2 |
| ---- | Alliance | 47.4 | 17.61 | 11.9 | 58.1 | 28.3 |
| ---- | Above | 46.9 | 15.44 | 12.0 | 57.9 | 31.3 |
| ---- | Akron | 46.5 | 16.98 | 11.8 | 58.1 | 28.0 |
| ---- | Arrowsmith (W) | 46.4 | 16.76 | 12.6 | 59.0 | 29.1 |
| ---- | Jagger | 46.1 | 15.66 | 12.9 | 58.7 | 29.5 |
| ---- | Culver | 46.1 | 15.94 | 12.2 | 57.6 | 27.3 |
| ---- | Wesley | 45.9 | 15.84 | 12.9 | 57.7 | 29.9 |
| ---- | Arapahoe | 45.8 | 17.41 | 12.9 | 58.2 | 34.7 |
| ---- | Antelope (W) | 45.8 | 16.79 | 12.4 | 58.6 | 25.9 |
| ---- | Niobrara | 45.6 | 16.59 | 12.1 | 57.5 | 27.2 |
| ---- | Buckskin | 45.5 | 16.70 | 12.5 | 59.0 | 27.9 |
| ---- | Halt | 45.3 | 17.37 | 12.9 | 57.5 | 33.9 |
| ---- | 2137 | 44.6 | 17.06 | 12.3 | 58.2 | 31.5 |
| ---- | Lakin (W) | 44.2 | 16.19 | 12.2 | 59.6 | 28.3 |
| Gen Mills | NuHorizon (W) | 43.9 | 16.85 | 12.3 | 60.2 | 26.5 |
| ---- | Scout66 | 43.9 | 15.88 | 12.2 | 59.4 | 34.1 |
| ---- | Cougar | 43.7 | 15.48 | 12.9 | 59.5 | 26.1 |
| ---- | Betty (W) | 43.3 | 16.95 | 13.5 | 59.3 | 29.1 |
| ---- | Nuplains (W) | 43.0 | 18.19 | 12.6 | 60.5 | 25.9 |
| ---- | Turkey | 41.3 | 17.51 | 12.7 | 59.3 | 29.1 |
| ---- | Heyne (W) | 36.5 | 16.15 | 14.0 | 58.6 | 25.5 |
| Average all entries | | 45.7 | 16.74 | 12.5 | 58.7 | 29.1 |
| Difference required for sig. 5% | | 3.1 | 1.10 | 0.5 | 1.2 | 1.8 |

| | | | | | | |
|--------------------|----------------|------|-------|------|------|------|
| Four year averages | | | | | | |
| ---- | Harry | 48.2 | 17.27 | 11.8 | 56.3 | 27.8 |
| ---- | Wahoo | 47.2 | 16.89 | 12.3 | 57.6 | 28.5 |
| ---- | Millennium | 46.8 | 16.39 | 12.4 | 59.4 | 30.0 |
| ---- | Alliance | 46.0 | 17.49 | 11.8 | 58.3 | 28.1 |
| ---- | Pronghorn | 45.4 | 16.46 | 12.3 | 59.9 | 32.0 |
| ---- | Trego (W) | 45.3 | 16.27 | 12.2 | 59.7 | 26.0 |
| ---- | Arrowsmith (W) | 44.5 | 16.61 | 12.6 | 59.2 | 31.0 |
| ---- | Akron | 44.5 | 17.14 | 11.8 | 58.4 | 28.0 |
| ---- | Halt | 44.2 | 17.41 | 12.7 | 57.8 | 25.8 |
| ---- | Niobrara | 44.2 | 16.55 | 12.1 | 57.9 | 29.5 |

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Panhandle Dryland Wheat Variety Tests



1999 - 2003 Third page

| Brand | Variety | Grain Yield bu/a | Kernel Weight 000/lb | Grain Protein pct | Bushel Weight lb/bu | Plant Height inches |
|---------------------------------|--------------|------------------------|----------------------------|-------------------------|---------------------------|---------------------------|
| Four year averages (Continued) | | | | | | |
| ----- | Culver | 44.1 | 15.84 | 12.2 | 58.0 | 28.7 |
| ----- | Antelope (W) | 43.9 | 16.92 | 12.2 | 58.7 | 27.0 |
| ----- | Wesley | 43.5 | 16.15 | 12.8 | 57.8 | 25.6 |
| ----- | Arapahoe | 43.4 | 17.58 | 12.8 | 58.3 | 29.1 |
| ----- | 2137 | 43.0 | 16.82 | 12.2 | 58.6 | 27.2 |
| ----- | Buckskin | 42.3 | 16.59 | 12.4 | 59.4 | 33.8 |
| ----- | Nuplains (W) | 41.8 | 17.89 | 12.5 | 60.8 | 26.1 |
| ----- | Betty (W) | 41.0 | 17.53 | 13.3 | 59.3 | 28.1 |
| ----- | Scout66 | 40.9 | 15.82 | 12.1 | 59.7 | 33.1 |
| ----- | Cougar | 40.4 | 15.65 | 12.9 | 59.5 | 30.9 |
| ----- | Turkey | 38.3 | 17.47 | 12.7 | 59.2 | 33.4 |
| ----- | Heyne (W) | 35.7 | 16.58 | 13.7 | 58.8 | 25.8 |
| Average all entries | | 43.4 | 16.79 | 12.4 | 58.8 | 28.9 |
| Difference required for sig. 5% | | 3.0 | 0.90 | 0.4 | 0.9 | 1.4 |

Five year averages

| | | | | | | |
|---------------------------------|----------------|------|-------|------|------|------|
| ----- | Wahoo | 48.1 | 16.89 | 12.3 | 57.4 | 28.5 |
| ----- | Millennium | 47.8 | 16.39 | 12.4 | 59.1 | 30.0 |
| ----- | Alliance | 47.6 | 17.49 | 11.8 | 58.4 | 28.1 |
| ----- | Arrowsmith (W) | 46.4 | 16.61 | 12.6 | 59.1 | 31.0 |
| ----- | Akron | 46.3 | 17.14 | 11.8 | 58.4 | 28.0 |
| ----- | Halt | 46.3 | 17.41 | 12.7 | 57.7 | 25.8 |
| ----- | 2137 | 46.2 | 16.82 | 12.2 | 58.7 | 27.2 |
| ----- | Trego (W) | 46.0 | 16.27 | 12.2 | 59.7 | 26.0 |
| ----- | Niobrara | 45.8 | 16.55 | 12.1 | 58.0 | 29.5 |
| ----- | Wesley | 45.7 | 16.15 | 12.8 | 57.8 | 25.6 |
| ----- | Pronghorn | 45.5 | 16.46 | 12.3 | 59.7 | 32.0 |
| ----- | Culver | 45.2 | 15.84 | 12.2 | 58.0 | 28.7 |
| ----- | Arapahoe | 44.5 | 17.58 | 12.8 | 58.1 | 29.1 |
| ----- | Nuplains (W) | 43.7 | 17.89 | 12.5 | 60.7 | 26.1 |
| ----- | Buckskin | 43.3 | 16.59 | 12.4 | 59.3 | 33.8 |
| ----- | Betty (W) | 43.0 | 17.53 | 13.3 | 59.3 | 28.1 |
| ----- | Cougar | 41.6 | 15.65 | 12.9 | 59.6 | 30.9 |
| ----- | Scout66 | 40.1 | 15.82 | 12.1 | 59.5 | 33.1 |
| ----- | Turkey | 37.5 | 17.47 | 12.7 | 59.0 | 33.4 |
| ----- | Heyne (W) | 37.5 | 16.58 | 13.7 | 58.8 | 25.8 |
| Average all entries | | 44.4 | 16.76 | 12.5 | 58.8 | 29.0 |
| Difference required for sig. 5% | | 3.6 | 0.90 | 0.4 | 0.7 | 1.4 |

(W) Indicates Hard White Wheat

| BRAND | HYBRID | Average | Cheyenne | Albin WY | Bushel | Plant | Seed | Plant | Grain |
|-------------------------------|----------------|---------|----------|----------|--------|--------|--------|-------|---------|
| | | Yield | Yield | Yield | weight | height | weight | lodg. | protein |
| | | Bu/a | Bu/a | Bu/a | lb/bu | inches | 000/lb | pct | pct |
| | Wesley | 97 | 108 | 86 | 63.1 | 28 | 13.4 | 0 | 11.6 |
| Gen Mills | NuFrontier (W) | 96 | 105 | 86 | 64.6 | 31 | 14.3 | 5 | 10.9 |
| | NI02402 | 94 | 105 | 82 | 60.8 | 28 | 14.0 | 0 | 10.5 |
| AGRIPRO | Jagalene | 94 | 109 | 79 | 63.6 | 27 | 13.6 | 3 | 11.2 |
| | NH01046 | 93 | 102 | 83 | 62.5 | 31 | 12.1 | 4 | 11.2 |
| | Antelope (W) | 93 | 103 | 82 | 63.1 | 29 | 13.0 | 19 | 11.1 |
| | 2145 | 93 | 100 | 85 | 63.9 | 28 | 13.4 | 0 | 11.8 |
| | NE97V121 | 92 | 103 | 80 | 62.0 | 28 | 13.1 | 0 | 11.3 |
| | Wahoo | 90 | 96 | 83 | 62.4 | 31 | 14.1 | 48 | 10.8 |
| | Halt | 89 | 98 | 80 | 62.4 | 28 | 13.3 | 0 | 12.4 |
| | NW99L7083(W) | 88 | 94 | 82 | 62.2 | 26 | 13.2 | 36 | 11.3 |
| | Jagger | 88 | 93 | 82 | 63.6 | 26 | 12.4 | 3 | 12.4 |
| | NI01824 | 88 | 94 | 81 | 64.0 | 30 | 13.3 | 11 | 12.0 |
| | Trego (W) | 87 | 96 | 77 | 63.3 | 28 | 13.7 | 28 | 11.0 |
| | Alliance | 87 | 86 | 87 | 61.9 | 30 | 14.5 | 38 | 10.4 |
| | Yumar | 86 | 94 | 77 | 62.6 | 29 | 13.8 | 18 | 11.3 |
| | Harry | 86 | 90 | 81 | 61.0 | 29 | 13.4 | 33 | 10.9 |
| | NI01808 | 86 | 82 | 89 | 62.1 | 29 | 14.1 | 48 | 11.3 |
| | Millennium | 85 | 92 | 78 | 63.3 | 31 | 15.3 | 30 | 11.3 |
| | Arrowsmith (W) | 85 | 89 | 80 | 62.6 | 32 | 12.2 | 26 | 11.6 |
| Gen Mills | NuHorizon (W) | 85 | 104 | 65 | 62.9 | 26 | 12.6 | 8 | 11.3 |
| AGRIPRO | Dumas | 85 | 95 | 74 | 63.2 | 27 | 13.5 | 0 | 10.9 |
| | NE99543 | 84 | 91 | 76 | 61.2 | 29 | 12.8 | 3 | 11.0 |
| | Akron | 84 | 84 | 83 | 62.1 | 28 | 15.5 | 36 | 11.1 |
| | NE98471 | 84 | 85 | 82 | 61.4 | 29 | 13.9 | 18 | 11.5 |
| | NI01828 | 83 | 86 | 80 | 64.9 | 28 | 16.2 | 41 | 11.7 |
| | Lakin (W) | 83 | 91 | 74 | 61.3 | 29 | 14.1 | 9 | 11.0 |
| | Nuplains (W) | 83 | 92 | 73 | 63.8 | 29 | 15.1 | 26 | 11.7 |
| | NI02416 | 83 | 92 | 73 | 62.5 | 27 | 16.0 | 0 | 10.5 |
| | NW99L7068(W) | 82 | 85 | 78 | 61.4 | 27 | 13.5 | 51 | 10.9 |
| | NW99L7171(W) | 81 | 90 | 71 | 61.8 | 32 | 15.0 | 4 | 11.2 |
| | NE98632 | 81 | 85 | 76 | 61.1 | 31 | 15.6 | 19 | 10.7 |
| | NI98439 | 80 | 84 | 76 | 62.3 | 28 | 12.5 | 6 | 11.0 |
| | NI01803 | 80 | 85 | 74 | 62.6 | 26 | 11.9 | 7 | 12.1 |
| | NI02420 | 79 | 87 | 71 | 61.2 | 28 | 14.0 | 0 | 11.8 |
| | 2137 | 79 | 83 | 75 | 62.1 | 28 | 12.9 | 7 | 10.5 |
| | Betty (W) | 78 | 85 | 70 | 62.9 | 29 | 13.5 | 10 | 12.4 |
| AGRIPRO | Platte (W) | 77 | 82 | 72 | 63.6 | 25 | 13.5 | 5 | 12.1 |
| | NE99495 | 75 | 81 | 69 | 60.6 | 28 | 15.2 | 23 | 11.4 |
| | NE98466 | 75 | 81 | 68 | 61.5 | 30 | 17.1 | 20 | 11.1 |
| | Heyne (W) | 73 | 78 | 67 | 63.9 | 26 | 13.0 | 4 | 13.3 |
| Average all entries | | 85 | 92 | 78 | 62.5 | 29 | 13.8 | 16 | 11.4 |
| Dif. req. for sig. 5% | | 11 | 11.2 | 10.7 | 1.6 | 3 | NS | 27 | 0.4 |
| W) Indicates Hard White Wheat | | | | | | | | | |

(W) Indicates Hard White Wheat

Yield (bu/a) of all varieties at all locations for 2003

Ranked by relative performance over all locations entered.

| BRAND | HYBRID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|--|----------------|------|------|------|------|------|------|------|------|------|------|------|-------|------|
| ----- | Wesley | 79.0 | 94.5 | 57.5 | 51.2 | 51.0 | 81.7 | 89.0 | 46.8 | 37.4 | 64.1 | 39.6 | 107.8 | 86.1 |
| ----- | Wahoo | 71.7 | 79.1 | 61.9 | 51.1 | 60.0 | 80.9 | 93.2 | 50.9 | 48.1 | 66.2 | 42.9 | 96.0 | 82.9 |
| AGRI | Jagalene | 75.6 | 99.5 | 61.9 | 40.5 | 50.5 | 73.6 | 90.4 | 49.6 | 41.9 | 63.9 | 40.3 | 109.0 | 79.4 |
| Gen Mills | NuFrontier (W) | 82.9 | 76.0 | 57.5 | 34.0 | 56.4 | 80.1 | 88.3 | 52.8 | 49.5 | 63.5 | 44.2 | 105.0 | 85.6 |
| ----- | NH01046 | 76.8 | 73.3 | 59.7 | 55.5 | 55.0 | 79.3 | 87.1 | 50.9 | 43.7 | 65.2 | 40.5 | 101.7 | 82.6 |
| ----- | Millennium | 77.0 | 88.2 | 58.6 | 47.9 | 59.3 | 78.0 | 90.1 | 48.1 | 45.5 | 61.0 | 43.8 | 92.1 | 77.5 |
| ----- | Ankor | | | | | | | 84.2 | 51.6 | 53.5 | 63.5 | 38.8 | | |
| ----- | Harry | 79.7 | 64.8 | 61.2 | 48.9 | 54.3 | 74.7 | 84.1 | 53.0 | 54.2 | 67.2 | 43.0 | 89.9 | 81.3 |
| ----- | NW99L7083(W) | 74.1 | 79.0 | 59.3 | 47.2 | 52.8 | 78.2 | 94.2 | 52.3 | 30.2 | 67.5 | 44.9 | 94.2 | 82.3 |
| ----- | Vista | | | 57.6 | 46.9 | 56.6 | 74.1 | | | | | | | |
| ----- | Trego (W) | 84.0 | 74.7 | 60.1 | 49.5 | 51.8 | 74.4 | 87.3 | 51.6 | 46.8 | 60.1 | 41.2 | 95.7 | 76.7 |
| ----- | Alliance | 73.5 | 71.5 | 66.4 | 54.1 | 50.7 | 77.3 | 88.4 | 52.1 | 40.3 | 67.5 | 35.4 | 86.3 | 87.0 |
| ----- | NW99L7068(W) | 80.4 | 74.8 | 60.4 | 50.3 | 55.2 | 80.1 | 91.0 | 56.3 | 26.9 | 65.7 | 43.1 | 84.7 | 77.5 |
| ----- | Jagger | 79.3 | 88.5 | 57.8 | 53.0 | 53.7 | 79.7 | 88.2 | 49.0 | 25.0 | 58.9 | 38.0 | 93.0 | 81.8 |
| ----- | NE99543 | 72.8 | 72.3 | 64.6 | 53.5 | 55.7 | 74.7 | 84.4 | 51.5 | 41.7 | 64.3 | 40.0 | 90.9 | 76.3 |
| ----- | Arrowsmith (W) | 77.2 | 78.2 | 60.4 | 46.8 | 51.0 | 73.3 | 87.7 | 47.2 | 48.1 | 61.5 | 35.2 | 88.7 | 80.3 |
| ----- | Pronghorn | | | 54.9 | 38.4 | 50.6 | 75.6 | 84.3 | 51.8 | 50.3 | 62.9 | 43.1 | | |
| ----- | Antelope (W) | 69.6 | 74.8 | 62.7 | 42.9 | 45.3 | 70.3 | 86.3 | 50.2 | 46.5 | 57.4 | 38.9 | 103.2 | 82.2 |
| ----- | NE97V121 | 77.0 | 77.7 | 58.6 | 36.1 | 50.5 | 72.7 | 86.2 | 47.1 | 39.5 | 59.9 | 40.9 | 102.8 | 80.0 |
| ----- | NE98471 | 85.0 | 79.0 | 59.7 | 47.5 | 49.3 | 73.9 | 81.5 | 51.6 | 36.5 | 59.6 | 37.6 | 85.2 | 81.9 |
| ----- | Buckskin | | | | | | | 80.0 | 48.1 | 52.4 | 57.5 | 41.6 | | |
| ----- | Above | | | 65.5 | 42.5 | 48.1 | 74.8 | 81.8 | 50.1 | 37.9 | 62.5 | 41.7 | | |
| ----- | NI98439 | 83.1 | 82.0 | 54.5 | 46.8 | 52.7 | 74.5 | 85.0 | 49.0 | 35.5 | 61.5 | 39.1 | 83.8 | 75.6 |
| ----- | Goodstreak | 69.8 | 66.8 | 61.1 | 34.4 | 56.1 | 76.3 | 79.8 | 49.5 | 52.6 | 63.3 | 42.1 | | |
| ----- | 2145 | 80.9 | 87.3 | 49.1 | 35.3 | 49.7 | 69.0 | 80.5 | 45.7 | 41.1 | 56.7 | 40.0 | 99.5 | 84.7 |
| ----- | Halt | | | 67.3 | 43.6 | 47.9 | 70.1 | 85.7 | 52.7 | 30.3 | 57.5 | 37.9 | 98.0 | 79.5 |
| ----- | Arapahoe | 73.4 | 68.6 | 58.3 | 44.2 | 53.7 | 74.1 | 81.9 | 47.4 | 42.4 | 60.6 | 39.3 | | |
| NuPride | Empire | 76.5 | 60.9 | 60.0 | 45.5 | 51.2 | 74.9 | | | | | | | |
| ----- | Akron | | | 59.2 | 38.1 | 48.3 | 62.2 | 85.6 | 50.9 | 50.9 | 60.6 | 39.3 | 83.8 | 82.7 |
| ----- | Betty (W) | 81.0 | 79.4 | 53.0 | 45.6 | 50.6 | 74.6 | 82.9 | 44.8 | 42.5 | 55.1 | 43.6 | 84.7 | 69.6 |
| ----- | 2137 | 76.2 | 79.9 | 60.2 | 48.5 | 49.8 | 70.0 | 76.0 | 48.3 | 42.9 | 58.9 | 35.8 | 83.1 | 74.8 |
| Gen Mills | NuHorizon (W) | 66.3 | 78.1 | 58.1 | 36.8 | 45.2 | 67.3 | 85.0 | 48.6 | 44.5 | 60.0 | 40.1 | 103.7 | 65.5 |
| ----- | NE98632 | 76.0 | 73.9 | 60.5 | 42.6 | 38.1 | 63.2 | 74.8 | 48.8 | 52.9 | 61.2 | 39.2 | 84.6 | 75.6 |
| ----- | NE98466 | 78.8 | 77.7 | 58.4 | 45.5 | 45.4 | 68.8 | 84.4 | 47.4 | 36.6 | 60.4 | 38.5 | 81.1 | 68.1 |
| ----- | Culver | 67.0 | 68.8 | 58.6 | 42.9 | 42.7 | 65.6 | 84.4 | 49.0 | 42.1 | 57.5 | 38.9 | | |
| ----- | Niobrara | | | 61.0 | 39.8 | 42.2 | 66.0 | 76.6 | 48.8 | 41.0 | 58.0 | 39.3 | | |
| ----- | Avalanche | | | | | | | 80.6 | 45.8 | 38.1 | 56.2 | 40.2 | | |
| ----- | Lakin (W) | 58.1 | 57.3 | 65.8 | 37.5 | 41.9 | 68.2 | 80.3 | 50.9 | 41.6 | 56.9 | 40.9 | 90.9 | 74.2 |
| AGRI | AP502CL | | | 60.3 | 38.3 | 44.7 | 67.9 | 76.8 | 50.4 | 30.6 | 55.7 | 38.1 | | |
| ----- | Heyne (W) | 76.7 | 88.9 | 52.3 | 45.2 | 47.5 | 68.0 | 71.4 | 43.4 | 32.6 | 52.8 | 38.9 | 78.4 | 67.2 |
| ----- | NW99L7171(W) | 75.5 | 50.1 | 61.1 | 39.3 | 46.3 | 64.7 | 71.0 | 46.1 | 53.4 | 57.0 | 35.2 | 89.8 | 70.8 |
| AGRI | Thunderbolt | | | 52.1 | 39.0 | 41.0 | 71.2 | | | | | | | |
| ----- | NE99495 | 67.1 | 50.4 | 57.2 | 43.2 | 42.7 | 65.6 | 77.6 | 50.5 | 34.0 | 63.0 | 42.3 | 81.3 | 69.1 |
| ----- | Scout66 | 58.7 | 60.7 | 56.4 | 37.7 | 40.2 | 66.3 | 71.6 | 47.9 | 47.4 | 56.2 | 37.9 | | |
| ----- | Cougar | | 61.4 | 53.3 | 30.8 | 39.8 | 62.5 | 68.7 | 43.2 | 45.4 | 55.5 | 40.1 | | |
| ----- | Nuplains (W) | 72.1 | 49.0 | 54.2 | 27.2 | 35.7 | 53.2 | 78.5 | 43.6 | 48.0 | 52.5 | 38.5 | 91.5 | 73.0 |
| ----- | Turkey | 47.6 | 45.8 | 47.5 | 32.4 | 41.0 | 58.1 | 70.6 | 43.1 | 45.4 | 52.4 | 37.9 | | |
| Irrigated Tests (Scotts Bluff Co Nebraska and Albin Wyoming only) | | | | | | | | | | | | | | |
| ----- | NI02402 | | | | | | | | | | | | 104.5 | 82.4 |
| ----- | NI01824 | | | | | | | | | | | | 94.1 | 80.6 |
| ----- | Yumar | | | | | | | | | | | | 94.3 | 77.1 |
| ----- | NI01808 | | | | | | | | | | | | 82.0 | 89.1 |
| AGRI | Dumas | | | | | | | | | | | | 94.7 | 74.3 |
| ----- | NI01828 | | | | | | | | | | | | 85.7 | 80.5 |
| ----- | NI02416 | | | | | | | | | | | | 92.2 | 72.8 |
| ----- | NI01803 | | | | | | | | | | | | 84.9 | 74.5 |
| ----- | NI02420 | | | | | | | | | | | | 86.8 | 70.8 |
| AGRI | Platte (W) | | | | | | | | | | | | 82.4 | 72.0 |

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Table 1

| | |
|---|---|
| 5 | 5 |
| 7 | 7 |
| 1 | 1 |
| 6 | 6 |
| 5 | 5 |
| 7 | 7 |
| 0 | 0 |
| 1 | 1 |
| 5 | 5 |
| 1 | 1 |
| 8 | 8 |
| 6 | 6 |
| 0 | 0 |
| 1 | 1 |
| 4 | 4 |
| 2 | 2 |
| 1 | 1 |
| 5 | 5 |
| 4 | 4 |
| 2 | 2 |
| 6 | 6 |
| 3 | 3 |
| 3 | 3 |
| 1 | 1 |
| 6 | 6 |
| 7 | 7 |
| 2 | 2 |
| 2 | 2 |
| 2 | 2 |
| 5 | 5 |
| 6 | 6 |
| 1 | 1 |
| 9 | 9 |
| 5 | 5 |
| 3 | 3 |

Bushel weight (lb/bu) of all varieties at all locations for 2003

Ranked by relative performance over all locations entered.

| BRAND | HYBRID | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 13.0 |
|-----------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| ----- | Pronghorn | | | 59.1 | 59.3 | 59.7 | 62.3 | 63.2 | 62.2 | 62.6 | 62.6 | 60.6 | |
| AGRI | Thunderbolt | | | 59.9 | 58.5 | 59.5 | 61.9 | | | | | | |
| ----- | Goodstreak | 61.0 | 60.0 | 60.4 | 57.7 | 57.3 | 63.0 | 63.3 | 62.1 | 61.9 | 62.2 | 60.5 | |
| AGRI | Jagalene | 60.3 | 60.2 | 59.9 | 56.6 | 58.9 | 61.3 | 63.9 | 62.5 | 59.1 | 63.1 | 60.4 | 63.6 |
| Gen Mills | NuFrontier (W) | 60.0 | 58.7 | 59.4 | 57.0 | 57.5 | 62.6 | 63.4 | 62.5 | 61.6 | 62.5 | 59.8 | 64.6 |
| ----- | Scout66 | 60.6 | 59.4 | 60.7 | 59.4 | 59.4 | 62.1 | 61.8 | 60.7 | 60.4 | 61.6 | 58.5 | |
| ----- | Nuplains (W) | 60.3 | 55.5 | 59.9 | 54.7 | 56.6 | 60.4 | 63.5 | 63.9 | 62.3 | 63.9 | 61.1 | 63.8 |
| ----- | NW99L7171(W) | 59.8 | 58.6 | 61.2 | 55.2 | 55.6 | 62.9 | 62.5 | 62.3 | 62.7 | 61.7 | 60.7 | 61.8 |
| ----- | Turkey | 58.8 | 58.2 | 60.0 | 57.9 | 56.6 | 62.1 | 62.6 | 61.7 | 61.2 | 62.1 | 60.2 | |
| ----- | Betty (W) | 60.1 | 59.2 | 59.9 | 57.9 | 56.5 | 62.2 | 62.8 | 61.5 | 59.9 | 61.7 | 60.2 | 62.9 |
| Gen Mills | NuHorizon (W) | 59.5 | 59.0 | 59.2 | 56.8 | 57.8 | 60.4 | 63.4 | 62.4 | 59.0 | 62.8 | 60.8 | 62.9 |
| ----- | Heyne (W) | 59.2 | 59.1 | 60.3 | 56.0 | 58.4 | 62.4 | 62.3 | 62.8 | 57.2 | 62.6 | 58.4 | 63.9 |
| ----- | Trego (W) | 62.4 | 57.6 | 60.6 | 57.7 | 57.9 | 60.6 | 60.7 | 60.5 | 59.5 | 61.2 | 59.7 | 63.3 |
| ----- | Buckskin | | | | | | | 62.9 | 61.6 | 60.1 | 60.9 | 59.4 | |
| ----- | Avalanche | | | | | | | 63.1 | 62.6 | 57.8 | 61.8 | 59.5 | |
| ----- | Millennium | 59.3 | 59.3 | 58.7 | 56.8 | 56.8 | 61.3 | 62.2 | 61.3 | 61.5 | 61.5 | 59.4 | 63.3 |
| ----- | 2145 | 60.4 | 58.6 | 59.2 | 55.8 | 56.8 | 60.2 | 62.2 | 61.7 | 59.4 | 62.2 | 59.5 | 63.9 |
| ----- | Cougar | | 56.9 | 60.4 | 56.5 | 54.8 | 61.1 | 62.2 | 61.6 | 60.9 | 61.4 | 59.5 | |
| ----- | Arrowsmith (W) | 58.4 | 57.4 | 59.8 | 56.2 | 56.9 | 61.5 | 60.1 | 61.4 | 60.8 | 61.4 | 59.9 | 62.6 |
| ----- | Antelope (W) | 58.4 | 57.2 | 58.4 | 56.1 | 57.2 | 58.9 | 61.9 | 62.0 | 62.2 | 63.0 | 57.6 | 63.1 |
| ----- | NH01046 | 60.3 | 58.2 | 59.9 | 57.2 | 57.2 | 60.9 | 60.9 | 61.3 | 58.0 | 62.0 | 57.4 | 62.5 |
| ----- | Alliance | 59.6 | 58.0 | 59.7 | 57.9 | 57.6 | 59.9 | 61.3 | 60.6 | 59.8 | 61.3 | 58.1 | 61.9 |
| ----- | NI98439 | 59.6 | 57.9 | 59.0 | 56.8 | 56.9 | 60.5 | 61.7 | 60.6 | 58.8 | 61.3 | 59.7 | 62.3 |
| ----- | NE99543 | 58.9 | 57.6 | 59.4 | 58.1 | 57.5 | 59.1 | 61.6 | 61.3 | 59.4 | 61.7 | 59.2 | 61.2 |
| ----- | NE98466 | 58.6 | 57.5 | 60.0 | 57.4 | 56.6 | 59.3 | 61.4 | 61.3 | 58.8 | 62.2 | 59.2 | 61.5 |
| ----- | Jagger | 59.9 | 58.7 | 59.5 | 56.6 | 57.7 | 60.8 | 62.6 | 61.5 | 52.0 | 62.1 | 58.7 | 63.6 |
| ----- | NE97V121 | 59.8 | 59.1 | 58.8 | 56.8 | 56.7 | 59.2 | 61.1 | 61.3 | 58.9 | 60.4 | 59.1 | 62.0 |
| ----- | Ankor | | | | | | | 61.0 | 61.0 | 59.6 | 60.7 | 59.1 | |
| ----- | 2137 | 59.8 | 58.6 | 60.4 | 57.7 | 56.8 | 57.6 | 60.8 | 61.5 | 56.7 | 61.0 | 58.4 | 62.1 |
| ----- | Wesley | 58.6 | 57.4 | 58.5 | 56.6 | 56.8 | 59.7 | 61.7 | 61.0 | 56.0 | 61.5 | 58.8 | 63.1 |
| ----- | Lakin (W) | 59.0 | 55.6 | 59.1 | 55.4 | 56.0 | 58.4 | 61.9 | 61.8 | 60.2 | 60.0 | 59.5 | 61.3 |
| ----- | Arapahoe | 58.7 | 56.7 | 58.8 | 56.9 | 56.7 | 60.8 | 60.7 | 59.9 | 56.8 | 61.4 | 58.1 | |
| ----- | NW99L7068(W) | 57.9 | 58.1 | 58.2 | 55.6 | 57.1 | 59.9 | 61.7 | 61.4 | 56.6 | 61.5 | 57.8 | 61.4 |
| ----- | NW99L7083(W) | 58.3 | 57.9 | 57.9 | 54.3 | 57.2 | 59.7 | 61.7 | 60.9 | 58.0 | 61.1 | 57.8 | 62.2 |
| ----- | Akron | | | 58.7 | 55.5 | 56.4 | 57.0 | 59.4 | 61.3 | 60.2 | 60.7 | 59.3 | 62.1 |
| ----- | NE98632 | 59.4 | 55.4 | 58.3 | 55.8 | 57.0 | 56.8 | 59.9 | 60.9 | 60.5 | 60.4 | 59.2 | 61.1 |
| ----- | Vista | | | 58.0 | 56.2 | 56.3 | 59.0 | | | | | | |
| ----- | NE99495 | 58.7 | 54.4 | 58.8 | 55.9 | 56.4 | 59.1 | 60.5 | 61.3 | 57.0 | 61.7 | 59.5 | 60.6 |
| ----- | Wahoo | 58.0 | 57.3 | 58.9 | 56.5 | 56.7 | 59.9 | 59.7 | 59.7 | 56.0 | 60.4 | 57.3 | 62.4 |
| ----- | Above | | | 59.5 | 55.5 | 57.2 | 58.7 | 60.8 | 59.9 | 57.5 | 59.2 | 56.9 | |
| ----- | NE98471 | 58.4 | 56.5 | 58.1 | 55.1 | 56.7 | 58.9 | 60.3 | 59.7 | 53.7 | 60.8 | 58.2 | 61.4 |
| ----- | Halt | | | 58.2 | 56.3 | 56.6 | 58.4 | 60.4 | 60.6 | 52.8 | 59.4 | 57.7 | 62.4 |
| ----- | Niobrara | | | 59.5 | 55.4 | 56.2 | 58.0 | 59.1 | 59.7 | 57.3 | 59.2 | 56.6 | |
| ----- | Culver | 58.7 | 56.3 | 59.2 | 55.3 | 56.1 | 56.3 | 60.2 | 60.0 | 58.3 | 59.2 | 55.1 | |
| AGRI | AP502CL | | | 59.0 | 55.5 | 57.0 | 56.4 | 60.8 | 59.8 | 53.2 | 58.2 | 56.7 | |
| ----- | Harry | 58.3 | 54.1 | 57.6 | 55.8 | 54.8 | 57.2 | 58.2 | 58.9 | 58.1 | 59.1 | 56.6 | 61.0 |
| NuPride | Empire | 58.4 | 53.2 | 58.5 | 54.0 | 55.5 | 57.1 | | | | | | |

Irrigated Tests (Scotts Bluff Co Nebraska and Albin Wyoming only)

| | | |
|---------|------------|------|
| ----- | NI01828 | 64.9 |
| ----- | NI01824 | 64.0 |
| AGRIPRO | Platte (W) | 63.6 |
| AGRIPRO | Dumas | 63.2 |
| ----- | NI01803 | 62.6 |
| ----- | Yumar | 62.6 |
| ----- | NI02416 | 62.5 |
| ----- | NI01808 | 62.1 |
| ----- | NI02420 | 61.2 |
| ----- | NI02402 | 60.8 |

Stripe Rust Ratings, 2003

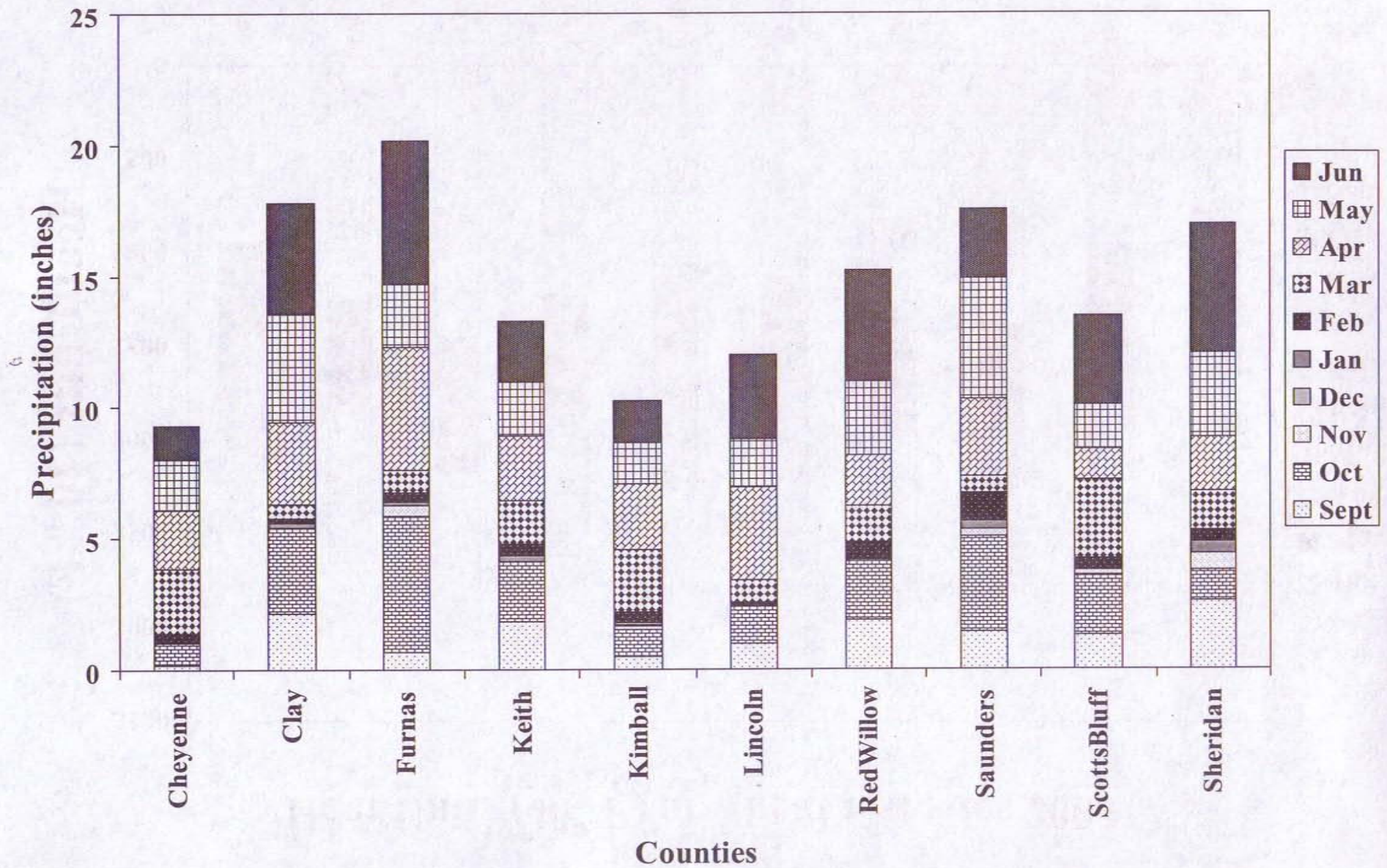
| Variety | Stripe Rust |
|-------------|-------------|
| Akron | MS |
| Alliance | MR-MS |
| Arapahoe | MR-MS |
| Antelope | R |
| Arrowsmith | MR-R |
| Betty | R |
| Big Dawg | R |
| Buckskin | MR-MS |
| Centura | -- |
| Cougar | S |
| Culver | MS |
| Dumas | S |
| Empire | MS-MR |
| Goodstreak | MR |
| Harry | MS-S |
| Heyne | R |
| Jagalene | MR |
| Jagger | R |
| Karl 92 | -- |
| Longhorn | MS |
| Millennium | R-MR |
| Niobrara | S |
| NuFrontier | R |
| NuHorizon | R |
| NuPlains | S |
| Ogallala | S |
| Pronghorn | R |
| Scout 66 | MS |
| Thunderbird | MR-MS |
| Thunderbolt | MS-MR |
| Tomahawk | MS |
| Trego | MS-S |
| Vista | MR |
| Wahoo | MR |
| Wesley | MR |
| 2137 | S |
| Lakin | S |
| Platte | S |
| 2145 | MS-MR |

2003 Winter Barley Trials in Nebraska and Kansas

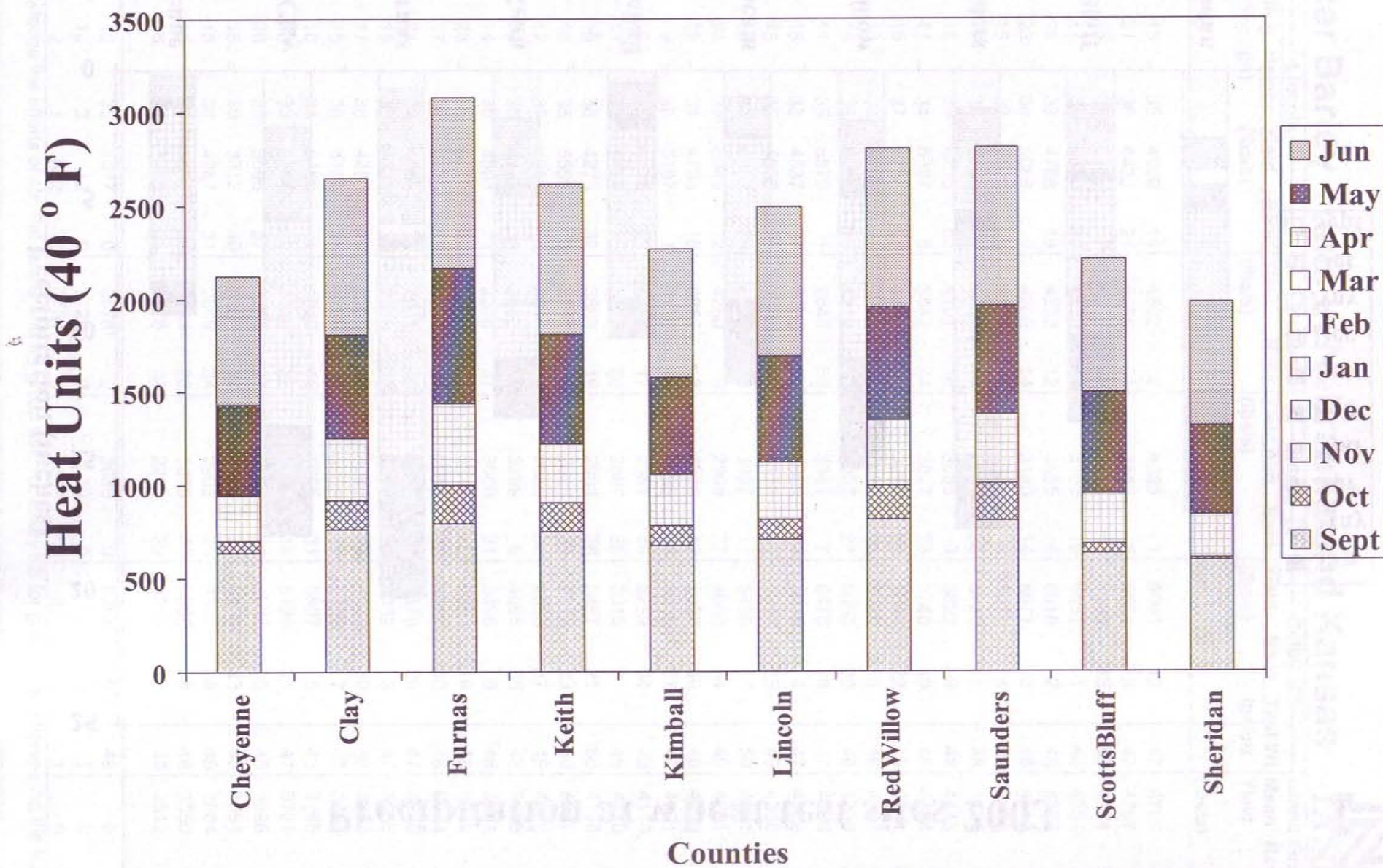
| VARIETY | -----Lincoln----- | | | | -----McCook----- | | -----Sidney----- | | -----Colby, KS----- | | | Grand Grand | |
|------------|--------------------------------------|----------------|------------------|------|------------------|------|-----------------------|------|---------------------|------|-------------------|--------------------------|------|
| | Heading Date after April 30 | Height (in) | Yield (lbs/a) | Rank | Yield (lbs/a) | Rank | Yield Avg. (lbs/a) | Rank | Yield (lbs/a) | Rank | Test Wt lbs/bu | Mean Yield (lbs/a) | Rank |
| NE95713 | 15 | 35 | 4908 | 14 | 4502 | 2 | 4083 | 1 | 5665 | 12 | 47 | 4789 | 1 |
| NE018199 | 21 | 36 | 4433 | 27 | 5588 | 1 | 3442 | 5 | 5564 | 15 | 47 | 4757 | 2 |
| NE98934 | 15 | 38 | 5742 | 2 | 4370 | 3 | 3191 | 13 | 5592 | 13 | 49 | 4724 | 3 |
| NE99845 | 17 | 34 | 4658 | 20 | 4259 | 10 | 3166 | 15 | 6531 | 1 | 46 | 4654 | 4 |
| NE018187 | 18 | 33 | 4708 | 19 | 4232 | 12 | 3555 | 4 | 6016 | 2 | 48 | 4628 | 5 |
| NE99881 | 23 | 36 | 5086 | 9 | 4209 | 14 | 3180 | 14 | 5977 | 3 | 48 | 4613 | 6 |
| NE018030 | 15 | 32 | 5103 | 8 | 4325 | 4 | 3353 | 6 | 5571 | 14 | 47 | 4588 | 7 |
| NE018131 | 13 | 36 | 5049 | 11 | 4253 | 11 | 2917 | 26 | 5730 | 11 | 48 | 4487 | 8 |
| NE98936 | 16 | 35 | 4215 | 33 | 4101 | 16 | 3633 | 3 | 5822 | 9 | 48 | 4443 | 9 |
| NE99885 | 11 | 34 | 5387 | 6 | 3542 | 24 | 3027 | 23 | 5740 | 10 | 48 | 4424 | 10 |
| NE99875 | 18 | 37 | 4758 | 18 | 4265 | 7 | 3278 | 10 | 5344 | 22 | 49 | 4411 | 11 |
| P-954 | 16 | 33 | 4786 | 16 | 4293 | 6 | 3093 | 19 | 5400 | 18 | 48 | 4393 | 12 |
| NE95711 | 15 | 36 | 5084 | 10 | 4212 | 13 | 3007 | 24 | 5053 | 29 | 48 | 4339 | 13 |
| NE018177 | 11 | 35 | 5879 | 1 | 2648 | 35 | 3341 | 7 | 5475 | 16 | 47 | 4336 | 14 |
| P-721 | 16 | 33 | 4537 | 24 | 3171 | 29 | 3699 | 2 | 5898 | 4 | 47 | 4326 | 15 |
| NE018163 | 15 | 35 | 4535 | 25 | 4301 | 5 | 3138 | 16 | 5251 | 25 | 49 | 4306 | 16 |
| NE018211 | 15 | 34 | 4407 | 29 | 4262 | 8 | 3097 | 17 | 5439 | 17 | 50 | 4301 | 17 |
| NE00809 | 21 | 35 | 5045 | 12 | 4260 | 9 | 2908 | 27 | 4953 | 34 | 49 | 4291 | 18 |
| NE018161 | 15 | 34 | 4793 | 15 | 3956 | 18 | 3235 | 12 | 5052 | 30 | 48 | 4259 | 19 |
| Perkins | 19 | 38 | 5187 | 7 | 4130 | 15 | 2498 | 38 | 5069 | 27 | 47 | 4221 | 20 |
| NE018196 | 15 | 34 | 4625 | 22 | 4038 | 17 | 2551 | 36 | 5252 | 24 | 49 | 4116 | 21 |
| NE018180 | 11 | 36 | 5424 | 5 | 3404 | 25 | 2597 | 35 | 5015 | 31 | 49 | 4110 | 22 |
| NE94738 | 16 | 38 | 4273 | 32 | 3888 | 19 | 2903 | 28 | 5367 | 21 | 50 | 4108 | 23 |
| JAGGER | 18 | 36 | 5598 | 3 | 2711 | 33 | 2828 | 33 | 4972 | 33 | 59 | 4027 | 24 |
| NE99868 | 17 | 37 | 4952 | 13 | 3615 | 23 | 2886 | 30 | 4633 | 37 | 49 | 4022 | 25 |
| Hitchcock | 17 | 36 | 4129 | 36 | 3833 | 20 | 3298 | 9 | 4695 | 36 | 48 | 3989 | 26 |
| NE97891 | 14 | 35 | 4593 | 23 | 2376 | 37 | 3060 | 21 | 5896 | 6 | 48 | 3981 | 27 |
| NE99874 | 23 | 39 | 4212 | 34 | 2996 | 31 | 3316 | 8 | 5397 | 19 | 46 | 3980 | 28 |
| NE98888 | 17 | 38 | 4775 | 17 | 3725 | 21 | 2936 | 25 | 4381 | 40 | 46 | 3954 | 29 |
| NE018100 | 21 | 33 | 4652 | 21 | 2631 | 36 | 3088 | 20 | 5370 | 20 | 47 | 3935 | 30 |
| NE99838 | 15 | 35 | 4320 | 30 | 2810 | 32 | 2500 | 37 | 5832 | 8 | 47 | 3865 | 31 |
| NE018212 | 17 | 36 | 4457 | 26 | 3299 | 26 | 3042 | 22 | 4530 | 39 | 49 | 3832 | 32 |
| NE99820 | 15 | 36 | 4159 | 35 | 1766 | 39 | 3254 | 11 | 5889 | 7 | 49 | 3767 | 33 |
| TAMBAR 501 | 10 | 34 | 5460 | 4 | 849 | 40 | 2855 | 31 | 5897 | 5 | 45 | 3765 | 34 |
| Weskan | 18 | 33 | 3404 | 39 | 3188 | 28 | 3094 | 18 | 5199 | 26 | 47 | 3721 | 35 |
| NE99802 | 20 | 35 | 3896 | 37 | 3261 | 27 | 2688 | 34 | 4937 | 35 | 45 | 3696 | 36 |
| Kanby | 16 | 39 | 3312 | 40 | 3161 | 30 | 2849 | 32 | 5336 | 23 | 46 | 3664 | 37 |
| NE018160 | 15 | 34 | 4287 | 31 | 2669 | 34 | 2903 | 29 | 4557 | 38 | 49 | 3604 | 38 |
| NE99832 | 15 | 39 | 3847 | 38 | 3644 | 22 | 1656 | 40 | 5055 | 28 | 46 | 3550 | 39 |
| NE018008 | 16 | 41 | 4413 | 28 | 2376 | 38 | 2278 | 39 | 4983 | 32 | 48 | 3512 | 40 |
| GRAND MEAN | 16 | 35 | 4677 | 0 | 3578 | 0 | 3036 | 0 | 5358 | 0 | 48 | 0 | 0 |
| CV | 10 | 3 | 12 | 0 | 29 | 0 | 19 | 0 | 10 | 0 | 1 | 0 | 0 |
| LSD | 2 | 1 | 682 | 0 | 1735 | 0 | 658 | 0 | 601 | 0 | 1 | 0 | 0 |

We gratefully acknowledge the efforts of Mr. Pat Evans and his group at KSU, Colby KS for growing and harvesting the trial at Colby

Precipitation at wheat test sites 2003



Heat Units (40° F) at wheat test sites 2003



Agricultural Research Division
College of Agricultural Sciences and Natural Resources
College of Home Economics
Conservation and Survey Division
Cooperative Extension Division
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