

AGRONOMY NEWS

 *Grasslands for Tomorrow*

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WINTER WHEAT SEED SUPPLIERS

The Nebraska winter wheat variety **Millennium** has performed very well in SDSU and NDSU variety trials. It is a medium height variety with very good straw strength and yield potential. Millennium has the ability to do well across a broad range of environmental conditions. Its winter survival appears to be similar to Wesley and Arapahoe.

ND & SD Growers	Production Year	Phone Number
David Kinzler—Ellendale, ND	2004	701-349-4101
Doug Rotenberger—Lisbon, ND	2004	701-683-5762
Gale Nelson—Volga, SD	2005	605-826-4118
VanderPol Farms—Geddes, SD	2005	605-337-2412
Jorgensen Land & Cattle—Ideal, SD	2005	605-842-3217

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Day, Marshall, James River, Ransom and Wild Rice Conservation Districts

North Dakota Dept. of Health 319 Program

NDSU and SDSU Cooperative Extension Service

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The South Dakota Crop Improvement Association and North Dakota State Seed Department have their lists of 2004 winter wheat seed increase growers at the following web sites:

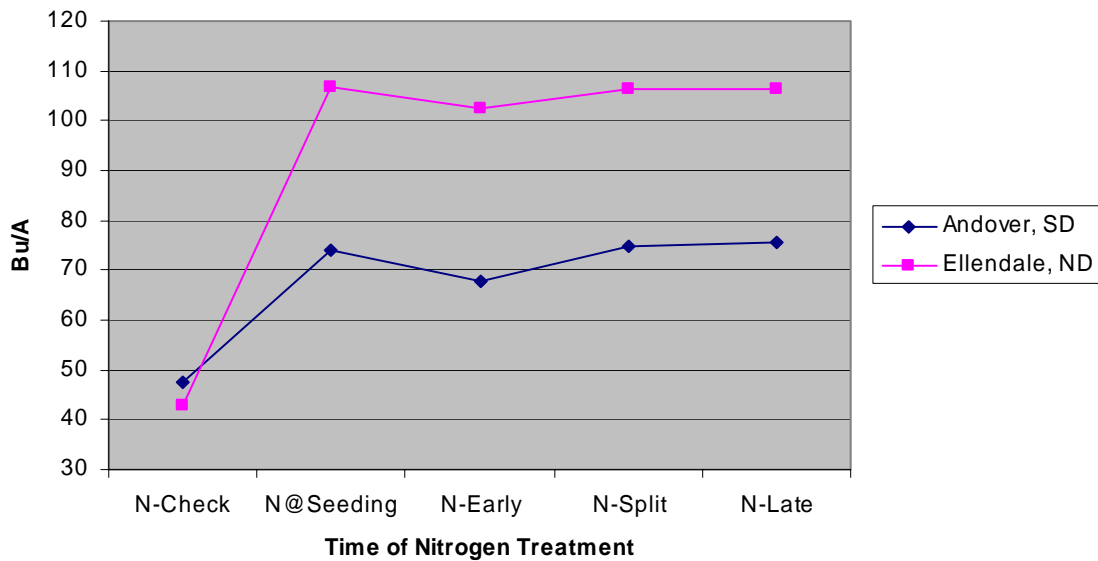
South Dakota: <http://plantsci.sdstate.edu/seedcert/growerdir.htm>

North Dakota: <http://www.state.nd.us/seed/reports>

UAP Northern Plains has the rights to the variety CDC Falcon and CDC Buteo and you can obtain seed by calling Ron Gienger at Valley City, North Dakota at 1-800-728-6958 or 701-845-5523. The variety Jagalene can be obtained from AgriPro dealers or by calling David Boehm at 701-298-0511.

The DU website www.prairie.ducks.org also has the South Dakota and North Dakota seed growers lists for 2004 and 2005.

Figure 1. 2004 Wesley Winter Wheat - Effect of Time of Nitrogen Application at Ellendale, ND and Andover, SD



2004 Nitrogen Timing Results

The prior two issues of *Agronomy News* reported the results of the winter wheat trials at Ellendale, ND and Andover, SD for 2004. The following nitrogen timing treatments were applied to the variety Wesley at these trial locations:

1. N-Check — no nitrogen applied except the starter at 15 gpa of 10-34-0.
2. N@Seeding — 45 gpa of 28-0-0 blended with the starter and deep banded at seeding.
3. Early — 45 gpa of 28-0-0 stream bar applied when the winter wheat was breaking dormancy.
4. Split — 20 gpa and 25 gpa of 28-0-0 stream bar applied at breaking dormancy and 5.5 leaf winter wheat, respectively.
5. Late — 45 gpa of 28-0-0 stream bar applied at 5.5 leaf stage of winter wheat growth.

Figure 1 indicates that all nitrogen time of applications yielded significantly more than the N-Check. The Early nitrogen treatment at Andover yielded less than the N@Seeding, Split, and Late nitrogen treatments. At Ellendale, all nitrogen timing treatments had similar yields. Rainfall did not occur for over three weeks following the Early nitrogen application. There is a good possibility some nitrogen was lost during that time period.

The 2004 results indicate that applying your nitrogen in a band at seeding yielded similar results as the spring nitrogen applications. Heavy fall or early spring rainfall could result in nitrogen leaching for seeding time nitrogen application. Rainfall amounts and timing can have a big impact on individual year results.

At Ellendale in 2003, a comparison of Early and Late nitrogen time of application was applied to several winter wheat varieties. The Early nitrogen application yielded more than the Late application in 2003. The winter wheat experienced severe winter injury and stand loss and needed early nitrogen to stimulate tiller development to compensate for the stand loss. Additional trials are being conducted in 2005 and in 2006.

Recognition and Thank You

DU and SDSU could not conduct these trials without the tremendous support of Wheat Growers at Bristol and Oakes and Agrilience at Ellendale. All have supplied nitrogen and starter fertilizer for these trials. Thank you to **Dave Clark** alias "Super Dave", **Ben Hanson** and **David Manau** for their respective company's support. Kevin Anderson with **Horsch Anderson** has provided a shank plot drill to seed these sites each year. **Kevin and Larry Anderson** have been site cooperators.

NDSU Preliminary winter wheat yield and disease rating data from Lisbon, 2005

Variety	Scab field severity		Flag leaf disease		Yield (bu/ac)		
	Untreated	Treated	Untreated	Treated	Untreated	Treated	Avg.
Arapahoe	24.5	6.7	85	8	29.2	41.3	35.3
CDC Buteo	29.3	8.5	62.4	10.8	37.0	54.1	45.6
CDC Falcon	67.9	26.7	83.3	7.3	27.4	37.1	32.3
DH99-54-327	30.9	18.8	75	12.4	27.6	47.2	37.4
Expedition	49.7	20.1	100	17.2	21.7	37.9	29.8
Harding	23.2	5.6	63.4	9.9	39.5	51.2	45.4
Jagalene	63.1	43	100	10.7	27.0	40.9	34.0
Jerry	16.8	3.1	83.8	15	35.5	52.0	43.8
McClintock	44.5	18.1	28.4	2.3	34.9	45.9	40.4
Millennium	34.5	17.2	65	10.2	37.9	54.8	46.4
MT00159	45.3	13.9	88.7	10.9	30.7	40.7	35.7
MT0097	17.4	11.8	38.3	8	33.0	40.2	36.6
MT01148	24.2	14.1	76.7	13	32.2	50.0	41.1
NuSky	29.6	7.2	80.8	6	27.7	45.6	36.7
Ransom	19.6	4.6	100	13.9	35.6	46.1	40.9
Roughrider	15.8	3.8	84.4	8.8	27.8	37.3	32.6
SD1181	59.7	27.7	39.2	10	40.3	53.7	47.0
SD92107-5	18.6	11.8	38.3	7.3	37.6	55.3	46.5
SD98102	35	11.5	100	3.7	32.4	55.9	44.2
Wahoo	29.2	12.9	100	15.5	27.1	35.5	31.3
Wendy	75.4	33.7	100	12.5	23.2	29.6	26.4
Wesley	69.8	46	100	12.6	28.1	39.8	34.0
Mean	37.5	16.7	76.9	10.3	31.5	45.1	38.3
LSD 0.05	9.5	5.7	11.1	NS	9.7	9.7	N/A

**Trial conducted by Dr. Joel Ransom, Dr. Marcia McMullen and Scott Meyer, NDSU Randy and Susan Mairs, cooperators, Lisbon, North Dakota
Financial Support from Bayer CropScience and BASF**

NEW WEB SITE

Place this website in your "favorites" file. The **CCSP** (Conservation Cropping Systems Project) demonstration—research farm has just registered the following name for their website address:
www.notillfarm.org

Information is being added to the site and will include results from their 10 no-till crop rotations. Farmers from Day and Marshall counties in South Dakota and Ransom and Sargent counties in North Dakota guide the CCSP. Dickey County farmers are also being added to the CCSP board. Walt Albus is the farm manager and Kelly Cooper is the 319 watershed coordinator.

Winter Wheat averaged 106 bushels per acre in 2004. The 160-acre CCSP farm is one mile south of Forman, ND and has heavy soils and is in a higher rainfall area than similar farms in the central Dakotas.

2005 SDSU CPT Preliminary Grain Yield (bu/ac) Summary—Dr. Amir Ibrahim

Entry	Brook-ings	Platte	Highmore	Eastern Region	Dakota Lakes	Winner	Ken-nebec	Central Region	Hays	Martin	Oelrichs	Sturgis	Wall	Western Region	State
	05' 3-yr	05' 3-yr	05' 3-yr	05'	05' 3-yr	05' 3-yr Fung	05'	05'	05'	05'	05'	05' 3-yr	05' 3-yr	05'	05' Rank 3-yr Tst. Wt.
ALLIANCE	32 62	39 53	68 63	46	64 51	48 47 59	57	57	57	60	50	28 34	52 47	49	51 16 54 57
ARAPAHOE	47 70	36 51	71 67	51	66 50	48 47 59	52	57	61	57	46	29 32	45 41	48	51 12 53 58
CRIMSON	33 66	41 51	66 60	46	62 52	48 44 58	56	56	54	53	51	26 31	46 46	46	49 23 52 60
EXPEDITION	35 68	32 51	66 60	45	64 49	43 43 54	60	55	67	66	50	29 31	42 43	51	51 15 53 59
HARDING	43 75	37 55	66 66	49	62 49	52 48 52	52	54	56	55	49	25 30	46 47	46	49 22 54 59
HARRY	32 .	28 .	65 .	42	64 .	46 . 60	50	55	54	58	58	29 .	41 .	48	48 27 . 54
HATCHER	27 .	34 .	72 .	44	68 .	50 . 63	63	61	59	72	62	36 .	48 .	55	54 4 . 58
JAGALENE	20 64	42 54	62 64	41	74 55	52 53 59	64	62	61	72	48	28 32	47 45	51	52 10 56 59
JERRY	53 82	40 53	66 67	53	64 49	46 44 61	58	57	56	60	55	24 31	54 50	50	53 7 54 59
MILLENNIUM	54 82	47 59	71 67	57	68 51	49 51 63	65	61	65	65	48	33 35	56 48	53	57 2 58 60
NE01643	53 .	45 .	70 .	56	75 .	51 . 69	70	66	69	67	49	27 .	51 .	53	58 1 . 60
NE99533-4	24 .	36 .	62 .	41	69 .	48 . 63	59	59	51	61	42	33 .	46 .	47	49 24 . 58
NEKOTA	26 64	38 53	58 60	40	59 48	45 47 56	45	51	43	43	46	30 33	46 44	42	44 30 50 57
OVERLEY	32 .	30 .	60 .	41	67 .	43 . 56	68	58	79	67	41	29 .	40 .	51	51 13 . 60
SD00032	43 .	39 .	51 .	44	55 .	48 . 54	56	53	66	62	44	26 .	42 .	48	48 26 . 59
SD00W024	37 .	38 .	61 .	46	56 .	51 . 62	45	54	39	43	51	22 .	42 .	39	45 29 . 58
SD01104	32 .	33 .	52 .	39	59 .	48 . 56	55	55	50	56	53	30 .	45 .	47	47 28 . 57
SD01122	42 .	40 .	67 .	49	61 .	54 . 59	55	57	49	55	54	26 .	44 .	46	50 19 . 58
SD01W064	26 .	42 .	62 .	44	65 .	60 . 68	57	62	56	63	53	29 .	64 .	53	53 9 . 60
SD96240-3-1	40 .	36 .	68 .	48	63 .	54 . 69	69	64	66	71	61	31 .	48 .	55	56 3 . 58
SD97059-2	49 82	38 54	73 70	53	74 54	57 52 59	57	62	52	59	52	28 32	51 49	48	54 5 57 58
SD97380-2	48 76	37 52	69 67	51	56 49	52 49 68	57	58	61	58	52	30 34	54 45	51	53 8 55 58
SD97538	39 76	35 54	66 65	47	67 53	48 51 56	55	56	52	59	52	31 36	53 49	49	51 14 57 58
SD97W609	31 67	33 55	68 65	44	62 50	56 51 64	57	60	64	66	50	26 31	48 43	51	52 11 55 59
SD98102	30 68	49 63	67 66	48	64 51	58 52 61	48	58	46	55	50	30 36	56 50	48	50 17 56 59
TANDEM	36 65	40 51	64 63	46	55 48	48 47 48	61	53	67	59	47	29 32	43 45	49	50 20 53 60
TREGO	20 59	32 51	63 61	39	66 50	52 51 53	55	57	57	59	50	31 34	50 41	49	49 25 53 58
WAHOO	43 76	41 56	72 69	52	64 51	49 50 53	58	56	60	64	50	29 34	54 50	52	53 6 57 56
WENDY	38 71	26 49	68 62	44	77 52	51 50 56	58	60	53	58	47	29 33	45 44	46	50 18 54 59
WESLEY	35 71	39 55	62 63	45	64 49	43 42 48	61	54	62	68	41	27 31	43 45	48	50 21 53 57
Mean	37 71	37 54	65 64	46	64 51	49 48 59	58	58	58	60	50	29 34	48 46	49	52 54 59
CV%	11 12	12 11	6 7		11 14	11 10 11	11		9	8	10	10 10	15 12		11 12 2
LSD0.05	6 7	6 5	5 4		10 6	8 4 10	9		8	7	7	5 3	10 5		2 2 1

2005 NDSU CPT Preliminary Grain Yield Summary - Dr. Joel Ransom & Scott Meyer

Variety	Williston		Hettinger		Minot		Avg.	
	2005	3 Yr. Avg.	2005	3 Yr. Avg.	2005	3 Yr. Avg.	2005	3 Yr. Avg.
Arapahoe	39.8	35.4	69.6	52.2	48.2	69.8	52.5	52.5
CDC Buteo	41.0	—	65.8	—	51.6	—	52.8	—
CDC Falcon	43.4	37.4	66.7	53.6	44.3	71.6	51.5	54.2
Elkhorn	34.1	32.6	—	—	—	—	—	—
Expedition	35.1	—	55.7	51.0	48.0	60.4	46.3	—
Goodstreak	—	—	—	—	—	—	—	—
Harding	41.8	37.0	71.1	62.0	61.1	75.5	58.0	58.2
Harry	—	—	—	—	—	—	—	—
Jagalene	36.1	—	61.3	40.7	41.0	70.6	46.1	—
Jerry	40.8	37.6	70.8	62.4	58.8	74.8	56.8	58.3
McClintock	41.9	25.7	63.3	54.6	48.3	69.5	51.2	49.9
Millennium	39.7	37.5	66.9	56.6	59.4	76.9	55.3	57.0
Morgan	40.3	36.9	—	—	—	—	—	—
NeKota	36.7	34.1	—	—	—	—	—	—
Norstar	35.8	32.8	—	—	—	—	—	—
NuPlains	—	—	—	—	—	—	—	—
NuSky	39.0	—	48.5	—	28.0	—	—	—
Paul	39.5	—	—	—	—	—	—	—
Ransom	40.2	34.7	64.5	51.7	54.5	67.3	53.1	51.2
Roughrider	39.9	33.7	60.8	49.7	44.7	65.2	48.5	49.5
Seward	39.1	34.9	—	—	54.1	68.7	—	—
Wahoo	33.8	35.4	—	—	41.4	68.6	—	—
Wendy	37.1	—	61.7	—	33.9	—	44.2	—
Wesley	37.1	31.9	68.7	50.1	47.5	65.4	51.1	49.1
Yellowstone	42.5	—	68.2	—	35.0	—	48.6	—
Mean	38.9	34.5	64.2	53.2	47.1	69.6	51.1	53.3

Variety	Carrington	Langdon		Prosper	Lisbon ¹		Avg.
	2005	2005	3 Yr. Avg.	2005	Untreated	Treated	2005
Arapahoe	62.6	33.0	67.7	65.2	29.2	46.3	47.3
CDC Buteo	61.8	27.5	--	55.0	37.0	54.1	47.1
CDC Falcon	64.8	26.0	68.5	61.4	27.4	37.1	43.3
Expedition	55.3	39.6	77.1	59.2	21.7	37.9	42.7
Goodstreak	58.1	--	--	--	--	--	—
Harding	65.2	32.7	70.8	76.3	39.5	51.2	53.0
Jagalene	34.2	17.2	65.1	45.5	27.0	40.9	33.0
Jerry	75.4	34.0	73.4	78.0	35.5	52.0	55.0
McClintock	50.1	27.3	64.5	49.2	34.9	45.9	41.5
Millennium	76.5	30.9	74.3	71.7	37.9	54.8	54.4
NuSky	36.0	16.6	--	34.5	27.7	45.6	32.1
Ransom	66.0	34.3	67.6	66.6	35.6	46.1	49.7
Roughrider	58.9	26.0	60.1	52.0	27.0	37.3	40.2
Seward	54.1	--	--	--	--	--	—
Wahoo	28.2	36.7	73.8	55.7	24.5	35.5	36.1
Wendy	58.2	29.1	--	51.0	23.2	29.6	38.2
Wesley	56.4	38.0	73.1	44.4	28.1	39.8	41.3
Yellowstone	44.3	--	--	43.8	30.7	40.7	—
Mean	55.9	29.9	69.7	56.8	30.4	43.4	43.3

1- Data on the response of varieties with fungicide (at 4 if stage and at flowering) or without fungicide are included for the Lisbon location

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Table 3. Test weight of winter wheat varieties grown at seven locations in North Dakota, 2005.

Variety	Williston	Het-tinger	Minot	Carring-ton	Langdon	Prosper	Lisbon ¹		Avg.
							No Fung.	Fung.	
Arapahoe	60.1	57.3	56.3	59.2	55.2	50.0	48.1	53.0	54.9
CDC Buteo	61.7	57.7	58.5	59.6	55.1	51.0	48.0	52.4	55.5
CDC Falcon	59.5	55.7	53.7	57.0	51.2	48.4	44.4	49.0	52.4
Elkhorn	60.1	--	--	--	--	--	--	--	--
Expedition	60.6	54.4	55.1	58.7	55.5	47.9	43.3	43.7	52.4
Goodstreak	--	--	--	55.0	--	--	--	--	--
Harding	60.3	--	57.8	59.6	55.4	51.2	47.1	49.4	54.4
Harry	--	57.0	--	--	--	--	--	--	--
Jagalene	60.7	57.3	50.2	52.3	49.6	40.9	36.5	44.7	49.0
Jerry	59.5	57.7	56.5	59.3	55.0	54.9	52.0	53.3	56.0
McClintock	61.3	57.8	56.0	57.1	54.8	49.1	45.7	51.0	54.1
Millennium	61.0	56.7	58.2	60.7	55.9	50.7	49.3	51.7	55.5
Morgan	60.1	--	--	--	--	--	--	--	--
NeKota	60.7	--	--	--	--	--	--	--	--
Norstar	60.1	--	--	--	--	--	--	--	--
NuPlains	--	--	--	--	--	--	--	--	--
NuSky	60.2	55.1	51.0	52.9	51.3	42.5	42.5	46.6	50.3
Paul	58.4	--	--	--	--	--	--	--	--
Ransom	59.0	55.8	54.6	58.6	54.8	52.5	48.1	50.6	54.3
Roughrider	60.5	58.5	57.1	60.0	55.6	53.9	50.2	52.4	56.0
Seward	60.6	--	57.2	58.6	--	--	--	--	--
Wahoo	58.0	--	51.1	51.2	53.7	42.5	39.5	41.7	48.3
Wendy	61.4	57.3	55.4	--	54.7	45.7	41.3	47.2	51.8
Wesley	59.8	56.5	52.7	57.3	54.8	43.1	43.5	43.0	51.3
Yellowstone	59.3	55.2	48.0	51.7	--	40.2	--	--	--
Mean	60.1	56.7	54.7	57.0	54.2	47.8	45.3	48.7	53.1

1- Data on the response of varieties with fungicide (at 4 if stage and at flowering) or without fungicide are included for the Lisbon location.