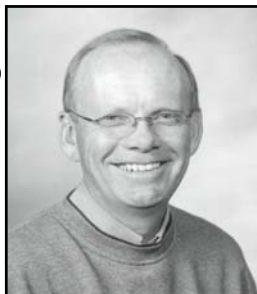


# AGRONOMY NEWS

 **Grasslands for Tomorrow**

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## **Winter Wheat Production Records Set in 2007**

According to the 2007 National Agricultural Statistics Service data, South Dakota achieved records in winter wheat planted and harvested acreage, yield and total production. South Dakota planted 2.1 million acres and harvested 1.98 million acres of winter wheat. The state average winter wheat yield was 48 bushels/acre and they produced 95 million bushels.

North Dakota winter wheat production is estimated at 22.3 million bushels, a record high, and is up from 7.92 million bushels from 2006. The area harvested for grain totaled 445,000 acres, up from 180,000 acres in 2006. The yield is a record at 50.0 bushels/acre, up 6.0 bushels from last year. Minnesota winter wheat acreage continues to increase also with 65,000 planted acres and 60,000 harvested acres with a yield of 48 bushels/acre. Minnesota set a record yield of 62 bushels/acre in 2006. Montana harvested 2.19 million acres of winter wheat in 2007 with a 38 bushel/acre yield.

In USDA's September 29 crop report, total U.S. hard red spring wheat production was estimated at 449 million bushels, up from last years production of 432 million bushels. The U.S. average yield for hard red spring wheat is estimated at 37.0 bushels/acre. Yields for the four-state region are as follows: Minnesota, 47 bushels/acre, Montana, 23 bushels/acre, North Dakota, 36 bushels/acre and South Dakota, 39 bushels/acre.

USDA's September 29 crop report estimated combined durum production for North Dakota and Montana at 55.2 million bushels, up 45 percent from the previous year, as a result of increased planted acreage and higher yields. Average yield for the North Dakota durum crop is estimated at 30 bushels/acre and the yield for the Montana crop is estimated at 24 bushels/acre.

### **Winter Annual Brome Control**

Controlling Downy and Japanese Brome just prior to soil freeze up can be very effective.

### **Agronomy News**

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***NDSU and SDSU Cooperative Ext. Service***

**North Dakota State University 2007 Winter Wheat Variety Trial Yields  
Dr. Joel Ransom and Scott Meyer**

**Other contributors: Neil Riveland, Glenn Martin, Bryan Hanson,  
Eric Eriksmoen, Blaine Schatz and Steve Zwinger**

**Table 1. Yield (Bu/A) of winter wheat varieties grown at four locations in western North Dakota in 2007, with three-year averages. (2005-2007)**

Variety	Williston		Dickinson <sup>1</sup>		Hettinger		Mandan		Average	
	2007	3-Yr. Avg.	2007	3-Yr. Avg.	2007	3-Yr. Avg.	2007	3-Yr. Avg.	2007	3-Yr. Avg.
Alice	72.5	-- <sup>†</sup>	79.0	--	54.3	--	61.6	--	66.9	--
CDC Buteo	74.1	48.9	82.7	--	60.1	54.3	70.7	47.3	71.9	--
CDC Falcon	73.1	48.3	79.8	74.9	65.9	47.1	54.1	36.1	68.2	51.6
Darrell	77.8	--	79.9	--	57.0	--	73.5	--	72.1	--
Expedition	65.5	43.1	71.0	64.7	60.5	45.2	55.7	40.0	63.2	48.3
Goodstreak	72.8	--	77.6	--	55.8	--	65.2	--	67.9	--
Harding	70.2	46.6	74.0	70.0	59.5	52.5	69.1	52.8	68.2	55.5
Jagalene	67.8	44.6	64.5	59.9	60.5	47.6	60.1	--	63.2	--
Jerry	79.6	50.7	82.9	75.2	59.3	51.6	60.5	48.6	70.6	56.5
McClintock	70.8	48.0	66.7	66.9	50.8	41.0	54.1	37.2	60.6	48.3
Millennium	72.3	48.4	86.7	78.3	63.0	46.2	84.2	53.7	76.6	56.7
NuDakota	72.8	--	80.2	--	55.5	--	67.2	--	68.9	--
Paul	77.0	48.7	83.3	--	57.6	--	59.3	--	69.3	--
Radiant	69.7	--	70.7	--	59.5	--	55.7	--	63.9	--
Ransom	71.5	46.5	73.2	71.4	56.4	50.4	63.6	42.2	66.2	52.6
Roughrider	71.4	47.5	63.3	58.9	49.5	46.2	66.0	46.4	62.6	49.8
Wendy	75.4	48.2	77.5	--	62.8	47.8	66.8	41.4	70.6	--
Wesley	73.6	47.0	78.9	64.5	57.8	48.5	73.1	42.3	70.9	50.6
Yellowstone	72.7	50.2	75.4	--	59.3	49.3	50.6	32.5	64.5	--
Mean	72.7	47.6	76.2	68.5	58.2	48.3	63.7	43.4	67.7	52.2

<sup>1</sup> Average yields 2003, 2005 and 2007, winter wheat not grown in 2004 and 2006.

<sup>†</sup> -- Data not available

\*\*\*\*\*

**Table 2. Yield (Bu/A) of winter wheat varieties grown at four locations in eastern North Dakota in 2007, with three-year averages. (2005-2007)**

Variety	Carrington		Langdon		Prosper		Lisbon		Average	
	2007	3-Yr. Avg.	2007	3-Yr. Avg.	2007	3-Yr. Avg.	2007	3-Yr. Avg.	2007	3-Yr. Avg.
Alice	34.6	-- <sup>†</sup>	39.7	--	45.7	--	55.2	--	43.8	--
CDC Buteo	37.6	48.6	50.4	51.4	55.0	74.1	55.8	66.3	49.7	60.1
CDC Falcon	42.5	51.5	52.6	51.3	53.9	72.2	61.7	58.3	52.7	58.3
Darrell	43.6	--	45.4	--	49.4	--	60.3	--	49.7	--
Expedition	31.2	44.8	41.5	54.2	46.8	58.6	65.7	61.9	46.3	54.9
Goodstreak	40.2	47.5	48.1	--	57.2	--	58.3	--	51.0	--
Harding	47.0	53.2	57.6	51.5	72.1	87.2	70.7	68.7	61.9	65.2
Jagalene	31.2	39.8	23.4	35.9	31.3	59.7	39.5	51.9	31.4	46.8
Jerry	49.9	60.3	66.3	57.1	67.7	83.9	73.1	70.1	64.3	67.9
McClintock	36.2	44.8	33.1	46.3	48.2	64.8	--	42.5	--	--
Millennium	51.2	59.1	66.7	57.3	76.3	86.9	65.3	68.6	64.9	68.0
NuDakota	45.4	--	41.5	--	54.1	--	66.3	--	51.8	--
Paul	30.1	--	31.0	--	31.0	--	40.6	--	33.2	--
Radiant	36.1	--	38.5	--	38.8	--	54.8	--	42.1	--
Ransom	41.5	51.5	60.0	58.7	65.0	77.5	57.3	60.9	56.0	62.2
Roughrider	39.9	49.3	39.7	38.9	47.9	62.6	44.4	51.3	43.0	50.5
Wendy	31.4	44.7	40.0	47.4	41.9	68.4	58.4	52.8	42.9	53.3
Wesley	35.7	45.3	43.9	52.3	45.6	67.3	62.6	64.1	47.0	57.3
Yellowstone	39.2	42.9	33.8	33.7	35.3	63.7	52.4	55.7	40.2	49.0
Mean	39.2	48.8	44.9	48.9	50.7	71.3	57.9	59.5	47.4	57.8

<sup>†</sup> -- Data not available

**North Dakota State University 2007  
Winter Wheat Variety Trial Test Weight and Protein Data**

Table 3. Test weight of winter wheat varieties grown at eight locations in North Dakota, 2007.									
Variety	Willis- ton	Dickin- son	Hettinger	Mandan	Carring- ton	Langdon	Prosper	Lisbon	Avg.
	------(Lb/bu)-----								
Alice	60.9	59.2	60.3	59.1	53.1	55.0	56.3	54.4	57.3
Buteo	62.1	60.8	64.2	62.8	58.8	59.0	58.6	57.3	60.5
Falcon	59.7	55.9	61.2	55.6	55.4	56.9	55.2	53.7	56.7
Darrell	60.5	58.5	62.3	60.2	56.6	56.0	55.5	54.8	58.1
Expedition	60.4	57.9	61.9	59.6	55.7	57.0	56.9	55.5	58.1
Goodstreak	58.8	53.9	60.3	55.3	52.4	52.2	52.3	49.3	54.3
Harding	60.3	57.5	61.2	62.6	57.8	58.8	58.4	57.8	59.3
Jagalene	61.0	54.5	63.7	57.1	53.2	54.2	53.0	49.0	55.7
Jerry	59.6	58.9	61.4	58.7	57.2	58.1	57.0	57.4	58.5
McClintock	61.2	58.6	62.2	61.5	57.3	56.7	57.6	--	--
Millennium	61.0	60.3	62.6	63.6	58.0	59.4	58.6	57.9	60.2
NuDakota	58.6	55.6	62.8	57.8	53.2	52.4	53.0	52.8	55.8
Paul	59.1	54.3	58.8	55.7	52.8	52.9	50.8	49.3	54.2
Radiant	58.9	54.7	59.9	59.1	56.1	54.0	52.1	51.7	55.8
Ransom	58.8	56.7	58.6	59.7	56.9	56.9	56.7	55.7	57.5
Roughrider	61.1	60.0	61.8	61.4	58.9	57.8	58.3	56.9	59.5
Wendy	61.1	59.1	62.6	59.1	55.9	56.2	55.5	54.9	58.1
Wesley	59.9	57.6	59.6	58.6	52.4	55.0	53.6	52.6	56.2
Yellowstone	59.2	54.6	60.4	55.4	52.5	51.0	48.6	49.2	53.9
Mean	60.1	57.3	61.4	59.1	55.5	55.8	55.1	53.9	57.2

\*\*\*\*\*

Table 4. Grain protein content of winter wheat varieties grown at eight locations in North Dakota, 2007.									
Variety	Willis- ton	Dickin- son	Hettinger	Mandan	Carring- ton	Langdon	Prosper	Lisbon	Avg.
	------(%)-----								
Alice	12.2	11.9	13.4	10.5	11.5	11.3	12.9	13.4	12.1
Buteo	12.8	12.3	13.4	10.5	11.4	10.2	12.5	12.3	11.9
Falcon	12.6	12.4	12.8	12.0	11.8	10.4	13.5	13.5	12.4
Darrell	12.7	12.2	13.6	9.9	11.8	11.1	12.9	12.8	12.1
Expedition	12.6	12.1	13.5	10.6	11.3	10.1	11.9	13.0	11.9
Goodstreak	11.1	12.0	12.0	9.8	10.9	10.1	12.5	12.6	11.4
Harding	13.3	13.4	13.6	10.9	11.9	11.3	14.3	14.4	12.9
Jagalene	12.6	12.9	13.0	10.7	13.1	11.3	13.4	13.6	12.6
Jerry	13.3	13.0	14.5	11.4	11.7	11.0	13.4	13.6	12.7
McClintock	13.2	13.3	13.6	10.7	12.1	11.5	14.0	--	--
Millennium	12.7	12.5	13.8	10.5	10.9	11.3	13.2	13.7	12.3
NuDakota	12.8	12.4	12.4	9.6	12.3	12.2	14.5	13.8	12.5
Paul	13.2	12.7	13.4	11.1	12.6	9.9	13.1	13.5	12.4
Radiant	13.5	12.6	12.2	11.0	11.6	10.4	11.8	12.4	11.9
Ransom	13.1	13.0	14.0	10.5	11.3	10.4	13.4	13.4	12.4
Roughrider	14.0	13.7	14.9	11.4	12.3	11.2	13.8	14.7	13.3
Wendy	12.9	12.4	13.8	11.2	13.0	11.3	12.9	13.4	12.6
Wesley	12.9	13.4	14.4	10.9	12.8	11.3	14.0	14.0	13.0
Yellowstone	13.3	12.8	13.2	11.7	12.2	10.9	13.5	13.2	12.6
Mean	12.9	12.7	13.4	10.8	11.9	10.9	13.2	13.6	12.4

## **Marketing Winter Wheat for the Future**

***Steve Metzger, Farm Business Management Coordinator  
Carrington Research Extension Center, Carrington, ND***

The decision to plant winter wheat as another cash crop provides for both opportunities and challenges in the aspect of marketing. Before any marketing plan is formulated, producers must calculate a cost of production. Statistics from the North Dakota Farm Business Management Program indicate that in 2006, enrolled producers had an average cost of \$155.42 per acre, including an average land rent of \$33.32 and an average fertilizer cost of \$26.09 per acre.

With the current rise in land rental rates, along with the increased cost of fertilizers, fuels and ag. chemicals, it would not be unreasonable to estimate that the per acre cost of winter wheat, as well as that of many other crops, could easily be increased by \$40 to \$60 per acre, depending upon such things as local land costs and fertilizer availability and prices.

In addition to the approximate \$200 per acre cost, which does include about \$9.00 for equipment depreciation, an additional amount of \$20 to \$25 per acre might be included for the producer's time and management, along with an additional \$20 to \$25 for principal payments on term debts. All together this could add up to a total cash flow cost of \$240 to \$250 per acre. Although the farm program would provide some additional income in direct payments spread over the farm's tillable acres, \$10.38 per acre in 2006, it is not included in the calculations set out in the next few paragraphs.

With this investment per acre it is important that producers be on top of their marketing program. Producers need to be familiar with the local basis for winter wheat, which is the local cash price minus the futures price). In central North Dakota we are seeing a basis of approximately \$1.00 to \$1.05 under the Minneapolis spring wheat futures price for the desired marketing month. This basis will vary by area and by demand.

With the 2008 September futures at approximately \$6.80, at the time of this writing, producers can project an August winter wheat price of approximately \$5.75 per bushel or an after total cash flow output of approximately \$40 to \$50 per acre on an estimated yield of 50 bushels per acre or about \$20 per acre on a 45 bushel yield. Bear in mind, this is after all cash flow requirements are met plus any direct farm program payments could be added to these net amounts.

While waiting and price speculation may often be a part of farming, producers need to consider the impact of this projected positive price in their own cash flow. Producers may find that put options, which give the producer the right but not the obligation to sell the futures at a pre-set price, are just too expensive with so much time and risk involved. Producers may wish to consider a futures fixed or as it is also known, a hedge-to-arrive contract, with a local elevator. This contract would lock in the futures price but leave the basis open, allowing for basis improvement should it occur between now and about a month before the grain is due to be delivered. As this does require delivery, caution must be exercised as to what percentage of the total crop any one producer may wish to contract under this method. A similar result could be obtained by simply hedging the crop on the futures but this does leave the producer open to margin calls in a rising market. With the normal hedging transaction, producers are also open to deliver grain to the elevator or buyer of their choice and are not committed to a single delivery point.

If the producer was to simply fix the basis right away, the contract then simply becomes a cash contract as the final price before delivery time discounts is already known. One of the main reasons producers often choose not to fix a price or even the futures portion of it, is the chance that market prices may go higher.

Producers may prepare for an uncertain price rise in the future by the purchase of a call option, giving the producer the right, but not the obligation, to buy the futures market at a pre-stated price. Producers may consider the purchase of this type of option later in the marketing year when they might typically expect the market to climb higher. The risk in this scenario is limited to the cost of the option purchased.

As producers consider their individual current financial positions, they must individually formulate a marketing plan that considers both their production and marketing risks. Winter wheat can be a successful crop if producers are willing to consider both their risks and their opportunities in its production and future marketing.

**Winter wheat Response to previous crop and Foliar Fungicides, Ellendale, 2007**  
*Gregory Endres, Blake Vander Vorst, Eugene Elhard, and Brandt Lemer*

**Sponsors**

**Syngenta Crop Production, Dickey County CIA, Cenex of Ellendale, David Kinzler, Monango; NRCS, Unity Seed Company, NDGame & Fish Dept., SD Foundation Seed, UAP Northern Plains, Anderson Machine, Wheat Growers, Oakes, TJ Technologies, Horsch Anderson, James River SCD, AgriPro Seeds, NDSU, SDSU, ND Foundations Seedstocks**

The trial was conducted as a joint project between Ducks Unlimited and the NDSU Carrington Research Extension Center, with financial support from Syngenta. Experimental design was a randomized complete block with a split-split plot arrangement and three replications. Main factor was previous crop, split factor was variety, and split-split factor was fungicide. The trial was direct seeded in 15-inch rows with a 6- to 7-inch spread at 1.2 million pure live seeds/acre (treated with Dividend Extreme + Cruiser at 2 + 1 oz/100 lb seed) on Sep 25, 2006 on previous crop stubble including spring wheat, field pea, flax and soybean. Soil pH was 6.0, with 5.5% organic matter, and soil N at 0- to 24-inch depth ranged from 139 to 336 lb/acre. Starter fertilizer was applied as 10-34-0 at 8 gpa + 28-0-0 at 2 gpa + TJMicroMix at 3 pt/acre. On April 16, 2007, 28-0-0 was applied at 5 gpa on wheat, flax, and pea ground, and at 20 gpa on soybean ground. Quilt at 7 fl oz/A was applied on May 9 to tillering wheat with a hand-boom plot sprayer equipped with 8001 flat fan nozzles delivering 12 gal/A at 30 psi. Tilt at 4 fl oz/A plus NIS at 0.125% v/v was applied on June 11 to wheat at early to full flowering with TJ60 8002EVS nozzles delivering 12 gpa at 30 psi. Flag leaf disease (leaf rust = leaf and stripe; leaf spot = tan spot, Septoria, and bacterial) was visually evaluated on June 25 and Fusarium head blight (scab) was evaluated on July 5. The trial was harvested with a plot combine on July 20.

**Continued on page 6**

Winter wheat response to crop rotation and fungicides, Ellendale, 2007.									
	Flag leaf rust	Flag leaf spot	FHB incidence	FHB severity	FHB severity index	Grain yield	Test weight	250 KWT	Protein
Treatment	(%)	(%)	(%)	(%)	(%)	(bu/A)	(lb/bu)	(grams)	(%)
<b>Previous Crop</b>									
Flax	3	25	24	55	14	51.9	55.8	7.39	12.6
Hrs	3	22	19	54	11	59.1	57.7	7.91	12.1
Pea	3	23	21	58	14	53.1	55.6	7.42	12.8
Soy	4	20	22	62	14	66.1	57.8	7.86	12.2
LSD 0.05	NS	NS	NS	NS	NS	2.8	0.5	0.15	0.2
<b>Variety</b>									
Jerry	1	18	18	54	10	62.5	57.2	8.26	12.9
Millennium	1	25	19	46	10	66.2	59.2	7.98	12.4
Radiant	9	23	28	73	20	44.0	53.8	6.70	11.8
LSD 0.05	1	NS	1	1	1	3.3	0.5	0.30	0.2
<b>Fungicide</b>									
UTC	7	24	22	64	14	54.1	56.1	7.52	12.2
Tiller	5	24	23	60	15	56.1	56.2	7.48	12.3
Flower	1	19	20	51	11	59.9	57.3	7.80	12.5
Tiller/Flower	1	21	22	55	13	60.1	57.4	7.80	12.6
LSD 0.05	2	3	NS	1	NS	3.2	0.3	0.20	0.1
Mean	3	22	22	58	13	57.6	56.7	7.65	12.4
C.V.%	109	32	41	35	54	12	1	1	2

# AGRONOMY NEWS

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## ***Continued from page 5***

Grain yield was highest with soybean as the previous crop (table). Test weight and kernel weight were highest with the previous crops of soybean and spring wheat. Millennium had the highest yield and test weight of the three varieties. There was an advantage with kernel weight and protein with Jerry compared to Millennium. Yield and quality of Millennium and Jerry were substantially higher than Radiant. Leaf rust and Fusarium head blight was greater in Radiant compared to the other varieties. There was minimal wheat response to fungicide application at the tillering stage compared to the untreated check. Grain yield and quality improved with fungicide application at flowering or with sequential application of fungicides compared to the untreated check. There were significant differences with the variety and fungicide interaction for leaf rust and leaf spot disease, and grain quality (data not shown).

## **Tracy Saylor—Writer, Ag Communications, passes away October 11, 2007**

As a reader of Ducks Unlimited – *Agronomy News*, you may not have known Tracy Saylor, but if you were a wheat producer in ND or MN, you no doubt have seen some of his work. Tracy was the person behind the success of the popular *Prairie Grains Magazine*. Tracy took pride in writing and editing the magazine to make sure that it contained only the very best articles that would help growers improve their bottom line. The one exception was the witty and humorous *Prairie Ramblings* on the last page of the magazine, which he wrote each issue. *Prairie Ramblings* had a large fan base.

His real passion, in his career, was to help growers increase their profitability through information and research. He did many things to accomplish this. One project he felt strongly about was winter wheat in ND and MN. He was in the process of working with others, including DU, to build the awareness of winter wheat's potential by communicating research and economic data to growers.

More recently Tracy learned that growers were talking about the need for a regional winter wheat breeder in ND and MN. Tracy knew DU had similar interests in Canada and he was persistent about getting Blake Vander Vorst together with the wheat grower organizations to discuss the possibilities. I met with Blake and learned that we do indeed have a lot in common with DU and I think we can work together to improve profitability of producers, just as Tracy thought.

We should work hard to keep the winter wheat information flowing and Tracy's ideas growing.

*Dave Torgerson, Minnesota Association of Wheat Growers*

