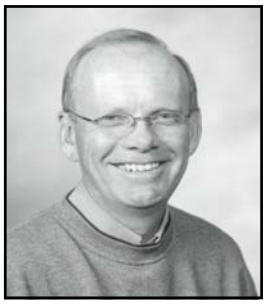
AGRONOMY NEWS

Grasslands For Tomorrow

Volume 6, Issue 3 **April 2006**



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2005 Winter Wheat Management Study

M. Draper, K. Ruden, S. Thompson, D. Wittmeier, B. Vander Vorst
Cooperator, Kevin Anderson

Four cultivars of winter wheat were planted three miles east of Andover, SD along Highway 12 on the Kevin and Donna Anderson farm on September 14, 2004. All varieties were seeded at 1.2 million PLS per acre at a depth of 1.5 inches and the seed was treated with Raxil MD. Starter fertilizer (10-34-0) was applied at 15 GPA along with 3 pints/acres of TJ Wheat Micromix in a deep band between the seed spread 5 to 6 inches with Anderson triple shoot openers. The winter wheat was seeded in spring wheat stubble with a 7.5 foot Horsch-Anderson air plot drill with a 15-inch shank spacing.

Dr. Martin Draper, SDSU Extension Plant Pathologist, and Kevin Anderson at Horsch Anderson field day, June 2005.

Soil Test Information

Nitrogen = 10 lbs/A	pH = 6.6
Chloride = 32 lbs/A to 2'	Boron = 0.2 ppm
Copper = 0.74 ppm	Manganese = 19.6 ppm
Phosphorous = 8 ppm Olsen	Potassium = 259 ppm
Sulfer = 20 lbs/A to 2'	Zinc = 0.42 ppm
Iron 42.2 ppm	O.M. 3.4%

2005 Nitrogen Treatments

N-Check = no nitrogen other than starter
N-Early = 54 GPA UAN on April 1
N-Late = 54 GPA UAN on May 3
N-Split = 27 GPA UAN on April 1 and May 3

Rainfall after application

April 10 = 0.24; April 11 = 0.73; April 12 = 0.13;
May 7 and 8 = 0.81; May 9 = 0.20

Reminder

All "Agronomy News" issues can be found at Ducks Unlimited website:

http://prairie.ducks.org/Agronomy_News

Also, email Janell at jrath@ducks.org and let her know if you would like to receive it by email. Agronomy News will arrive 7-10 days sooner if you choose to receive it by email.

Agronomy News
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Urea Ammonium Nitrate (UAN or 28-0-0) nitrogen was applied with stream bars provided by Amity Technology for an 80-bushel yield goal using 2.25 lbs of nitrogen per bushel. Roundup was applied as a pre-plant burn down.

Fungicide Treatments and Results

Table 1: Rate and date of fungicide application, and stage of plant growth for fungicide treatments for a winter wheat trial at Andover, SD in 2005.

Descriptive Treatment	Fungicide: Date applied: Feekes Growth Stage:	Headline 5-26-05 6	Tilt 6-9-05 8	Folicur 6-15-05 10.51
1. Untreated				
2. Joint		3 oz.		
3. Flag Leaf			4 oz.	
4. Early Flower				4 oz.
5. Joint + Flag Leaf		3 oz.	4 oz.	
6. Joint + Early Flower		3 oz.		4 oz.
7. Flag Leaf + Early Flower			4 oz.	4 oz
8. Joint + Flag Leaf + Early Flower		3 oz.	4 oz.	4 oz.

Table 1 lists the seven fungicide treatments including Headline, BASF; Tilt, Syngenta Crop Protection; and Folicur, Bayer CropScience, used for the Feekes growth stage treatments 6, 8 and 10.51, respectively. The Feekes growth stage treatments correspond with early joint, flag leaf and early flower stages of growth.

Figure 2. Fusarium Head Blight Severity Response to Fungicide Treatments.

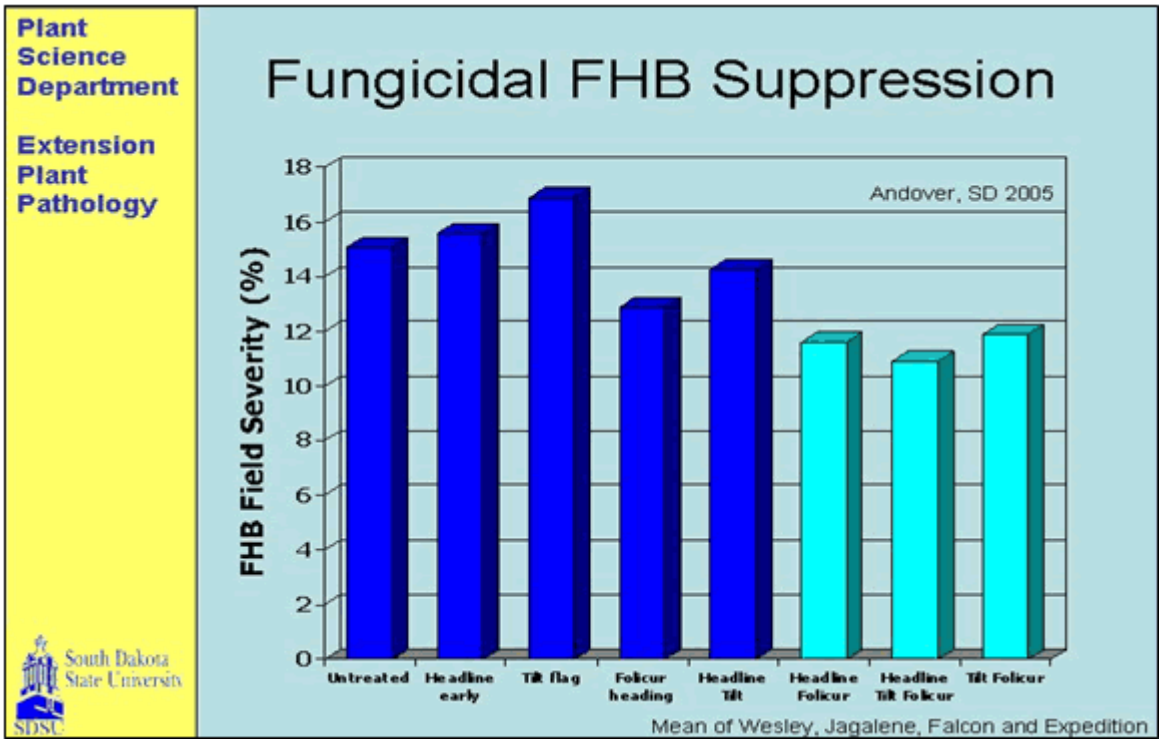


Figure 2 indicates the level of Fusarium head blight (FHB) suppression by the fungicide treatments. Headline + Folicur, Headline + Tilt + Folicur, and Tilt + Folicur treatments had signifi-

Figure 3. Yield Response to fungicide treatments averaged across winter wheat

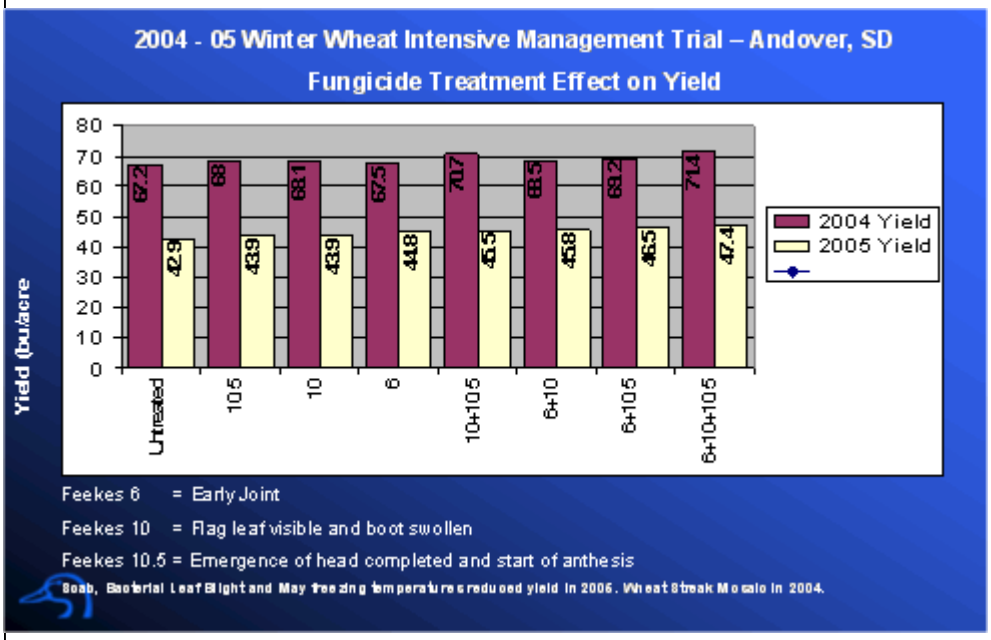


Figure 4. Winter wheat cultivar yield response to time of nitrogen application averaged across fungicide treatments at Andover, SD in 2005.

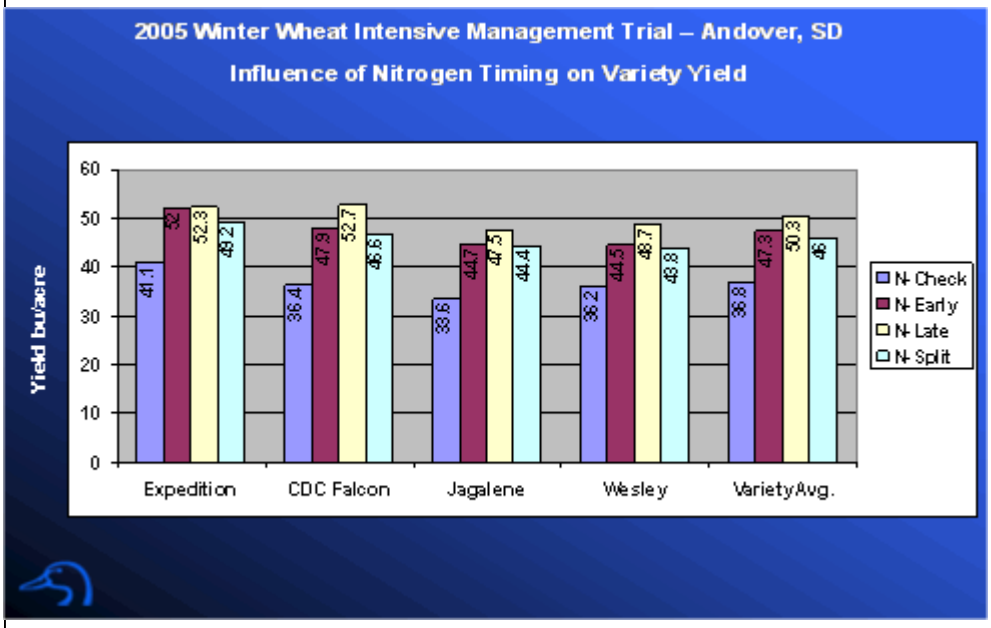
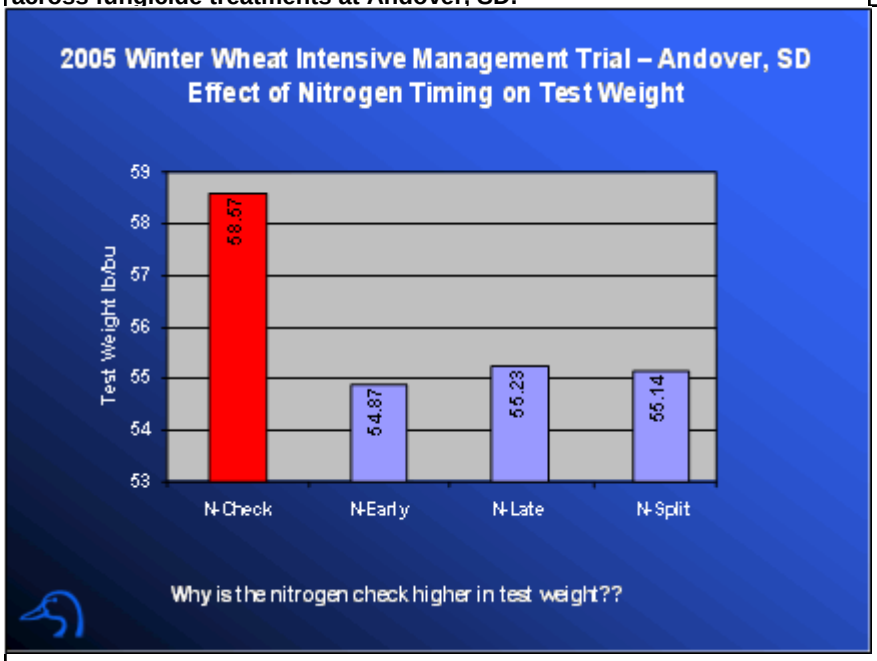


Figure 3 shows the yield response to the fungicide treatments for 2004 and 2005. The fungicide treatment yields were not significantly different from one another in 2004. In 2005, Headline, Tilt + Folicur, Headline + Tilt, Headline + Folicur, and Headline + Tilt + Folicur yielded significantly more than the untreated check. Bacterial leaf blight, barley yellow dwarf, wheat streat mosaic, Fusarium head blight (scab) and early May temperatures in the teens greatly reduced the yield potential of the 2005 winter wheat crop. Despite the lack of a significant difference in yield, there appears to be a continuing trend towards higher yields with split or multiple fungicide treatments. This is supported by research conducted by Dr. Marcia McMullen, NDSU, at Lisbon, ND from 2001 to 2004.

Figure 4 reveals that the late nitrogen treatment yielded more than the early, split and check treatments when averaged over the four cultivars in 2005. There is a significant difference in yield between each of the nitrogen treatments when averaged over the four cultivars. Figure 4 also indicates that there is a similar trend for individual cultivar response. The 2004 results indicate that the split nitrogen treatments had the highest yields. Figure 5 tells us that test weight was higher in the nitrogen check than the other treatments. It may be a reflection of less scab damage due to fewer heads, tillers and plant foliage than in the nitrogen treated plots. Leaf and head wetness may have occurred for a longer period each day due to the more dense canopy of the nitrogen treated plots causing a greater level of scab damage.

Figure 5. Test weight response to time of nitrogen application averaged across fungicide treatments at Andover, SD.



Acknowledgements

This research was supported in part by grants from BASF Corporation, Bayer CropScience, Syngenta Crop Protection, Ducks Unlimited and SD Game, Fish & Parks. Others providing support were the Bristol Wheat Growers, SD Foundation Seed, Anderson Machine, Dakota Crop Services, AgriPro Seeds, and UAP Northern Plains. Dr. Martin Draper and staff from SDSU conduct a majority of the plot work.

The Money Farm by Mike Krueger
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US Wheat Outlook

Wheat prices have been very volatile recently. Prices set new contract highs in early March, collapsed in late March and then rallied back to near the contract highs again in mid-April. The reason is clearly weather and the ongoing drought in the primary hard red winter wheat producing states of Texas, Oklahoma and Kansas. This region has been locked in a drought for more than a year. Planted acres were smaller than expected because of dry conditions last fall. Rainfall in 2006 has been far below normal and temperatures the middle of April reached the mid-90's. Texas and Oklahoma have been hit the worst. Texas agricultural officials recently estimated their wheat crop would be about 40 million bushels. That compares with 95 million bushels in 2005. The smallest recorded wheat crop in Texas was 31 million bushels. It is a full-blown disaster. The Oklahoma wheat crop will likely be less than 75 million bushels compared to 130 million last year.

Kansas production is the real key to where wheat prices go from here. Last year's hard red winter wheat crop was 930 million bushels. Some analysts believe the 2006 crop will be no

Hard red spring wheat planting is just getting underway. Most analysts believe spring wheat acres will be unchanged from last year, but durum acres are expected to drop more than 30%. There are also some trouble spots outside the US. The wheat crop in the Ukraine will be down nearly 40% from last year and Russia's crop will also be smaller. Wheat exports from the Black Sea will be sharply reduced from 2005. The next issue – aside from weather - that will affect the wheat market will be how many acres of wheat Canadian farmers will plant. Early estimates projected as much as 15% more wheat would be planted than last year. Stats Canada will release their estimate on April 25th.

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Winter Wheat Variety x Fungicide Trial
NDSU North Central Research Extension Center—Minot, ND 2005

Kent McKay, Area EXT Specialist/Cropping Systems
Lee Novak, Research Specialist — Marcia McMullen, EXT Plant Pathologist, Fargo
Shanna Mazurek, Field Assistant — Joel Ransom, EXT Agronomist-Central Crops, Fargo

Trial Information:
The objective of this trial was to evaluate winter wheat variety response to a flag leaf application of Headline for leaf disease control. The trial was no-till planted September 16, 2004 on previous durum residue. Excellent stands were established in 2005 with no differences in winter kill noted between varieties. Headline was applied at the flag leaf to 50 percent headed stage to Jagalene, Millennium and Wendy on June 16. Headline was applied to all other varieties at the flag leaf to 50 percent headed stage on June 21. Leaf spot and leaf rust ratings were taken on July 6. Plots were harvested with a plot combine on August 1.

Winter Wheat Variety x Fungicide Results, Minot, North Dakota 2005

	Yield bu/a		Test Wt lb/bu		Leaf Rust on Flag %		Leaf Spot on Flag%	
Variety	**Untr.***	**Headline****	**Untr.***	**Headline****	**Untr.***	**Headline****	**Untr.***	**Headline****
Ransom	51.1	69.7	55.9	58.9	0.0	0.2	11.0	3.7
Jerry	55.5	71.8	57.0	59.1	1.0	0.3	12.1	3.5
CDC Falcon	48.5	66.6	54.3	59.1	3.8	0.2	37.1	6.2
Jagalene	35.3	62.5	51.0	58.7	36.8	1.6	43.2	7.5
Seward	46.0	66.0	57.4	59.5	8.5	0.4	11.5	4.2
Millennium	55.8	73.4	58.6	61.1	1.7	0.4	17.5	4.6
Wendy	27.8	47.6	56.5	61.2	8.9	0.2	50.5	5.9
Morgan	43.9	76.1	54.1	58.8	28.6	2.1	29.6	4.3
LSD (P=.05)	8.5	8.5	1.0	1.0	8.2	8.2	5.4	5.4

***Untreated**
****Headline at 4 fl oz/A plus NIS at 0.125% v/v applied at the flag to 50% headed stage**

Application of fungicide significantly increased yield and test weight compared to the untreated. Fungicide also significantly reduced the percentage of leaf rust and leaf spot on the flag leaf.

Thank You Marty

Dr. Martin Draper, SDSU Extension Plant Pathologist, will be leaving SDSU in mid-July for a position as national Program Leader in Plant Pathology with USDA-CREES in Washington, DC. He will focus on field crops, especially wheat and soybeans, and work with extension and outreach efforts. DU wishes Marty the best in his new position and extend their sincere appreciation for his past cooperation with DU agronomy programs. Congratulations Dr. Draper!

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Ducks Unlimited and Bayer CropScience partnership

Left to Right: Jeff Nelson, DU Director of Operations, Dan Wogsland, NDGGA Executive Director, Jim Gray , Bayer CropScience Stewardship State Affairs Manager, and Blake Vander Vorst, DU Regional Agronomist.

Ducks Unlimited (DU) and Bayer CropScience have entered into a partnership that will allow DU to provide more incentives for farmers to grow winter cereals. The $500,000 agreement will also allow DU to expand its winter cereals program to an additional county in South Dakota and open a new project area in northwestern North Dakota.

Bayer CropScience's contribution will provide farmers, who agree to plant a winter cereal crop like winter wheat or rye, with Bayer crop protection products. The company will provide $100,000 each year of the five-year agreement. "The contribution and resulting incentives will help reduce the risk for growers to adopt a new crop or expand their current acreage," said Blake Vander Vorst, DU regional agronomist and manager of the winter cereals program.

DU's agronomy program provides incentives and education to encourage farmers to plant winter cereals because of the minimal field disturbance in the spring of the year, which improves nesting success. "Research in Canada shows that duck nest success improves by 35 times with fall-planted winter cereals when compared to spring planted cereals," said Jeff Nelson, director of DU's Great Plains Regional Office.

"Bayer CropScience is pleased to support Duck's Unlimited in this effort to restore waterfowl habitats and enhance duck nesting and production," said Alan Ayers, director of Bayer CropScience State Affairs and Stewardship. "This is an excellent example of how crop protection chemicals can be used to increase crop yield and play an important role in the conservation of wildlife."

This partnership will allow DU to expand the counties in which it offers the program. The current South Dakota project area will expand to include Brown County. DU will also open a new project area in northwest North Dakota in McLean, Mountrail, and Ward counties. DU currently offers the winter cereal program in the Dickey, Ransom and Sargent counties in North Dakota and Day and Marshall counties in South Dakota.

Today's agreement is part of DU's Wildlife Conservation-Technology Initiative with CropLife America, an organization that represents firms that produce plant science solutions for agriculture and pest management in the United States. Growers in South Dakota and southeastern North Dakota interested in participating in DU's winter cereals program can contact Roger Knapp at (701) 724-3247. Those in the new project area in northwest North Dakota can contact Blake Vander Vorst at (701) 355-3500.