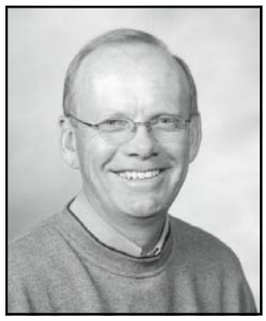
AGRONOMY NEWS

Grasslands For Tomorrow

Volume 3, Issue 3 **2003**



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Fungicides – Should I or Shouldn't I

There are several factors to consider when determining whether to add a fungicide with the herbicide at the tillering or early joint stages of growth or to spray a fungicide at the flag leaf or the early heading stages of growth of winter wheat or spring wheat. The factors are:

Geographic location within the state
Prior crop: e.g. wheat or corn
Disease present on lower leaves
Wet weather forecast
Yield levels of 45 bushels or more
Field history of disease problems

Generally, the further east and north you move in the Dakotas the greater the potential return from an investment in fungicide treatments for wheat. The greatest return from a fungicide application seems to come at the flag leaf or early heading stage of growth in winter wheat. However, in our Tilt fungicide timing trial at Lisbon, ND across 5 winter wheat varieties in 2001, the split application of 1 ounce + 3 ounces (tillering and early heading stages) produced the greatest return to all but one of the varieties. All geographic areas in the two states can benefit from fungicide applications depending on the year.

Winter wheat seeded into spring wheat stubble is a much more likely candidate for fungicide applications than when seeded into flax or canola stubble. This is especially true for the early application. However, one needs to scout the field and observe what diseases are present and at what levels before making a determination. It is also a great virtue to be able to forecast the weather for the next couple of weeks.

The fungicide trials of the last two years somewhat demonstrate the yield level factor. The 2001 winter wheat fungicide trial top yield was 82 bushels per acre with yield increases up to 13 bushels per acre. The 2002 trial yields were greatly reduced by dry conditions to 40 to 45 bushels per acre. The yield increases to the various fungicide applications was limited to 2 bushels per acre.

Feel free to call Roger or Blake if you don't have a crop consultant, local Agronomist or Extension Agronomist to visit with. Maybe we can help you think your way through the decision making process.

SD Study Finds Winter Wheat Most Profitable

Study of 101 eastern South Dakota farms in 2002 by Roger DeRouchey of Mitchell Technical Institute, Mitchell, SD. Income from federal programs and cost of land was not included in the numbers below. Crop income data was calculated from statistical comparisons of how well individual fields produced the crops. Overall, government payments declined from 10.5 percent of farm income in 2001 to 4.5 percent of farm income in 2002. Expenses included fertilizer, pesticide, seed, crop insurance and machinery depreciation and operation. Again, no government payments or land costs were included in the cost calculations.

Commodity	Net Profit/ ac	Bu/ac	Avg cost/ac
Winter Wheat	**$71.21**	42.4	$82.64
Alfalfa Hay	$27.95	2.3 tns	$82.84
Soybeans	$15.19	28.1	$104.01
Corn	$14.86	64.5	$151.43
Oats	$14.04	45.2	$67.88

Editor's note: It is encouraging to see winter wheat maintaining a reasonable level of profit in the drier environment that 2002 provided. As Mr. DeRouchey was quoted, "Profitability depends on consistent high yields, price received and low total production costs." Winter wheat has the characteristics of having a low cost of production as well as consistently higher yields.

It also points out the value of several crops in a rotation to spread your risk from drought, prices and production costs.

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Seed Increase Application Deadlines

Applications for field inspection for seed increase for small grains are due by the following dates:

South Dakota Crop Improvement Association	**May 31, 2003**
North Dakota State Seed Department	**June 15, 2003**

2003 Tour Dates

June	**11- 12**	**Horsch-Anderson and Anderson Machine Tour and Meeting: southwest of Andover, SD**
June	24	USDA-ARS Conservation Tour: 1:00 p.m., 5:30 p.m. dinner, Brookings, SD
June	26	USDA-ARS Area IV SCD Tour: 4:00 p.m., Mandan, ND
	26	Dakota Lakes Research Farm Tour, east of Pierre, SD
July	**1**	**Dickey Co. Winter Wheat Plot Tour and Lunch: Varieties, N Management, Fungicide Mgmt., 7:00 p.m., 9.25 miles east of Ellendale, ND**
July	**2**	**Ransom Co. – HRWW, HRSW, Barley Varieties, Corn Planting Date Study, HRWW Variety/Fungicide Trial Tour: 7:00 p.m., 7.5 miles south of Lisbon, ND, lunch to follow**
July	2	SDSU Northeast Research Station, Summer Tour, 4:00 p.m., South Shore, SD, Rain date - July 7
July	8	Manitoba North Dakota Zero Tillage Farmers Assn. Tour: Manitoba, CA
July	**10**	**Conservation Cropping Systems Project Tour: Forman, ND**
Sept	3	SDSU Northeast Research Station, Fall Tour, 1:00 - 4:00 p.m., South Shore, SD

The following are the dates of the **NDSU Research Extension Center** tours:

June	25	Minot – Canola Tour
July	8	Hettinger
	9	Dickinson
	10	Williston
	15	Carrington
	16	Minot
	17	Langdon
	18	Minot – Pulse Tour
August	19	Oakes Irrigation Station Tour: south of Oakes, ND
	21	**Conservation Cropping Systems Project Tour: Forman, ND**

CCSP

The Conservation Cropping Systems Project (CCSP) research/demonstration farm at **Forman**, ND has scheduled their summer tours for **July 10, 2003** and **August 21, 2003**.

Due to the loss of some of its land area to a business development the rotations have been modified to include the following:

A: sw/ww(cc)/c/s – disk drill
B: sw/ww(cc)/c/s – shank drill
C: sw/ww(cc)/c/s – strip till
D: sw/c/s
E: sw/s
F: c/s
G: sw/c/s/c/s
H: sw/ww(cc)/c/s/c/s
I: sw/ww(cc)/dormant canola or s/c/c/s
J: ww/s/c/c/dormant canola
L: sw/ww(cc)/c/c/s/s
N: sw/ww(cc)/a/a/c/s

ww = winter wheat, sw = spring wheat,
cc = cover crop in fall following ww,
c = corn, s = soybean, a = alfalfa

The CCSP farm will fill a void in no-till cropping systems research information for a climatic area with greater rainfall and heavier soil types than similar research farms at Pierre, SD and Mandan, ND. Ducks Unlimited is one of the major sponsors of the CCSP farm. The following are other major contributors to the CCSP during its first year of operation in 2002:

Platinum:
Ducks Unlimited
Environmental Protection Agency 319 Project
Wild Rice SCD

Gold:
Farmers Union Oil Co. of Lisbon, Elliot, and Forman, ND
Titan Machinery (formerly Meyer Equipment)
Monsanto

Silver:
Agvise Laboratories
Pioneer HiBred International
Wheat Growers

Bronze:
4 Seasons Cooperative, Britton, SD
Breker Drill Rental
Dairyland Seed Co., Inc.
Emery Visto Equipment
Farm Credit Services of Aberdeen & Lisbon
First National Bank of Milnor
K & S Soil Analysis
Marshall County Equipment Co., Britton, SD
Northern Plains Ag Service, Forman, ND
Sargent County Bank
Syngenta
Martin Industries
Dakota Valley Electric
Wensman Seed
Concord

CCSP (continued)
Special Thanks:
Ron Simonson, Roslyn, SD
Shane Breker, Rutland, ND
Bill Smith, Forman, ND
Dan Pearson, Forman, ND
Kevin Anderson, Andover, SD
NDSU
SDSU
NRCS

Sponsor levels (per year):
Platinum (greater than $10,000),
Gold ($5,000 to $10,000),
Silver ($2,500 to $5,000),
Bronze ($500 to $2,500)

The CCSP farm is led by 10 farmers from the counties of Day and Marshall in SD and Ransom and Sargent in ND. For more information call the Wild Rice SCD @701-724-3247, ext. 3.

Left to right - Back row: Joel Erickson, Doug Rotenberger, Kent Carpenter, Joe Breker. Front row: Gerald Bosse, Mark Wyum, Ron Simonson, Kevin Anderson. Not pictured are John Rabenberg and Pat Freeberg.

Nitrogen Management Questions

A number of questions surrounding nitrogen management in winter wheat have been received regarding the timing of application.

My first analysis tool would be a nitrogen soil test, particularly in the surface soil zone. I would then look at the number of plants and tillers that have survived the winter. If surface soil nitrogen is very low and/or plant population is less than desired, I would apply more nitrogen early to stimulate tillering and plant growth.

A majority of the nitrogen should be available by the early jointing stage or Feekes 6 growth stage or 6 leaf stage to have the most impact on yield.

Applying nitrogen to impact grain protein levels in winter wheat would probably only be economical if protein levels are expected to be less than 12%. Winter wheat price discounts for protein levels below 12% are much more severe than the protein premiums paid above 12%. So basically, your goal is 12% protein winter wheat unless you are in an area or market that can capture significant protein premiums.

Please see the last issue (Spring 2003, Volume 3, Issue 2) for more information.

Winter Survival 2002-2003

Winter wheat survival this past winter exceeded Roger's and my expectations despite the lack of snow cover that was experienced in many fields during February and March. Temperatures were also cold during this time period.

Most of the soil temperature readings taken this winter were at the 4-inch depth, which is not necessarily representative of the soil temperature at crown depth of 0.5-inch to 1-inch. Soil temperatures at several locations would have indicated more mortality than was actually experienced. We are working with a couple of locations to try and have temperature probes placed at the crown depth this coming winter. Hopefully, they can be tied to a web site for easy access.

One theory to the decreased injury is that the cold hardening process in October was very effective with the many cold evenings. This was not the case in the two prior falls with warm temperatures until snow cover and then immediate cessation of growth. Spring warm up was also more gradual this year than the fluctuating temperatures of the past couple of springs.

Stand loss occurred most frequently where dry seedbeds delayed fall germination and poor growth resulted in small crowns in combination with little standing residue to trap snow. Adequate standing residue seemed to be the more important of the two. It seemed that if there was adequate height and density of standing residue, survival was adequate even in the areas of delayed fall emergence.

One observation that Roger and I made was most winter wheat plants across the two states survived into the first week of April. Two weather events in April caused a majority of the stand losses that were experienced. One was the mini blizzard accompanied by cold temperatures in mid-April after dormancy had broken. The other was the high temperature and high winds that caused dry surface soil conditions in an area in the central and western Dakotas that also experienced poor fall growth. Death was actually caused by desiccation in the latter scenario because the surface soils were dry to 2 to 3-inches and crown root development was just starting on the poorly developed plants. Poor seed to soil contact and/or hair pinning accentuated both of these problems.

Where plant development was adequate last fall, stands seem to be adequate to produce good to excellent yields. Differences in hardiness were visible in a number of the research and demonstration plots. We finally seem to be back to a more normal weather pattern of spring rains, which is important for good winter wheat yields.

Agronomy News
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The Money Farm
by Mike Krueger

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The May USDA crop production estimates and supply and demand reports have started to change the psychology of the market from bearish to bullish.

The much smaller than expected world wheat crop and ongoing tightness in corn and soybean supplies caught many analysts and traders off guard. This biggest change in the overall outlook is in wheat. Last year's world wheat crop was small because of droughts in the US, Canada and Australia. The market has been talking about how big this year's world wheat crop was going to be since last winter.

Significant crop problems in the Former Soviet Union and Europe now mean the world wheat crop will not be much bigger than last year. That also means that world wheat supplies will get to levels not seen since the early 70's in the coming year.

World feed grain supplies will also be extremely tight in the coming year even with good US corn and barley crops. All of this means that markets will probably be very active, at least until we get through the growing season in the Northern Hemisphere. Now the world is counting on big crops in the US, Canada and Australia to prevent supplies from getting dangerously small.

Winter Cereal Sponsors

Ducks Unlimited

North Dakota Natural Resources Trust

South Dakota Game, Fish and Parks

North Dakota Game & Fish Department

Syngenta Crop Protection

Natural Resources Conservation Service (NRCS)

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

North Dakota Dept. of Health 319 Program

NDSU and SDSU Cooperative Extension Service