

## Minnesota Wheat Research and Promotion Council

### RESEARCH PROPOSAL GRANT APPLICATION

<b>1. NAME AND ADDRESS OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE</b>  <b>Name:</b> North Dakota State University <b>Address:</b> Office of Sponsored Programs Administration Dept #4000 PO Box 6050, Fargo, ND 58108-6050		
<b>2. TITLE OF PROPOSAL</b> <b>Spring Wheat Protein Spread Project</b>		
<b>3. PRINCIPAL INVESTIGATOR(S)</b> Frayne Olson	<b>4. PI #1 BUSINESS ADDRESS</b> North Dakota State University Dept of Agribusiness and Applied Economics Barry Hall 606 NDSU Dept 7110, PO Box 6050 Fargo, ND 58108-6050 frayne.olson@ndsu.edu	
PI# 2 Name: Ron Haugen		
PI# 3 Name: NA		
<b>5. PROPOSED PROJECT DATES (calendar years)</b> July 1, 2014 to June 30, 2015  Note: Research Reports are Due November 15th of Each Year	<b>6. TOTAL PROJECT COST</b>  \$18,100	<b>7. PI #1 PHONE NO.</b>  701-231-7377
<b>8. RESEARCH OBJECTIVES:</b> (List objectives to be accomplished by research grant)  This project is an educational program which combines current hard red spring wheat agronomic research with protein spread marketing data to be disseminated to producers. There are two objectives of this project: First, producers will understand the dynamics of hard red spring wheat protein spread marketing. They will use and understand decision tools to analyze protein spreads and marketing alternatives and ultimately increase their profitability. Secondly, producers will understand the economic factors involved with a post-anthesis nitrogen application to hard red spring wheat to increase protein levels. They will use and understand decision tools to analyze this action. Cost and benefits of this action will be understood.  Attach a 2-page detailed discussion of importance of the proposal to wheat profitability; how study complements previous research in area; procedures to be used; and competency of the research group in achieving research objectives. (Please keep the proposal concise, only 2 pages will be provided reviewers).		
<b>Signature Of Principal Investigator</b>	<b>Date</b>	<b>Phone Number</b> 701-231-7377
<b>Signature Of Authorized Representative</b>	<b>Title</b>	<b>Date</b>
<b>Address Of Authorized Representative</b>		<b>Phone Number</b>

# Minnesota Wheat Research and Promotion Council

## RESEARCH PROPOSAL GRANT APPLICATION

### (2-pages maximum)

#### Project Title:

#### Spring Wheat Protein Spread Project

#### Importance of this project to the profitability of wheat producers:

Hard red spring wheat (HRSW) grown on the Northern Plains is sold based on grain quality grades. A very important grading factor is protein percentage. Various climatic and agronomic conditions determine protein levels. Typically a premium is paid for protein above 14 percent and discounted if lower. The specific premiums and discounts paid for alternative protein levels vary based on market conditions. Spring wheat with higher protein is desired by millers and bakers for its characteristics in bread and baking flour. Varieties with high yield potential typically do not have high protein characteristics. Producers must make decisions on which varieties to plant and how to manage fertility during the growing season.

Two issues are considered: Issue 1. Producers must make marketing decisions based on the current protein spreads and those expected in the future. Issue 2. Just before harvest, producers must decide to apply nitrogen post-anthesis (after flowering) to increase protein. Costs of this procedure needs to be considered such as nitrogen price, application cost, and the risk of application not working. This project will address these two issues by educating producers with decision aids and other risk management tools and materials. In our previous Extension meetings, producers have indicated a need for this education.

Protein premiums and discounts applied to HRSW can significantly influence the net cash price received by the producer. The project's goal is to help western Minnesota and eastern North Dakota HRSW producers make two decisions: 1: to help market spring wheat production by incorporating protein spreads (premiums or discounts) into marketing plans. 2: to decide whether or not to make a post-anthesis nitrogen application to try increase protein levels.

Presentations at workshops, Extension, marketing club, commodity group and other producer meetings will be conducted demonstrating decision tools for protein spread marketing and post-anthesis nitrogen application. The primary audience will be hard red spring wheat producers in western Minnesota and some in eastern North Dakota. The project will be delivered in western Minnesota and eastern North Dakota. At least six presentations are planned for a western Minnesota audience. Meetings may be held in cities in eastern North Dakota along the border with Minnesota, It is assumed they will draw Minnesota producers. Presentations would be done at the Small Grains Update meeting series and the Prairie Grains Conference. Three hundred attendees are estimated.

#### Procedures:

Dr. Dave Fransen, NDSU Soil Science and Dr. Joel Ransom, NDSU Plant Science, have done physical experiments regarding post-anthesis nitrogen application. This project will marry that research with applied economics. Dr. Frayne Olson has done studies and presentations on protein spreads. This knowledge and data will be used in this project.

The project will be conducted in two methods. First, materials will be developed for PowerPoint presentations to describe and disseminate the post-anthesis decisions and protein spread marketing alternatives to producers. Secondly, decision tools will be developed. Excel spreadsheets tools will be developed to illustrate post-anthesis decision alternatives. Physical experiment data from Dr. Dave Fransen's and Dr. Joel Ransom's post-anthesis studies on fertilizer types and applications will be used.

Decision tools will be demonstrated and PowerPoint presentations will be offered at producer meetings. Also these decision tools and presentations will be available on the "smallgrains.org" website and the NDSU Extension website.

**Regional linkages to other research activities:**

NA

**List current or potential other funding sources for this project:**

No other organizations are involved in funding. However, the NDSU Extension Service will provide travel expenses for eastern North Dakota meetings as part of its ongoing effort to inform producers about current issues.

**Research Group:**

NA

**Relationship to past projects:**

NA

**Estimate the budget requirements:**

Time Slip Salary:		\$15,000
Time Slip Benefits:		1,500
10% is the NDSU standard rate for time slip employees		
Travel:		
560 miles out of state mileage @ .40 (state car)	224	
Lodging out of state 6 nights @ \$100	600	
Per Diem meals 6 days @ \$46	276	1100
Printing:		<u>500</u>
Total Request:		\$18,100

**References:**

Olson, Frayne *Spring Wheat Basis and Protein Spreads*, Presentation at the 2012 Small Grains Update Meetings, January 16-20, 2012

**Minnesota Wheat Research and Promotion Council  
RESEARCH PROPOSAL BUDGET**

<b>PROJECT TITLE: Spring Wheat Protein Spread Project</b>			
<b>Principal Investigator(s) / Project Directors(s)</b>  Frayne Olson, Ron Haugen	<b>Funds Requested For</b>		
	<b>Year 1 (2014)</b>	<b>Year 2 (2015)</b>	<b>Year 3 (2016)</b>
<b>A. Salaries and Wages</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
1. Co-principal Investigator(s)	7500	7500	
2. Senior Associates			
3. Research Associates - Post Doctorate			
4. Other Professionals			
5. Graduate Students			
6. Prebaccalaureate Students			
7. Secretarial - Clerical			
8. Technical, Shop and Other			
<b>B. Fringe Benefits @ 35% (10% only for time slip employees)</b>	<b>750</b>	<b>750</b>	
<b>C. Nonexpendable Equipment (Planting and harvesting equipment use)</b>			
<b>D. Materials and Supplies</b>			
<b>E. Travel</b>	<b>550</b>	<b>550</b>	
<b>F. Publication Costs</b>	<b>250</b>	<b>250</b>	
<b>G. Computer Costs</b>			
<b>H. All Other Direct Costs (Attach supporting data)</b>			
<b>TOTAL AMOUNT OF THIS REQUEST (per year)</b>	<b>9050</b>	<b>9050</b>	