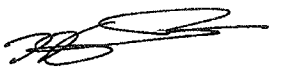



# Minnesota Wheat Research and Promotion Council

## RESEARCH PROPOSAL GRANT APPLICATION

<b>1. NAME AND ADDRESS OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE</b>  <b>Name:</b> Regents of the University of Minnesota <b>Address:</b> Sponsored Projects Administration 454 McNamara Alumni Center, 200 Oak Street SE Minneapolis, MN 55455-2070		
<b>2. TITLE OF PROPOSAL</b> Southern Minnesota Small Grains Research & Outreach Project		
<b>3. PRINCIPAL INVESTIGATOR(S)</b> J.J. Wiersma  PI# 2 Name: P.A. Glogoza  PI# 3 Name:	<b>4. PI #1 BUSINESS ADDRESS</b> Northwest Research & Outreach Center University of Minnesota 2900 University Avenue Crookston, MN 56716	
<b>5. PROPOSED PROJECT DATES (calendar years)</b> January 1, 2017 – December 31, 2017  <small>Note: Research Reports are Due November 15th of Each Year</small>	<b>6. TOTAL PROJECT COST</b> \$ 20,183.00	<b>7. PI #1 PHONE NO.</b> +1 (281) 281-8629
<b>8. RESEARCH OBJECTIVES:</b> (List objectives to be accomplished by research grant)  The objectives of the research are: <ul style="list-style-type: none"> <li>- Conduct variety performance evaluation trials for HRSW, HRWW, barley, rye, and/or oats near Rochester, New Ulm, LeCenter, Kimball, and Benson.</li> <li>- Publish the results of the variety performance evaluations trials in the Minnesota Field Crops Trials bulletin</li> <li>- Conduct a small demonstration trial of the use of Pallasade growth regulator in reduce lodging in HRSW and oats.</li> <li>- Organize summer field days at the four variety performance evaluation trials.</li> <li>- Organize grower seminars in Mora, Cold Spring, LeCenter, Slayton, and Benson in the winter of 2017</li> </ul> <p>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).</p>		
<b>Signature Of Principal Investigator</b> 	<b>Date</b> 12/29/16	<b>Phone Number</b> + (218) 281-8629
<b>Signature Of Authorized Representative</b> 	<b>Title</b> Kevin McKoskey, Director Sponsored Projects Administration	<b>Date</b> 1/5/17
<b>Address Of Authorized Representative</b>  Kevin McKoskey, Sr. Associate Director, Office of Sponsored Projects Administration 450 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, MN 55455-2070		<b>Phone Number</b>  612-624-5599

# Minnesota Wheat Research and Promotion Council

## RESEARCH PROJECT PROPOSAL

### (2-pages maximum)

**Project Title:** Southern Minnesota Small Grains Research & Outreach Project

**Importance of this project to the profitability of wheat producers:** Although small grains have not been king in central and southern Minnesota for over a century, barley, spring wheat, and oat acreages in these parts of the state account for approximately 15, 20 and 75% of the state's total acreages. In the past small grains were often grown on less productive soils and for reasons other than grain production including livestock manure applications, cover crop for forage establishment, straw production. Low commodity prices across the board and a need/desire to diversify crop rotations has meant that producers in these regions are more and more inclined to intensify production practices, demonstrating time and again that small grains can be grown very successfully with both high yield and good quality. This replicates what our research and demonstrations plots have documented.

Our goals are to assist southern small grains producers by outlining risk management strategies and identifying best practices to maximize yield and quality by further improving variety selection, alerting producers about potential disease and pest problems, educating producers about how and when to use crop inputs, and ultimately developing best management practices specific to their agro-ecological zone.

**Procedures:** We propose to establish variety performance evaluation trials for HRSW, HRWW, barley, rye, and/or oats near Rochester, New Ulm, LeCenter, Kimball, and Benson (Table 1). In addition to the variety performance evaluations, the trial will include a small demonstration trial of the use of Pallaside growth regulator in reduce lodging in HRSW and oats in the 2017 growing season. These locations will again serve as sentinels for production pest problem identification and reporting and will be used for hands-on demonstrative workshop locations for summer field days.

Table 1 – On-Farm locations in central and southern Minnesota

Location	HRWW	Rye	HRSW	Barley	Oats
LeCenter	x	x	x		x
Kimball	x	x	x	x	x
Benson			x		
Rochester <sup>1</sup>					x
New Ulm <sup>1</sup>				x	

<sup>1</sup> Not funded through this grant application

Field preparations are done by the cooperators with planting, weed control, data collection, and harvest completed by the research group. All trials will use a Randomized Complete Block design with 3 replications. Individual experimental units measure 4 3/8 ft. by 15 ft. for the winter cereals and 5 ft. by 15 ft. for the spring cereal trials and are seeded with a Kinkaid no-till plot drill or Almaco plot drill, respectively. All trials will be harvested and sub-sampled with a Zurn 150 plot combine.

The Southern Wheat Tour encompasses the winter extension programming efforts for small grains in central and southern Minnesota. These meetings will be held in Mora, Cold Spring, LeCenter, Slayton, and Benson in 2017. The performance data is integrated into the Minnesota Field Crops Trials bulletin that is published annually by the Minnesota Agricultural Experiment Station under the authority granted by the Hatch Act of 1887 to conduct performance trials on farm crops and interpret data to the public. The data is also presented and interpreted for producers during the Southern Wheat Tour.

**Outline the timeline for completion:**

October of 2016.....	Planting of winter wheat and rye trials
February of 2017.....	Southern Wheat Tour (LeCenter, Mora, Cold Spring, Slayton, and Benson)
April of 2017.....	Planting of spring wheat, barley, oats trials
June of 2017.....	Field Day at each research location of LeCenter, Kimball, and Benson
July of 2017.....	Harvest of research locations
Aug-Oct. of 2017.....	Processing of plot samples and data compilation
November of 2017.....	Release of collected data

**Regional linkage to other research activities:** Minnesota pest scouting survey, winter rye project, barley breeding program, oat breeding program, and spring wheat breeding program.

**List current or potential other funding sources for this project:** Winter rye project, barley breeding program, oat breeding program, and spring wheat breeding program, Minnesota Soybean Research and Tech Transfer (vehicle and equipment rentals)

**Research Group:** J.J. Wiersma, P.A. Glogoza, J.A. Anderson, K.P. Smith, M. Smith.

**Relationship to past projects:** We continue building on previous efforts in working closely with producers, consultants, industry and researchers to provide impactful data with utility. We have a core audience that has been growing over time. Numerous private industry representatives have approached our team in wanting to partner with establishing local sources of small grains for their needs. This includes millers, bakers, maltsters, food oats, and the horse industry. Seed and input companies have expressed appreciation for past efforts and anticipation of future projects. Producers are quick studies and have readily adopted much of the information collected and discussed as it relates to genetics, products, production management, pests, and equipment. Our grant submittal is a response to the call for continued work from producers and industry in this part of Minnesota.

**Estimate the budget requirements:** \$ 20,183

Table 2 - Primary costs include the establishment, maintenance, in-season data collection, and harvest of three research sites as outlined.

Cost Center	Description	Amount
Labor		
Technical & Civil Service	Technical personnel	\$ 950.00
Student labor	University students	\$ 1,260.00
Temp/Casual	Non University personnel	\$50.00
Fringe Benefits		
Technical	26.0 %	\$ 247.00
Student labor	0 %	\$ .00
Temp/Casual	8.1%	\$4.00
Non-expandable equipment		
Pick-up lease P. Glogoza		\$ 1,900.00
Lease of tractor for plot maintenance		\$ 850.00
Materials & Supplies	Envelopes, fertilizer, seed, fungicides etc.	\$ 1,611.00
Travel		
Mileage for planting/harvest	2,400 miles @ \$2.00/ mile	\$ 4,800.00
Mileage for plot maintenance/note taking/etc.	4,200 miles @ \$0.54/mile	\$ 2,268.00
Mileage for truck lease to move equipment	4,500 miles @ \$0.37/mile	\$ 1,665.00
Lodging & Meals	8 overnight stays (lodging and per diem)	\$ 1,200.00
Other Direct Cost		
Field Day	Publicity	\$ 750.00
Field Day	Meals	\$750.00
Cooperator reimbursements	\$500-/acre charge (participant payments for fertilizer and tillage fees)	\$ 1,878.00
	<b>TOTAL</b>	<b>\$20,183.00</b>

# Minnesota Wheat Research and Promotion Council

## RESEARCH PROJECT PROPOSAL BUDGET

<b>PROJECT TITLE:</b> Southern Minnesota Small Grains Research & Outreach Project			
<b>Principal Investigator(s) / Project Directors(s)</b> J.J. Wiersma, P.A. Glogoza	Funds Requested For		
	Year 1 (2017)	Year 2 (2018)	Year 3 (2019)
<b>A. Salaries and Wages</b>	\$	\$	\$
1. Co-principal Investigator(s)			
2. Senior Associates			
3. Research Associates - Post Doctorate			
4. Other Professionals			
5. Graduate Students			
6. Prebaccalaureate Students	\$ 1,260.00		
7. Secretarial - Clerical			
8. Technical, Shop and Other	\$ 1,000.00		
<b>B. Fringe Benefits</b>	\$ 251.00		
<b>C. Nonexpendable Equipment (Planting and harvesting equipment use)</b> - see Table 2 for details	\$ 2,750.00		
<b>D. Materials and Supplies</b>	\$ 1,611.00		
<b>E. Travel - see Table 2 for details</b>	\$ 10,683.00		
<b>F. Publication Costs</b>			
<b>G. Computer Costs</b>			
<b>H. All Other Direct Costs (Attach supporting data) - see Table 2 for details</b>	\$ 2,628.00		
<b>TOTAL AMOUNT OF THIS REQUEST (per year)</b>	\$ 20,183.00	\$	\$