



U.S. Wheat & Barley Scab Initiative

FY12 Request for Pre-Proposals

For more information:

www.scabusa.org

scabusa@scabusa.org

517-355-0271 ext. 1183

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Note: All Individual Pre-Proposal forms may be viewed and downloaded from the FY12 RFP Website: http://www.scabusa.org/research_rfp12

EXECUTIVE SUMMARY

FY12 Request for Pre-Proposals (RFP) - Quick Start

Read this First!

What is new for FY12?

- **Two year pre-proposals** - All proposed research projects being submitted to a coordinated project or individual research area pre-proposals should be submitted as two year requests.
- **The USWBSI is soliciting proposed research for the following:**

- **Coordinated Projects (CP):**

- Barley (BAR-CP);
- Durum (DUR-CP); and
- Hard Winter Wheat (HWW-CP)
- VDHR Regional Nurseries:
 - Spring Wheat (VDHR-SPR);
 - Northern Soft Winter Wheat (VDHR-NWW); and
 - Southern Soft Winter Wheat (VDHR-SWW)

For more information, please turn to page 16.

- **FHB Management (MGMT) Coordinated Projects:**

- 1) Integrated Management Studies (IM) Coordinated Project
- 2) Uniform Fungicide and Biological Control Trials (UT) Coordinated Project

For more information, please turn to page 23.

- **MGMT, FSTU, GDER and PBG Individual Pre-Proposals:** The procedure is largely unchanged from FY11 with the exception that pre-proposals should be submitted as two year requests. For more information, please turn to page 29.

Finally, research priorities and action plan goals may have changed. For more information, please turn to page 8 or view the action plan at http://scabusa.org/pdfs/uswbsi_action-plan_web.pdf.

What is included in this document? This document contains only the instructions for submitting pre-proposals for FY12. All RFP forms must be downloaded from the RFP website at: http://scabusa.org/research_rfp12.html#fy12_rfp

Categories of Pre-Proposals for FY12:

There are three distinct categories of FY12 Pre-Proposals: **1) Proposed Research Projects** submitted to one of the Coordinated Projects (CP) listed above ; **2) Proposed Research Projects** submitted to one of the FHB Management (MGMT) Coordinated Projects (CP) listed above under MGMT; and **3) Individual Pre-Proposals** submitted to one of the following research areas: FHB Management (MGMT), Food Safety, Toxicology and Utilization of Mycotoxin-contaminated Grain (FSTU), Gene Discovery and Engineering Resistance (GDER), and Pathogen Biology and Genetics (PBG). For more information on these three categories, see page 3.

IMPORTANT DEADLINES FOR ALL CATEGORIES

Description of Item:	Deadline:
Pre-Registration for Electronic Pre-Proposal Submission (EPS) System Opens	June 1, 2011
EPS System Opens	July 15, 2011
Pre-Registration for EPS System Closes	August 31, 2011
Submission of FY12 Individual RA Pre-Proposal(s) and Supporting Documents (All Categories)	September 20, 2011

To see additional 'Category' specific deadlines, turn to page 7.

PREFACE

The FY12 Request for Pre-Proposals is based on the USWBSI's Action Plan which will lead to greater collaboration and communication, and more rapid attainment of the Initiative's primary goal: **“To develop as quickly as possible effective control measures that minimize the threat of Fusarium head blight (scab), including the reduction of mycotoxins, to the producers, processors, and consumers of wheat and barley.”** To read the complete action plans for all research areas go to http://www.scabusa.org/pdfs/uswbsi_action-plan_web.pdf.

FY12 Research Categories (RC)

Below are the Research Categories for which FY12 pre-proposals will be accepted:

1. Commodity- and VDHR-based Coordinated Projects:

- ❖ Barley Coordinated Project (BAR-CP)
- ❖ Durum Coordinated Project (DUR-CP)
- ❖ Hard Winter Wheat Coordinated Project (HWW-CP)
- ❖ Variety Development and Host Resistance – Spring Wheat Region (VDHR-SPR)
- ❖ Variety Development and Host Resistance - Northern Soft Winter Wheat Region (VDHR-NWW)
- ❖ Variety Development and Host Resistance - Southern Soft Red Winter Wheat Region (VDHR-SWW)

2. FHB Management Coordinated Projects:

- ❖ Integrated Management Studies (IM)
- ❖ Uniform Fungicide/Biocontrol Trials (UT)

3. Research Areas (RA) Individual Pre-Proposals:

- ❖ FHB Management (MGMT)
- ❖ Food Safety, Toxicology and Utilization of Mycotoxin-contaminated Grain (FSTU)
- ❖ Gene Discovery and Engineering Resistance (GDER).
- ❖ Pathogen Biology & Genetics (PBG).

Program descriptions and research priorities for the research categories listed above are included in this document (Page 8), and may also be accessed at http://www.scabusa.org/research_rfp12. Proposed research should be based on the FY12-13 research priorities which are derived from the goals of the Action Plan.

Requests for Funding

The USWBSI has changed the annual research plan and budget process for FY12, including major changes to the Request for Pre-Proposal (RFP) process. **There are three distinct categories of FY12 Pre-Proposals:** 1) Commodity and VDHR-based Coordinated Projects; 2) FHB Management Coordinated Projects; and 3) Individual Pre-Proposals submitted to MGMT, FSTU, GDER or PBG Research Areas. An overview of the three categories follows:

- 1) **Commodity and VDHR-based Coordinated Projects:** If the primary focus of your proposed research (all USWBSI Research Areas) is on Barley, Durum or Hard Winter Wheat, you **should** submit your proposed research to the appropriate Coordinated Project Committee (CPC). If your proposed research is in the area of Variety Development and Host Resistance, and you work within one of the Uniform Nursery Regions (see page 16 to find your regional nursery), you **must** submit your proposed research to the appropriate VDHR Uniform Nursery Coordinated Project Committee. Please follow the instructions under **Section 1 - Coordinated Projects – Proposed Research Projects** (instructions begin on page 16).
- 2) **FHB Management Coordinated Project Pre-Proposals:** If your proposed research fits into one of the FHB Management Coordinated Projects listed below, please follow the instructions and forms under Section 2 titled “**FHB Management Coordinated Project Proposed Research Projects**” (instructions begin on page 23) to submit your proposed research.
 - Integrated Management Studies (IM)
 - Uniform Fungicide/Biocontrol Trials (UT)
- 3) **Individual Research Area Pre-Proposals:** If your proposed research is in one of the research areas listed on page 2 and is not associated with a Commodity, VDHR or FHB Management Coordinated Project, please follow the instructions under Section 3 titled “**Individual Research Area Project Pre-Proposals**” (instructions begin on page 29) to submit your pre-proposal.

Enhancement of USWBSI Communication Activities: The USWBSI is interested in receiving pre-proposals that innovatively address this need. PIs should follow the instructions under **Category 3: Individual Research Area Pre-Proposals**. In Box 16 of the Application for Funding Cover Page, select option ‘None of the above’.

PIs are welcome and encouraged to interact with any of the contacts (listed on page 6) for the Coordinated Projects or Research Areas, or the Networking & Facilitation Office, to identify the appropriate area for their proposed work.

Electronic Submission of FY12 Pre-Proposals:

The Electronic Pre-Proposal Submission (EPS) System (web-based) must be used for the submission of all individual pre-proposals and supporting documents for all proposed research projects. General instructions for completing pre-proposals and supporting documents for electronic submission are included in this document.

The on-line submission process begins with the completion of the 'Pre-Registration Process'. The pre-registration period opens June 1, 2011 and must be completed no later than August 31, 2011. Information submitted during this process will be used to setup accounts for PIs and co-PIs. The Electronic Pre-Proposal Submission (EPS) System will open July 15. Information needed for accessing the EPS System will be distributed to PIs within 48 business hours after completing the 'Pre-Registration Process'.

The USWBSI does not require signatures by the Authorized Organizational Representatives (AORs) on pre-proposals/proposed research projects, so AORs will not require access to the EPS system. If PI's institution requires approval from the Authorized Organizational Representative (i.e. Grants or Sponsored Programs Office) on 'pre-proposals', included in the RFP is a special form that can be used at the institutional level for obtaining approval by the PI's sponsored programs office. The form can be downloaded from the FY12 RFP website at http://scabusa.org/research_rfp12#fy12_rfp.

INTRODUCTION

After carefully reading the 'PREFACE' and 'FY12-13 Research Category Program Descriptions and Research Priorities', you are ready to create your proposed research requests. Below are a few helpful hints to guide you through this process:

1. First, determine the appropriate Category for your proposed research: 1) Coordinated Project; 2) MGMT Coordinated Project; or 3) Individual Research Area Project Pre-Proposal. You may contact any individual listed in Table 1 (page 6) to help determine the most appropriate category for your proposed research.
2. If Category 1 or 2 was selected in step 1, determine the Coordinated Project that best fits your proposed research.
3. If Category 3 was selected, determine the appropriate Research Area for your proposed research.
4. Finally, follow the instructions in the corresponding section to complete your proposal.

NOTE: Proposals that do not fit into one of the coordinated projects or research areas (listed on page 3) for which proposals are being accepted for FY12 are also welcome. Follow the instructions under Section 3 to complete and submit your pre-proposal.

PRE-PROPOSAL PREPARATION:

It is important that all pre-proposals conform to the instructions provided in the FY12 Request for Project Pre-Proposal Application. The USWBSI's Networking & Facilitation Office may return, without review, any pre-proposals that are not consistent with these instructions. The NFO must authorize any deviations from these instructions in advance of pre-proposal submission. Deviations must be authorized by written approval from the NFO Director (dvs@uky.edu) or Manager (scabusa@scabusa.org).

COLLABORATIVE PROJECTS:

In addition to the Coordinated Projects, other collaborative projects within or across research areas are encouraged. PIs who intend to submit pre-proposals with similar objectives, methods, treatments, etc. should coordinate their efforts to produce a single, unified pre-proposal rather than similar, separate pre-proposals. If you are part of a collaborative project, and your proposed project is approved for funding, the funding will come in the form of a direct agreement between USDA-ARS and your institution.

REVIEW AND FUNDING RECOMMENDATION PROCESS:

Please note that proposed research projects and pre-proposals will be **regarded as confidential** documents. Distribution will be limited only to parties involved with the review process. All pre-proposals received by the assigned deadline will be sent for review to one of the designated review panels. The Executive Committee will then review the panels' recommendations and if necessary, modify the awards to conform to the FY12 Congressional budget and the overall objectives of the Initiative. The final step is approval of the EC's recommended research plan and budget by the Steering Committee in early December. **All PIs whose pre-proposals or proposed research project(s) are recommended for funding by the Initiative will be asked to compile and formalize their proposed research into 'Grant Applications' for inclusion in the Initiative's recommended research plan** (approximately mid-January). The recommended comprehensive plan will be sent to USDA-ARS in the early months of 2012. More detailed information on the review process for each pre-proposal category is available on the RFP website - http://www.scabusa.org/research_rfp12.

REVISIONS TO PRE-PROPOSALS MADE DURING THE REVIEW PROCESS:

In the event of a significant development (e.g., research findings, changed circumstances, unavailability of PI, etc.) that might materially affect the outcome of the review of a pending pre-proposal, the PI must contact the Director of the NFO to discuss the issue. Depending on the outcome of that discussion, the PI may be allowed to submit a one-page update to the NFO. The NFO will provide a form and deadline for the update. Submitting additional information must not be used as a means of circumventing page limitations or stated deadlines.

NEED HELP?

If you have any questions regarding this application or the pre-proposal process, please contact the U.S. Wheat and Barley Scab Initiative's Networking and Facilitation Office (NFO) by phone at (517) 355-0271 ext. 1183 or by e-mail at scabusa@scabusa.org.

To facilitate pre-proposal preparation, a Frequently Asked Questions (FAQs) document pertaining to preparation and submission of pre-proposals has been developed and is available electronically on the USWBSI's Website at:

http://scabusa.org/pdfs/rfp_faq.pdf

The FAQ document will be updated regularly as questions and requests for clarification are submitted to the Networking & Facilitation Office (NFO).

Table 1. Contacts for Research Areas, Coordinated Projects and the Networking & Facilitation Office (NFO).

RESEARCH AREAS (RA)	CONTACT	EMAIL ADDRESS
FHB Management (MGMT)	Christina Cowger, USDA-ARS, NC	Christina.Cowger@ars.usda.gov
Food Safety, Toxicology and Utilization of Mycotoxin-contaminated Grain (FSTU)	Paul Schwarz, North Dakota State Univ.	Paul.Schwarz@ndsu.edu
Gene Discovery and Engineering Resistance (GDER)	Steve Scofield, USDA-ARS, IN	scofield@purdue.edu
Pathogen Biology and Genetics (PBG)	Frances Trail, Michigan State Univ.	trail@msu.edu
COORDINATED PROJECTS (CP)		
COORDINATED PROJECTS (CP)	CONTACT	EMAIL ADDRESS
MGMT-CP Integrated Management Studies (IM)	Pierce Paul, Ohio State Univ.	paul.661@osu.edu
MGMT-CP Uniform Fungicides/Biocontrol Trials (UT)	Scott Halley, North Dakota State Univ.	scott.halley@ndsu.edu
Barley (BAR)	Kevin Smith, Univ. of Minnesota	smith376@umn.edu
Durum (DUR)	Xiwen Cai, North Dakota State Univ.	xiwen.cai@ndsu.edu
Hard Winter Wheat (HWW)	Bill Berzonsky, South Dakota State Univ.	William.Berzonsky@sdstate.edu
VDHR ¹ Uniform Nursery- Spring Wheat (VDHR-SPR)	Karl Glover, South Dakota State Univ.	Karl.Glover@sdstate.edu
VDHR Uniform Nursery – Northern Soft Winter Wheat (VDHR-NWW)	Clay Sneller, Ohio State Univ.	sneller.5@osu.edu
VDHR Uniform Nursery – Southern Soft Red Winter Wheat (VDHR-SWW)	Jose Costa, Univ. of Maryland	costaj@umd.edu
NETWORKING & FACILITATION OFFICE (NFO)		
NETWORKING & FACILITATION OFFICE (NFO)	CONTACT	PHONE NUMBER/E-MAIL
General Questions regarding the RFP Process	Dave Van Sanford, Director	859-338-2409 dvs@email.uky.edu
	Sue Canty, Manager	517-290-5023 scabusa@scabusa.org

¹VDHR – Variety Development and Host Resistance

IMPORTANT RFP DATES AND DEADLINES FOR FY12 PRE-PROPOSALS

IMPORTANT DATES AND DEADLINES (order by Category and then date)

<u>RFP Category</u>	<u>Description of Item:</u>	<u>Deadline:</u>
Category 1: Commodity and VDHR-based Coordinated Projects	Pre-Registration for EPS System Opens (Proposed-Research and User Registration Forms)	June 1, 2011
	Letter of Intent (LOI) sent to CP Chair and NFO (electronic version acceptable)	July 1, 2011
	EPS System Opens	July 18, 2011
	CP Chairs notify all PIs who submitted Letters of Intent to their CP whether their proposed research has been accepted into the CP's FY12 Pre-Proposal.	August 1, 2011
	Pre-Registration for EPS System Ends (Proposed-Research and User Registration Forms).	August 31, 2011
	E-version of Proposed Research Project (PRP) sent to CPC Chair and NFO.	September 2, 2011
	CV/Publication List, and Current and Pending Support Form uploaded to EPS System.	September 20, 2011
	Submission of FY12 CP Pre-Proposals by CPCs	October 5, 2011
Category 2: FHB Management Coordinated Projects	Pre-Registration for EPS System Opens (Proposed-Research and User Registration Forms)	June 1, 2011
	EPS System Opens	July 18, 2011
	Letter of Intent (LOI) sent to CP Chair and NFO (electronic version acceptable)	July 19, 2011
	CP Chairs notify all PIs who submitted Letters of Intent to their CP whether their proposed research has been accepted into the CP's FY12 Pre-Proposal.	August 12, 2011
	Pre-Registration for EPS System Ends (Proposed-Research and User Registration Forms).	August 31, 2011
	E-version of Proposed Research Project (PRP) sent to CPC Chair and NFO.	September 9, 2011
	CV/Publication List, and Current and Pending Support Form uploaded to EPS System.	September 20, 2011
	Submission of FY12 MGMT-CP Pre-Proposals by CPCs.	October 7, 2011
Category 3: Research Area Individual Pre-Proposals	Pre-Registration for EPS System Opens (Proposed-Research and User Registration Forms)	June 1, 2011
	EPS System Opens	July 18, 2011
	Pre-Registration for EPS System Ends (Proposed-Research and User Registration Forms).	August 31, 2011
	Submission of FY12 Pre-Proposal(s) and supporting documents via the EPS System.	September 20, 2011

Need Help? Please contact (see previous page) Sue Canty or Dave Van Sanford if you have questions.

FY12-13 Research Categories (Areas and Coordinated Projects) Program Descriptions

FHB MANAGEMENT (MGMT)

Program Description:

The FHB Management (MGMT) research area supports research to develop effective and economical disease management practices that reduce FHB severity and mycotoxins in small grain crops to meet the immediate and long-term needs of the wheat and barley industries.

This research area involves:

- tillage practices, crop sequences, and other cultural practices targeting *Fusarium*-infested residues;
- fungicides and biocontrol agents with demonstrated field efficacy, and their application technologies;
- the refinement and deployment of disease prediction and forecasting models, and disease management decision tools; and
- studies of pathogen survival, inoculum production, dispersal, infection, colonization, mycotoxin production, and factors accounting for unacceptable levels of mycotoxins in symptomatic or asymptomatic grain.

NOTE: Priority will be given to multi-PI, collaborative, integrated pre-proposals that address the research priorities listed below. Pre-proposals pertaining to uniform integrated management (IM) studies and uniform fungicide/biocontrol trials (UT) will be developed as multi-PI, collaborative, integrated proposals. Coordinators for those integrated proposals are listed in Table 1 (FY12 RFP, page 6).

FY12-13 Research Priorities derived from Action Plan Goals:

1. Validate and optimize integrated management strategies for FHB and mycotoxins.
2. Help develop and validate the next generation of management tools for FHB and mycotoxin control.
3. Develop a full understanding of specific environmental and biological factors influencing infection and toxin accumulation.
4. Enhance communication and end user education/outreach.

FOOD SAFETY, TOXICOLOGY AND UTILIZATION OF MYCOTOXIN-CONTAMINATED GRAIN (FSTU)

Program Description:

The Food Safety, Toxicology and Utilization of Mycotoxin-Contaminated Grain (FSTU) research area supports research on food safety and food processing issues related to the presence of *Fusarium* spp. mycotoxins in wheat and barley grain. Practical outcomes of research in this area include: 1) improved toxicological data to assure that current guidelines are providing the appropriate safety factors for the consumer; 2) analytical tools that can be used by small grain producers, elevators, millers, and processors, to rapidly and reliably identify mycotoxin-contaminated grain; 3) develop appropriate strategies to deal with contaminated grain; and 4) diagnostic data on *Fusarium* spp. mycotoxins required for development of FHB resistant/tolerant varieties of wheat and barley.

FY12-13 Research Priorities derived from Action Plan Goals:

1. Provide analytical support for DON/trichothecene quantitation for Initiative's stakeholders.
2. Provide requisite information on DON/trichothecene safety issues to producers, millers, researchers, risk assessors, and regulators.

GENE DISCOVERY AND ENGINEERING RESISTANCE (GDER)

Program Description:

The Gene Discovery and Engineering Resistance (GDER) research area (RA) will focus primarily on the identification of genes from wheat and barley that can be used to increase FHB resistance and/or reduce DON accumulation, and on development of engineered strategies for FHB resistance or reduced DON levels. Gene discovery and transformation of non-cereal systems will be supported only for the purpose of rapidly screening potential anti-*Fusarium* genes.

FY12-13 Research Priorities derived from Action Plan Goals:

1. Characterize the genetic function of existing and novel loci for FHB resistance.
2. Identify candidate genes for resistance against FHB and/or reduced DON accumulation.
3. Develop effective FHB resistance and/or reduced DON accumulation through transgenic strategies.
4. Develop improved methods for the generation of transgenic wheat and/or barley.

PATHOGEN BIOLOGY & GENETICS (PBG)

Program Description:

Research in this area includes studies that address pathogen diversity and mycotoxin biosynthesis on plants, host/parasite interactions, and host resistance mechanisms that target the pathogen. Research in PBG should complement and be linked to whole plant research that will lead to disease control and/or toxin reduction strategies. Population surveys should be accompanied by studies of biological relevance. Successive yearly surveys cannot be supported by this program, as funding is limited.

FY12-13 Research Priorities derived from Action Plan Goals:

1. Characterize plant-fungal interactions in plant lines being developed by researchers in the USWBSI.
2. Develop new strategies for reducing impact of FHB disease and mycotoxin contamination in barley and wheat. Focus on research that seeks to demonstrate a reduction in FHB or DON in planta. Establish a protocol for transferring these new strategies into viable crop product through collaborative interactions with GDER.

VARIETY DEVELOPMENT AND HOST RESISTANCE (VDHR)

Program Description:

The VDHR research area will be Uniform Nursery based in the case of soft winter wheat and spring wheat. States will be aligned with the uniform nurseries as follows: Uniform Regional Scab Nursery for Spring Wheat Parents (MN, ND, SD, MT); Uniform Northern Winter Wheat FHB Screening Nursery (NY, MI, OH, IN, IL, MO, KY); Uniform Southern Soft Red Winter Wheat FHB Screening Nursery (NC, MD, VA, AR, GA, LA). VDHR research will be commodity-based in the case of barley, durum and hard winter wheat coordinated projects.

Each Uniform nursery will be coordinated by a regional committee. Nurseries will be conducted in collaboration with a pathologist wherever possible and a subset of promising entries may be grown at multiple locations in Integrated Management Trials. The nurseries will also be evaluated for milling and baking quality, and haplotyped at the USDA regional genotyping labs. The most promising lines may be entered in the nurseries for a second year of testing at the lines originator's request. Collaborators will submit candidate parents for crossing, and prebreeding populations derived from these crosses/populations will be made available to all collaborators. Mapping of new resistance sources will be accomplished through joint phenotyping of populations. All collaborators must screen varieties planted commercially (>5% of wheat acreage) in their state for FHB resistance and provide this information to growers.

FY12-13 Research Priorities derived from Action Plan Goals:

1. Increase acreage planted with varieties with improved FHB resistance to reduce DON in the US grain supply.
2. Increase efficiency of coordinated project breeding programs to develop and release FHB resistant varieties.
3. Develop new breeding technologies and germplasm to further enhance short term and long term improvement of FHB resistance and to efficiently introgress effective resistance genes into breeding germplasm.

BARLEY COORDINATED PROJECT (BAR-CP)

Project Description:

Minimizing the impact of Fusarium head blight (FHB) on barley production in the U. S. requires a multi-dimensional, yet focused and coordinated research effort. The Barley Coordinated Project (CP) seeks to combine existing lines of productive research with new avenues of investigation to develop a set of tools and disease management strategies that will minimize disease risk to producers and end-users of barley (Figure 1). This toolbox will consist of: 1) varieties with enhanced levels of resistance to FHB, lower levels of deoxynivalenol (DON), superior agronomic performance, and good end-use quality; 2) chemical formulations, application procedures, and a disease forecasting model, that maximize fungicide efficacy; 3) residue management strategies that reduce the potential of pathogen inoculum to contribute to disease epidemics; and 4) a set of best management practices that incorporate our current understanding of the tools available to combat this disease.

FY12-13 Research Priorities derived from Action Plan Goals:

The Barley CP is organized around four of the Research Areas (RA) outlined in the USWBSI Action Plan. A set of 10 objectives are established within these four RAs.

I. Variety Development and Host Resistance (VDHR)

- Objective 1. Screen available *Hordeum* germplasm for novel sources of resistance.
- Objective 2. Map novel QTL for resistance to FHB in barley.
- Objective 3. Validate and fine map FHB resistance QTL.
- Objective 4. Develop new barley varieties with enhanced resistance to FHB and lower DON.

II. Gene Discovery and Engineering Resistance (GDER)

- Objective 5. Identify barley genes differentially regulated in the barley-*Fusarium* interaction.
- Objective 6. Evaluate promising transgenes in adapted genetic backgrounds in regional nurseries.

III. Pathogen Biology and Genetics (PBG)

- Objective 7. Investigate host genotype x pathogen interaction for infection, spread, disease development, and accumulation of DON.

IV. FHB Management (MGMT)

- Objective 8. Elucidate the epidemiology of colonization and survival of *Fusarium graminearum* on host tissue, disease development, and toxin accumulation.
- Objective 9. Develop and evaluate chemical/biological management strategies that reduce FHB and/or DON in barley.
- Objective 10. Develop and promote best management strategies through integrated disease management.

DURUM COORDINATED PROJECT (DUR-CP)

Project Description:

Fusarium head blight (FHB) caused by the fungus *Fusarium graminearum* Schwabe [telomorph: *Gibberella zeae* (Schwein.) Petch.] has been seriously attacking durum wheat (*Triticum turgidum* L. var. *durum*) in North Dakota and the surrounding states. There is continuous decline in harvested durum acreage and production in the durum producing area in the United States because of FHB. Fungicides may reduce the disease but the most environmentally safe and economical way to control the disease is with genetic resistance. A durum Coordinated Project (CP) has been created under the direction of the USWBSI to accomplish the initiative action plans. The CP's main objective is to develop FHB resistant durum wheat germplasm (lines/cultivars) with low DON levels, good agronomic traits, and good quality traits that will serve the producers, the domestic pasta industry, and the international export market. Reducing the impact of FHB requires a multidisciplinary effort and therefore the CP includes plant breeders, pathologists, geneticists, and researchers working in the area of disease management. The CP also includes stakeholders such as millers and pasta manufactures.

FY12-13 Research Priorities derived from Action Plan Goals for VDHR:

1. Search for novel sources of resistance to FHB in durum and its tetraploid relatives.
2. Identify, map, and validate FHB resistance QTL in the newly identified sources of resistance and develop user-friendly molecular markers to assist selection in durum breeding and germplasm development.
3. Incorporate FHB resistance QTL from tetraploid and hexaploid wheat accessions into adapted durum backgrounds and develop elite durum germplasm with the assistance of molecular markers in selection.
4. Develop durum varieties with enhanced level of FHB resistance and reduced DON accumulation.
5. Investigate host genotype x pathogen chemotype/genotype interaction for FHB and DON.
6. Evaluate chemical management strategies that reduce FHB and/or DON in durum.
7. Develop and promote best management strategies through integrated disease management.

HARD WINTER WHEAT COORDINATED PROJECT (HWW-CP)

Project Description:

The HWW-CP is an efficient coordinated project that will measure its success by reducing DON in the hard winter wheat grain supply to the food grade level acceptable in the European Union (EU). This level is currently lower than the US standard. Because half of our grain is exported and the majority of it shipped to the EU, the risk is that it can be sourced from high scab areas within the HWW region (e.g. the Eastern Great Plains). As the popularity of whole grain products increases, our goal is to ensure that the DON concentration in these products is also below established thresholds. Based upon the timelines expected for success in reducing DON, the HWW-CP includes the scientific activities of plant breeders, pathologists, geneticists and supporting research programs. We coordinate with disease management efforts because we realize that in addition to improved varieties, improved management will optimize project success within expected timelines. HWW-CP germplasm and information are publicly available and made available to other participating researchers in other research areas of the USWBSI. The HWW-CP remains focused on reducing DON levels as quickly as possible and by using the most efficacious methods to do so. Membership in the HWW-CP includes; all researchers currently funded within the CP, individuals designated as representatives from other research areas of the USWBSI, all interested FHB researchers who may or may not be funded by the USWBSI, stakeholders representing members from groups that fund our research (e.g. the KS, NE, SD, and ND Wheat Commissions), and members of groups that are key to our industry and who non-monetarily support HWW-CP research. These are “independent” stakeholders, such as major mills and bakeries, private wheat breeders, and chemical company representatives.

FY12-13 Research Priorities derived from Action Plan Goals:

The HWW-CP is organized around two of the research areas – Variety Development and Host Resistance (VDHR) and FHB Management (MGMT) as outlined in the USWBSI Action Plan. Two major objectives and associated research activities have been established within this CP. In addition, the HWW-CP works closely with other USWBSI Research Areas (RAs) to support the stated goal of reducing DON levels specified by the EU. Specifically, the HWW-CP works most closely with the MGMT RA.

Variety Development and Host Resistance (VDHR) and FHB Management (MGMT)

Objective 1. Increase acreage planted to varieties exhibiting improved FHB resistance to reduce DON in the HWW grain supply.

Associated Research Activities:

- Increase efficiency of individual breeding programs to develop and release FHB resistant varieties.
- Develop new breeding technologies and germplasm to further enhance short-term and long-term improvement of FHB resistance and to efficiently introgress effective resistance genes into breeding germplasm.
- Test and evaluate regional germplasm to include breeding lines from public and private breeding programs and to include irrigated field nurseries representative of all FHB environments throughout the region.

Objective 2. Evaluate practices enhancing varietal resistance and disseminate information that in association with resistant varieties, leads to reduced DON in the HWW grain supply.

Associated Research Activities:

- Characterize genotype x fungicide treatment responses for enhancing FHB resistance and the reduction of DON.
- Develop a full understanding of specific environmental and biological factors influencing FHB infection and toxin accumulation.
- Enhance communication and end-user education/outreach relating to resistant varieties and effective management practices.

SECTION 1:

COORDINATED PROJECTS - PROPOSED RESEARCH PROJECTS (PRPs)

INTRODUCTION

Does my proposed research belong in a Commodity- or VDHR-based Coordinated Project (CP)?

Yes, if the primary focus of your proposed research involves the following:

Commodity-Based Coordinated Projects: (includes proposed research in all research areas that focus on this commodity)	Barley (BAR)
Commodity-Based Coordinated Projects: (includes proposed VDHR research on Durum or Hard Winter Wheat)	Durum (DUR)
	Hard Winter Wheat (HWW)
VDHR Uniform Nursery Coordinated Projects: (all proposed VDHR research not submitted to one of the Commodity-Based CPs must be submitted to one of the Uniform Nursery CPs)	Spring Wheat Region - States included in this CP: MN, ND, SD, MT
	Northern Soft Winter Wheat - - States included in this CP: NY, MI, OH, IN, IL, MO, KY
	Southern Soft Red Winter Wheat - -States included in this CP: NC, MD, VA, AR, GA, LA

Overview of Submission Process for Coordinated Project Pre-Proposals:

Whether you are proposing research to the Barley, Durum, Hard Winter Wheat CPs or one of the VDHR - Regional Uniform Nurseries CPs, below are the main components (in order of completion) of the submission process:

1. PIs submit a **Letter of Intent (LOI)** to the Chair of the CPC (see Table 1, page 6), with a copy of the LOI sent to the NFO. **Deadline: July 1**
2. CP committees notify all PIs who submitted Letters of Intent to their CP whether their proposed research has been accepted into the CP’s FY12 Pre-Proposal. **Deadline: August 1**
3. PIs and Co-PIs complete the Pre-Registration Process for uploading their CV/Publication Lists and Current and Pending Support Form to the EPS System. **Deadline: August 31**
4. PIs submit electronic version (PDF format) of the ‘**Proposed Research Project**’ to the Chair of the CPC and the NFO. **Deadline: September 2**
5. PIs upload their CV/Publication Lists, and Current and Pending Form (PDF format) to the EPS System. **Deadline: September 20**
6. CPC Chairs submits electronic version of CPC’s completed forms and updated PRPs to the NFO (deadline indicates date NFO must receive the pre-proposal). **Deadline: October 5**

INSTRUCTIONS

1. PRE-SUBMISSION - LETTER OF INTENT (LOI)

If you plan to participate in one of the Coordinated Projects, you must submit a Letter of Intent to the Chair of the appropriate CP Committee (see Table 1, page 6) by **July 1st**. The LOI must adhere to the following:

- *One page (single spaced) maximum;*
 - *Name of PI and co-PIs, and the proposed title;*
 - *Indicate if this is a continuing or new project;*
 - *Identify the research area (MGMT, FSTU, GDER, PBG or VDHR) in which your project fits (applicable to commodity-based CPs only).*
 - *Synopsis that describes the following:*
 - *the research objective which your project fits;*
 - *the problem being addressed, approaches for solving the problem and the rationale for using these approaches; and*
 - *the outputs of the project and how those outputs will be used by researchers, extension educators, or stakeholders to accomplish the overall goal of the USWBSI.*
- NOTE:** If it does not fit one of the CP's stated objectives (refer to CPs' or VDHR Program Descriptions and Research Priorities/Objectives - http://scabusa.org/pdfs/fy12-rfp_pd-rp.pdf), then suggest a new objective; and*
- *Include a statement that demonstrates that the PI/co-PI's are capable of carrying out the proposed research based on past research productivity and expertise in the relevant field(s) of research.*

Deadline: Both the Chair of the relevant Coordinated Project Committee and the NFO must receive all Letters of Intent by **July 1, 2011**. LOIs may be submitted electronically via e-mail.

Mailing Information for CPC Chairs:

COMMODITY-BASED COORDINATED PROJECTS		
Barley	Durum	Hard Winter Wheat
Kevin Smith Dept. of Agronomy and Plant Genetics 411 Borlaug Hall, 1991 Upper Buford Circle University of Minnesota St. Paul, MN 55108 smith376@umn.edu	Xiwen Cai Dept. of Plant Sciences Box 5051, 166 Loftsgard North Dakota State University Fargo, ND 58105-5051 xiwen.cai@ndsu.edu	Bill Berzonsky Rm. 248A NPB, Box 2140C South Dakota State Univ Brookings, SD 57007-2141 William.Berzonsky@sdstate.edu
VDHR – REGIONAL UNIFORM NURSERIES		
Spring Wheat Parents	Northern Soft Winter Wheat	Southern Soft Winter Wheat
Karl Glover Plant Science Dept. Box 2207A, NPB 247 South Dakota State University Brookings, SD 57007 Karl.Glover@sdstate.edu	Clay Sneller Dept. of Hort. and Crop Science 1680 Madison Ave. Ohio State University/OARDC Wooster, OH 44691 sneller.5@osu.edu	Jose Costa 2102 Plant Sciences Building University of Maryland College Park, MD 20742 costaj@umd.edu

2. CP COMMITTEES' RESPONSE TO RECEIVED LETTERS OF INTENT

The CP Committee Chair will notify all PIs who submitted Letters of Intent whether their proposed research has been accepted into the CP FY10 Pre-Proposal. PIs have the option, if their proposed research has been rejected by the CP, to submit an individual pre-proposal (follow instructions for Category 3, page 29) for consideration.

Deadline: August 1, 2011

3. PRE-REGISTRATION PROCESS FOR EPS SYSTEM

All PIs submitting a proposed research project to one of the Coordinated Projects must complete the Pre-Registration Process so that they may upload their CV/Publication Lists and Current and Pending Support forms to the EPS System. However, PIs should wait to complete the Pre-Registration Process until after they have received a response from the CP Committee concerning their submitted Letter of Intent (LOI) – *see item 2 above*.

- 1) **Proposed Research Form:** Information submitted on this form pertains to the proposed research being submitted. Follow the instructions included on the form - http://www.scabusa.org/cgi-bin/pre_reg.cgi.
- 2) **User Registration Form:** The submission of this form will setup the PI's user account within the EPS System. Form may be accessed at <http://scabusa.org/eps/register.php>. You may have already completed this step if you have created a user ID for the Scab Website (i.e. Discussion Boards, Chat, Photo Album etc.)

Deadline: August 31, 2011

4. PROPOSED RESEACH PROJECT (PRP)

Plan of Work:

A Plan of Work must be submitted with your proposed project. This plan must describe how your work specifically fits into the overall Coordinated Project and identify any linkages to other work plans that are part of the Coordinated Project. This document should not exceed 3 pages in length and begins with the 'Plan of Work' Form (downloaded at http://scabusa.org/research_rfp12.html) as page 1 (text for Plan of Work should begin on page 1 below form fields). The Plan of Work should describe in clear, concrete terms, the substance of your proposed research including experimental design, materials and methods, and timeline for completing research. The timeline for the Plan of Work should be two years.

Format: The Plan of Work should be formatted using Times New Roman (Normal type except headings), 12 point or higher with one-inch margins. **NOTE:** Bold formatting should only be used for section headings or used minimally to emphasize importance or significance. Conformance to the format requirements will be strictly enforced.

Budget Requests (Year 1 and 2):

Please complete the '**Proposed Research Project Budget Justification Form**' by following the instructions on the form. PI will also complete a budget using either '**Proposed Research Project Budget Form**' or the '**FY12 Multi-PI Budget Worksheet**' (MS Excel file). If the 'Multi-PI Budget Worksheet' is used, please remove the budget page from the 'Plan of Work' forms. Your proposed research project should include a 'Year 1' and 'Year 2' budget request. **NOTE:** In the majority of cases, total request for Year 1 and Year 2 should be the same amount.

Multi-PI Budget Worksheet: The ‘Multi-PI Budget Worksheet’ was developed for use by PIs whose proposed research includes components at multiple institutions. In such cases, if a proposed research project is recommended for funding, the awards would go directly to the individual institutions from USDA-ARS. This form should be used in place of the Single Budget Page, as it provides for both the individual budgets as well as the total requested amount for the proposed research. However, when using this form, separate Budget Justification Forms must be included for each individual budget request. This form can be downloaded from the Scab Website at http://scabusa.org/research_rfp12.html#fy12_rfp under ‘SPECIAL FORMS’. The file contains detailed instructions on completing the budget worksheet which contains calculated fields.

Instructions for submitting Multi-PI Budget Worksheet with PRP: You must convert the Excel budget worksheet to a PDF file and either merge it with the other items listed under ‘Proposed Research Project’ into a single PDF, or you may send it to the CPC Chair and the NFO as a separate PDF file.

Tuition Remission: Tuition remission is **permitted** under USDA-ARS **extramural agreements** with any type of recipient organization (i.e. universities). If tuition remission is budgeted as a direct cost, it should be included in the "Other Direct Costs" category of the Budget Page (Section H).

Indirect Cost (IDC) Rate Policy: The USWBSI’s review process focuses on the **competitiveness of total project costs (direct and indirect)**. Because Fusarium head blight is such a severe problem for the U.S. wheat and barley industries, the USWBSI has set the rate limit for indirect costs at 5%.

NOTE: There are two versions of the Proposed Research Project forms: 1) Commodity-based; and 2) VDHR – Uniform Nurseries. Make sure you download the appropriate version.

Breeder Form

If you are submitting a proposed research project that focuses on VDHR, you must also complete a Breeder Form. This form can be downloaded from the RFP website under ‘SPECIAL FORMS’.

Instructions for submitting Breeder Form with PRP: You must convert the Breeder Form to a PDF file and either merge it with the other items listed under ‘Proposed Research Project’ into a single PDF, or you may send it to the CPC Chair and the NFO as a separate PDF file.

Deadline

Both the Chair of the relevant Coordinated Project Committee (CPC) **and** the NFO must receive the electronic version of the Proposed Research Project (PRP) by **September 2, 2011**.

5. SUPPORTING DOCUMENTS - ITEMS TO BE UPLOADED TO EPS SYSTEM

Curriculum Vitae and Publication List (Maximum four pages per scientist)

To assist peer reviewers in assessing the competence and experience of the proposed project staff, all personnel who will be involved in the proposed project must be identified clearly. The items listed below should be included for all personnel (PI, Co-Investigators, and secondary scientists (i.e. post-docs, graduate students)) who are expected to work on the project in a significant fashion (e.g. expectation of co-authorship on ensuing publications), whether or not funds are sought for this support:

- *Curriculum Vitae (C.V.)*. The C.V. should be limited to a presentation of academic and research credentials, e.g., educational, employment and professional history, and honors and awards. Unless pertinent to the project, do not include meetings attended, seminars given, or personal data such as birth date, marital status, or community activities.

- *Publication List.* A chronological list of all publications in refereed journals during the past five years, including those in press, should be provided for each professional project member for whom a Curriculum Vitae is provided. Non-refereed technical publications that have relevance to the proposed project may be included.

The C.V. and Publication List combined must not exceed four pages per scientist. C.V. and Publication Lists for collaborators or sub-contractors are not required.

Submission Instructions: PIs and Co-PIs are responsible for uploading their own CV/Pubs to the EPS System. CV/Pubs for all secondary scientists should be included in the PI's file. The CV/Pubs will only need to be uploaded one time whether or not the investigator is connected to multiple pre-proposals. File must be uploaded to the EPS System by **September 20, 2011.**

Current and Pending Support (CPS)

CPS form can be downloaded from the RFP website at http://scabusa.org/research_rfp12.html#fy12_rfp.

All PIs submitting a proposed research project (PRP) must also submit completed Current and Pending Support Forms listing other current public or private support to which key personnel identified in the PRP have committed portions of their time, whether or not salary support for person(s) involved is included in the budget. Analogous information must be provided for any pending proposals that are being considered by, or that will be submitted in the near future to, other possible sponsors, including other USDA Programs or agencies, and the USWBSI. Concurrent submission of identical or similar proposals to the other possible sponsors will not prejudice the review or evaluation by the USWBSI for this purpose. However, a PRP that duplicates or overlaps substantially with a **proposal already reviewed and funded (or to be funded)** by another organization or agency will not be recommended under this program. The third column ('Requested/Award Amount') on the 'Current and Pending Support Page' has been divided into two sub-columns: Total \$ Amount and PI \$ Allocation. For each grant/proposal listed, **include both the total ('Total \$ Amount') and the amount you have or may receive ('PI \$ Allocation')**.

Submission Instructions: PIs are responsible for uploading their own Current and Pending Support Form to the EPS System. The CPS Form will only need to be uploaded one time whether or not the investigator is connected to multiple pre-proposals. File (PDF format) must be uploaded to the EPS System by **September 20, 2011.**

NOTE: Upon successful completion of the 'Pre-Registration Process', the user will receive a confirmation e-mail that will include a 'Help Document' for navigating the EPS System.

IMPORTANT DEADLINES

Pre-Submission

- PIs submit Letters of Intent (LOI)
**Submission Deadline (received by Chair
of CP Committee and NFO):** **July 1, 2011**
 - CPCs respond to PIs regarding acceptance of LOIs into CP **August 1, 2011**
-

Pre-Registration

- Proposed Research Form: Information submitted on this form pertains to the proposed research being submitted and will be used by the NFO to configure the EPS System for each PI. **NOTE: This step should not be completed until you have received a response from the CPC to your Letter of Intent.**
- User Registration Form: The submission of this form will set up the PI's user account within the EPS System.

Registration Deadline: **August 31, 2011**

Final Submission of PRP

PI Check-list of Required Items for Proposed Research Projects Submitted to Coordinated Project Committee

- Plan of Work (should not exceed three pages; starts with 'Plan of Work' Form as page 1)
- Proposed Research Project Budget Justification Forms (complete all relevant sections)
- Proposed Research Project Budget Forms (add e-signature and date)

**Submission Deadline - E-version received by CPC Chair
and the NFO):** **September 2, 2011**

Submission of Supporting Documents

Check-list of Required Items to be uploaded to EPS System

- Curriculum Vitae and Publication List
- Current and Pending Support Form

Submission Deadline (uploaded to EPS System) **September 20, 2011**

SECTION 2:

FHB MANAGEMENT COORDINATED PROJECT - PROPOSED RESEARCH PROJECTS (PRPs)

Category 2: FHB Management Coordinated Projects

INTRODUCTION

Does my proposed research belong in an FHB Management Coordinated Project (CP)?

Yes, if the primary focus of your proposed research involves the following:

Integrated Management Studies (IM)	Integrated management strategies for FHB and DON including tillage practices, crop sequences, and other cultural practices targeting <i>Fusarium</i> -infested residues.
Uniform Fungicide and Biocontrol Trials (F/BC)	Uniform testing of fungicides, biological control agents, and application technologies for chemical and biological agents.

Overview of Submission Process for MGMT Coordinated Project Pre-Proposals:

If you are submitting proposed research to the Uniform Fungicide/Biocontrol Trials or the Integrated Management Studies Coordinated Projects, below are the main components (in order of completion) of the submission process:

1. PIs submit a **Letter of Intent (LOI)** to the Contact of the MGMT-CP (see Table 1, page 6), with a copy of the LOI sent to the NFO. **Deadline:** July 19
2. CP committees notify all PIs who submitted Letters of Intent to their CP whether their proposed research has been accepted into the CP’s FY12 Pre-Proposal. **Deadline:** August 12
3. PIs (and Co-PIs) complete the Pre-Registration Process for uploading their CV/Publication Lists and Current and Pending Support Form to the EPS System. **Deadline:** August 31
4. PIs submit electronic version (PDF format) of the ‘**Proposed Research Project**’ to the Coordinator of the MGMT-CP and the NFO. **Deadline:** September 9
5. PIs upload their CV/Publications Lists, and Current and Pending Support (CPS) Form (PDF format) to the EPS System. **Deadline:** September 20
6. NFO receives MGMT-CP Pre-proposals from CP Coordinators. **Deadline:** October 7

1. PRE-SUBMISSION - LETTER OF INTENT (LOI)

If you plan to participate in one of the FHB Management Coordinated Projects, you must submit a Letter of Intent to the CP leader of the appropriate Coordinated Project (see table below) by **July 19th**. The LOI, which may be in the form of an e-mail, must include the following:

Names of PI and co-PI(s), a proposed title, and a synopsis that describes the following:

- *Reasons proposed component is needed;*
- *Goals in the USWBSI’s action plan addressed by this proposed research;*
- *Research needs in the USWBSI’s action plan addressed by this research; and*
- *Statement that demonstrates that the PI/co-PI(s) are capable of carrying out the proposed research based on past research productivity and expertise in the relevant field(s) of research*

Deadline:

Both the Coordinator of the MGMT Coordinated Project and the NFO must receive the Letter of Intent (may be in the form of an e-mail) by July 19, 2011.

Mailing Information for MGMT-CP Coordinators and NFO:

<p>Uniform Fungicide/Biocontrol Trials (UT) Scott Halley Langdon Research Extension Center 9280 107th Ave NE North Dakota State University Langdon, ND 52349 E-Mail: scott.halley@ndsu.edu</p>	<p>Integrated Management Studies (IM) Pierce Paul 1680 Madison Ave. Dept. of Plant Pathology Ohio State University Wooster, OH 44691 E-mail: paul.661@osu.edu</p>
<p>Networking & Facilitation Office ATTN: Sue Canty USWBSI-NFO 380 Plant & Soil Sciences Bldg. East Lansing, MI 48824-1325 E-mail: scabusa@scabusa.org</p>	

2. MGMT-CP COORDINATORS’ RESPONSE TO RECEIVED LETTERS OF INTENT

The CP Coordinator will notify all PIs who submitted Letters of Intent whether their proposed research has been accepted into the FY12 Coordinated Project Pre-Proposal. PIs have the option, if their proposed research has been rejected by the CP, to submit an individual project pre-proposal for consideration by following the instructions for Category 3, page 29). **Deadline: August 12, 2011**

3. PRE-REGISTRATION PROCESS FOR EPS SYSTEM

All PIs submitting a proposed research project to one of the Coordinated Projects must complete the Pre-Registration Process so that they may upload their CV/Publication Lists and Current and Pending Support forms to the EPS System. However, PIs should wait to complete the Pre-Registration Process until after they have received a response from the CP Committee concerning their submitted Letter of Intent (LOI) – *refer to item 2 above*.

- 1) **Proposed Research Form:** Information submitted on this form pertains to the proposed research being submitted. Follow the instructions included on the form. Form may be accessed at http://www.scabusa.org/cgi-bin/pre_reg.cgi.
- 2) **User Registration Form:** The submission of this form will set up the PI's user account within the EPS System. Form may be accessed at <http://scabusa.org/eps/register.php>. You may have already completed this step if you have created a user ID for the Scab Website (i.e. Discussion Boards, Chat, Photo Library, Scab Blog, etc.). If you are not sure whether you already have a user ID for the Scab Website, please contact the NFO at scabusa@scabusa.org.

Following successful completion of the Pre-Proposal Registration process (both steps), you will receive a confirmation e-mail containing a 'Help Document' that will aid you in navigating the EPS System. **NOTE:** You do not have to complete the 'Pre-Registration Process' before you begin working on your Pre-proposal.

Deadline: August 31, 2011

4. PROPOSED RESEARCH PROJECT (PRP)

Plan of Work:

A Plan of Work must be submitted with your proposed research project. This plan must describe the details of your proposed research including how the proposed research differs from the **required standard protocols** that have been established for the coordinated project to which you are submitting your Proposed Research Project. This document should not exceed 3 pages in length (starts with 'Plan of Work' Form as page 1) and should describe in clear, concrete terms the substance of your proposed research. The timeline for the Plan of Work should be two years. The Coordinated Project Committee leader will send the standard protocols to all PIs whose proposed research was accepted into the CP by August 17.

Format: The Plan of Work should be formatted using Times New Roman (Normal type except headings), 12 point or higher with one-inch margins. **NOTE:** Bold formatting should only be used for section headings or used minimally to emphasize importance or significance. Conformance to the format requirements will be strictly enforced.

Budget Requests:

Please complete the '**Proposed Research Project Budget Justification Form**' by following the instructions on the form. Your proposed research project should include a 'Year 1' and 'Year 2' budget request. **NOTE:** In the majority of cases, total request for Year 1 and Year 2 should be the same amount.

Tuition Remission: Tuition remission is **permitted** under USDA-ARS **extramural agreements** with any type of recipient organization (i.e. universities). If tuition remission is budgeted as a direct cost, it should be included in the "Other Direct Costs" category of the Budget Page (Section H).

Policy on Indirect Cost (IDC) Rate: The USWBSI's review process focuses on the **competitiveness of total** project costs (direct and indirect). Because Fusarium head blight is such a severe problem for the U.S. wheat and barley industries, the USWBSI has set the rate limit for indirect costs at 5%.

5. Curriculum Vitae and Publication List (CV/Pubs)

(Maximum four pages for CV with Publication List per Scientist)

To assist peer reviewers in assessing the competence and experience of the proposed project staff, all personnel who will be involved in the proposed project must be identified clearly. The items listed below should be included for all personnel (PI, Co-Investigators, and secondary scientists (i.e. post-docs, graduate students)) who are expected to work on the project in a significant fashion (e.g. expectation of co-authorship on ensuing publications), whether or not funds are sought for this support:

- *Curriculum Vitae (C.V.)*. The C.V. should be limited to a presentation of academic and research credentials, e.g., educational, employment and professional history, and honors and awards. Unless pertinent to the project, do not include meetings attended, seminars given, or personal data such as birth date, marital status, or community activities.
- *Publication List*. A chronological list of all publications in refereed journals during the past five years, including those in press, should be provided for each professional project member for whom a Curriculum Vitae is provided. Non-refereed technical publications that have relevance to the proposed project may be included.

The C.V. and Publication List combined must not exceed four pages per scientist. C.V. and Publication Lists for collaborators or sub-contractors are not required.

Submission Instructions: PIs and Co-PIs are responsible for uploading their own CV/Pubs to the EPS System. CV/Pubs for all secondary scientists should be included in the PI's file. The CV/Pubs will only need to be uploaded one time whether or not the investigator is connected to multiple pre-proposals. File must be uploaded to the EPS System by **September 20, 2011**.

6. Current and Pending Support (CPS) Form

CPS form can be downloaded from RFP website at http://scabusa.org/research_rfp12#FY12_rfp.

All project pre-proposals must contain completed Current and Pending Support Forms for PI and all Co-PIs listing other current public or private support to which key personnel identified in the pre-proposal have committed portions of their time, whether or not salary support for person(s) involved is included in the budget. Analogous information must be provided for any pending proposals that are being considered by, or that will be submitted in the near future to, other possible sponsors, including other USDA Programs or agencies, and the USWBSI. Concurrent submission of identical or similar proposals to the other possible sponsors will not prejudice pre-proposal review or evaluation by the USWBSI for this purpose. However, a project pre-proposal that duplicates or overlaps substantially with a **proposal already reviewed and funded (or to be funded)** by another organization or agency will not be recommended under this program. The third column ('Requested/Award Amount') on the 'Current and Pending Support Page' has been divided into two sub-columns: Total \$ Amount and PI \$ Allocation. For each grant/proposal listed, **include both the total ('Total \$ Amount') and the amount you have or may receive ('PI \$ Allocation')**.

Submission Instructions: PIs and Co-PIs are responsible for uploading their own Current and Pending Support Form to the EPS System. The CPS Form will only need to be uploaded one time whether or not the investigator is connected to multiple pre-proposals. File must be uploaded to the EPS System by **September 20, 2011**.

IMPORTANT DEADLINES

Pre-Submission

- PIs submit Letters of Intent (LOI) **July 19, 2011**
 - CP Coordinators respond to PIs regarding acceptance of LOIs into CP. **August 12, 2011**
-

Pre-Registration

- Proposed Research Form: Information submitted on this form pertains to the proposed research being submitted and will be used by the NFO to configure the EPS System for each PI.
PLEASE NOTE: This step should NOT be completed until you have received a response from the CP Coordinator to your Letter of Intent.
- User Registration Form: The submission of this form will set up the PI's user account within the EPS System.

Registration Deadline: **August 31, 2011**

Final Submission of PRP

PI Check-list of Required Items for Proposed Research Projects Submitted to the Coordinator of MGMT-CP

- Plan of Work (should not exceed three pages; starts with 'Plan of Work' Form as page 1)
- Proposed Research Project Budget Justification Form (complete all relevant sections)

Submission Deadline - E-version received by CP Coordinator and the NFO: **September 9, 2011**

Submission of Supporting Documents

Check-list of Required Items to be uploaded to EPS System

- Curriculum Vitae and Publication List
- Current and Pending Support Form

Submission Deadline (uploaded to EPS System) **September 20, 2011**

SECTION 3:

INDIVIDUAL RESEARCH AREA PROJECT PRE-PROPOSALS

Category 3 - Individual Research Area Project Pre-Proposals

INTRODUCTION

If your research is in one the following research areas, and if the primary focus is not on Uniform Fungicide/Biological Control Trials or Integrated Management Studies, you should complete your pre-proposals using the instructions and forms provided in this section of the FY12 RFP.

- ❖ FHB Management (MGMT)
 - Biocontrol: a single, collaborative pre-proposal will be accepted which addresses the following criteria:
 - Demonstration of efficacy in the field; and
 - Research should be structured to capitalize on individual strengths of the research group.
- ❖ Food Safety, Toxicology, & Utilization of Mycotoxin-contaminated Grain (FSTU)
- ❖ Gene Discovery and Engineering Resistance (GDER)
- ❖ Pathogen Biology & Genetics (PBG)

Note: If your proposed research was rejected by one of the MGMT-CPs, you may submit an individual project pre-proposal for consideration following the instructions in this section.

OVERVIEW OF THE ELECTRONIC SUBMISSION PROCESS

Individual Pre-proposals will be submitted using the USWBSI's Electronic Pre-Proposal Submission (EPS) System. Pre-proposal must be organized and saved as three separate Adobe PDF files for the purpose of uploading to the EPS System. Below are the steps you will take to complete and submit your individual project pre-proposal:

- a. **Pre-Registration Process** - All PIs must complete the Pre-Registration Process in order to submit their pre-proposal via the EPS System.
 - i. Proposed Research Form: Information submitted on this form pertains to the proposed research being submitted. Form may be accessed at http://www.scabusa.org/cgi-bin/pre_reg.cgi. Select from the drop down list the research area that best fits your proposed research.
 - ii. User Registration Form: The submission of this form will set up the PI's access account within the EPS System. Form may be accessed at <http://scabusa.org/eps/register.php>. You may have already completed this step if you have created a user ID for the Scab Website (i.e. Discussion Boards, Chat, Photo Album etc.) If you are not sure whether you already have a user ID for the Scab Website, please contact the NFO at scabusa@scabusa.org.

Following successful completion of the Pre-Proposal Registration process (both steps), you will receive a confirmation e-mail containing a 'Help Document' that will aid you in navigating the EPS System. **NOTE:** You do not have to complete the 'Pre-Registration Process' before you begin working on your Pre-proposal. **Deadline: August 31, 2011**

- b. You will complete your pre-proposal by following the instructions provided in this RFP and using the forms which may be downloaded from the FY12 RFP website at: http://www.scabusa.org/research_rfp12. Your final pre-proposal must be completed by creating three files organized as follows:

- **FILE 1 – Body of Pre-Proposal** – Contains the following:
 - Application for Funding Cover Page
 - Project Summary Form
 - Summary of Progress for Ongoing Related Project(s)
 - Project Description
 - References to Project Description
 - Facilities and Equipment
 - Collaborative Arrangements
 - Letters of Intent from Collaborators and Co-Investigators–(*may be in the form of e-mail messages copied and pasted into your pre-proposal document*)
 - Budget Justification Form.
 - Budget Page (**Note:** If you are completing a ‘Multi-PI Budget’ which is in Excel format, please refer to the instructions on page 34).

- **FILE 2 – Curriculum Vitae and Publication List (CV/Pubs):** The PI and each Co-PI is responsible for uploading his/her own CV/Pubs file. CV/Pubs for secondary project personnel should be included in the PI’s file.

- **FILE 3 – Current and Pending Support (CPS) Form:** The PI and each Co-PI is responsible for uploading his/her own CPS form.

Log in to the EPS System using the information received after successful completion of the ‘Pre-Registration Process.’ Following the instructions in the ‘Help Document’ (included in e-mail from the Networking & Facilitation Office), proceed to upload the three separate files (Body of Pre-Proposal, Curriculum Vitae/Publication List, and Current and Pending Support Form). The files you upload must be in Adobe PDF format.

Because the USWBSI does not require signatures by the Authorized Organizational Representatives (AORs) on pre-proposals, institutional AOR’s will not be granted access to the EPS System.

Important Dates for EPS System and Deadlines for Individual Pre-Proposals:

- June 1: Pre-registration begins (you will receive your access information on or within 48 business hours after July 1).
- July 15: EPS System Opens
- Aug 31: Pre-Registration Process ends.
- Sept 20: Deadline for final submission of pre-proposals and supporting documents.

INSTRUCTIONS

FILE 1: Body of Pre-Proposal

Application for Funding Cover Page

The pre-proposal must contain a completed ‘Application for Funding Cover Page’, which will be the first page of the application. In completing this form, please note the following:

- *Title of Proposal (Block 6).* The title of the project pre-proposal must be brief (**80-character maximum**), yet represent the major thrust of the project. Because this title will be used to provide information to those who may not be familiar with the proposed project, highly technical words or

phraseology should be avoided where possible. In addition, phrases such as “investigation of” or “research on” should not be used.

- *Principal Investigator/Co-Investigators (Block 10)*. List the name of the proposing principal investigator in this block. All other participating scientists should be listed as co-investigators. The co-investigators should be limited to those required for major scientific collaboration.
- *Currently Funded Projects (Block 13)*. List the titles of all individual research projects that are currently being funded in FY11 (approx. May 2011 – April 2012) in association with the USWBSI/ARS collaboration.
- *Research Area (Block 16)*. Your Project Pre-Proposal should be constructed to address one or more of the Action Plan goals (http://scabusa.org/pdfs/uswbsi_action-plan_web.pdf). In Block 16, designate with an 'X' one Research Category whose description and priorities your project is designed to address. Research Area Program Descriptions and Research Priorities (PD-RP) can be accessed through the Initiative’s Web site at www.scabusa.org/research.html.
- *Signatures*. Signatures are not required for pre-proposals submitted via the Electronic Pre-Proposals Submission (EPS) System. However, a Letter of Intent (may be in the form of an e-mail) from all Co-Investigators must be included in the pre-proposal under the section titled “Collaborative or Sub Contractual Arrangements”.

Project Summary Form

Each project pre-proposal must contain a completed Project Summary Page, which will be the second page of the project pre-proposal. The names and institutions of all of the principal and co-investigators should be listed on this form (if space for this information is insufficient, please enter “see attached” and provide the information on a separate sheet immediately following the Project Summary Page). The project summary itself must fit within the space indicated. The summary is not intended for the general reader; consequently, it may contain technical language relating to Fusarium head blight research. The project summary should be self-contained, include a specific description of the activity to be undertaken, and focus on the following:

- Overall project goal(s)
- Project Objectives (list in numbered format) and Expected Outcomes;
- Plans to accomplish project goal(s) within period of proposed work (**two years**); and
- Relevance of the project to the goals of the U.S. Wheat and Barley Scab Initiative with specific reference to the research priorities listed in the FY12 Program Descriptions and Research Priorities (PD-RP).

A concise, informative project summary is essential. Project Summaries are considered part of the pre-proposal and are therefore confidential.

Summary of Progress for Ongoing Related Project(s) – *Limit to a single page per project*

The purpose of this section is to enable PI's to demonstrate that they have made (or are moving towards) effective use of funds for ongoing USWBSI-recommended projects **related to** the current pre-proposal. This includes projects which were funded this year (FY11). Include the following information for each **relevant** ongoing project:

- Project Title;
- brief summary of activities (including non-data generating items such as hiring of personnel, equipment acquisition, etc.), any results and/or accomplishments made to date (include actual data documenting progress made since FY11 funding was awarded; and
- any information that will help reviewers understand how the current pre-proposal builds upon the ongoing project.

Project Description

The Project Description should provide a clear statement of the work to be undertaken and must include: research objectives for the **period of the proposed work** and expected significance; relation to longer-term goals of the PI's project; and relation to the present state of knowledge in the field, to work in progress by the PI under other support and to work in progress elsewhere.

The Project Description should outline the general plan of work, including the broad design of activities to be undertaken, and, where appropriate, provide a **clear description** of experimental methods and procedures, and plans for preservation, documentation, and sharing of data, samples, physical collections, curriculum materials and other related research and education products.

- ii. **Format:** Brevity will assist reviewers and USWBSI/NFO staff /reviewers in dealing effectively with pre-proposals. **Therefore, the written text of the Project Description must be five pages or less (single spaced or equivalent); ten pages or less in total including figures and tables.** The Project Description should be formatted using Times New Roman (Normal type except headings and 12 point or higher) with one-inch margins. **NOTE:** Bold formatting should only be used for section headings or used minimally to emphasize importance or significance. Conformance to the format requirements will be strictly enforced.

iii. Content:

- *Title.* Same as Application for Funding Cover Page (**80-Character Maximum**).
- *Introduction.* A clear statement of the goal(s) and supporting objectives or research questions of the proposed project should be included. The most significant published work in the field under consideration, including the work of key project personnel on the current application, should be reviewed. The current status of research in this field of science should also be described **including, but not limited to, any ongoing USWBSI-recommended work currently underway. Preliminary data pertinent to the proposed research may be included in this section.** Present and discuss published literature that is directly related to, and supports, the proposed research (research objectives, materials and methods).
- *Rationale and Significance.* It is understood that head scab is a devastating disease. **Acknowledgment of this fact should require no more than one sentence.** Concisely present the rationale behind the proposed research; identify the gaps in the knowledge base that your pre-proposal is trying to fill. Relevance of the project to the goals of the U.S. Wheat and Barley Scab Initiative with specific reference to the priorities listed in the FY12 Program Descriptions and Research Priorities (PD-RP) should be clearly stated. If applicable, please indicate if the research proposed here could lead to successful acquisition of grant funds from other agencies.

- *Research Materials and Methods.* Specifically, this section must include:
 - The hypotheses or questions being asked;
 - A description of the investigations and/or experiments proposed **in the sequence** in which the investigation or experiments are to be performed;
 - Techniques and methodologies to be used in carrying out the proposed project, including the feasibility of the techniques. (**Describe in step by step fashion exactly what techniques, materials and methods will be used.**);
 - Results expected;
 - Means by which experimental data will be analyzed or interpreted;
 - Means of applying results or accomplishing technology transfer, where appropriate;
 - Pitfalls that may be encountered;
 - Limitations to proposed procedures; and
 - A tentative schedule for conducting major steps involved in these investigations and/or experiments.

NOTE: Failure to address each of the issues in the bullet list will diminish the likelihood of the success of your pre-proposal being recommended for funding.

References to Project Description

All references cited in the Project Description should be included in bibliographic format. Although there is no established page limitation for the references, this section must include bibliographic citations only, and must not be used to provide parenthetical information outside of the project description.

Facilities and Equipment

All facilities and major items of equipment available for use or assignment to the proposed project during the requested period of support should be described. In addition, items of nonexpendable equipment necessary to conduct and successfully conclude the proposed project should be listed (including dollar amounts), and, if funds are requested for their acquisition, justification should be included in the Budget Justification.

Collaborative or Sub-contractual Arrangements

If the nature of the proposed project requires collaboration or contractual arrangements with other research scientists, corporations, organizations, agencies, etc, the applicant must identify the collaborator(s) and provide a **detailed explanation of the nature** of the collaboration. Evidence in the form of a letter of intent (may be in the form of an e-mail) from all collaborators must be provided to assure reviewers that collaborators or sub-contractors involved have agreed to render the indicated services. **The letter of intent must include specific details describing the services the collaborator will provide.**

Budget Requests

Please complete the ‘**FY12 Individual Project Pre-Proposal Budget Justification Form**’ by following the instructions on the form. You must also complete a budget using either ‘**FY12 Individual Project Pre-Proposal Budget**’ form or the ‘**FY12 Multi-PI Project Pre-Proposal Budget Worksheet**’ (MS Excel file). If the ‘Multi-PI Budget Worksheet’ is used, please remove the budget form from File 1 before uploading to the EPS System. Your pre-proposal should include a ‘Year 1’ and ‘Year 2’ budget

request. **NOTE:** In the majority of cases, total request for Year 1 and Year 2 should be the same amount.

Multi-PI Budget Worksheet: The 'Multi-PI Budget Worksheet' was developed for use by PIs whose proposed research includes components at multiple institutions. In such cases, if a pre-proposal is recommended for funding, the awards would go directly to the individual institutions from USDA-ARS. This form should be used in place of the 'Individual Project Pre-Proposal Budget' page, as it provides for both the individual budgets as well as the total requested amount for the proposed research. However, when using this form, separate Budget Justification Forms should be included for each individual budget request. This form can be downloaded from the Scab Website at http://scabusa.org/research_rfp12.html#FY12_rfp under 'SPECIAL FORMS'. The file contains detailed instructions on completing the budget worksheet which contains calculated fields.

Instructions for submitting Multi-PI Budget Worksheet: You must first convert the Excel budget worksheets to a single PDF file and then merge with the PDF of 'File 1' before uploading to the EPS System. Contact the NFO if you need assistance with this step.

Tuition Remission: Tuition remission is **permitted** under USDA-ARS **extramural agreements** with any type of recipient organization (i.e. universities). If tuition remission is budgeted as a direct cost, it should be included in the "Other Direct Costs" category of the Budget Page (Section H).

Policy on Indirect Cost (IDC) Rate: The USWBSI's review process focuses on the **competitiveness of total** project costs (direct and indirect). Because Fusarium head blight is such a severe problem for the U.S. wheat and barley industries, the USWBSI has set the rate limit for indirect costs at 5%.

FILE 2: Curriculum Vitae and Publication List (CV/Pubs)

Curriculum Vitae and Publication List (Maximum four pages for CV with Publication List per Scientist)

To assist peer reviewers in assessing the competence and experience of the proposed project staff, all personnel who will be involved in the proposed project must be identified clearly. The items listed below should be included for all personnel (PI, Co-Investigators, and secondary scientists (i.e. post-docs, graduate students)) who are expected to work on the project in a significant fashion (e.g. expectation of co-authorship on ensuing publications), whether or not funds are sought for this support:

- *Curriculum Vitae (C.V.).* The C.V. should be limited to a presentation of academic and research credentials, e.g., educational, employment and professional history, and honors and awards. Unless pertinent to the project, do not include meetings attended, seminars given, or personal data such as birth date, marital status, or community activities.
- *Publication List.* A chronological list of all publications in refereed journals during the past five years, including those in press, should be provided for each professional project member for whom a Curriculum Vitae is provided. Non-refereed technical publications that have relevance to the proposed project may be included.

The C.V. and Publication List combined must not exceed four pages per scientist. C.V. and Publication Lists for collaborators or sub-contractors are not required.

Submission Instructions: PIs and Co-PIs are responsible for uploading their own CV/Pubs to the EPS System. CV/Pubs for all secondary scientists should be included in the PI's file. The CV/Pubs will only need to be uploaded one time whether or not the investigator is connected to multiple pre-proposals. File must be uploaded to the EPS System by **September 20, 2011.**

NOTE: Upon successful completion of the 'Pre-Registration Process', the user will receive a confirmation e-mail that will include a 'Help Document' for navigating the EPS System.

FILE 3: Current and Pending Support (CPS) Form

CPS form can be downloaded from RFP website at http://scabusa.org/research_rfp12#FY12_rfp.

All project pre-proposals must contain completed Current and Pending Support Forms for PI and all Co-PIs listing other current public or private support to which key personnel identified in the pre-proposal have committed portions of their time, whether or not salary support for person(s) involved is included in the budget. Analogous information must be provided for any pending proposals that are being considered by, or that will be submitted in the near future to, other possible sponsors, including other USDA Programs or agencies, and the USWBSI. Concurrent submission of identical or similar proposals to the other possible sponsors will not prejudice pre-proposal review or evaluation by the USWBSI for this purpose. However, a project pre-proposal that duplicates or overlaps substantially with a **proposal already reviewed and funded (or to be funded)** by another organization or agency will not be recommended under this program. The third column ('Requested/Award Amount') on the 'Current and Pending Support Page' has been divided into two sub-columns: Total \$ Amount and PI \$ Allocation. For each grant/proposal listed, **include both the total ('Total \$ Amount') and the amount you have or may receive ('PI \$ Allocation')**.

Submission Instructions: PIs and Co-PIs are responsible for uploading their own Current and Pending Support Form to the EPS System. The CPS Form will only need to be uploaded one time whether or not the investigator is connected to multiple pre-proposals. File must be uploaded to the EPS System by **September 20, 2011.**

IMPORTANT DEADLINES

Pre-Registration

- Proposed Research Form: Information submitted on this form pertains to the proposed research being submitted and will be used by the NFO to configure the EPS System for each PI.
- User Registration Form: The submission of this form will setup the PI's user account within the EPS System.

Pre-Registration Deadline:

August 31, 2011

Check List of Required Items for Individual Project Pre-Proposals

- **FILE 1: Project Pre-Proposal** (*complete in order below*)
 - Application for Funding Cover Page
 - Project Summary Form (*must fit within text box*)
 - Summary of Progress for Ongoing Funded Project(s) – FY11 (*one page maximum per project*)
 - Project Description (*five pages or less written text; ten pages or less in total including figures and tables*)
 - References to Project Description
 - Facilities and Equipment
 - Description of Collaborative Arrangements
 - Letters of intent from each collaborator and/or Co-PI
 - Budget Justification Form
 - Project Pre-Proposal Budget Form (*use either Individual or Multi-PI Budget forms; if 'Multi-PI Budget form is used, merge with PDF of File 1 before uploading to the EPS System*)
- **FILE 2: Curriculum Vitae and Publication List** (*maximum of four pages total per scientist*)
- **FILE 3: Current and Pending Support Form**

Submission of FY12 Pre-Proposal Deadline:

September 20, 2011