**REQUEST FOR FUNDING OF RESEARCH**

**2018-2019 FUNDING CYCLE**

**TITLE:**

**INVESTIGATORS:** *(List names, titles, institutions, phone and email contacts of Principal Investigator (PI) and cooperators. If the first listed participant is not the PI for this project (e.g., a graduate student), then please indicate the investigator actually serving as the PI.)*

**FIVE MOST IMPORTANT CAREER ACHIEVEMENTS OF PI:** (*List in the order you prefer. Limit two lines per achievement.)*

**PROGRAM AREA (check all that apply):**

\_\_\_ Management of weeds, to include resistance management and economics

\_\_\_Irrigation/water management

\_\_\_Quality of harvested seed—Phomopsis/Seed rot

\_\_\_ Disease Management/Control

\_\_\_ Fertility needs (especially P and K) for optimum and economical yield

\_\_\_ Insect management/Control, especially late-season populations

\_\_\_ Harvest aids

\_\_\_ Iron Chlorosis

\_\_\_ Nematode management/control

\_\_\_ Rotations using soybeans

\_\_\_ Research Validation or Demonstration

\_\_\_ Producer Communications

\_\_\_ Variety Trials

\_\_\_ Economics

\_\_\_ Other (*Identify*)

**PROJECT STATUS:**

New \_\_\_\_ *(Indicate planned length of project–1 of 2, 1 of 3, etc.)*

Renewal \_\_\_\_ (Year of )

Stand alone \_\_\_ or cross-commodity \_\_\_ (*additional funding from other sources?*)

**2018 FUNDING REQUEST** \_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| **BUDGET FOR 2018 MSPB RESEARCH PROJECT**  Grant/Contract Period: April 1, 2018 to March 31, 2019 | | | |
| CATEGORY *(see below for guidelines)* | | MSPB--ORIGINAL |  |
| A. | Personnel (No Permanent Salaries) |  |  |
|  | 1. Salaries (See Addendum B) |  |  |
|  | 2. Wages (hourly workers) |  |  |
|  | 3. GRA (include tuition) |  |  |
| B. | Fringe Benefits (% *used to calculate*) |  |  |
| C. | Travel |  |  |
| D. | Contractual Services |  |  |
| E. | Subcontracts |  |  |
| F. | Commodities |  |  |
| G. | Publication Costs |  |  |
| H. | Other Costs *(Define)* |  |  |
| TOTAL COST | |  |  |
| (MSPB does not allow indirect costs/overhead charges) | | | |
| **Personnel**: Show number of hours x hourly rate for each category. GRA cost to include tuition and books. MSPB does not pay salaries of principal investigators or cooperating scientists (USB Compliance Manual, Sect. 17, Part 2-D).  **Fringe Benefits:** Amount and rate for indicated salaries, wages, and GRAs must be shown.  **Travel**: Out-of-pocket and per diem expenses (hotel and meals) for site visits, travel to and from meetings (e.g. airfare, vehicle mileage not to exceed the IRS rate), etc.  **Contractual Services**: External lab fees, consultants, etc.  **Commodities**: Expenses related to the conduct of the project (e.g., seed, fertilizers, pesticides, lab supplies).  **Additional Details**: Provide for each budget category in addendum if necessary.  **Reminder**: All payments for project activities are on a reimbursable basis based on an itemized invoice submitted to MSPB each quarter along with a progress report.  **Budget Transfers**: The MSPB follows USB guidelines, which state “The PI may transfer funds amongst budget categories only with MSPB’s prior written consent if (i) the amount transferred exceeds 10% of any one general budget category (per annual period) or (ii) the funds transferred are travel related. PI shall request permission from MSPB for all budget reallocations and account for them in his/her financial report.”  **Additional Instructions:** See Addendum B. | | | |

**TECHNICAL SUMMARY**

*(Brief description of rationale, objectives, approach, and expected results and their impact on Mississippi soybean production. Give a short background that summarizes previous work, but no literature review or reference list. Limit to one page or less.)*

**OUTLINE OF RESEARCH**

**RATIONALE/JUSTIFICATION FOR RESEARCH:** *(Summarize previous work and current knowledge. Do not list literature citations, but keep documentation of summary statements for verification if requested.)*

**OBJECTIVE(S):** *(Include description of how this research will directly or indirectly benefit the Mississippi soybean industry.)*

**APPROACH AND EXPERIMENT CONDUCT:** *(Present according to each objective listed above; i.e., if you have three objectives, this section should have 3 sections with a summary section tying the objectives together. Give details such as experimental factors, factor or treatment levels/descriptions, number of locations and where, soil series for field experiment site(s), design of experiment, etc.)*

**PROJECTED IMPACT OF RESULTS ON MISSISSIPPI SOYBEAN PRODUCTION**

*(Estimate the monetary or acreage impact upon successful completion of this research. Provide both direct and indirect benefit of project results to Mississippi soybean producers.)*

**EXPECTED END PRODUCT(S)**

*End Products will be required at the project’s conclusion. List expected or planned end products such as a PowerPoint presentation, experiment station bulletin, journal publication, poster presentation, etc. that will be forthcoming when the project is completed. An MS Thesis or Ph.D. Dissertation is considered an acceptable end product if it is electronically accessible. An Executive Summary from a Thesis or Dissertation is preferred.*

*Identify the planned or expected venue for end product dissemination. End product(s) will be reviewed by the MSPB Coordinator to determine suitability for posting on MSSOY.COM. PI’s will be responsible for end product revisions that may be necessary before inclusion on the website. This requirement will be monitored by MSPB to ensure transfer of technology derived from funded research.*

**APPENDICES *(Add as needed)***

A. Explanation/justification of budget categories where needed for clarification or detail.

B. Special considerations–items not covered in prior sections.

**ADDENDUM A**

**Special Instructions/Requirements for Proposal Submission**

**Italicized instructions.** Delete from submitted proposal after inserting requested material.

**Page limit.**  Technical Summary and Outline of Research sections should not exceed 5 pages.

**Format.**  Use MS Word (**no pdf**) with Times New Roman 11 point font and double-space throughout.

**Special requests.**  Place in Appendix under special considerations.

**Requests for funding of equipment purchases.** Soybean checkoff monies are to be spent for the benefit of Mississippi soybean producers. Therefore, proposals that contain requests to fund general agricultural equipment that your institution cannot assure will be used for soybean-specific programs will not be considered. If the request is for the MSPB to fund a portion of the equipment purchase, the MSPB will consider providing funds in proportion to how much the equipment will be used for soybean-related research.

**Criteria used for funding consideration.**  1) How will Mississippi soybean producers benefit from this research? 2) How will you measure the benefits? 3) What percentage of the project will be funded by MSPB? 4) Does your organization participate in lobbying, advocacy, or legislative activity? 5) Is this funding for a specific project or program?

**Submitted proposals that do not follow the above format will be returned.**

**Send completed proposal in MS Word format to** [**larryheatherly@bellsouth.net**](mailto:larryheatherly@bellsouth.net) **and a copy to your institution (if required) before Dec. 10, 2017.**

**ADDENDUM B**

**Budget Guidelines for MSPB Grants**

Research grants from MSPB are reimbursable grants; i.e., a grantee/institution is reimbursed for actual expenses that are incurred in designated budget categories during the conduct of the research project that is funded. Actual expenses in each budget category must be itemized in order to receive funds from MSPB. Expenses in all budget categories are reimbursable only up to the amount stipulated in the proposal budget. A detailed description of this process follows.

**Personnel.** MSPB does not pay for any portion of the salaries of principal investigators and cooperating scientist(s). No permanent salaries are allowed; however, designation of a portion of the salary of a permanent employee other than the PI or cooperating scientist(s) assigned to the project is allowed. Wages for hourly employees are reimbursed at the indicated hourly rate on each proposal and designated on each invoice. Hourly rates should be commensurate with the placement of each designee within the conducting organization/institution; i.e., the rate for an hourly wage worker should be lower than that for a Research Associate, technician, or equivalent. MSPB assumes that the portion of all salaries and wages paid by MSPB is commensurate with the time each person spends on the project as indicated by the PI in the proposal and on itemized invoices submitted at designated intervals. Payment for a Graduate Research Assistant (GRA) stipend assumes that the portion paid by MSPB is commensurate with the time the GRA spends on the MSPB project as verified by the PI on each invoice.

**Fringe Benefits.** These are allowed at the sponsoring institution’s rate for each employee category, and should be calculated and shown separately for each category. The appropriate fringe amount should be shown if amounts for salaries/wages/GRA are requested. Fringe amounts should be carefully determined based on employee category to avoid common invoice problems with this category.

**Travel.** Travel is reimbursed at actual cost. This includes personal vehicle mileage not to exceed the IRS rate for the project period, lodging expenses supported by receipts, and meals and miscellaneous expenses at a daily rate not to exceed the sponsoring institution’s daily rate or $90, whichever is less. Receipts are required for daily non-lodging expenses. Expenses related to attending professional meetings to make a presentation that is related to the funded project and/or to interact with colleagues and recruit advance degree candidates to enhance research conducted to benefit Mississippi soybean producers are reimbursable. All project-related travel expenses are reimbursable up to the amount stipulated in the travel category of the proposal budget.

**Contractual Services and Subcontracts.** Expenses for this category are reimbursed at the rate charged by the contractor/subcontractor as supported by invoices received by the PI from the contractors and submitted to MSPB.

**Commodities.** MSPB will reimburse for items (usually supplies and materials needed to conduct the research or activity) in this category that are used for the MSPB-funded project and that are itemized by the PI on each submitted invoice.

**Publication Costs.** These costs will be reimbursed at the rate charged by the publishing agent, or MSPB will reimburse for in-house printing/publishing of a specifically identified publication resulting from the project in the amount indicated by the PI on each submitted invoice.

**Other Costs.** MSPB will reimburse for these costs (private lab. analyses, etc.) that the PI stipulates are used in support of the funded project and that are supported by invoices from vendors.

**Indirect Costs.** These costs are not allowed for MSPB projects. However, if the PI can provide documentation that a portion of the cost of an item is directly attributable to the support of the MSPB project, then MSPB will reimburse for that specific portion. Example: a charge for the electricity that is used to power a growth chamber or greenhouse bay that is dedicated to the MSPB-funded project, and that can be supported by usage history or a separate use meter.

**Equipment purchase.** Costs for the purchase of equipment (e.g. vehicles, tractors, implements, growth chambers) or capital improvements (e.g. land forming, irrigation well installation) are not allowed for MSPB projects. If such items are necessary for the conduct of the proposed project, then a lease/rental arrangement or similar option will need to be placed in the proposal budget as the preferred method to secure the needed items.

**Budget Transfers.**  The MSPB follows USB guidelines, which state “The PI may transfer funds amongst budget categories only with MSPB’s prior written consent if (i) the amount transferred exceeds 10% of any one general budget category (per annual period) or (ii) the funds transferred are travel related. PI shall request permission from MSPB of all budget reallocations and account for them in his/her financial report.”

**Additional Information.** PI’s are responsible for keeping records, receipts, invoices from vendors, etc. to support all requests for reimbursement from MSPB. In the event of an audit of MSPB’s conduct of its research program and funds disbursement, there may be requests of PI’s to furnish documents that support claims for reimbursement. Failure to provide these documents may result in forfeiture of previously disbursed funds from MSPB.

**ADDENDUM C**

**Reporting Requirements**

**MSPB Project Quarterly Reports**

* Quarterly reports of progress/activity will be due 90 days after the contract beginning date, and at 3-month intervals thereafter. Progress should be presented as per the objective(s) listed in the project proposal. Only report significant events toward progress (e.g., plots were planted, measurements were taken, plots were harvested, lab analyses were completed). These reports should be no more than 500 words (1 page single-spaced with line break between paragraphs).
* The required format for quarterly reports is:
  + Title of project:
  + Name of PI and email address
  + Background and Objectives
  + Report of Progress/Activity
    - Objective 1:
    - Objective 2:
    - Objective x:

**MSPB Project Annual Reports**

Annual reports will be due one year from the contract beginning date and on subsequent anniversary years for multi-year projects. They should contain a summary of the year’s activities and findings as per the objective(s) listed in the project proposal. Report all activities and findings, including those for unmet objectives. Include reason(s) for lack of activity or accomplishment in any unmet objectives. These reports should be no more than 1500 words (3 pages single-spaced with line break between paragraphs–tables and graphs can be additional). **Annual Reports can replace the 4th Quarter Report if received within 15 days of the project end date.**

**MSPB Project Final Reports**

The MSPB annually funds numerous research and extension projects that are designed to provide new and/or updated information and technology to improve the production and profit potential for Mississippi soybean producers. An integral part of the conduct of these projects is the timely production of a Final Report that provides detailed results from these projects that can be disseminated to producers in a timely manner.

The purpose of the Final Report(s) is to quickly disseminate project results to Mississippi soybean producers. This will be done by posting edited versions of the Final Reports, along with executive summaries, on the MSPB website.

Timely receipt of final reports is necessary to ensure that the benefits from checkoff investments are quickly and fully realized. Thus, **Final Reports for completed projects**:

* Will be due on or before the project end date. The MSPB determines that this allotted time is sufficient to compile a Final Report from completed projects, especially since the due date (usually Mar. 31) is about 6 months from the completion date of most field projects in the previous year;
* Shall be submitted using the format described below;
* Shall summarize all years of the project, not just the final year;
* Should be written at the same quality level as for an institutional publication or refereed journal;
* Shall describe in detail the conduct of the research plus results and conclusions in lay language (including English units) suitable for website posting and release to Mississippi soybean producers. It is expected that Project PI’s shall make revisions as requested by the MSPB Coordinator to provide an end product suitable for posting on MSPB’s website.

MSPB will approve payment of the final invoice for a project only after the Final Report as outlined in the contract is received from the PI of the project.

If a final invoice for a project is presented to MSPB before the end of the contract period, then the Final Report for that project will be due at the time said final invoice is received.

**In all cases, a Final Report for a project must be received before the final invoice will be paid.**

The MSPB recognizes that refereed journals sometimes require that submitted/accepted articles will not have been previously published. If this is a requirement of a journal to which the results of an MSPB-funded project are submitted, then the MSPB will allow 6 months from a project’s end date before posting the complete results on its website. However, a condensed summary version of the project’s conduct and results is expected in lieu of a complete report at the conclusion of the project, with the stipulation that the complete report be submitted to MSPB for website posting and dissemination to producers no later than 6 months from a project’s end date.

**Required Format for Annual and Final Reports for MSPB Projects**

**Title of Project with MSPB Project No.**

**Name of PI and email address**

*The email address is required to allow reader contact with PI when more information and/or clarification are needed.*

**Background and Objectives**

*This section should include the problem or issue being addressed, a short statement describing the approach of the research, and a* ***concise list of the objectives*** *of the research as presented in the Project Proposal (300-400 or fewer words).*

**Report of Progress/Activity**

*In 5 or fewer pages (not including graphs and tables), report the finding(s) or activity resulting from the project* ***by objective****. Give specific data in graphic or table form. Also indicate whether or not data/results are preliminary or stand-alone for final use by producers.*

**Impacts and Benefits to Mississippi Soybean Producers**

*In 200 or fewer words, provide an executive summary that describes the benefits from the activity and the projected acreage that is impacted.*

**End Products–Completed or Forthcoming**

*List outputs (publications, presentations at conferences, field days, workshops, etc., and products or other technology) resulting from the project activity. Additionally, give the total remaining outputs for each category. If none have resulted from this activity, so indicate. However, please indicate where/how the findings/results from the ongoing activity will be presented as they are developed.*

**Graphics/Tables**

*Include pictures (only those that show treatment or response effect), figures, and/or tables of data that support summary statements above. Tables should be prepared in the Tables function of Word or WordPerfect.*

**Special Instructions for all Reports**

All reports must show the MSPB Project Number and be submitted in Word format for MSPB editing. All tables must be constructed in the Tables Function of the word processing software.

Submit the Progress/Activity Report by the due date to the MSPB Coordinator– [larryheatherly@bellsouth.net](mailto:larryheatherly@bellsouth.net) (MSU PI’s cc Mary Ann Latham at [mlatham@mafes.msstate.edu](mailto:mdowns@mafes.msstate.edu))–for review and verification of progress activity. Reports are required by the above-indicated times before disbursement of monies for invoiced expenses.

**Attribution**

Whenever results of projects funded by MSPB are presented at meetings, seminars, symposia, etc., or published in any medium, the author is expected to give attribution to MSPB for providing financial support to the project that resulted in the information and/or results that are presented.

**ADDENDUM D**

**Invoice Requirements**

Please do the following when submitting an invoice to MSPB for reimbursable expenses.

* Each invoice to MSPB requesting payment for reimbursable expenses should be itemized by the budget category in the original proposal and **must show the MSPB project number**. Each budget category with listed items for reimbursement on the invoice should be detailed by subcategory. For example, in the salaries and/or fees category, items should be broken down by grade and hourly rate for each period, such as: Person A, 20 hours x hourly rate = x; Person B, 40 hours x hourly rate = y; etc.
* Submit with each invoice the budget form with the running total for each budget category as per the most recent invoice.
* This means that two items will be submitted with each request for payment:

An invoice with expenses itemized by budget category

The original budget form with the running total of expenses in each category and subcategory listed by quarter.

Submit the invoice requesting payment to:

**USDA-ARS and private party awardees**: Send to [kelleythompson@cpabea.com](mailto:kelleythompson@cpabea.com) with a cc to [larryheatherly@bellsouth.net](mailto:larryheatherly@bellsouth.net)

**MSU awardees**: Send to your institution’s accounting department.

Originals required to support documentation for invoiced travel expenses should be mailed to Kelley Thompson, Butchart, Ellzey, and Associates, PO Box 629, Canton, MS 39046-0629.

PI’s should retain bills or invoices for requested reimbursable expenses.

**ADDENDUM E**

**Special Consideration of Proposals.**

The MSPB strongly encourages that all research proposals that have a production input or inputs with associated cost(s) also include an economic evaluation component or objective. This may require an Agricultural Economist as a collaborator to use the Mississippi State Budget Generator for appropriate budgeting procedures.

**ADDENDUM F**

**Priority Research Areas**

The below are production topics that are under-researched and need further study, or that need research as the result of new technology or new occurrences. The items in this list do not supplant presently-funded projects that are considered to be priority research as determined by previous funding commitments from the MSPB. The order of items in this list does not indicate an assignment of relative importance.

* Irrigation water savings in a corn-soybean rotation system through management of corn residue.
* Specialized soil fertility management geared toward ultra-high soybean yields and improved soil health.
* Iron deficiency chlorosis management options, namely identification of tolerant varieties.

Problem: Iron deficiency chlorosis (IDC) is a recognized production problem in East Mississippi, and research is needed to identify problem fields and provide remedial measures. This will require a coordination of the accepted rating or determination of IDC symptoms among regional specialists so that determination of varietal symptoms and differences are consistent across locations. Also, the conduct of variety trials in affected areas should be conducted to determine varietal differences in symptoms and effect, and provide a list of tolerant varieties based on study results.

* Research on nonirrigated sites to explore production/management options that will increase opportunities for consistent yields and profits across years without irrigation. Over one-half of Mississippi soybeans are grown on dryland or nonirrigated sites. The erratic nature of summer rainfall patterns in Mississippi often leads to inconsistent yields from these sites over a period of years. Therefore, research should be conducted to determine the optimum (different from maximum) dryland yields for maximum economic returns over the long term. In other words, research should be designed to determine what agronomic practices (planting date, bed vs. no bed, MG, etc.) and subsequent post-planting management practices will result in the most consistent and economical yield over the long term.
* Investigate use of conventional varieties (with no technology fees) in dryland systems to lower cost. This may be a viable option since management of herbicide-resistant weeds is increasingly relying on conventional herbicides which significantly increases weed control costs.
* Investigate weed control strategies to manage and safely use new/forthcoming GE weed control traits.
* Controlling costs associated with various irrigation management schemes will be necessary to ensure their long-term profitability. However, a first step in this process will be an accurate assessment and/or determination of all costs associated with all irrigation systems so that changes/enhancements to irrigation management for soybeans can be accurately evaluated from an economic standpoint. In other words, researchers, extension specialists, and producers should have access to the same updated economic data set for irrigation systems with which to assess their economic results. This will involve cooperation among all of the above parties to ensure that data input into developed budgets is consistent, accurate, and recent.
* The redbanded stink bug (RBSB) is an insect pest that has shown the propensity to cause extensive physical and economic damage to soybean through harvest. Research to address the damage potential and control of this pest is needed, and should consider the following important components.
* The overwintering capacity of this insect and food source(s) that will promote its survival into the next soybean growing season.
* When will overwintering populations infest soybeans, and what if any early-season management protocols should be applied to address this?
* Management options, including effective insecticides and their application protocol, that are effective in controlling RBSB throughout the period of economic injury.
* RBSB damage that will affect physical seed quality in an amount that will result in dockage at the elevator.
* RBSB damage effect on seed compositional quality, namely protein and oil.
* Accurate determination of thresholds for season-long control that may be/is justified.
* Identifying/evaluating remedies, both genetic and prophylactic, for late-season seed damage that is common but exacerbated by abnormal weather near or at maturity. This will involve a cooperative research effort among Miss. and regional scientists/specialists to integrate all known technologies that may contribute to a solution. This should involve a team approach; i.e., projects that propose research with individual components of this problem will not be favorably considered unless they are in cooperation with other scientists/specialists who will work in consort to incorporate these individual components into a coordinated end-product solution.
* One approach could be the economic impact of applying a prophylactic application of an effective fungicide between soybean stages R7 and R8 to protect seed quality vs. the current practice of applying a prophylactic application of a fungicide at the recommended R3-R4 period. This latter practice has resulted in the development of fungicide resistance to some fungicides, as well as the attainment of only minimal seed yield increases. This approach will involve the cooperation of an agricultural economist(s) to determine whether or not the perceived assurance of seed quality (thus minimizing dockage) with the later fungicide application will result in greater economic return to yield than will the small yield increase from the earlier application.

**MANY OF YOU ARE IN PRODUCER FIELDS AND/OR ARE IN CONTACT WITH PRODUCERS ON A CONSTANT BASIS. YOU ARE ENCOURAGED TO USE INFORMATION GAINED FROM THESE CONTACTS TO DEVELOP PROPOSALS THAT WILL ADDRESS THOSE AREAS THAT MEET PRODUCER CONCERNS THAT YOU HEAR ABOUT MOST OFTEN.**

**MANY OF YOU ATTEND REGIONAL MEETINGS WHERE YOU COMMUNICATE WITH SCIENTISTS AND SPECIALISTS FROM OTHER STATES IN THE REGION. THESE CONTACTS AND INFORMATION GAINED FROM THEM SHOULD GUIDE YOU IN DEVELOPING PROPOSALS THAT YOU DEEM APPROPRIATE TO ADDRESS COMMON SOYBEAN PRODUCTION PROBLEMS. THE MSPB REQUESTS THAT YOU CONSIDER THE BELOW RELATED POINTS.**

* **THE ABOVE CONTACTS SHOULD BE USED BY YOU TO ENSURE THAT YOUR PROPOSED ACTIVITY IS NOT A REPEAT OF THOSE PROJECTS THAT YOUR REGIONAL COLLEAGUES HAVE CONDUCTED OR ARE CONDUCTING.**
* **THE ABOVE CONTACTS SHOULD BE USED BY YOU TO DEVELOP REGIONAL PROJECTS IN COOPERATION WITH YOUR COLLEAGUES IN OTHER STATES SO THAT THERE IS A COORDINATED EFFORT AMONG REGIONAL SCIENTISTS AND SPECIALISTS TO ADDRESS THE SAME PROBLEM THAT OCCURS ACROSS STATE LINES.**