



Maryland Grain Producers Utilization Board

209 Jarman Branch Drive, Centreville, MD 21617

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October 4, 2016

Dear Research Scientist, Promoter and Educator,

The Maryland Grain Producers Utilization Board (MGPUB) is seeking proposals from universities, organizations and individuals to help fulfil its mission to increase the profitability of Maryland grain production and to improve the public understanding of agriculture. MGPUB will be using checkoff investments to support these education, promotion and research projects.

For 2017 funding, MGPUB is interested in proposals to:

- Develop and evaluate production systems to enable farmers to achieve a 300 bu/acre corn yield to feed the expanding population.
- Assess what, if any, water quality benefits that can be credited to the use of genetically- modified corn and soybeans since farmers started using this technology in their crop production.
- Evaluate the differences in laboratories reporting tissue sampling results and create guidance/recommendations for grower interpretation of the values.
- Research nutrient uptake and resulting crop yields based on timing of application in concert with weather conditions, degree units, and other cover (cover crops) growing to determine optimal conditions for fall/winter nutrient applications.
- Investigate the benefit and efficiency of foliar application of nutrients on grain crops.
- Determining cost effectiveness of poultry litter in comparison to inorganic fertilizer, including the increased transportation cost, application cost, and incorporation cost.
- Evaluate the release of nitrogen from cover crops and the availability to the next crop including timing and amount.
- Examine soil phosphorus over time (20± years) to determine trends in phosphorus level.
- Evaluate the economic, environmental and production impacts of allowing farmers to spread poultry litter to satisfy two-year crop needs for Phosphorus in a single application in a corn, wheat, soybean rotation to enable more affordable and practical application rates, reduced incorporation frequency with potential soil loss, etc.
- Determining N use efficiency and/or N loss in a corn-soybean rotation when applying poultry litter at rotational P removal rates and then applying remaining N needs through enhanced N application technologies (Greenseeker™, PSNT) under irrigation.
- Determine production methods for effective and economically-viable ways for grain farmers to achieve the goal of continuous improvement in nutrient use efficiency.
- An assessment of the use of the fall nitrate test for small grains.
- Developing and evaluating strategies to reduce wildlife crop damage.

Additional topics and details on submitting proposals are outlined in the “Research Proposal Guidelines”.

Proposals will be accepted until December 1, 2016, at which time they will be distributed to our Funding Committee for review. They will be evaluated, and those accepted approved, at the MGPUB funding meeting on January 4-6, 2017 in Grasonville. This will be the only time that funding requests for 2017 will be considered.

Please review the enclosed MGPUB - Research Proposal Guidelines, dated October 1, 2016 for more specific information. **Forty five copies** of the proposals, back-to-back preferable, should be 3-hole punched, (no folders or binding please) and sent to: MGPUB, 209 Jarman Branch Drive, Centreville, MD 21617. Proposals must be postmarked no later than **December 1, 2016**. No faxes or emails will be accepted.

Grant recipients for multi-year projects funded in 2016 should submit their 2017 funding requests, along with their 2016 annual progress report or final report, using the same format as first year grant recipients. All sections of the proposal should be completed in full. If you have any questions, please contact Lindsay Thompson at Lindsay.mdag@gmail.com

Sincerely,



Jennie Schmidt
President

Maryland Grain Producers Utilization Board

Research Proposal Guidelines

October 1, 2016

The Maryland Grain Producers Utilization Board (MG PUB) was formed in 1991 to administer Maryland's Grain Checkoff Program. Checkoff funds can be used to promote greater utilization of grain through expanded promotion, research, education, information and other similar activities. For 2017 funding, MG PUB will continue to support projects to help grain farmers remain profitable through production research and market development. Under continued pressure for agriculture to go beyond the current level of best management practices to improve water quality, MG PUB is interested in proposals to:

- Develop and evaluate production systems to enable farmers to achieve a 300 bu/acre corn yield to feed the expanding population.
- Evaluate the economic, environmental and production impacts of allowing farmers to spread poultry litter to satisfy two-year crop needs for phosphorus in a single application in a corn, wheat, soybean rotation to enable more affordable and practical application rates, and reduced incorporation frequency with potential soil loss, etc.
- Evaluate the potential benefits and risks of drones in agricultural production, assess and report on the existing laws and regulations, identify concerns that farmers should be aware of, the ability that the data collected by drones can be plugged in to existing GPS equipment, the potential use of drones by regulators, customers and scouts, etc.
- Assess what, if any, water quality benefits that can be credited to the use of genetically- modified corn and soybeans since farmers started using this technology in their crop production.
- Assess any long-term benefits to water quality by growing multi-species cover crops that include clover compared to single cereal crop cover crops.
- Evaluate products and systems to maximize the availability of nitrogen from manure and commercial fertilizer for the growing crop.
- Determining N use efficiency and/or N loss in a corn-soybean rotation when applying poultry litter at rotational P removal rates and then applying remaining N needs through enhanced N application technologies (Greenseeker™, PSNT) under irrigation.
- Determining cost effectiveness of poultry litter compared to inorganic fertilizer. Including the increased transportation cost, application cost, and incorporation cost. Produce a document that helps farmers in low P regions determine if they should consider poultry litter and how much they should pay for it.
- Examine soil phosphorus over time (20± years) to determine trends in phosphorus level.
- Evaluate the economic, environmental, and energy use implications of substituting locally generated poultry litter with imported fertilizer on the Eastern Shore.
- Determine production methods for effective and economically-viable ways for grain farmers to achieve the continuing desire for nutrient efficiency.
- An assessment of the use of the fall nitrate test for small grains.
- Determining the nutrient contribution of wildlife into the Chesapeake Bay.
- Developing and evaluating strategies to reduce deer damage.
- Evaluating sorghum varieties for Maryland (to be funded in cooperation with the National Sorghum Checkoff Program).
- Strategies for lessening the negative impact of stinkbugs and slugs on grain crops.
- A field assessment of the accuracy of tissue analysis based fertilizer recommendations and a study on crop tissue analysis that is production oriented based on stewardship rather than solely based on reduction of fertility.
- New uses for grain, grain components and byproducts.
- Determine the potential for foliar fertilizer applications to effectively reduce soil nutrient levels.
- Demonstrate and document the true level of best management practices (BMPs) installed and water quality improvement activities on farms to provide more accurate data to be counted in the Bay model.
- Establish protocols for Canadian thistle elimination rather than control.
- Educate the general public, youth, environmental community and policy makers about agriculture.

Funds are generally spent in the same proportion on each crop as they are received. Applications should be postmarked no later than December 1, 2016. Individuals who received funding in 2016 for multi-year projects should submit their requests for 2017 funding at this time. Annual (or progress) and final reports of previously funded grants should also be submitted by December 1, 2016 to enable MG PUB to review the results prior to the January funding meeting. Each board member receives copies of the reports and proposals in December in a 3-ring binder in preparation for the funding meeting. Funding requests to MG PUB require **45 copies** of the proposals and **45 copies** of any 2016 reports, (3-hole punched, two sided preferable, no folders or binding). Final and interim reports should include one copy of the final invoice and one copy of the summary. As well as

submitting the summary in Microsoft Word format, the summary and the 2016 report should also be submitted electronically in PDF format for posting on the MGPUB website, these two items should be emailed to Marguerite Guare at marguerite.mdag@gmail.com. Please review your grant approval letter before submitting your report to ensure that all issues are addressed.

Full proposals, which must be no longer than 10 pages, should contain the following information:

1. Title.
 2. Name of organization to which grant should be made.
 3. Principal investigators - names, addresses, phone numbers, e-mail addresses, websites and affiliations.
 4. An Abstract (limited to one page).
 5. Amount requested.
 6. Other funding sources.
 7. Statement of need to justify the project.
 8. Value of proposed project to Maryland and/or national grain producers. Explain how project will impact education, research, marketing and promotion to improve grain utilization or improve the image of agriculture.
 9. Goals and measurable objectives.
 10. Procedure to achieve these objectives.
 11. Evaluation.
 12. Schedule for proposed project.
 13. Overview of other research/projects being undertaken in this area.
 14. Itemized budget, showing each years' expenditure (if longer than one year), other funding sources and amounts (including institution investment), breakdown into salaries, fringe benefits, equipment, travel, materials and methods, etc.
- MGPUB grants cannot be used to pay indirect costs.**
15. Qualifications of principal investigator.

Proposals that do not provide the information requested in 1-15 will not be considered. After the full proposal has been reviewed, an applicant may be asked to supply more information and/or attend the review meeting on Thursday, January 5, 2017 at the Hilton Garden Inn in Grasonville to discuss the project.

Multi-year projects should be shown as such, but the Board will approve expenditures annually. Any amendment to the length of a project must be noted and justified. The work outlined in the initial proposals must be completed before additional funding will be provided; MGPUB does not permit stacking of grant funds from one year to another.

Recipients of grants will be required to:

1. List MGPUB as a sponsor and display signs provided by MGPUB, during field days, demonstrations, producer meetings, etc. and when results are published.
2. All projects will require a final evaluation report showing how the objectives were met.
3. Multi-year projects will require an annual progress report and a final evaluation report.
4. Reports are due on December 1 of the year they are approved unless written permission is granted for an extension.
5. Recipients will be required to attend a meeting to report their progress and findings to the Board of Directors of MGPUB (or a sub-committee of the Board).
6. Provide a 100-200 word summary article about the project's findings to be published in local ag publications, MGPUB's newsletter and on the MGPUB website.
7. If possible, add a link to MGPUB's website (www.marylandgrain.com) to provide additional information on the projects that are funded.
8. If available, attend the Maryland Commodity Classic meeting on July 27, 2017 to explain the project.
9. Slides, overheads and PowerPoint presentations used to present data summaries to groups should list MGPUB as a sponsor.
10. MGPUB directors, or a research committee, may arrange to visit projects to discuss the project with the grant recipient.
11. Additional requirements may be requested.

Forty five copies of the proposals must be submitted by mail (no faxes or emails) and postmarked no later than December 1, 2016 to:

MGPUB
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Centerville, MD 21617