The Andersons Research Grant Program:
Regular Competition

Request for Proposals

On-line Submission Deadline:
Friday, September 8, 2017

Photo courtesy of: The Andersons, Inc., External Communications

NC-213, Marketing and Delivery of Quality Grains and BioProcess Coproducts
NC-213 MEMBER INSTITUTIONS AND REPRESENTATIVES

Officers
Chair ................................................................................................................... Sam McNeill, University of Kentucky
Vice Chair ........................................................................................................ Anton Bekkerman, Montana State University
Secretary ........................................................................................................ Griffiths Atungulu, The University of Arkansas
Past Chair ........................................................................................................ Gretchen Mosher, Iowa State University
Industry Advisory Committee Chair ................................................................ Chuck Hill, AgriGold Hybrids
CSREES/USDA Representative ........................................................................ Hongda Chen
The Andersons, Inc. ........................................................................................... Christopher Reed
Administrative Advisor/Coordinator ........................................... David A. Benfield, The Ohio State University/OARDC
Administrative Associate and Report Production ..................... Bill Koshar, The Ohio State University/OARDC

Participating Stations
University of Arkansas ................................................................................ Griffiths G. Atungulu*
University of Idaho ............................................................................................ Dojin Ryu*
University of Illinois ........................................................................................... Vijay Singh*
Grace Danao, Peter Goldsmith, Marvin Paulsen, Kent Rausch, Mike Tumbleson
Purdue University ............................................................................................... Klein Ileleji *
Kingsly Ambrose, Linda Mason, Richard Stroshine
Iowa State University ............................................................................................ Gretchen A Mosher*
Carl Bern, Shweta Chopra, Chard E. Hart, Charles Hurburgh, Jr., Dirk Maier, Kurt Rosentrater, Angela Shaw
Kansas State University ...................................................................................... Carlos Campabadal*
Subramanyam Bhadriraju, Tom Phillips, Praveen V. Vadlani
University of Kentucky ....................................................................................... Michael Montross*
Sam McNeill
Mississippi State University .............................................................................. Haibo Yao*
University of Missouri ....................................................................................... Joe Parcell*
Montana State University .................................................................................... David K. Weaver*
Anton Bekkerman
University of Nebraska ...................................................................................... Devin Rose*
North Dakota State University ........................................................................ Senay Semsek*
Clifford Hall, Kenneth Hellevang, Frank Manthey
The Ohio State University ................................................................................... Pierce Paul*
Oklahoma State University .............................................................................. Brian D. Adam*
Patricia Rayas-Duarte, Carol Jones
Texas AgriLife Research ...................................................................................... Tim J. Herrman*
Joseph Awika, Kyung M. Lee, Wei Li
University of Wisconsin ...................................................................................... Sundaram Gunasekaran*
USDA, ARS, CGAHR, Manhattan, Kansas ................................................ Mark Casada*
Paul Armstrong, Frank Arthur, Scott Bean, Thomas J. Herald

*Official Voting Representative. (Material on Participating Stations obtained from NIMSS Appendix E as of April 24, 2017.)
This is a request for Multistate Project NC-213 members to submit proposals, on-line, to the Andersons Research Grant Program for 2017. The Andersons Research Grant Program will provide research funding within the scope of the multistate research project entitled "Marketing and Delivery of Quality Grains and BioProcess Coproducts". Successful proposals will receive up to $25,000 per year for two years.

**PROPOSALS MUST BE SUBMITTED ON-LINE NO LATER THAN FRIDAY, SEPTEMBER 8, 2017**

### SECTION 1.0 STATEMENT OF THE PROBLEM

Legislative and technological changes in grain markets are creating new opportunities to deliver high quality products that enhance value to end-users. Some changes may also create increased risk for different industry sectors. The challenge is to generate value through quality at as many points as possible in the production, distribution, and marketing system. At the same time, it is critical to preserve quality of all cereals and oilseeds, to successfully manage risk and insure security. Product and system changes that create value will require improved communication, information, technology transfer, and collaboration among the diverse communities that comprise and affect grain markets.

*The goal of the Andersons Research Grant Program is to develop new approaches and technologies to maintain or improve the quality of cereals and oilseeds from harvest to delivery, while preserving the environment, and maintaining consumer safety.* These approaches and technologies must be developed and implemented if the U.S. is to remain at the forefront of the world’s major producers.

### SECTION 2.0 OBJECTIVES AND ELIGIBILITY

#### 2.1 Objectives

Proposals submitted to the Andersons Research Grant Program must address one or more of the following NC-213 objectives:

1. To characterize quality and safety attributes of cereals, oilseeds, and their processed products, and to develop related measurement systems.
2. To develop efficient operating and management systems that maintain quality, capture value, and preserve food safety in the farm-to-user supply chain.
3. To be a multi-institutional framework for the creation of measurable impacts generated by improvements in the supply chain that maintain quality, increase value, and protect food safety/security.
2.2 Eligibility

To be eligible for The Andersons Research Grant Program, at least one of the principal investigators must be a member of Multistate Research Project NC-213, "Marketing and Delivery of Quality Grains and BioProcess Coproducts" (i.e., the principal investigator’s name must be listed in Appendix E of the Plan of Work). In addition, at least one investigator must have a current report included in the 2016 Annual Report of Progress.

“Are all reporting requirements for all investigators up to date?” Any investigator with outstanding annual or final reports will be, along with their Proposal, ineligible for the competition until reporting obligations are met. This also includes an investigator who is on a multi-station (or Team) Proposal.

SECTION 3.0 FORMAT FOR PROPOSALS AND ELECTRONIC SUBMISSION

All proposals must be submitted on-line as PDF documents (Adobe). To submit, visit the NC-213 web site at http://www.nc213.org and select the “Submit a Proposal” tab on the right column. Once you are on the submission page, you will need to enter the following information:

- Principal Investigator’s Name (Last Name, First Name)
- Principal Investigator’s E-mail address
- Proposal Title
- Requested Funding (Please use integers only. No “$” sign or decimal point.)
- Competition Type (From the drop down, select “regular.”)
- Comments for Administrator

Use the “Browse” feature to find your .pdf file, click once on the “Submit” button to submit your proposal.

Proposals must be submitted using a standard 8.5 x 11 page size with 1” margins and an easily readable font (e.g., Arial, Tahoma, Times Roman) in 12 point font. All pages except the Cover Page should be numbered at the bottom center of the page. Proposals are limited to 10 pages, excluding the cover page, CV (U.S.D.A. guidelines for CVs may be followed), Current & Pending, and budget pages. Research project proposals must contain the following sections and must be assembled as follows:

- Cover page (example included)
- Problem Identification and Related Research - Describe the basis for the project, a means to evaluate the importance of the objectives and what research has been accomplished to date.
- Objectives - Indicate which NC-213 objective(s) (i.e., Objectives 1-3, Section 2.1) the project will address and the specific objectives for the proposed research.
• **Methods** - Describe in detail, the process that will be used to complete the investigation, including the experimental design, equipment, materials, and travel. This section should also explicitly describe how the collaborators/coPIs will interact.

• **Anticipated results, products, and impacts** - Describe the expected results and products developed as a part of this research project. How will the results/products of this project impact the industry and who will use the results/products?

• **Leveraging Resources** – Describe how the Andersons Funds can and will be used to leverage additional resources (e.g., matching funds, used to seed a larger grant/contracts activities).

• **Timetable** - Describe the schedule of events. Be as specific as possible.

• **Literature Cited** - List only those articles, books, or reports that are referenced in the proposal.

• **CV** – (U.S.D.A. guidelines for CVs may be followed.) The CV should be no longer than two pages, excluding publications and the information listed here must be included: Education, Employment and professional history, honors and awards, selected recent or relevant publications within the past four years. All investigators must include a CV.

• **Current and Pending Form** (see form provided). All investigators must include a Current and Pending form.

• **Budget** - All proposals must include an itemized budget. This budget should indicate materials, supplies, travel, and other expenses that will be required to complete the research. The budget must follow the Budget format provided in this request for proposals.

• **Budget Narrative** - Briefly describe how each budget item will be used in the project.

**SECTION 4.0 PROPOSAL EVALUATION CRITERIA**

The following criteria will be used to evaluate Andersons Research Grant Program proposals. Proposals must precisely follow the format in Section 3.0.

• Does the proposed project address problems that relate to NC-213 objectives as presented in the October 1, 2013-September 30, 2018 Workplan?

• Is the science sound and of high quality? (Rated item.)

• Are the objectives clear and quantifiable? Are the procedures sound? Does the proposal clearly describe statistical analyses where appropriate? (Rated item.)

• Are there clearly stated outputs of the proposed research? Examples: Publications, patents, data, workshops. (Rated item.)
The Andersons Research Grant Program

- Is the written quality (organization, grammar, spelling, clarity) of the proposal sufficiently high? (Rated item.)

- Will the proposed research likely produce tangible results within the project timetable? (Rated item.)

- What do you see as a specific impact (short- and/or long-term) of this research on the grain industry and/or grain science? (Rated item.)

- Does the proposed research have the potential to generate competitive external funding support? (Rated item.)

- Is the proposed budget appropriate to conduct the proposed research?

*All reviewers have the opportunity of leaving specific comments in addition to rating each criteria.

Criteria will be evaluated on a scale of 1 to 5 (1 - poor, 2 - below average, 3 - average, 4 - above average, 5 - excellent), or by a “Yes” or “No”.

Within the limits of available funds, awards will be made to applicants whose proposals are judged most meritorious under the evaluation criteria and procedures defined. Andersons Grant funds will become available to principal investigators based on the start date of the project. Funds are contingent upon the receipt of any outstanding reports from previously awarded proposals, and are contingent on receipt of an annual report.

All proposals will be evaluated by a Review Panel made up of the Administrative Advisor/Coordinator, Past Chair, Objective Chairs, and one member from the Industry Advisory Committee. If a Review Panel member specified above submits a proposal for funding consideration, they shall be replaced by the Administrative Advisor/Coordinator from among current officers and/or current members who have not submitted a proposal. Review Panel will rate each evaluation criterion (above) on a scale of 1 to 5 (1 – poor, 2 – below average, 3 – average, 4 – above average, 5 – excellent), or by a “Yes” or “No”. Those scores will be summed to arrive at a total score for each proposal. Panel discussion and written comments will augment numeric scores in the event of a tie. These comments also serve as feedback to the submitting lead principal investigator.

Composition of Review Panel: Best efforts are made to have the following composition of reviewers: Two land grant reviewers, one USDA grant reviewer, and two Industry reviewers.

**SECTION 5.0 REPORTING**

An annual (Year 1) progress report and a final (Year 2) written report are required. Annual reports must be submitted on-line no later than 30 days after the end of the project year. Second year funding will not be released until an acceptable annual report is received. Successful investigators are eligible to receive future Andersons Grants only if they have completed
previous projects and submitted acceptable final reports. Final reports must be submitted on-line no later than 90 days after the project end date. In addition to written reports, grant recipients are expected to present project results during the NC-213 Annual Meeting.

To submit your reports, visit the NC-213 web site at http://www.nc213.org and select the “Submit A Report” tab on the right column. When it is time for you to electronically submit your report, The Administrative Advisor’s office will send you an e-mail with your password. Once you are ready to submit your report, visit the web site then you will:

- Enter your e-mail address.
- Enter your password.

Once the password has been entered, click on the “Login” button. Once you have selected the “Login” button, you will be taken to a page that lists your funded proposals. Select the proposal for which you would like to submit a report. Paste your written text into the space provided and then select the “Save and Continue” button. The next screen will give you the opportunity to add elements to your report. If you add additional elements, you will need to click the “Save” button after each element. Elements are:

- Abstracts, Conference Proceedings
- Article, Peer Reviewed (only published or in press)
- Book Chapter (only published or in press)
- Bulletin or Technical Report
- Invention Disclosures
- Patents
- Extramural Funding
- Results and Impacts. This element is critical and for your report to be considered “acceptable”, this must be included.

Once finished, the next screen will show your lay summary. When finished viewing, simply click on the “Log Out” button.

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The Andersons Research Grant Program is supported by an endowment made to The Ohio State University (OSU) by The Andersons Inc. in February of 1966.

The Andersons, founded in 1947, is a diversified agribusiness and retailing firm based in Maumee, Ohio. Its Agriculture Group, one of the top grain handlers in the United States, also produces and markets fertilizer products and operates ten Retail Farm Centers. The Processing & Manufacturing Group includes railcar repair and marketing, lawn fertilizer production and marketing, corn cob milling for industrial and environmental applications, and the operation of seven full-service auto repair centers and one outdoor power equipment dealer. The Retail Group consists of six stores in Toledo, Columbus, and Lima, Ohio.
The Andersons Research Grant Program

Project Title: ______________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Principal Investigator(s)

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<tr>
<th>Name</th>
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(Attach an additional sheet if more space is needed.)

Project Contact (list one person to act as the primary contact):

| Name: | | Address: | |
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| Phone: | | Fax: | |
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| E-mail: | |
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Period of Proposed Project Dates:

Beginning: ___________________  Ending: ___________________

Amount Requested (maximum $25,000 per year for two years):

Year 1: ____________________  Year 2: ____________________
### ANDERSONS RESEARCH FUND - RESEARCH PROPOSAL BUDGET

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<th>Category</th>
<th>Year 1</th>
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*Andersons funds cannot be used for faculty salaries, departmental space, or facilities.

**The Andersons Research Grant Program policy specifies that no indirect costs can be charged to this project.
**CURRENT & PENDING SUPPORT**

**Name:**

**Instructions:**
Who completes this template: All individuals contributing to this research.
How this template is completed:
- Record information for active and pending projects, including this proposal.
- All current efforts to which individuals contributing to the research have committed a portion of their time must be listed, whether or not salary for the person involved is included in the budgets of the various projects.
- Provide analogous information for all proposed work which is being considered by, or which will be submitted in the near future to, other possible sponsors, including other programs.
- For concurrent projects, the percent of time committed must not exceed 100%.

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<th>NAME</th>
<th>SUPPORTING AGENCY/SPONSOR AND AGENCY ACTIVE AWARD/PENDING PROPOSAL NUMBER</th>
<th>TOTAL $ AMOUNT</th>
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**NC-213, Marketing and Delivery of Quality Grains and BioProcess Coproducts**
Pre-submission checklist.

To ensure that your grant proposal meets all criteria to be reviewed, the following items must be checked-off and reviewed prior to submitting your grant proposal. Missing any of the items below will make your grant proposal ineligible for this opportunity.

___ At least one of the principal investigators must be a member of Multistate Research Project NC-213 and is their name listed in Appendix E.

___ At least one investigator must have a current report included in the current Annual Report of Progress. Please visit the NC-213 website to review the latest report.

___ Any investigator with outstanding annual or final reports from previously funded Andersons Grant programs must meet all reporting obligations or the grant proposal will be ineligible for the competition.

Your grant proposal must contain, in this order, the following, pages numbered:

___ Cover page.

___ Problem Identification and Related Research.

___ Objectives.

___ Methods.

___ Anticipated results, products, and impacts.

___ Leveraging Resources.

___ Timetable.

___ Literature Cited.

___ CV – (U.S.D.A. guidelines for CVs may be followed). Each Investigator must have a CV.

___ Current and Pending. Each Investigator must have a Current and Pending.

___ Budget.

___ Budget Narrative.