



*Identifying and promoting opportunities for corn growers  
while enhancing quality of life.*

## **2020 INNOVATION GRANT, REQUEST FOR PROPOSALS**

To foster innovative solutions to some of the greatest challenges facing Minnesota production agriculture, the Minnesota Corn Research & Promotion Council (MCR&PC) and the Minnesota Corn Growers Association (MCGA) have allocated Innovation Grant funding. The funding is designated to aid farmers (or research faculty in a Level 4 funding request: see criteria below) to test or prove an innovative practice on their farm to solve a specific challenge. In the next growing season, we anticipate that there will be continued public focus on agricultural production practice in Minnesota agriculture. The MCR&PC and the MCGA are accepting proposals from farmers and students who would like to test or prove their ideas through a field scale project on their corn production farm. Post-secondary research faculty with an innovative idea that matches the project may submit a Level 4 proposal utilizing the criteria listed below.

### **PURPOSE OF THE GRANTS AND WHO MAY APPLY**

These grants will engage the ingenuity of Minnesota corn farmers; students engaged in FFA or 4-H programs; or students pursuing post-secondary education in an agricultural related field. Students submitting a proposal must be engaged in a family agricultural operation or in submit in collaboration with an active farmer engaged in production agriculture to serve as co-principal investigator. Proposals should engage in solving questions related to production agriculture and environmental stewardship. Please see priorities below.

Projects must be applied for and conducted by an active Minnesota corn farmer subject to the Minnesota corn check-off (for Levels 1, 2 or 3) but may include student collaborators or family members working with that farmer. University research faculty (for a Level 4 funding request: see criteria below) may also apply for these grants.

### **PROJECT PRIORITIES**

This request for proposals has a specific focus of investigating innovations as well as replicated trial research with specific intent including:

- 1) **Improved nutrient use efficiency** of corn production. Improved management should investigate improved use efficiency of macronutrients including Nitrogen, Phosphorus, Potassium as well as Sulphur. Emphasis within investigations that also reduce nutrient loss to ground and/or surface waters is strongly encouraged. This may include rain fed or irrigated corn production. Projects are encouraged to include monitoring drainage tile flow, where applicable, for nutrient loss under the proposed practice(s), OR
- 2) **Comparative tillage innovations** that investigate the role of tillage in production practices that reduce soil erosion improve soil health and result in improved ground and/or surface water quality associated with the focus farm operation. OR,
- 3) **Economic and management innovations** that investigate ideas which may result in increased profitability of corn production and may include but are not limited to accounting, record management, software tools to improve management, marketing, resource efficiency etc., supply procurement and grain utilization and marketing. Proposals should not be in conflict with other goals and priorities listed within this RFP.
- 4) **Production practices that enhance water quality**. Innovations which investigate additional practices which are not included in the above priorities with specific proposed outcomes to maintain profitable corn production while simultaneously preserving or improving ground and surface water quality.

Previously funded projects are listed by year at <http://www.mncorn.org/research/innovation-grants/>. Preference will be given to novel proposals that are not replications of previously funded projects. One of the biggest challenges of implementing new ideas is having an accurate estimate of what they cost to execute. In order to discover and promote innovations that may benefit other corn farmers, providing accurate information on costs to a farmer who might implement the new practice will be expected as part of proposal and the final reporting of each innovation grant.

#### **FIELD DAY OPTION**

**Level 1:** Past and/or current Innovation Grant recipients may be solicited by MN Corn to host a field day showcasing their innovation grant project to local area farmers, local and state level governmental leadership, local business leadership and other influencers. This will be a MN Corn singular event solicited and scheduled through MN Corn staff. The field day will be coordinated with the host farm and must occur between April 1<sup>st</sup> and November 15<sup>th</sup>, 2020. MN Corn staff will assist with coordination, advertisement, planning, set-up, and costs to support a farmer-hosted “Innovation Field Day” event.

#### **PROPOSAL OPTIONS**

**Level 2:** Up to \$7,000 (per year) grant toward development of a farmer lead innovative concept or best practice idea within a corn production system. Funding may be used to develop or modify equipment to test a novel practice. Project funding is not intended to retroactively support an already funded project or accepted farming practice at the proposed location unless it is a continuation of a previously awarded MN Corn innovation grant. Projects should be applied to no less than 20 acres of corn production to test the innovative concept with comparison to normal production practice. A submitted proposal should involve one growing season with potential for evaluation to justify renewal of the grant each year for up to three years total. Collaboration with at least one representative from a SWCD, NRCS, university and/or other agency personnel is expected. Priority consideration will be given to replicated trials with a statistical design and analysis methodology.

**Level 3:** Up to \$30,000 (per year) grant to test a farmer lead innovative practice in replicated farm scale trials. Collaboration with a qualified individual(s) [private, agency, university, etc.] to develop a sound farm trial experimental design is expected as part of the proposal however funding is not meant to be a supplement for a non-MCR&PC project. The proposal must include a statistical design as well as plans for data collection and statistical analysis. Level 3 projects are expected to comprise replicated farm scale trials with publishable results that have the potential as proof of concept research toward broad adoption of a technique or practice focused on priorities listed in this RFP. Equipment purchase is limited to no more than 10% per year of the award and must be for the purpose of the research. Proposals should involve three growing years to capture treatments in multiple environments as part of the design. Site visits and progress reporting in line with the proposed work plan are the basis for annual evaluation and renewal of the project grant.

**Level 4:** Up to \$10,000 (one year), grant for post-secondary research faculty to test an innovative or novel scientific approach or develop preliminary data to leverage greater funding concerning one of the priorities identified above. Funding is not intended to be used for new equipment, salary or to supplement ongoing research but to facilitate investigation of novel ideas similar to Level 2 funding for farmers.

#### **PROPOSAL CONTENT**

These instructions are intended to give the applicant guidelines for the proposal format as well as expectations for reporting information gained as a result of the project (**see Conditions of Funding Acceptance below**). The instructions are intended to insure submission of a complete proposal with high potential for successful completion. Level 1 project funding and proposed field days will be directed by MCR&PC. Funding for Level 2, 3 or 4 projects will be available from April 1, 2020 to January 31, 2021. For each proposal, objectives and goals must be identified that can be completed in the designated duration of the grant.

The **unbound** proposal should address the following sections in no more than a **total of five single-spaced 8.5” X 11” pages including the cover page and budget section:**

1. Cover page should be completed and attached to your proposal (**SEE BELOW**).

2. Include a synopsis ( $\leq 500$  words) of what you hope to investigate/research/demonstrate with the grant. If the project is funded, this synopsis will be reproduced in the MN Corn Research Directory.
3. Identify the Level of the proposed project matching one of the Proposal Options.
4. Identify each collaborator(s) [SWCD, NRCS, university, or other agency] for the proposal and the level of involvement. Note: At least one person from any of these entities is required as a collaborator for Level 2 or 3 grants. List each collaborator, their work affiliation and area of expertise, and how they will contribute to the project. Note: Level 4 funding has no collaborator requirement.
5. Identify all other external sources of funding associated with the project whether past, current, or applied for. Note: Failure to disclose all collaborators and external sources of funding may negate the terms of a grant award.
6. Within the body of the proposal, provide a work plan of the project including objectives and how they will be accomplished (the methods used) during the funding cycle. Replicated trials must include a description of the statistical design and analysis protocols expected to be utilized. All proposals should include a description of how costs will be tabulated to estimate actual cost of implementation of the innovation or practice on a per acre basis.
7. Identify the deliverables – what you hope to demonstrate at completion of the project.
8. Include a general itemized budget section with the proposal including but not limited to: supplies and materials, equipment, laboratory analysis, consulting expense, or other costs. Budgets should cover the cost of conducting the research only. Compensation for yield loss or any other proposed financial losses incurred by the participating farm or farmer as part of conducting this research should not be part of the proposed budget and will not be considered as part of funding. Any equipment or components to be purchased using these funds must be identified in the initial proposal and budget.

*Note: Sections 4 and 5 above may not be applicable for Level 4 proposals.*

#### **PROPOSAL DELIVERY AND DEADLINE**

An electronic version of the proposal must be received via the application process on the MN Corn website (<http://www.mncorn.org/research-rfps/>), no later than 3:00 p.m., Central Standard Time, **December 31<sup>st</sup>, 2019**.

#### **PROPOSAL EVALUATION**

Members of the MCGA/MCR&PC Production Stewardship Focus Team will evaluate each proposal based on the following criteria:

- Relevance of the project to the priorities and fit to the expectations indicated in this RFP
- Soundness of proposed work and experimental design where appropriate
- Proposal ingenuity to provide possible solutions to the RFP priorities
- Proficiencies of lead farmer(s) and collaborator(s)
- Probability of successful completion and potential to be of value to MN corn farmers

Successful and non-successful applicants will be notified by **March 1, 2020**.

#### **CONDITIONS OF FUNDING ACCEPTANCE**

- The body of the proposal must include a synopsis ( $\leq 500$  words); the work plan including objective(s), methods proposed, statistical design (if appropriate), deliverables at the close of the project, and the proposed budget of the funding requested.
- The lead farmer/researcher on each successful proposal for 2020 will also be expected to provide one-page quarterly progress updates on or before *June 1<sup>st</sup>, 2020*, *September 1<sup>st</sup>, 2020* and *December 15<sup>th</sup>, 2020* and an additional final report will be due on or before *January 31<sup>st</sup>, 2021* for Level 2, 3 and 4 projects.
- The lead farmer/researcher agrees to participate, if requested, in interviews conducted by either Minnesota Corn communications staff or other media or as part of a panel at an agricultural event to discuss successes and/or challenges that occurred during the project.
- The lead farmer/researcher agrees to provide a summary paragraph (abstract  $\sim 250$  words) included with the final report upon completion of the research. The abstract and final report are due with the final invoice.

**Minnesota Corn Research & Promotion Council  
Innovation Grant Proposal Cover Page, FY20**

Proposal Title (ten words or less):

Project Farmer Leader(s) and student applicant where proposing in collaboration.

Name(s):

Farm mailing Address:

E-mail address:

Phone Number:

Acres of corn you intend to plant in 2020:

County where the project will be located:

MCGA Member:  Yes  No

MCR&PC Innovation Grant Topic

**Check the appropriate Innovation Grant level the proposal matches and list all collaborators/advisors involved with the project:**

Level 1: \_\_\_\_\_

Level 2: \_\_\_\_\_

Level 3: \_\_\_\_\_

Level 4: \_\_\_\_\_

**This Section for Office Use Only**

MCR&PC Action on Innovation Grant Proposals

Funded  Not Funded

FY2020 Allocation \_\_\_\_\_

Project #: \_\_\_\_\_ (assigned after successful funding)

MCR&PC Comments: