FPPC Farm Pilot Project Coordination, Inc.
Technologies for Nutrient Management

Request for Proposal

Call for Research Addressing Environmental Impact of Nutrient Management Products, Technologies and Methodologies

Background: Farm Pilot Project Coordination, Inc. (FPPC), a non-profit organization, chartered to find and evaluate innovative methods, technologies, and products for manure and animal waste is expanding its nutrient management role to applications of fertilizers, amendments, and methods that will improve the nutrient-to-plant efficiency and lower losses of nutrients that impact water and air quality.

Objective: The goal is to find and evaluate promising nutrient management methods, technologies, and soil amendments that will be applicable for both manure and chemical fertilizers when applied using the right source, the right rate, the right time and the right place. Technology providers should describe how their proposed technology and advanced methodology keeps N, P, K nutrients in the soil and available to plants and minimizes nutrient losses affecting water and air quality. The scientific principals addressed by the 4Rs are briefly defined below:

RIGHT SOURCE: Ensure a balanced supply of essential nutrients, considering both naturally available sources and the characteristics of specific products in plant available forms.

RIGHT RATE: Assess and make decisions based on soil nutrient supply and plant demand.

RIGHT TIME: Assess and make decisions based on the dynamics of crop uptake, soil supply, nutrient loss risks, and field operation logistics.

RIGHT PLACE: Address root-soil dynamics and nutrient movement, and manage spatial variability within the field to meet site-specific crop needs and limit potential losses from the field.

Award Size: Farm Pilot intends to make three (3) separate awards valued between $100,000 and $200,000 by early May of 2012. To leverage existing funds, developers and nutrient innovators who are actively engaged in current field level programs with land grant universities or other established research entities to evaluate the proposed technology or advanced methodology are preferred. Third party evaluation is required for data collection and evaluation where there is a commercial interest in the results.

Proposals Invited: A one to two page white paper should be submitted detailing the current stage of development, test results to date, potential commercial interest and the environmental impact. The white paper should include a narrative describing how the proposed technology or advance methodology addresses the 4Rs, how the environmental impact will be measured, how requested funds will be utilized, and a justification of the needed implementation time line.

Scope interest: Areas of interest include technologies and advanced methodologies that provide environmental benefits while functioning within high yield cropping systems and have commercial applicability without negatively affecting a producer's economic returns. Proposed research should produce field level data that is replicated, widely applicable and metrics that quantify environmental impact. Examples of specific project areas include but are not limited to the following examples:

- Enhanced efficiency fertilizer products which may include slow or controlled release products, nitrogen stabilizers, and nitrification or urease inhibitors;
- Precision agriculture technologies that supply precise rates at the right time and or place given varying field or soil conditions;
- Creative use of cover crops including farming techniques like planting scavenger crops, relay cropping and crop rotation to control runoff and excessive nitrates leaching to groundwater;
- Best use of thermo-chemical byproducts (i.e. biochar and ash) to improve retention and plant available nutrients in the soil. To ensure that a proposed thermo-chemical byproducts can be replicated, the production process or standard by which it was manufactured must be must be fully described.
- Environmental impact and benefit data for technologies and methodologies underway in nutrient hotspots (such as the Chesapeake Bay watershed and Upper Mississippi River Basin) are preferred.

Deadline for Submission:

To be considered for potential funding, prepared white papers should be submitted, to the following address or by email to aimee.thomas@fppcinc.org no later than March 28, 2012.

Attention: **Aimee Thomas, Program Manager**
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