FOUNDATION FOR
FOOD & AGRICULTURE
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Request for Information: Designing a Global Digital Integration Hub to Enhance Collaboration Between Agricultural Producers and Researchers

Planned Release Date: October 12, 2022
Deadline for Comments: November 23, 2022
Comments can be submitted via a web form at:
https://www.grantrequest.com/Application.aspx?sid=6242&aid=22409

Summary:

 AgMission™ seeks input into the development of a new digital integration hub to enhance collaboration between agricultural producers and researchers as a core element of its program to accelerate the adoption of climate-smart agriculture (CSA). AgMission is a collaboration of the Foundation for Food & Agriculture Research and the World Farmers Organisation to co-develop CSA solutions to achieve net zero emissions and bolster adaptation and resilience to climate change globally.

Forging closer links between agricultural producers, who implement CSA practices, and agricultural scientists, who study the greenhouse gas mitigation potential and resilience benefits of these practices, has been identified as an important step towards building the trust and understanding necessary to increase adoption. Central to the approach of AgMission research is the understanding that farmers and ranchers must have a seat at the table and direct involvement in the development of CSA strategies and practices so that solutions co-developed with researchers are practical and actionable, as well as scientifically robust.

Therefore, AgMission is considering investing in the development of a digital integration hub that will allow direct communication on farmer-identified research needs, lived-experience insights from agricultural producers on gaps in scientific understanding of practice impacts, ongoing research studies and scientific priorities, on-farm research opportunities, and sharing insights on CSA practice transition costs, benefits and feasibility across different communities of agricultural producers. The objective of the integration hub would be two-fold: to facilitate transparency and accessibility of agricultural research to agriculture producers, and to provide a conduit for insights and feedback from producers to inform research priorities and design. The resulting research insights would therefore incorporate and reflect the knowledge and experience of practitioners.

Through this Request for Information, AgMission seeks input from agricultural producers, scientists, technology developers and other agricultural stakeholders to further define the scope and requirements that would provide the most value to the targeted user communities.

The vision for the integration hub is to create a digital connection and collaboration space with three sets of users:

1. **Agricultural producers** to communicate research needs and contribute to research priority identification through their knowledge and day-to-day work, in several possible ways:
   a. Indicating priority areas of interest for research on agronomic practices relevant to climate mitigation or adaptation;
   b. Identify researchers studying specific issues of relevance to their operations and access the research results and/or contribute to ongoing studies;
   c. Sharing data from their operations on production practices (e.g. rotation and tillage history) and environmental characteristics (e.g. soil samples, sensor data) to advance specific research projects of interest;
   d. Indicating availability and willingness to collaborate with scientists in on-farm research.
2. **Agricultural researchers** to receive input and feedback on research priorities and research projects to explore and establish collaborations. Examples include:
   a. Describe a priority area of science for exploration, including hypotheses requiring testing, and solicit feedback from farmer stakeholders on relevant observations;
   b. Describe a funded research project and articulate what farm level data or on-farm research activities are desired;
   c. Identify potential farmer collaborators by production system, region and topics of interest.
3. **On-farm research programs and producer networks** to act as amplifiers of research:
   a. Identify opportunities to disseminate research results and/or derived training materials and/or farmer experience as it relates to practice transitions;
   b. Identify collaboration opportunities to advocate for research in areas with common producer challenges and priorities.

The technical design of the digital hub is critical to its success, and we are soliciting input from web and digital tool developers with agricultural experience on the following issues:
- While data would not be stored in the hub, we envision that the hub could include a data transfer mechanism for users to share information. Such a mechanism would need to be secure and ensure data privacy.
- To promote use of the hub, the design and development would need to include process for integrating input from the intended user groups.

- The design will need to meet the needs of multiple types of users with different needs, expectations and digital systems knowledge

We envision a greater scale of collaborations involving farmers in research will emerge from creating this direct connection space. However, this potential will only be realized if researchers and producers participate at sufficient scale. Therefore, the initial design of the hub must be clear, farmer-friendly, intuitive and secure. It must protect participants information, while identifying where connections can be made based on geographic location, research interests, agricultural systems and identified agricultural practices.
In addition, AgMission would also use the collective information in the hub to help inform ongoing work identifying research gaps, and communicating research needs and funding requirements to funding organizations through a regular assessment and communication. A specific data management plan will be constructed to ensure users requirements on data privacy are taken into account.

Who should respond to this Request for Information
Any person or organization with an interest in participating in a digital connection space that fosters collaboration between agricultural researchers and producers to advance Climate Smart Agriculture, including but not limited to:
- Agronomists, soil scientists, crop scientists and other researchers engaged in the study of crop and livestock systems in both the public and private sector, in all world regions.
- Extension researchers and educators engaged in on-farm agriculture research.
- Farmers, ranchers and other agricultural producers.
- Farmer organizations and non-profit organizations working directly with farmers.
- Agricultural stakeholders conducting direct work with farmers and farmer organizations, including NGOs, agricultural retailers, food companies and other private sector groups.
- Digital tool developers with insights into the design requirements for identifying connections and ensuring participant privacy and security.

In the spirit of the multi-stakeholder approach that guides AgMission, respondents are encouraged to present shared ideas.

Questions: *All respondents can address any and all questions as relevant to their expertise*
Demographic questions for all respondents:
Name, email, organization, role (agricultural producer, scientist, farmer organization, NGO, corporate, government, other (please describe))

For scientists and research organizations:
1. What features of the platform would provide the greatest value when you consider:
   - Your needs in connecting directly to agricultural producers and farmer networks
   - Access to on-farm data
   - Identifying agricultural producers as partners for on-farm research

- Collecting research priority ideas from agricultural producers and considering their lived-experience insights in design of research projects and methods

For agricultural producers and farmer organizations:
2. What features of the platform would provide the greatest value when you consider:
- The possibility to express your needs in terms of research that would address a particular challenge or question about your operations
- Your needs in connecting directly with the academic research community
- Interest in participating in on-farm research
- Beneficial data sharing and requirements for deciding whether to share your data with specific projects, and for ensuring data privacy/anonymity when information is shared.
- Connecting with producer networks of your region or your agricultural system working on topics of mutual interest or relevance.
- Creating a space to help producer networks identify and connect with one another to share information farmer-to-farmer.
- Disseminating research results in a manner most relevant to agricultural producers to boost further adoption across farmers' networks

For web and digital tool developers:
3. Are there like tools or websites in existence that provide a model or examples for design of this digital integration hub?
4. What implications exist for ensuring data privacy in a digital collaboration space and how can risks of privacy breaches be minimized?
5. What methods of system design can be employed to ensure end users have adequate input into the system?

For all:
6. Any additional ideas on topics to be included in or addressed by such a platform?