

REQUEST FOR APPLICATIONS - Seeding Solutions 2018

With the success of our last year's Seeding Solutions opportunity, the Foundation for Food and Agriculture Research (FFAR) is once again putting out a call to the community through our Seeding Solutions funding opportunity. FFAR, as a core component of [our mission](#) is seeking to encourage the development of unique partnerships to support innovative and potentially transformative research focused on our [Challenge Areas](#). FFAR anticipates funding at least one meritorious and transformative proposal in each of our seven Challenge Areas. We encourage applicants to reach out to the managing Scientific Program Director for their Challenge Area of interest to hone their ideas prior to submitting a pre-proposal (details below). FFAR as always continues to seek and develop partnerships and projects, but this is an opportunity for the community to bring FFAR innovative ideas and unique partnerships to solve intractable challenges in food in agriculture.

What we are looking for

To be considered, proposals must be transformative research that addresses and provides solutions to an intractable problem and/or accelerates innovation within the [Challenge Areas](#). Proposals may be new projects or expansions of ongoing projects. If a request is to expand an ongoing research project, the request must adequately explain why additional funding for an existing project will enhance innovation or accelerate the project. FFAR will only consider research proposals that:

1. Have the potential for a transformative impact within the selected Challenge Area. The Challenge Areas are:
 - a. [Food Waste and Loss](#)
 - b. [Protein Challenge](#)
 - c. [Water Scarcity](#)
 - d. [Innovation Pathway to Sustainability](#)
 - e. [Healthy Soils, Thriving Farms](#)
 - f. [Urban Food Systems](#)
 - g. [Making "My Plate" Your Plate](#)

Key Dates

Pre-proposal Application Open: March 1, 2018 at 12:00pm ET

Pre-proposals Due: April 18, 2018 at 4:59:59 PM ET
Submitting a pre-proposal is required to submit a full proposal.

Full Proposal Invitation: June 15, 2018

Full Proposal Application Open: June 15, 2018 at 12:00pm ET
Only open to applicants invited to submit a full proposal.

Full Proposals Due: August 17, 2018 at 4:59:59 PM ET

Award Notification: Early Winter 2018

Anticipated Project Start Date: February 2019

2. Demonstrate partnerships with different sectors (private, NGOs, governments, academia, and end users, etc.), such that research outcomes may be scalable and applicable to food and agriculture systems.
3. Contribute to the goal of sustainable food and agriculture, defined as practices that, “satisfy human food and fiber needs; enhance environmental quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operation; and enhance the quality of life for farmers and society as a whole.” (Food and Agriculture, Conservation and Trade Act of 1990, Public Law 101-624, Title XVI, Subtitle A, Section 1603).
4. Serve the public good by making data open and accessible to the public, creating unique economic development opportunities, and/or contributing to food and agriculture workforce development.

Eligibility

The Foundation for Food and Agriculture Research welcomes applications from all U.S. institutions of Higher Education, non-profit and for-profit organizations, government-affiliated researchers, and domestic and international organizations.

Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as Program Director(s)/Principal Investigator(s) is invited to work with his/her organization to develop an application for support.

Award Information

- Anticipated Project duration: Between 12 and 60 months
- Total Project Amount for this opportunity: Between \$600,000 and \$2,000,000 (with a FFAR one-to-one match between \$300,000 and \$1,000,000). **Applicants are advised not to interpret the maximum allowable amount under this opportunity as a suggestion that they should expand their anticipated budget to this level. Reasonable budgets clearly work in favor of the applicant. Budgets that are not commensurate with proposed work or poorly justified will likely have a negative impact on the overall evaluation of the proposal.**
 - The number of projects selected for funding may vary by Challenge Area.
 - A one-to-one match is required for this opportunity. Matching funds must come from a non-federal source. Our [Matching Guidelines](#) can be found [here](#).
 - Matching funds must correspond to line items in the full proposal budget. At least 50% of matching funds must be cash match. The remainder could be in-kind match. Matching funding must supplement and not supplant any pre-existing funds for the project. Indirect costs cannot exceed 10% of the total

budget (FFAR contribution + grantee's matching funding). Please carefully review our IDC policy in the Instructions Tab of the [budget template](#).

- FFAR encourages applicants to reach out to FFAR early in the process to work through any issues with how the funds will meet FFAR's [matching requirements](#). Establishing a relationship with FFAR will ease the process going forward for this and future interactions the two organizations may have.
- Estimated Number of Awards: TBD. Depends on the quality and budgets of successful proposals. FFAR reserves the right to negotiate all or none of the applications received for funding consideration under this opportunity.
- Anticipated Award Date: Early Winter 2018

Application Components

Applicants are required to upload a 2-page document of their pre-proposal, **AND** complete the online application form. The uploaded pre-proposal should be formatted using Calibri or Times New Roman, 11pt font, single spaced, 1-inch margins, figures may be included. If you have questions, please contact the FFAR Grants Management staff at grants@foundationfar.org.

Pre-Proposal Application

Required components

- Project title (*up to 250 characters*)
- Key personnel involved in the project – name(s), affiliation, expertise, role on the project
- Proposed project overview/description
 - What is the issue the project is trying to address? (*up to 3,000 characters*)
 - What research gaps will the project fill? (*up to 3,000 characters*)
- Innovation – please describe how the approach, methodology, technologies or products will significantly advance the food and agriculture sector. (*up to 3,000 characters*)
- Budget
 - Total FFAR funding request
 - Total matching funds
 - Total proposed budget (*FFAR funds + matching funds*)
- Proposed project start date
- Proposed project duration (*in calendar months*)
- Funding partners – list any committed or potential funding partners, describe why they are an appropriate source of matching funds, and any prior contact you have had or relationship you have developed with them about this project

Full Proposal Application

Required components

- Project title (*up to 250 characters*)
- Proposed budget
 - Total FFAR request
 - Total matching funds

- Total proposed budget (*FFAR funds + Matching Funds*)
- Budget justification (*up to 8,000-character limit*)
- Key Personnel
- Public abstract (*up to 2,000-character limit*)
- Project Executive Summary (*up to 6,000-character limit*)
- Project Description (*up to 10,000-character limit*)
- Goals and objectives (*by year; up to 6,000 characters*)
- Anticipated outcomes or outputs (*up to 6,000-character limit*)
- Data Management Plan (*up to 3,000-character limit*)
- Organization Assurances
 - Research involving human subjects
 - Research involving vertebrate animals
 - Research involving Recombinant DNA
 - Research involving National Security implications
 - Research involving hazardous materials
 - Research involving human fetal tissue
 - Research involving NEPA review
- Attachments
 - a. Required Attachments
 - [Budget Form](#)
 - [PI and Key Personnel Biosketch](#) - three-page limit per individual listed as PI or key personnel in the project.
 - [Current and Pending Support Form](#) - complete for everyone listed as PI or Key personnel on the project
 - Project timeline (*by year*)
 - References cited
 - Letters of Support - applicants must provide letters of institutional, collaborator, or stakeholder support for the proposed project, especially from matching funders. Please combine all letters of support into a single PDF document before uploading as an attachment.
 - b. Optional attachments to support project description -this section should not be used to circumvent the page/word limit for the Research Program Plan Section.
 - Graphics, Figures, Equations, and Tables - The textbox for the Research Program Plan does not support equations, tables, graphics, and figures. Applicants may upload a PDF document with graphics, figures, tables, or a list of equations to support the research program plan. **Five-page limit.**

Application Submission Guidelines

Applications must be submitted through FFAR's online application receipt system (<https://proposalcentral.altum.com/>). Only applications submitted through this portal will be considered eligible for evaluation. If you are a new user, register for an account by clicking the

orange “Create One Now” button. You will receive a confirmation email to sign-in to your account. Once you log in, search through the list of institutions to see if there is an institutional profile for your organization. If there is no institutional profile, ask your Grants & Contracts Department or Office of Sponsored Programs to register your organization. Once the organization’s profile is registered and saved, the PI can select their institution and complete his/her personal profile. To access FFAR’s open funding opportunities, click the “Grant Opportunities” button on the top right corner of your screen, then on the top left corner of the screen, pull down the “Filter by Grant Maker” button and scroll down to select FFAR. Select the opportunity you would like to apply for by clicking the “Apply Now” button. The Principal Investigator may give access to others who will carry out part of, or participate in the proposed project, in Section Three of the online application. To invite individuals to participate in a proposal, they must already have an account in the system. By applying, the applicant acknowledges and accept the terms and conditions of the RFA.

Application Review Process

Pre-proposal Review

All submitted pre-proposal applications will go through an internal review process to ensure that the proposed project is relevant to the RFA and suitable to FFAR’s mission. Only the most innovative and cutting-edge projects with significant potential for advancing agricultural research will be invited to submit a full proposal application. Applicants should expect to be notified by email of whether they are invited or not invited to submit a full proposal no later than June 15, 2018. ***The pre-proposal is binding, therefore, only applicants who submitted a pre-proposal and were invited, can submit a full proposal application.***

Full Proposal Review

Successful applicants invited to submit a full proposal will undergo further review using a two-stage peer review process: (1) External Peer Review, and (2) FFAR Advisory Council review. In the first review stage, applications will be evaluated by an independent, external peer review panel of scientific experts using the proposal review criteria below. In the second review stage, applications judged to be most meritorious by external peer review panels will be evaluated and recommended for funding by the FFAR Advisory Council based on comparisons with applications from the same cycle and FFAR’s program priorities. All reviewers are required to read and acknowledge acceptance of FFAR’s [Conflict of Interest Policy](#) and [Non-Disclosure Agreement](#). We make reasonable efforts to ensure that proposals are not assigned to reviewers with a real or apparent conflict with the applicant or project personnel. Reviewers with a conflict of interests are recused from evaluating or participating in the discussions of proposals with which they have a conflict. Each stage of the review is conducted confidentially, and as such, FFAR is responsible for protecting the confidentiality of the contents of the applications. Applications recommended for funding by the Advisory Council will go to the Scientific Program Director and FFAR’s Executive Director to consider program priorities set by the Advisory Board, portfolio balance across programs, and available funding. FFAR’s Executive Director will approve each grant award recommendation made by the Science Program Director.

Review Criteria

Full proposals are evaluated based on scored primary review criteria and unscored secondary review criteria. The bullets under each criterion may serve as a guideline to applicants when writing their proposals, and as a guideline to reviewers on what to consider when judging proposals. The bullets are illustrative and not intended to be comprehensive. Reviewers will evaluate and score each primary criterion and subsequently assign a global score that reflects an overall assessment of the application. The overall assessment will not be an average score of the individual criterions; rather, it will reflect the reviewers' overall impression of the application. Evaluation of the scientific merit of each application is within the sole discretion of the peer reviewers and they may raise additional factors to consider that are not covered in the bullets for each criterion.

Primary Review Criteria

Primary criteria will evaluate the scientific merit and potential impact of the proposed project. Concerns with any of these criteria potentially indicate a major flaw in the significance and/or design of the proposed work. Examples of primary review criteria are, Significance and Impact, Research Plan, Scientific Merit, Innovation or Novelty, Qualification of project personnel, and Outcomes.

Novelty, Innovation, and Originality

- Has the applicant demonstrated that this research has not been done elsewhere, or that this research accelerates a current research challenge or addresses an agricultural challenge in a new or innovative manner?
- Does the applicant propose new paradigms or challenge existing ones?
- What research gaps will the proposal address?
- How well has the applicant described the need for the project and how this project is innovative in meeting that need?

Potential Impact

- Will the results of this research, if successful, significantly impact the current challenge to sustainably feed the 9.7 billion people projected to populate the world by 2050?
- If the research project is successful, will it lead to truly substantial advances in the field rather than add modest increments of insight?
- How effectively does the applicant align the proposed project with FFAR's Challenge Areas?
- How well did the applicant identify how FFAR is uniquely positioned to fund this project versus other Federal agencies or non-governmental funding organizations?

Feasibility

- Are the aims/objectives of the proposed project outlined clearly?
- Are the methods outlined to achieve the project's aims feasible? Are the methods appropriate, and are potential experimental obstacles and unexpected results discussed?
- What risks could inhibit the success of the project and how well did the applicant describe their plan to avoid/overcome them?
- Is the timeline appropriate for the proposed work?
- Is the budget commensurate with the proposed work?

Research Environment and Institutional Support

- How qualified is the team conducting the proposed activities?
- Are the levels of effort of the key personnel appropriate?
- Does the team have the needed facilities and resources to accomplish all aspects of the proposed research?
- Is there evidence of institutional support of the research team and the project?

Outcome

- What is the potential of the proposed research outcomes to have a significant impact on U.S. food and agriculture systems?
- How well did the applicant address what segment of the food and agriculture community this project will impact and how is it likely to affect it/them?
- What would be the tangible outcomes of this project? How well did the applicant describe those outcomes?

Intellectual Property

- What potential intellectual property or proprietary information may be generated because of this project?
- How well did the applicant describe how they plan to handle potential proprietary information or intellectual property?
- In the case of projects producing proprietary information/technology, how effectively did the applicant describe the funding of the production of proprietary information and/or judicious use of public funding?
- How will the grantee manage and disseminate data generated by this project?
- How adequate is the dissemination plan outlined by the applicant to share results of the project with the food and agriculture community during and at the end of the project?
- How did the applicant describe, where applicable, how they would implement or incorporate results and/or products into existing food production systems?

Funding Partners

- How effectively did the applicant detail the partnerships involved in the project?
- Do the letters of recommendation detail the potential for the research to make a significant contribution to field in the specified Challenge Area?

Secondary Review Criteria

Secondary criteria contribute to the global score assigned to the application. Concerns with these criteria potentially question the feasibility of the proposed research. Examples of secondary review criteria are, Budget, Duration of the project, Scalability and Dissemination, Protections for Human and Animal Subjects, and Previous Project Performance.

Award Administration

Selection Notice

Following the full proposal review, the principal investigator and the authorized organization representative listed on the project will be officially notified by email whether (1) the proposal has been selected for funding pending award negotiations, or (2) the proposal has not been selected funding. If a proposal is selected for funding, the Foundation for Food and Agriculture Research reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to, matching funds, or other budget information. Potential grantees are free to accept or reject the Grant Agreement as offered.

Award Notice

FFAR notifies applicants of whether they are selected for funding through email. The notice does not constitute an award or obligate funding from FFAR until there is a fully executed Grant Agreement.

Grant Period(s)

Upon receipt of the Grant Agreement, the potential grantee should note the Start Date and the End Date. Grantees may only use FFAR funds on project expenditures on or after the Grant Agreement is fully executed, or with prior approval of pre-award expenditure. Charging expenditures to the grant prior to the fully executed date is strictly prohibited. Likewise, grantees may not use FFAR funds after the End Date except to satisfy obligations to pay allowable project costs committed on or before that date. Grantees may have up to the last day of the month of expiration to fulfill obligated expenses.

Once the Grant Agreement is fully executed, the Start Date cannot be changed. The End Date may be changed with a written approval of a no-cost extension request by FFAR. If a no-cost-extension request is approved, FFAR will issue an amendment to the Grant Agreement.

If the grantee requires additional time beyond the Grant Period and the established End Date to assure adequate completion of the original scope of work within the funds already made available, the grantee may request a one-time no-cost extension of up to 6 months. The request must be submitted to FFAR at least thirty (30) days prior to the End Date of the grant.

The request must explain the need for the extension and include an estimate of the unobligated funds remaining and a plan for their use. This one-time extension will not be approved merely for using the unexpended funds.

Post-award Management

Reporting Requirements

After a grant is conferred, the grantee shall provide an annual financial report to FFAR showing grant expenditures to date. The grantee shall also provide an annual progress report to FFAR showing activities being carried out under the grant, including but not limited to project accomplishments to date and grant expenditures. Within 30 days of completion of all grant activities, the grantee shall provide a final progress report. The final progress report should address the original objectives of the project as identified in the proposal, describe any changes in objectives, describe the final project accomplishments, and include a final project accounting of all grant funds.

Scientific Integrity

FFAR's ability to pursue its mission to build unique partnerships to support innovative science addressing today's food and agriculture challenges depends on the integrity of the science on which it relies. A fundamental purpose of FFAR is to facilitate the advancement of knowledge and the application of the science to address challenges relevant to the FFAR's mission. All FFAR grants must be conducted with the highest standards of scientific integrity.

Grant Terms and Conditions

The Foundation for Food and Agriculture Research expects applicants to have reviewed the Grant Agreement prior to applying to ensure that the applicants are aware of the applicable terms under which the grant is offered. FFAR will only entertain potential modifications to the Grant Agreement under the most exceptional circumstances. Successful applicants are strongly encouraged to sign the Grant Agreement as presented.

Requirement to Demonstrate Matching Funds

The match share requirement is a one-to-one FFAR-to-awardee ratio. Therefore, for every dollar FFAR awards, the grantee or a third-party institution must contribute a newly dedicated, non-federal dollar towards the project costs. For example, if proposal request two hundred thousand dollars (\$200,000) of FFAR funds, the applicant or a third-party must be able to come up with an additional two hundred thousand dollars (\$200,000) to match the request, for a grand total project budget of four hundred thousand dollars (\$400,000).

The applicant agrees to identify and certify matching funds annually prior to disbursement of award funds. At least fifty (50%) of the required matching funds must be a cash match, while the remainder can be in-kind match. The match share is intended to supplement, not supplant existing funding for the principal investigator (PI). The applicant will abide by FFAR's [Matching Guidelines](#) to meet FFAR's matching requirements. To constitute a valid match, all matching funds on a FFAR grant must be expended during the grant period.

Contact Information

1. Technical Help Contact
 - i. Hours of Operation: 8:30am – 5:00pm Eastern Time (Monday – Friday)
 - ii. Telephone: 800-875-2562 (Toll-free U.S. and Canada)
+1-703-964-5840 (Direct Dial International)
 - iii. Email: pcsupport@altum.com

2. Grants Questions Contact
 - i. Email: grants@foundationfar.org

3. Scientific or Programmatic Questions Contact
 - i. Food Waste and Loss lkurtyka@foundationfar.org
 - ii. Protein Challenge tkurt@foundationfar.org
 - iii. Water Scarcity lodom@foundationfar.org
 - iv. Innovation Pathway to Sustainability lkurtyka@foundationfar.org
 - v. Healthy Soils, Thriving Farms lodom@foundationfar.org
 - vi. Urban Food Systems jreich@foundationfar.org
 - vii. Making My Plate Your Plate jreich@foundationfar.org

We only accept scientific or programmatic, and grants inquiries by email. We strive to respond to inquiries within two business days, but our response time depends on the volume of questions we receive and the complexity of the questions asked. Please note that we do not monitor this mailbox on evenings, weekends, or federal holidays.

Challenge Area Priority – Food Waste and Loss

The FFAR Food Waste and Loss Challenge Area aims to address the social, economic, and environmental impacts from food waste and food loss. There are tremendous opportunities to influence economic impacts and environmental consequences through reclamation of agricultural products that are lost along the entire food chain. This Challenge Area targets innovative research that includes, but is not limited to, developing novel uses for agricultural waste, improving storage and distribution that leads to food loss reduction, developing tracking and monitoring, minimizing spoilage through pre- and post-harvest innovation, and changing behavior to reduce food waste.

While FFAR will not seek to limit pre-proposals to specific target areas within food waste and loss, we encourage applications that address the following research topics:

- Innovative technologies to:
 - Enable secondary uses of waste streams
 - Improve or extend shelf life of food
 - Convert by-products generated on farm into new value-added products
- Dynamic processing/distribution--research on (1) overcoming logistical barriers (e.g., sanitary design of waste stream handling and cold chain optimization for the small producer – scale processing); (2) opportunities for improving the supply chain to deliver better quality and more personalized products.
- Establishment of consistent food loss and waste measurement across and within the food supply chain through a Gold Standard Measurement System and Digital Architecture (reporting tools, tracking & monitoring, etc.) to (1) provide actionable data for stakeholders in the food system to inform decision making in food waste prevention, and (2) help policy makers to assess community-wide progress and progress toward policy goals.
- Food waste reduction solutions (prevention, donation, by-product utilization) result in net-positive environmental, economic, and social benefits, and in what context.
- Dynamics of the food system and/or strategies to reduce food in one portion of the supply chain and their potential impact on other areas of the chain (e.g., economic, food availability, life cycle environmental impact).

As noted in its [mission](#), FFAR seeks “not only brilliant minds, but also fresh perspectives tackling today’s challenges in food and agriculture. We embrace diversity and promote inclusiveness in all we do, from the teams we build to the grantees we support.” FFAR also understands that the outside-the-box thinking needed to drive innovation occurs when researchers with different skillsets and experience collaborate. With that spirit of diversity and inclusiveness in mind, cross-disciplinary research teams, especially those that include disciplines not traditionally

associated with food or agriculture science, to develop innovative solutions to address current agricultural challenges are strongly encouraged to apply to this Challenge Area.

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Challenge Area Priority – Protein Challenge

The FFAR Protein Challenge Area aims to enhance and improve the environmental, economic and social sustainability of diverse proteins for a growing global population.

This Challenge Area targets innovative research that includes, but is not limited to, feed and nutrition efficiency, environmental sustainability, animal well-being, improved immunity and pathogen control and antibiotic stewardship.

FFAR encourages submission of innovative, systems-based and/or cross-disciplinary projects relevant to the Protein Challenge.

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Challenge Area Priority – Overcoming Water Scarcity

The Overcoming Water Scarcity Challenge Area aims to increase the efficiency of water use in agriculture, reduce agricultural water pollution, and develop water reuse technologies. This Challenge Area will target innovative research that includes, but is not limited to, developing water conservation and reuse technology throughout the production chain, improving crop and livestock varieties/breeds, creating improved agronomic practices, increasing the social and economic tractability of water-conserving technologies/practices, and enhancing the efficacy of Extension services.

While FFAR will not seek to limit pre-proposals to specific target areas within water scarcity, we encourage applications that address the following research topics:

- Increasing water productivity - “crop per drop”
- Groundwater
- Innovative water conservation technologies in agriculture

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Challenge Area Priority – Forging the Innovation Pathway to Sustainability

The FFAR Forging the Innovation Pathway to Sustainability Challenge Area aims to understand the barriers and decision-making processes that prevent the adoption of technology and research results into sustainable practices. This Challenge Area focuses on research that investigates, across the agriculture and food production system, the adoption dynamics and distribution patterns of technologies and practices that incorporate the latest research results, identifies factors that affect their adoption, and recommends solutions for addressing barriers.

FFAR is seeking ground-breaking research leading to increasing adoption of innovations across the U.S. food system. While FFAR will not seek to limit pre-proposals to specific target areas within this Challenge Area, we encourage research applications that apply systems approach to addressing obstacles to innovation adoption, starting from the initial stages of innovation to the final product (e.g., process, technology) to its diffusion and adoption at multiple scales as well as its impact(s) on users.

To assist with identifying a barrier or a group of barriers to be addressed through research, we encourage applicants to review [key outcomes](#) from a FFAR event analyzing barriers to adoption of a wide range of innovations and technological advances aimed at improving agricultural sustainability.

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Challenge Area Priority – Healthy Soils, Thriving Farms

The FFAR Healthy Soils, Thriving Farms Challenge Area aims to increase soil health by building knowledge, fueling innovation, and enabling adoption of existing or new innovative practices that improve soil health.

This Challenge Area targets innovative research that includes, but is not limited to, promoting robust soil microbial communities, improving cover crop cultivars, developing improved agronomic practices, characterizing soil health-related ecosystem services, increasing social and economic tractability of soil health promoting practices, and enhancing the efficacy of Extension services

While FFAR will not seek to limit pre-proposals to specific target areas within soil health, we encourage applications that address the following research topics:

- Available soil water holding capacity
- Agricultural drainage systems
- Soil infiltration
- Drought resistant soil
- Innovative/ alternative soil amendments
- Optimization of soil moisture management strategies

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Challenge Area Priority – Urban Food Systems

The FFAR Urban Food Systems Challenge Area aims to enhance our ability to feed urban populations and build urban economies through urban and peri-urban agriculture.

This Challenge Area targets innovative research that includes, but is not limited to, production methods, extended growing seasons, adoption/adaptation of nutritious and resilient crops, food system constraints that increase the access and affordability of foods.

While FFAR will not seek to limit pre-proposals to specific target areas within urban food systems, we encourage applications that address the following research topics:

- Technologies that support/facilitate urban and local supply chains
- Agricultural production within urban and per-urban environments
- Technologies and/or novel methods that promote food and nutritional security within urban populations

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Challenge Area Priority – Making My Plate Your Plate

The FFAR Making My Plate Your Plate Challenge Area aims to find solutions to food and nutritional security by targeting aspects of the food system that increase the production and consumption of nutritious crops.

This Challenge Area targets innovative research that includes, but is not limited to, increasing the production and accessibility of nutritious fruits and vegetables, evaluating system constraints of nutritious fruit and vegetable introduction into the supply chain, profitability of different actors in the supply chain, and the affordability of food.

While FFAR will not seek to limit pre-proposals to specific target areas within the Making My Plate Your Plate Challenge Area, we encourage applications that address the following research topics:

- Advancements in semi-controlled environments, including as it relates to extended growing seasons
- Extending production in marginal environments
- Overcoming technological barriers in crop adaptation to new/changing environments
- Interventions aimed at improving food security within urban and rural populations
- Technologies that support/facilitate small and mid-size supply chains

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