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U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

ANNOUNCEMENT

**CALL FOR PARTNERSHIP CONCEPT PAPERS TO ADVANCE SCALING OF
HERMETIC POST HARVEST STORAGE TECHNOLOGIES AMONG
SMALLHOLDER FARMERS**

UNDER EXISTING

**GLOBAL DEVELOPMENT ALLIANCE ANNUAL PROGRAM STATEMENT
APS No.: APS-OAA-16-000001**

PLEASE NOTE: This is an addendum to an existing announcement. All interested organizations should carefully review both this addendum AND the full announcement, which can be found here: <https://www.usaid.gov/gda/global-development-alliance-annual-program>. Important information contained in the full worldwide announcement is not repeated in this specific addendum.

This program is authorized in accordance with Part 1 of the Foreign Assistance Act of 1961, as amended.

Through this Addendum to the FY2016-2020 Global Development Alliance (GDA) Annual Program Statement (APS) No. APS-OAA-16-000001 (the GDA APS), USAID/OFDA is making a special call for the submission of Concept Papers focused on finance mechanisms to accelerate adoption and use of hermetic postharvest storage technologies among smallholder farmers.

Unless otherwise stated herein, all terms and conditions of the GDA APS-OAA-16-000001 apply (<https://www.usaid.gov/gda/global-development-alliance-annual-program>).¹

¹ As stated in APS No. APS-OAA-16-000001, the partnerships and alliances proposed in any Concept Paper should mobilize and leverage private sector resources at a minimum of 1:1. Proposed alliances that do not mobilize and leverage private sector resources at a value that equals or exceeds the level of funding being requested from USAID will not be considered under this announcement.



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I. Background

Post-harvest loss is a critical issue facing farmers and food insecure populations globally, including in those countries most affected by humanitarian crises and in which OFDA operates. While food waste is an enormous problem in the developed world (31% of total available food), post-harvest grain loss from field to consumer of staple crops (rice, wheat, and maize) is the biggest issue facing developing countries. Losses can reach upwards of 20-30% in Sub-Saharan Africa but varying widely according to crop and locality. These losses represent a tremendous tax on agricultural production in fragile areas, particularly where protracted, complex emergencies are already making a tremendous hit to agricultural production and human health.

While post-harvest losses occur at various stages of the supply chain, including at harvesting, threshing/cleaning, drying, storage, transportation, and milling, on-farm storage losses are the most significant. This last category of losses is caused by the use of storage methods and structures which fail to maintain grain quality because they are not pest-proof and do not prevent the accumulation of moisture on the top or bottom of the structure. Insect and pests are the major contributors to actual on-farm storage losses of grain for consumption, both through a direct loss of commodity through consumption, and indirect losses due to loss of quality and nutritional value. Mycotoxin contamination both reduces the quantity and quality of grain, as well as reducing the germination rate of stored seed. Additional health problems include billions of cases of aflatoxin exposure each year, which can cause severe illness or death, especially in immunocompromised persons, including the young, elderly, undernourished, and HIV-affected individuals. Fortunately, on-farm storage losses can be addressed at the household level, through enhancements or additions to current agricultural production programming, whether in a development context or as part of a humanitarian response.

The benefits of hermetic (air-tight) post-harvest grain and seed storage have been shown in many situations to be superior to any modern or traditional practices that do not create a hermetic environment for grain storage. This is due to the destruction of insect pests, the removal of any need to apply insecticide to grain stores, and the significant ability to control aflatoxin growth. While there are few traditional storage technologies that provide hermetic environments, with the occasional exception of clay jars, both plastic and metal silos have been around for many years. More recently, hermetic plastic bags of various designs have been promoted aggressively for over 10 years. It is important to note that there are agro-climatic conditions where aflatoxin and insects are not a significant cause of crop loss and grain quality deterioration and in which properly constructed and maintained traditional grain storage technologies may still be appropriate.



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On the subject of how market forces affect postharvest storage practices, researchers have found that in many rural areas, staple grain prices experience significant yearly fluctuations, from post-harvest lows to pre-harvest peaks. Crop prices are often lowest right after harvest, increasing substantially in the months afterwards. For example, in East Africa, over the six to eight months following harvest, maize prices may increase as much as 50 percent (Burke et al, 2016). However, farmers are often unable to reap financial gains from selling their crops later in the season after initial harvest (Aggarwal, 2016). Studies have shown that even when farmers can access good storage structures, they often sell their grain at low prices immediately after harvest to pay loans and time-sensitive household expenses, only to face a need to purchase more grain later in the year at higher prices after exhausting their own stores. Subsistence farmers engaged in this purchasing pattern will often face poor access to credit or savings, with few opportunities to obtain cash besides crop sales (Burke et al, 2016). Developing financial mechanisms which would allow farmers to make better use of hermetic technologies after harvest may enable them to sell when prices are higher and thereby increase their income and household food security.

II. Solicitation

Last-mile connections of vendors to farmers is a persistent bottleneck to hermetic storage scaling. Even when the awareness of this technology has been developed, and a demonstrated demand for these products among farmer-consumers has been created, adoption is hampered by multiple factors. Many farmers cannot physically access hermetic bags, cannot afford more permanent and costly hermetic storage options, or do not have the ability to maximize benefits by saving grain for long after harvest, due to cash flow constraints that force them to sell grain quickly. These challenges are particularly difficult in areas affected by conflict or chronic, slow-onset disasters, as well as in areas with weak a private sector, input market systems, and business enabling environment.

There are many components necessary to successfully scale any agricultural technology, and in the case of hermetic post-harvest storage, these include outreach and demand generation, manufacturing and supply chain development, and product quality certification. Financing issues permeate this sector, as they do all agricultural value chain nodes, although OFDA has chosen to focus on finance issues at the household or end-user level. OFDA has supported research on the potential for harvest loans to help farmers better utilize hermetic containers to store grain/legumes after harvest and hopefully benefit from price arbitrage, compared to selling shortly after harvest and therefore not maximizing these technologies. Other implementers have provided choices to farmers on hermetic post-harvest storage, ranging from inexpensive hermetic plastic bags to more durable plastic and metal storage bins, with diminishing subsidies over time to facilitate technology experimentation and encourage adoption. Still others have modified shared-warehousing warrantage systems combined with delayed input loan



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repayment to maximize farmer revenue and maximize storage container utilization. Going forward, OFDA wants to continue to look at financial mechanisms that can help farmers better access hermetic storage, and more particularly, to have better cash flow to more optimally utilize these technologies.

The specific, primary objective of this Addendum is:

Scaling postharvest hermetic storage by identifying finance mechanisms to accelerate adoption and use of hermetic postharvest storage technologies among smallholder farmers.

Related objectives include the following:

- create or sustain demand for hermetic storage bags,
- enable households to effectively use such technologies through improved post-harvest cash flow and longer periods of hermetic grain storage, and,
- leave a market-viable mechanism for farm households to continue to access hermetic technologies once the donor-funded activity is completed.

USAID anticipates allocating up to \$500,000 over the next fiscal year to contribute to one partnership. Priority will be placed on existing agricultural productivity partnerships that seek to build a new program with existing farmer and private sector partners that will address the issue of sustainably scaling hermetic postharvest storage technologies through innovative financing.

One potential approach could involve a multi-entity partnership between NGOs offering technical assistance, a non-bank financial institution or MFI, and a private sector hermetic bag manufacturer or distributor. NGO-led outreach and training would serve to create demand from farm households, while the finance institution could offer small micro loans to help farmers acquire hermetic storage along with a harvest loan to incentivize use of the bags (which also helps de-risk the loan). If the financial institution could offer crop insurance, then the loan would be further de-risked, but costs to the farmer would also go up. It might also be necessary to include (or develop the capacity of) agro-input dealers in remote or challenged areas, so that the technology can remain accessible to rural households. **This is only an illustrative example of a potential mechanism, and is not included to imply that this model would be preferred by OFDA.**

Consistent with the terms of the GDA APS, proposed alliances under this call for concept papers must leverage private sector resources at a ratio of at least 1:1.²

² Consistent with terms of the GDA APS, if concept papers propose the use of debt or equity investment as leverage, a 5:1 ratio is required. See the GDA APS for further guidance.



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Applicants should refer to the GDA APS for more detailed information on the requirements for leverage of private sector resources.

USAID Learning Agenda

A key OFDA objective is to demonstrate new innovations and models that can be replicated to accelerate market-based technology scaling throughout the developing world. As such, USAID will support an agenda that seeks to extract lessons learned from the portfolio of funded alliances and will share these with a range of stakeholders focused on advancing sustainable technology scaling. Proposed alliance partners must be open to sharing key learnings as a public good, and should identify ways in which they can make data available to the broader community.

USAID seeks to address the following core question: *What financial mechanisms can increase farmer cash flow at harvest time to enable them to adopt and better use hermetic storage technology (i.e., store grain longer to maximize the benefit of price arbitration through seasonal increases in grain prices?).*

Additional questions include the following:

- *What financial models are most effective to facilitate sustainable last-mile uptake of hermetic post-harvest storage technologies?*
- *Which financial products do farmers need to adopt more expensive and durable hermetic storage technologies (such as metal or plastic silos)?*
- *Which financial institutions are best served to meet the cash flow needs of subsistence farmers seeking to store grain after harvest for later sale?*

Proposed alliances should incorporate one or more of these questions into their project design and monitoring and evaluation approaches.

III. Evaluation Criteria

Proposed alliances will be evaluated based on the general criteria set forth in the GDA APS in Section VI: Concept Paper Evaluation Criteria and Considerations. As stated in APS No. APS-OAA-16-00000, USAID expects to receive alliance proposals that mobilize and leverage private sector resources at a minimum of 1:1. In addition, the following criteria will also be used:

- **Partnership entities should demonstrate a track record of providing agricultural inputs to farmers including post-harvest storage technologies and training, including financing mechanisms for such inputs.**



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Preference will be given to alliances that include private sector partners who demonstrate long term commitment to the targeted region and a recognized business interest in the proposed concept.

Proposed alliances should be consistent with USAID legal and policy restrictions, including those set forth in USAID's Automated Directives System (ADS) and in the Foreign Assistance Act of 1961.

(Note: If USAID requests a full proposal, applicants will be given additional, specific evaluation criteria that speak to the subject matter of the concept.)

IV. Application Instructions and Review Process

USAID/OFDA will be responsible for the review process and management of any awards issued under this addendum. Applicants are required to follow the Concept Paper instructions set forth in the GDA APS and submit Concept Papers using the [Concept Paper Template](#). Information provided in Section I.E of that Template should address the objectives and criteria presented above.

Before submitting a Concept Paper, prospective applicants should contact Joseph Dever at jdever@usaid.gov. The USAID Point of Contact can discuss the extent to which a proposed idea is appropriate and aligns with USAID's goals.

In addition, prospective applicants must connect the prospective applicant's private sector partners to Joseph Dever as well. Under the GDA APS, the USAID Point of Contact can have robust and extensive discussions with prospective private sector partners with regard to potential alliance ideas and activities, so long as that partner is not seeking to receive and manage award funding from USAID.³ Such discussions help foster the co-creation that is core to the Global Development Alliance approach.

The completed Concept Paper Template (including the Concept Paper and required Supporting Information) should be sent to USAID/OFDA through [**jdever@usaid.gov**](mailto:jdever@usaid.gov) **with a copy to [**gda@usaid.gov**](mailto:gda@usaid.gov).**

For consideration, concept papers must be submitted by 4:00PM EST on May 8, 2020, 4:00 pm Eastern time. However, USAID encourages prospective partners to submit quality concept papers as soon as possible during the submission period (e.g. February 27 – May 8, 2020). USAID is eager to explore and develop an alliance that addresses the objectives of this addendum. As a result, USAID may review concept papers on a rolling

³ Note: If the private sector partner is seeking to receive and manage USAID funding, the discussions will need to be more limited. Questions regarding the nature and scope of partner discussions prior to the submission of a concept paper, as well as any questions regarding the terms of the Global Development Alliance Annual Program Statement, can be directed to [**gda@usaid.gov**](mailto:gda@usaid.gov) or Ken Lee at [**kenlee@usaid.gov**](mailto:kenlee@usaid.gov).



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basis. Concept papers and proposed alliances that warrant further consideration may advance in the process earlier than the specified Mission deadline.

USAID/OFDA may not provide a response to a concept paper until 45 days after the deadline for submissions. Please do not inquire regarding the status of a concept paper until after that time. USAID/OFDA appreciates applicant patience and understanding with regard to these timelines. USAID/OFDA reserves the right to fund any, some, or none of the full applications that ultimately result from submitted concept papers and the co-creation process under the GDA APS.

USAID/OFDA will inform each applicant of the concept paper review decision. If a concept paper receives a favorable review, USAID/OFDA will contact the partners to explain next steps and continue the co-creation process. If the subsequent discussions are productive, and USAID/OFDA determines the proposed GDA warrants further consideration, USAID/OFDA will request a full application from the partners. Specific guidance and instructions regarding the full application process will be provided at that time. See also the GDA APS for further information.

V. Questions and Further Assistance

Questions regarding the substance and objectives of this addendum should be directed to Joseph Dever at jdever@usaid.gov, with copy to gda@usaid.gov. Prospective applicants are strongly encouraged to submit questions as soon as possible and preferably before March 20, 2020. Frequently asked questions (FAQs) and/or select questions that reveal a need for clarification of matters in the addendum will be posted at [grants.gov](https://www.usaid.gov/grants). The list of FAQs will be revised on an ongoing basis if and as needed. Prospective applicants should regularly check the link for new questions that might get posted. USAID/OFDA will not post all questions that are submitted; USAID/OFDA will only post recurring or specific questions USAID/OFDA determines warrant posting to clarify matters under the addendum.

Questions regarding the substance and terms of the 2016 – 2020 GDA APS should be directed to Ken Lee at [kenlee@usaid](mailto:kenlee@usaid.gov), with copy to gda@usaid.gov.

For additional information regarding guidelines and procedures to submit a concept paper, please refer to the GDA APS which can be found at the following website: <https://www.usaid.gov/gda/global-development-alliance-annual-program>.