



REQUEST FOR INFORMATION

Request for Information (RFI) No.: 7200AA22R00008
Issuance Date: November 9, 2021
Response Date: December 22, 2021, by 5:00 p.m. EST
Subject: USAID/USDA - Understanding Global Insect Production
Eligibility: All interested parties

Dear Partners,

The U.S. Agency for International Development (USAID) and U.S. Department of Agriculture (USDA) are seeking information, opinions, and recommendations on the emerging global insect production industry. The associated RFI questions are contained in Attachment 1. This RFI intends to:

1. Allow all stakeholders and interested parties to provide information and recommendations regarding global production of insects for food, feed, and/or waste management;
2. Explore how USAID and USDA can best lead or support insect production activities in the future; and,
3. Help the U.S. Government understand the potential challenges, benefits, environmental impacts, and inclusive development considerations of insect production.

This request for information is issued solely for information, research and planning purposes and does not constitute a Request for Proposals (RFP) or a Notice of Funding Opportunity (NOFO). Responding to this RFI will not give any advantage to or preclude any organization or individual in any subsequently issued solicitation or NOFO. Any future development activities related to this activity will be announced separately on <https://beta.sam.gov/> and/or <https://grants.gov>. The RFI does not represent any award commitment on the part of the U.S. Government, nor does it obligate the Government to pay for costs incurred in the preparation and submission of any responses. Information received as part of this RFI shall become the property of USAID. Therefore, proprietary information that cannot be shared should not be sent. While verbatim responses will not be shared publicly, any submitted information may be included in a publicly available high-level summary of the RFI results, or in other public presentations or documents.

The RFI can be downloaded from <https://beta.sam.gov/> and <https://grants.gov>. If you have any issues downloading the RFI, please contact Olivia Ricks at oricks@usaid.gov to receive a copy. Responses should be submitted to USAID via email only to insect-protein@usaid.gov no later than the date and time shown above. See Attachment 1 for additional submission instructions.

Thank you for your interest in USAID's activities.

We look forward to receiving your responses.

Sincerely,

Olivia Ricks
Contracting and Agreement Officer
M/OAA/RFS
USAID

Attachments:

#1 - Background and RFI Questions

Attachment 1 – Background and RFI Questions

BACKGROUND

Insect consumption is an historically and globally common source of nutrition. For our purposes, we are focusing specifically on insect production for animal feed rather than insect foraging or insects for direct human consumption (Entomophagy). We use insect production to refer to all insect parts and their derivatives associated with any stage of an insect's life cycle.

Insect production has the potential to provide sustainable solutions to many challenging development problems such as food insecurity, overharvest of marine fish and wild animals (bushmeat) for consumption, waste disposal, mitigation of greenhouse gas emissions, and adaptation to climate change. The feed to protein ratio calculated for some insect species (1.7 kg of feed to produce 1 kg of insect protein) strongly suggests opportunities for more efficient production compared to traditional livestock (eg. 10 kg feed for 1 kg of beef.)

Insects are a common and growing input into human food chains worldwide. In rural communities, small-scale and low-cost insect production provides protein and other nutrients to directly supplement diets or for processed feed for domestic animals such as chickens and freshwater fish. Larger-scale insect production models could help sustainably replace marine inputs in current fishmeal value chains that threaten marine ecosystems from overharvest. From small to large-scale, insect production could provide critical economic opportunities for local economies and empower women, youth, and disadvantaged populations across the developing world.

One particularly innovative aspect of insect production is its potential contribution to reducing food waste. A circular economy model in which waste, such as crop residues, restaurant waste, or livestock waste--estimated to [contribute to 8% of global greenhouse gas emissions](#)--is used as feed for farmed insects provides multiple sustainable development opportunities. This model has yet to be implemented on a large scale in a USG-funded development context and is an intriguing application to achieve goals related to [Food Loss and Waste](#). Food-waste based insect production would amplify the already lower carbon footprint and inputs necessary for insect production as compared to other protein-production agriculture operations. Other circular economy (also called resource recovery) approaches have included using sewage sludge or fecal sludge as feed for insect production.

Independent estimates have predicted that over the next five years, insect production and consumption will grow into an industry valued between \$1-\$4.6 billion. This emerging industry has the potential to contribute to USAID and broader USG policies such as the [Global Food Security Strategy](#), and the [Global Water Strategy](#), USAID's [Private Sector Engagement Policy](#), and forthcoming Climate Change Strategy as well as USDA's [Food Loss and Waste](#) goals. It is also in alignment with the administration's interest in climate change mitigation and adaptation.

USAID and USDA recognize the power and innovation that arises from a diverse, equitable, inclusive and respectful engagement with colleagues, partners and stakeholders. Both agencies recognize that traditionally vulnerable members of society are more likely to be

unintentionally excluded if they are not intentionally included. Wherever we engage, we aim to create a nurturing space for open and honest dialogue to share, learn and create successful, long-term solutions. This RFI also acknowledges and respects that various Indigenous Peoples and local communities may already engage in entomophagy and there may be opportunities for these communities to significantly contribute. Engagement with these communities will be in line with [USAID’s Policy on Promoting the Rights of Indigenous Peoples](#).

As such, both agencies integrate and promote inclusive development in line with USAID Policies, including [Youth in Development](#), [LGBT Vision for Action Gender Equality](#), and [Women’s Empowerment](#).

ELIGIBILITY

Although anyone can submit a response to the questions contained within this RFI, USAID and USDA are especially interested in responses from:

- Insect production businesses
- Animal feed businesses
- Academics working on edible insect production
- Public and private sector entities working in fields such as, but not limited to, food security, food production, climate issues, economic growth, fisheries, conservation, sanitation, and others
- Traditional USAID and USDA partners, and organizations interested in partnerships
- Local organizations and businesses operating in, or looking to operate in, [Feed the Future](#) target countries (Bangladesh, Ethiopia, Ghana, Guatemala, Honduras, Kenya, Mali, Nepal, Niger, Nigeria, Senegal, and Uganda)

INSTRUCTIONS FOR SUBMITTING RESPONSES/COMMENTS:

Please send all responses to this RFI via email to insect-protein@usaid.gov by the date and time indicated in the cover letter with the subject line “RFI no. 7200AA22R00008 USAID/USDA Understanding Global Insect Production RFI”.

Respondents will only receive an electronic confirmation acknowledging receipt of response but will not receive individualized feedback on any suggestions. Specific questions about this RFI should be directed only to the email addresses identified above. If an organization responds to this RFI, USAID has the right to follow-up by phone or email with the offeror to seek clarification on information provided their submission, if necessary.

The submitted response should include the following information:

Reference Number: RFI no. 7200AA22R00008 - USAID/USDA Understanding Global Insect Production RFI

Date:

Name/Email:

Affiliation/Organization:

Address:

Submissions will be accepted in English only. Responses are limited to a maximum of seven (7) pages (single spaced, Times New Roman, 11 pt.). When referring to relevant reports, websites, or other publicly available resources, please include them as embedded links.

Attachments: You may attach additional documents that support your responses to the RFI questions. However, we ask that you limit the number of attachments, and prefer that you use embedded links in the main response. Additional attachments beyond the main response may not be reviewed. Respondents may also attach self/organization information, including past experiences working in this subject area, experience working with other stakeholders, or capacity information.

Clarifying comments and questions not to exceed two pages (2) will be accepted until the date and time listed on the cover letter.

INFORMATION REQUESTED

USAID and USDA are specifically interested in responses to the following questions. Please respond to the questions that are most pertinent to your expertise, needs, and interests. You do not need to answer every question below.

Insect Production Expertise

1. Where, what scale, and with what type of insect production do you work?
2. Do you anticipate expanding your insect-production operation? If yes, to where?
3. Which developing countries have strong opportunities for growth in insect production for animal feed, and why?
4. Where do you see expanding profitable market opportunities for insect-based feed production?
5. Would you be able to implement your technology and/or your business model in a developing-country context? If not, what challenges prevent you from doing so?
6. Would you be interested in starting or expanding business in a development scenario? If no, why not? And if yes, how?
7. What feed do you currently use for your insect production? How would you source feed for insects in a developing country?

Potential Challenges and Solutions

8. What scale of production is most practical to start insect production in a development context? Assuming the market exists, how can insect production models for animal feed (or even human consumption) most easily be scaled up in a development context?
9. What factors do you take into account in your insect species selection process? (Survey of customer need/preference as related to current and projected marketability; species biomass; production cycle; etc.)

10. If you have encountered the challenges outlined below, what solutions have you tried or do you suggest?
 - Start-up funding or generating profits
 - Finding local partners and connections in developing countries
 - Negative environmental impacts
 - Entering the market and establishing supply chains (local, national, international)
 - Technical and/or production processes
 - Cultural barriers to adoption
 - Other?
11. What challenges exist for US insect-production companies operating in developing countries? (If you are not a US-based company, what challenges do you face operating in developing countries?)
12. What is your preferred method of meeting new potential partners, and how can USAID/USDA facilitate these connections? (In person conference? Database? Webinar/virtual conference?)
13. What regulatory barriers (including the absence of regulatory procedures for insect production, marketing and/or use) have you encountered, particularly for working in developing countries?
14. What are critical knowledge gaps where research is necessary to improve and/or scale up insect production for animal feed?
15. What consistent services or resources are required to optimize insect production? (e.g., Waste collection? Electrical access for processing? Water for processing? Access to external markets? Access to local financing? Infrastructure for indoor production?)
16. How could collaboration with a larger global network yield potential technical solutions to issues you currently face?
17. What protocols do you employ to maintain optimum shelf-life in your production line including avoiding and minimizing food/feed waste?
18. What food safety issues are associated with insect production systems, and how are they mitigated?
19. Are there any other challenges or benefits to insect production farming versus other kinds of farming?

Environmental Impact

20. What are the minimum biosafety protocols you recommend to avoid spread of disease, environmental contamination and other negative environmental impacts?
21. How is your work in insect production contributing to decreased greenhouse gas emissions and/or improved climate change mitigation?
22. For development of a circular economy production model, how would you identify, aggregate, and/or treat waste products for use in insect production?

23. What challenges do you face, if any, in your containment procedures for producing both endemic and non-endemic species to avoid habitat invasions from escaped insects?
24. How could insect production practices contribute to ecosystem loss, or other forms of environmental degradation?

Potential Benefits

25. What illustrative or specific roles could you envision for USAID or USDA to support insect production?
26. How could insect-production projects help meet the [GFSS](#) goals: inclusive and sustainable agriculture-led economic growth, strengthened resilience among people and systems, and a well-nourished population?
27. What additional benefits of insect production do you see not typically mentioned in the scientific or gray literature or forums?
28. How can insect production increase opportunities for job creation and business development for American stakeholders?
29. What type of partnership or funding could help to start an insect production project, or scale up production, particularly in a development context? Would these involve USAID or USDA? If so, please explain.
30. What are the potential benefits to engaging women, youth, and marginalized communities in insect production? What are some of the potential social or economic risks?
31. How can insect production sustainably transform existing food systems and other value chains? What steps are needed to ensure that this systemic change is inclusive, sustainable, and equitable?
32. Aside from what is featured in this RFI, what additional questions about insect production should USAID and USDA be asking?

[End of Attachment 1]