

ACIAR/IDRC The Food Futures Research Program

Food Loss Research Project Application Guidelines

Reducing food loss in developing country value chains through food system innovation.

The Food Futures Research program is an initiative funded by the Australian Centre for International Agricultural Research (ACIAR) and Canada's International Development Research Centre (IDRC) to support strategic agricultural research that will have a transformative impact on food security into the foreseeable future. We consider food loss and food waste to be a symptom of larger inefficiencies in food systems. Food loss can lower incomes for smallholder farmers, increase climate change impacts, and lower the resilience of food systems to shocks. Research is required to both understand the problem within varying contexts and develop interventions to reduce food loss. We are seeking ideas from teams to develop projects that understand the drivers of food loss in the broader food system perspective, and test interventions that may address this problem.

From the time that agricultural produce leaves the farm, there are multiple points in the value chain, from distribution, storage to processing, where valuable food is lost. Whilst it is important to understand how smallholder farmers can increase yields and production levels overall, addressing areas of food loss outside the farm can also lead to more resilient food systems. As value chains in developing countries become longer, with a greater number of intermediaries, the amount of food lost before reaching consumers is likely to increase. Especially in countries with inadequate storage facilities, poor road and rail infrastructure, and limited access to post-harvest technologies to protect produce from pests, disease, and decomposition. In this context, food loss incorporates the real loss of production output before it reaches a consumer but also encompasses a loss in value resulting from quality reductions or inability to store produce.

Whilst there has been a large amount of research documenting post-harvest losses, interventions that work in a developing country context are insufficient. The Future of Food Research Program is seeking ideas from research teams wishing to address this important issue from a food system perspective. The causes of food loss are diverse and range from value chain inefficiencies and poor communication systems at the local level to structural inefficiencies at the regional level. We are seeking ideas from teams using a clearly defined two-step process. Projects must contain the following elements:

1. An examination of the food systems at a provincial or local level for one to several agricultural value chains in a minimum of two focal countries. One of the two focal countries must come from the country list provided at the end of this document, and the lead organisation must be based in that country. The second focal country may be any country in which ACIAR currently works (see country list). This may involve mapping the current stakeholders (including smallholder farmers and private agri-businesses) from harvest/slaughter through to the consumers and documenting the types and amounts of food loss that occur along the chain. This will involve collecting new primary data (both quantitative data and qualitative data from interviews with stakeholders) and synthesizing existing data if available. Please explain why you have chosen certain value chains over others in your target countries. If relevant for the value chain(s) under examination, an exercise to gather data on food loss during global shock events such as the 2020 COVID-19 pandemic could also be included.
2. A foresighting exercise to explore how these value chains are likely to change given future trends (up to 2040-2050) in farm labour (and gender dynamics), technology and mechanisation, climate change, urban and rural population density, and food nutritional requirements. The team will assess what impact these changes may have on total food loss from the value chain. The foresighting exercise should highlight large-scale structural changes and institutional reforms that

may need to take place to build resilience in the food system to decrease future losses (especially from global shocks).

3. The team should assess what interventions (knowledge, tools, technologies) are currently being successfully used to reduce food loss in each country (even at a pilot-scale). These technologies may be appropriate at any stage from harvest/slaughter through to selling to consumers. For the transfer of innovations to be useful we suggest research on the same value chains in the two countries at different stages of development. It may be that successful interventions at one point in the supply chain could have beneficial consequences along the entire supply chain.
4. An assessment of the factors that enable or prevent the transferring of interventions from one location to another to provide practical solutions for reducing food loss in the value chain. This may involve social/political/economic research on how likely the intervention is to be integrated into the new value chain successfully, and/or some pilot testing of hard technological solutions in new locations.
5. Throughout the design and implementation of the project, the team must seek to engage private agri-businesses and input suppliers along the value chain to firstly document the food loss situation they are experiencing, and then secondly to explore models for how innovations to reduce food loss can be sustained long-term. Noting that to reduce food loss at one point in the value chain may involve interventions at other points along the chain (including change of practice by smallholder farmers).
6. The project team must consist of a diversity of researchers from a minimum of two focal countries (see country list at the end of this document). The goal is to contrast food loss in the same value chain in multiple countries and identify where interventions might provide the most benefits. Another aim of the program is to facilitate south-south collaboration in the transfer and adaptation of technologies for smallholder food systems. We encourage involvement by researchers from developed countries, like Australia and Canada, but this is not a requirement for this program.
7. We encourage the involvement of people who have not worked with ACIAR in the past and ask teams to include members from a diversity of backgrounds and qualifications, both to aid in understanding the food system in its entirety and to generate novel ideas for interventions to address food loss.

Selection Process

There will be a two-stage selection process:

Stage 1. Submission of ideas will be via an online form linked on the ACIAR website (through survey monkey). The site will remain open for 4 weeks. The week before and during this period, we will host open information sessions with potential applicants. An assessment team will be formed to assess the applications against the eligibility criteria and rank against the selection criteria. The assessment team may seek additional clarifying information from eligible teams to assist them in this process. The assessment team will shortlist between one to four projects (up to the total value of ~\$3 million), and we may request these teams to develop a short presentation “pitch” of their idea to be delivered remotely to the staff at ACIAR.

Stage 2. Successful stage 1 ideas will then be commissioned to move towards the development of a full project proposal document. This will be assessed and refined at an internal meeting in ACIAR. If deemed successful at stage 2 this document will be used as the basis for contracting (please read over ACIAR standard contract and IP conditions [here](#)).

When do you expect projects to start work?

If successful, the team should be ready to develop contracts and start project work in the late 20/21 financial year or early in the 21/22 financial year. We expect projects to run for two to three years and adhere to the project reporting requirements of ACIAR.

Eligibility criteria

To be eligible the team must confirm the following:

1. The team must involve a minimum of two organisations from two or more focal countries (in which the focal value chains are located). One of the focal countries must be from the list of the countries specified below.
2. The lead organisation must be willing and able to enter into a contract agreement with ACIAR, should their idea be selected to move to stage 2. There is a significant amount of work to develop a full proposal so please bear this in mind when submitting your ideas. Standard contract and IP conditions can be found [here](#).
3. There must be demonstrated diversity in the team members according to the [ACIAR gender guidelines](#). We will use the 40:40:20 rule as a guide to assessing this. That means teams should aim for a minimum of 40% female team members and 40% male team members. We will count people who are making a significant time contribution to the project (>15% full-time equivalent).
4. The project leader must have submitted a completed application form (i.e. all required fields filled in and submitted on time). We will be unable to accept applications after the end date or by any other means than the online application form.
5. The activities outlined in the application form must be focussed on research for development. To be considered research there must be some evidence that the team can conduct a systematic investigation, with defined methods to establish facts and draw conclusions. There may be some development or capacity-building activities, and we encourage the use of participatory research approaches.

Selection criteria

The project ideas will be assessed by the assessment team according to these selection criteria:

The idea

1. Will the research questions and objectives deliver new knowledge to help address the problem of food loss?
2. Is there a compelling rationale for the value chain(s) chosen and has this been adequately been explained?
3. What is the likelihood that the project will facilitate the transfer of interventions to reduce food loss (knowledge/tools/innovations) between and within the countries involved?
4. Has gender been adequately considered in the proposed research activities?
5. What is the likelihood that the new knowledge generated through this project will contribute significantly to reducing food loss in the selected value chains through the impact pathway described?

The team

6. Does the team consist of a group of inter-disciplinary or trans-disciplinary people with skills in a diversity of disciplines?
7. Do the skills/experience/position/location of the people on the team match the needs of the activities proposed?
8. Is there a high level of predicted engagement with private agri-businesses along the value chain?

Practicality

9. Is the scale and scope of the proposed project (and potential impact) appropriate to justify the size of the budget?
10. Has the budget been clearly articulated and justified in the application?
11. Has the stage 1 application been written to a high standard in terms of answerable research questions and clarity of thoughts and ideas?

Country list

There are a minimum of two focal countries required for this project, and the idea is to contrast food loss in the same value chain in two countries at different stages of development. **One of the two focal countries must come from this list and the lead organisation must be based in this country.** The second focal country may be from this list and/or any country from the Pacific, Southeast Asia, South Asia or East and Southern Africa. People from organisations in countries that are not focal countries for the research can still be involved in the project and should be listed in the team section of the application.

Pacific
Fiji
Kiribati
Samoa
Solomon Islands
Tonga
Tuvalu
Papua New Guinea
Timor-Leste
East and South-East Asia
Cambodia
Indonesia
Laos
Mongolia
Myanmar
The Philippines
Vietnam
South Asia
Bangladesh
India
Nepal
Pakistan
Eastern and Southern Africa
Burundi
Ethiopia
Kenya
Malawi
Mozambique
Rwanda
South Africa
Tanzania
Uganda
Zambia
Zimbabwe