

# EVALUATION IN ACTION: Assessing the Impact of Sorghum Production on Household Food Security in Climate-Prone Regions in Honduras

HAEC-Funded Impact Evaluation



Photo Credit: Caroline Trutmann / Save the Children

## Background

In Honduras, people have been doubly impacted by extreme weather events and the COVID-19 crisis, leading to heightened food insecurity and chronic malnutrition rates. Approximately 2.6 million people (28% of the country's population) are at risk of Stage 3 food insecurity. In response to these pressing issues, the Adventist Development and Relief Agency (ADRA), funded by USAID/Bureau for Humanitarian Assistance (BHA), implements the Integrated Actions for Sustainable Food Security (TRANSFER) project to enhance the food security of 5,700 targeted households. Specifically, TRANSFER includes three key sectors: food assistance, economic recovery and market systems, and agriculture to reintroduce sorghum as a resilient alternative to traditional crops.

## Evaluation Overview

To assess the effect of the TRANSFER intervention on reintroducing sorghum production in the Southern Dry Corridor of Honduras, ADRA is partnering with [International Advisory, Products and Systems \(i-APS\)](#), to conduct an impact evaluation, funded by the Humanitarian Assistance Evidence Cycle. Primary research question:

What is the marginal impact to the TRANSFER project of **reintroducing sorghum** on annual household sorghum production and human consumption practices?

To study the causal effect of the sorghum cultivation intervention on sustainability and food security with multiple waves of panel data, the research team is implementing a Propensity Score Matching (PSM) as the main identification methodology and a **Difference-in-Difference (DID) estimation of the effect on a subsample that responded to a baseline survey** as a robustness check.

- **Treatment Group:** 440 eligible families that received sorghum seeds during the first 2 years of the TRANSFER project, with 277 responding to the baseline survey.
- **Comparison Group:** 440 Eligible families that did not receive sorghum seeds but would have wanted to if available, with 122 responding to the baseline survey.

## Navigating Evaluation Constraints

Conducting an impact evaluation requires sufficient technical capacity for methodology and design and an understanding of the local context. Yet, many implementers and funders misunderstand what sets impact evaluations apart from performance evaluations, which ADRA and i-APS worked to overcome. This was particularly important as the team faced challenges in identifying appropriate counterfactual groups from the existing populations.

## Quick Facts

### TYPE OF EVALUATION

Impact Evaluation

### EVALUATION METHODS

PSM as the main identification methodology and a DID as a robustness check

### EVALUATION ARMS

#### 1. Treatment Group 1:

Recipients received unconditional cash transfers, corn seeds, and field-school training

#### 2. Treatment Group 2:

Recipients received unconditional cash transfers, corn seeds, and field-school training + sorghum seeds and training on cooking with sorghum

### COUNTRY

Honduras

### DONORS

USAID/BHA

### PARTICIPANTS

5,700 households within 140 communities in 12 municipalities

### IMPLEMENTING PARTNER

ADRA

### EVALUATION/RESEARCH PARTNERS

ADRA, i-APS, and HAEC

It was difficult to differentiate between individuals who wanted but did not receive the sorghum seed (due to resource limitations) and those who did not want or need the seeds. There was also limited baseline data available, which did not include indicators such as sorghum consumption and production.

To address this challenge, ADRA and i-APS reviewed all available program data and three databases, then conducted matching to delineate these two groups. This data review aimed to identify the reasons for not receiving the seed, which helped enhance comparability. It minimized biases by integrating three variables in the analysis: **land extension, previous experience, and preference for sorghum**.

Overcoming this challenge ensures credible impact assessment results and informed intervention conclusions. Both the technical proficiency in designing an appropriate counterfactual and the contextual understanding were essential in designing this impact evaluation.



## Evaluation Purpose & Audience

This impact evaluation aims to understand and improve the effectiveness of sorghum reintroduction as a measure to address food insecurity in communities affected by extreme weather conditions in Honduras. This learning process captures lessons learned during the implementation and adjusts future strategies. It also strengthens the capacity of the organizations involved to make informed and adaptive decisions, promoting the sustainability of agricultural interventions.

The impact evaluation of ADRA's TRANSFER project would primarily benefit the communities directly involved, ADRA, and its local partners and donors such as USAID/BHA. Secondary audiences include government institutions such as SAG-DICTA, other organizations interested in food security and sustainable development, and international entities interested in effective strategies to improve food security in similar climate crisis contexts.

## Context and What's Next

This impact evaluation started in July 2023. After reviewing available program data, the evaluation team refined and revised the planned methodology to generate a comparison and treatment group. As a result, the evaluation team expects to conduct a single round of data collection in the first quarter of 2024, corresponding to the harvest cycle of sorghum.

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## Humanitarian Assistance Evidence Cycle

This brief is brought to you by the [Humanitarian Assistance Evidence Cycle \(HAEC\)](#) Associate Award. HAEC works to increase the efficiency and effectiveness of emergency food security activities funded by the USAID Bureau for Humanitarian Assistance (BHA) by increasing the use of cost-effective and timely impact evaluations in humanitarian contexts.

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This brief is part of HAEC's Evaluation in Action series highlighting ongoing impact evaluations from around the world. Do you have an ongoing impact evaluation in a humanitarian context that you want to share?



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