Bangladesh - Impact Evaluation of the Integrated Agricultural Productivity Project 2012

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Overview

Identification

ID NUMBER
BGD_2012_IAPP_v01_EN_M_v01_A_OCS

Overview

ABSTRACT
Over the last two decades, Bangladesh has achieved impressive growth and poverty reduction. Its agricultural sector grew at a rate of 4.8 percent between 1990 and 2005. But poverty-related food insecurity is widespread, bolstered by the soaring prices of key staples. The country has a poverty rate of over 30% and the highest incidence of malnutrition of all countries: in 2008, Bangladesh's food insecure population was estimated at 65.3 million. The Government of Bangladesh is pushing for increased use of technology and more intensive agricultural practices to improve food security and sustain economic growth. To that end, the Integrated Agricultural Productivity Project (IAPP) sponsors research to develop improved crop varieties and to promote adoption of improved varieties and production practices through the farmer field schools approach (FFS).

The IAPP project is designed to improve the income and livelihoods of crop, fish, and livestock farmers in Bangladesh. It consists of four separate components:

Component 1: Technology Generation and Adaptation;

Component 2: Technology Adoption;

Component 3: Water Management;

Component 4: Project Management.

The Impact Evaluation (IE) of the IAPP will contribute to understanding the drivers of technology adoption through two lenses. First, the overall project approach will be evaluated using a randomized phase-in of project villages (referred to as the “Overall Project Evaluation”). The Overall Project Evaluation will measure the effects of Components 2 and 3 of IAPP. All sub-components will be measured, with special focus on the crops and fisheries sub-components. Second, innovations will be tested through a randomized control trial to understand what approach to demonstration plots can deliver higher results (referred to as the “Demonstration Plot Evaluation”). The Demonstration Plot Evaluation is designed to test a fundamental question about technology adoption: to what extent can “learning by doing” increase technology adoption over “learning by observing”? It will compare the relative effectiveness of single demonstration plots (the standard approach) to more distributed demonstration strategies which allow more people to experiment with new technology. The Demonstration Plot Evaluation will focus on the crops sub-component.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Households

Scope

NOTES
The scope of the Impact Evaluation of the Integrated Agricultural Productivity Project includes:

HOUSEHOLD

-Household Roster

-Education

-Labour

-Housing

-Social Networks

-Assets, Income and Expenditures

-Savings and Access to Finance

-Household Gardens

-Food Security

-Risk and Ambiguity Aversion

-Formal Insurance and Negative Shocks

AGRICULTURE

-Access to Extension and Other Trainings

-Farmer Groups

-Production

-Labour for Basic Agricultural Activities

-Irrigation

-Inputs

-Technologies

LIVESTOCK, POULTRY AND FISHERY

TOPICS

Topic	Vocabulary	URI
Agriculture & Rural Development	FAO	
Food (production, crisis)	FAO	
Water	FAO	
Animal health	FAO	

KEYWORDS
Livestock, Agriculture, Agricultural technology

Coverage

GEOGRAPHIC COVERAGE
Regional

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation

Florence Kondylis	DIME, Development Research Group, World Bank
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FUNDING

Name	Abbreviation	Role
The Global Agriculture and Food Security Program	GAFSP	Funding

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of Chief Statistician	OCS	Food and Agriculture Organization	Adoption of metadata for FAM
Development Economics Data Group	DECDG	The World Bank	Documentation of the DDI

DDI DOCUMENT VERSION
BGD_2012_IAPPIE_v01_EN_M_v01_A_OCS_v01

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DDI_BGD_2012_IAPPIE_v01_EN_M_v01_A_OCS_FAO

Sampling

Sampling Procedure

The Baseline Household Survey was implemented in all 8 project districts: Rangpur, Kurigram, Nilfamari and Lalmonirhat districts in the North and Barisal, Patuakhali, Barguna and Jhalokathi districts in the South. Six districts (Kurigram, Nilfamari, Lalmonirhat, Patuakhali, Barguna, and Jhalokati) are included in the Overall Project Evaluation only. In these 6 districts, eight Unions were selected for the impact evaluation surveys. Within each Union, two villages were surveyed. Each of these villages is eligible for all four components of the IAPP (crops, fisheries, and livestock and water management interventions). In each union, one of the sampled villages will receive IAPP interventions in the first year ("treatment") and the other will not receive interventions until the third year ("control").

Prior to the Baseline Survey, a full census of the sampled villages in these 6 districts was conducted to identify household eligible for and likely to participate in IAPP. IAPP interventions are all based at the level of the farmer group, but at the time of the baseline survey, farmer groups were not yet formed. For that reason, census data was used to construct a sampling frame of likely participants in IAPP Crop and Fisheries groups. In each village, 16 households were sampled, half of which were selected as eligible for the Crops groups and half for the Fisheries groups. Eligibility was determined by IAPP targeting criteria, prioritizing crop farmers with marginal or small landholdings, and fishermen with access to ponds between 15-50 decimals.

Two districts (Rangpur and Barisal) are included in both the Overall Project Evaluation and the Demonstration Plots Evaluation, and as such the sampling strategy in these districts was slightly different. Because the DPE tests variations in project implementation, significantly more villages had to be sampled in these districts. In each district, 110 villages were sampled. Twenty-seven villages in each of these districts will receive standard IAPP interventions; those 54 villages are included in the Overall Project Evaluation sample.

Household selection in Rangpur and Barisal also differed. In these districts, the baseline survey was conducted concurrently to the IAPP group formation (for the OPE districts, the baseline occurred just before group formation). Of the total IAPP group members, 15 were randomly selected for the baseline survey.

A subset of households in each of the 6 OPE districts received an extended version of the baseline questionnaire, which included much more detailed information on plot-level agricultural production, household income, and food security.

Weighting

Considering the different sampling strategies explained above, we constructed probability weights to account for the consequent overrepresentation of Barisal and Rangpur districts. Table 1 of the survey report provided under the Related Materials tab shows the distribution of the sample across districts, separated into treatment and control, weighted and unweighted.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2012-09-12	2012-10-24	N/A

Data Collection Mode

Face-to-face [f2f]

Data Processing

No content available

Data Appraisal

Other forms of Data Appraisal

The impact evaluation will formally document the overall impact of IAPP in the project sites, using as a comparison group similar pre-identified sites that will receive IAPP activities later (a randomized phase).The main identifying assumption is that the only difference between villages that receive IAPP interventions and those that do not is the project itself.
Data from the baseline survey shows that control and treatment sites are indeed similar with respect to a large number of observable characteristics, which validates the randomization. Table 3 of the baseline survey report (provided under the Related Materials tab) shows that there are no significant differences in key indicators for household characteristics, livestock, agriculture and fisheries are between treatment and control.