

Nicaragua - Rice and Banana Farmers 2010-2011

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Overview

Identification

ID NUMBER

NIC_2010_RBF_v01_EN_M_v01_A_OCS

Overview

ABSTRACT

This study is an impact evaluation of two components of the Rural Business Development Program (RBD) in Nicaragua, specifically the components benefitting rice and plantain farmers on Nicaragua's Pacific coast. The RBD program helped finance irrigation equipment, inputs, and extension services for plantain producers, as well as extension, inputs, and drying patios for rice producers in 2009 and 2010; the price of rice is a function of its moisture content, and by increasing access to drying patios the RBD program sought to increase the value of sales by producers. Using a unique data set collected for the evaluation, average impacts of the RBD program on participating plantain farmers were estimated using difference-in-differences, while average impacts of the rice component on beneficiaries were estimated using fixed effects regressions. Estimated program impacts were combined with administrative cost data to calculate an internal rate of return for the plantain program and for one aspect of the rice program (construction of drying patios).

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

Individuals

Scope

NOTES

- Housing and Home Characteristics
- Demographic Characteristics of The Household of The Producer (A)
- Household Assets
- Food, Beverage and Tobacco Expenses
- Household Expenses and Other Income
 - (a) Expenses on Food Items
 - (b) Expenses on Non-Food Items
- Remittances and Income Not Associated with Work
- Ground Module
 - (a) Information on Own Land (Intended for Housing, Production, Rest, Leased, Lent)
 - (b) Investment in Own Land Suitable for Agricultural, Livestock, And Forest Production
- Agricultural Companies
- Rice Production and Commercialization
 - (a) Rice Sales, 2009-2010 Cycle

- Experience with Plantain
 - (a) Banana Production in the 2009-2010 Cycle
- Credit Market
 - (a) Formal Loans for Agricultural Activity, 2008
 - (b) Informal Loans for Agricultural Activity, 2008
- Housing and Home Characteristics
- Demographic Characteristics of The Household of The Producer
- Household Assets
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- Agricultural Companies
 - (a) Rice Production and Commercialization
 - (b) Rice Sales, 2009-2010 Cycle
 - (c) Experience with Plantain, And Banana Production in The 2009-2010 Cycle
- Credit Market
 - (a) Formal Loans for Agricultural Activity, 2008
 - (b) Informal Loans for Agricultural Activity, 2008

TOPICS

Topic	Vocabulary	URI
Food (production, crisis)	FAO	
Financial Sector	FAO	
Access to Finance	FAO	
Migration & Remittances	FAO	

KEYWORDS

Plantain, Banana, Farmers, Income

Coverage

GEOGRAPHIC COVERAGE

Regional

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Michael Carter	University of California-Davis
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FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	Financial assistance

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of Chief Statistician	OCS	Food and Agriculture Organization	Adoption of metadata for FAM
Millennium Challenge Corporation	MCC		Metadata producer

DDI DOCUMENT VERSION

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Sampling

Sampling Procedure

Two separate samples were designed for this evaluation: one consisting of participants in the RBD program for plantain producers and a comparable group of control producers, and a second sample consisting of participating rice farmers and controls. The plantain sample was constructed using a list of producers 239 who began the program in 2009, and 56 producers who applied to participate in the program but were rejected. These were the only lists of plantain producers that were made available by MCA. On one hand, the fact that both lists consisted of farmers who had applied for the program suggests that we might expect these two groups to be fairly similar; this sort of similarity can be important for the construction of a quality control group when assignment to treatment (e.g. participation in the RBD program) is not random. The study had 450 farm households, including 300 rice producers and 150 plantain producers. The sample selection considered the following:

(a) Rice: To be considered, producers must meet several criteria, which include having sown at least 2 manzanas in rice at some point in the past (1 manzana is roughly 0.7 hectares), owning no more than 50 manzanas of agricultural land, and being at least 20 years of age. MCC chose rice cooperatives based on their ability to organize a sufficiently large number of farmers to participate in the program. In the first meeting between MCC and the cooperatives, each cooperative provided an estimated number of potential program beneficiaries. Any individual farmer within these cooperatives that met the criteria, and was willing to make the matching investment, was able to participate.

(b) Plantain: Farmers must have at least 2 manzanas irrigated land, year-round access to water, and a maximum of 20 non-irrigated manzanas in agricultural land. Any individual farmer within these cooperatives that met the criteria, and was willing to make the matching investment, was able to participate.

Deviations from Sample Design

The original RBS research design consisted of geographically-based randomization, in which farmers in randomly chosen areas would be eligible to participate in the program. However, this randomization did not take rice and banana farmers into account. In the case of these two crops, farmer cooperatives were chosen for project eligibility based on their degree of organization. Rice and banana farmers belonging to these cooperatives were allowed to participate if they met certain farmer characteristics, had legal land titles, and were willing to make the necessary matching investments. This is a very different design than one based on a geographical randomization and calls for a different evaluation strategy.

Weighting

The study constructed a weight for each treated observation based on the inverse of its estimated probability of participating in the RBD program, and weights for each untreated observation based on the inverse of its probability of not participating.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2010-01	2010-02	Baseline
2011-08	2011-09	Endline

Data Collection Mode

Face-to-face [f2f]

Data Processing

No content available

Data Appraisal

No content available