Abstract

An impact assessment study was conducted in April 2010 in Niger and Burkina Faso to provide an initial estimate of the adoption of hermetic storage. The data shows that hermetic storage accounted for 77% of farm stored cowpea in Burkina Faso, 69% in the Dosso-Tillabery (DT) region of Niger and 70% in the Maradi-Zinder-Tahoua (MZT) region of Niger. Among hermetic storage methods, triple bag technology was 30%, 38% and 7% of total cowpea stored on farms in Burkina Faso, Niger DT and Niger MZT, respectively.

Introduction

Hermetic storage has the potential to reduce cowpea storage losses, eliminate health problems due to misuse of insecticides on stored cowpea and give farmers more flexibility in marketing. Adoption surveys in 2003 and 2004 showed that many farmers in West and Central Africa were using hermetic storage, but often failed because they did not understand the principles of storage in air tight containers and, lacked good quality and cost-effective containers. The goal of the Purdue Improved Cowpea Storage (PICS) Project is to have 50% of the cowpea grain stored on farms in West and Central Africa in hermetic storage without insecticides by 2012. The project started in 2007 with activities in Niger and Burkina Faso. PICS implemented storage demonstrations in over 9000 villages in these countries and worked with plastics manufacturers, distributors and retailers to create a supply chain for triple layer plastic storage bags. Implementing partners included INERA in collaboration with AFRICARE, CRUS and CRS in Burkina Faso; and World Vision and INRAN in Niger. An impact assessment study was conducted in April 2010 to provide an initial estimate of the impact of PICS in those two countries.

Methods

A stratified random sample of farm households in Niger and Burkina Faso was interviewed to determine their cowpea production and storage practices. Data was collected from 620 households in Niger and 317 households in Burkina Faso in villages that were part of PICS activities (VPICS) and villages where no PICS activities were conducted (NE).

Results

Information Source on TB Technology

Two main regions were considered in Niger: Maradi-Tahoua-Zinder (MZT, in eastern Niger) and Dosso-Tillabery (DT, in western Niger). In Niger, PICS activities were implemented in 44% and 67% of villages in the cowpea growing area of MTZ and DT regions, respectively. In Burkina Faso, 46% of villages in the cowpea growing area benefited from PICS activities.

Conclusion

A random sample of 937 farmers were interviewed in Niger and Burkina Faso to estimate adoption of hermetic storage technology after three years of the PICS program. Results showed that overall hermetic storage of cowpea was 77% in Burkina Faso, 69% in Niger DT region and 70% in the Niger MZT region. TB adoption was estimated at 30% in Burkina Faso, 38% in Niger DT region, and 7% in the Niger MZT region. As can be seen from the difference in TB adoption between the two regions in Niger, a key challenge is PICS supply chain development.

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