

ABSTRACT

The effect of on-farm experimentation on the adoption of agricultural technology.

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The characteristics and impact of on-farm experimentation carried out over a five year period in Saint Lucia and, Trinidad and Tobago are examined in this study. Physical, social, and psychological aspects of on-farm experimentation are examined and impact assessed in terms of changes in farming practices, participants' abilities to respond to disequilibrium, and strengths of linkages between participants in the agricultural technology generation and dissemination process. On-farm experimentation is explored as a mechanism for improving food production efficiency.

Participants in the on-farm experimentation process (namely researchers, farmers, extension officers and research supervisors), were formally interviewed. In addition, research stations, and farmers' holdings (where on-farm experiments had been conducted) were visited, to confirm interview responses and to gather qualitative information. Mathematical techniques of data analysis were used to identify the strengths and directions of associations between on-farm experiment characteristics, and their resulting impact.

On-farm experimentation constitutes a small proportion of agricultural research activity within the study area. However, where it is practised, it has considerable impact in terms of stimulating farming practice changes and improving farmers' ability to respond to disequilibrium. The activity improves researchers' ability to solve farmers' problems, and facilitates greater understanding and strengthens linkages between researchers and farmers. The widespread absence of extension officers from the on-farm experimentation process is identified as a major problem. Farmer involvement, particularly in the planning stage, is found to be crucial to maximising the impact of on-farm experimentation.

The study establishes that on-farm experimentation has a positive impact on the generation and adoption of improved farming practices, and in enhancing the ability of farmers to respond to disequilibrium, and may therefore offer a mechanism for improving food production efficiency. It is recommended that institutions afford greater attention and support to this approach to technology generation and implementation.

Staff and student of the Department of Agricultural Extension made my stay at St. Augustine a pleasure, and for all the West Indians I encountered, their hospitality and friendship was never questionable.

I acknowledge the farmers, extension officers and researchers who so generously took part in this study and hope that the findings will be of use as they confront problems seldom of their own making.