

Grassroots approaches to cope with global change on farm-scale – Insights from farmer's experiments and innovations in Cuba.

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Farming takes place in an inherently dynamic context. Over the course of history, farmers' experiments and innovations have always been a part of farming due to the necessity to adapt to ever-changing socio-ecological and socio-economic conditions. In order to identify feasible development paths at farm level, farmers' own experiments have become a survival strategy. The aim of this paper is, understanding the dynamic process of experimentation and to learn more about a possible contribution of farmers' experiments to adequately deal with global change processes on farm-scale. Therefore, the emphasis is on the topics, resources, methods and outcomes of farmers' experiments in Cuba. The research methods included 72 semi-structured interviews with farmers and 34 expert interviews. Data were analyzed according to content analysis based on deductive and inductive coding. Almost all respondents mentioned experiments that were conducted on farm using mainly local resources. Most experiments were related to the introduction of new crops or varieties and to plant production in general. The main motive was to increase production. The majority of the respondents experimented on a small-scale basis to reduce the risk involved. Observation and comparison helped to evaluate the process and the outcomes of experimenting. Only a few farmers made notes during experimenting. The most important outcome was production increase. By experimenting, farmers learn how to approach farm-specific problems. They modify, adapt and improve their farming system and thereby contribute to agricultural development. Farmers' experiments and innovations play a major role for building resilient farming systems and can contribute to preparing agriculture for global change.