Tropentag, September 17-19, 2018, Ghent

"Global food security and food safety:
The role of universities"

Do Community Seed Banks Contribute to the Socio-Ecological Resilience of Communities? A Case-Study from Western Guatemala

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Abstract

The region of Sierra de los Cuchumatanes (western Guatemala) has over the past decades seen a loss of its characteristic agrobiodiversity. Community seed banks (CSBs) were implemented to stop or reverse this trend and promote livelihood resilience. Our study is an enquiry into how CSBs contribute to sustainable agrobiodiversity management at community and household levels.

We conducted an in-depth comparative case study of three communities where CSBs have been implemented to explore how farmers have been affected by their establishment, using socio-ecological resilience as conceptual framework. We combined tools of participatory research and qualitative methods. The final data set comprised transcripts of 10 focus-group discussions and 86 semi-structured interviews, seed-network maps, CSB-timelines and the outcomes of three indicator-based self-assessment workshops on CSB-induced changes.

Our findings show that CSBs have an effect on local seed dynamics by fostering seed exchanges and providing access to new varieties. Other reported effects include improved information and knowledge exchange, and changes in gender roles and social organisation. Our results show that CSBs have a more direct impact at the household level rather than at the community level. They also make clear that in practice, implemented CSBs have a broader influence than originally planned. Still, challenges remain, such as involving the youth or including a wider range of crops that are important for income or nutrition.

The role CSBs (can) play is overshadowed by more fundamental changes in the socio-ecological system in the study area: the importance of maize cultivation and farming in general is diminishing, agricultural activities have become more individualised and market-oriented, and a large proportion of the youth is migrating to the United States. Traditionally, being self-sufficient in maize production has been an indicator of socio-ecological resilience. Today, however, remittances and a diversified household economy are dominant factors shaping resilience.

CSBs can contribute to this newly emerging resilience by strengthening livelihood diversification, improving technical and organisational capacities and contributing to more dynamic and effective networking. By doing so, the concepts of community seed bank and resilience acquire new meaning in the context of the larger socio-ecological change processes taking place in the region.

Keywords: Agricultural biodiversity, community seed banks, Guatemala, seed systems, socio-ecological resilience

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