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"Filling gaps and removing traps
for sustainable resource management"

Seed Distribution in Rural Communities of Central America

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Abstract

The importance of *in-situ* agricultural biodiversity has increased over the last two decades. Local crops and varieties have been lost at an alarming rate since the 1970s. Efforts to preserve them ex-situ in germplasm banks are just a partial solution: without a continuous cycle of planting and selection, agricultural biodiversity stops its dynamic cycle. Since the beginning of agriculture, seed exchange between farmers has been one of the main mechanisms of distribution and conservation of agricultural biodiversity.

In this study, we tracked and mapped how rural communities are preserving and exchanging seeds. We analysed and compared how seed networks operate for: 1) grains and legumes; 2) horticulture and vegetables; 3) tubers and root crops, and 4) forest and fruit trees. Using a structured survey, the research took place in a total of 18 rural communities in Belize, Honduras and Panama. Using a "following the seed" method, the total number of farmers surveyed was 427. Some of the results indicate that the grains and legumes and the tubers and roots networks were more dynamic and decentralised in the three countries when compared to the horticulture and vegetables networks now controlled by few actors.

Maize and bean varieties were selected, preserved and distributed between farmers with high intensity and without the need for external actors. In parallel, horticulture and vegetable networks are heavily concentrated, and their seed distribution is dependent on external actors such as NGOs, government agencies or private enterprises. The difficulties to select and preserve seeds of different crops is one of the main causes of a concentrated network dependent on external actors. If in-situ agricultural biodiversity is to be preserved in these countries, there is a need for greater understanding of how and why farmers are preserving and exchanging seeds.

Keywords: Central America, crop biodiversity, seed networks

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