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Title characterisation of the Mayan Milpa system: Maintenance of crop diversity

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Abstract

The Milpa system is a traditional Mayan intercropping system used by small scale farmers in Mesoamerica, which plays a vital role in ensuring food sovereignty and maintaining crop diversity. Despite its importance, small scale farmers are among the poorest in the world and are subject to economic, political, and cultural forces that shape their livelihood strategies and threaten Mayan culture. This study aims to characterise the present Milpa system in El Tablón, Sololá, Guatemala, and examine the farmers’ criteria for selecting and conserving seeds and crops within the system. Based on household surveys and participatory observation, the study found that El Tablón, Sololá, Guatemala, had many characteristics of traditional Milpa, including intercropping of local landraces of maize (*Zea mays* L.), beans (*Phaseolus* spp.) and squash (*Cucurbita* spp.). The seeds are saved for generations and are usually not shared among neighbours, giving rise to high landrace diversity among the families. Fertiliser management includes the use of compost and manure. However, there was a widespread use of chemical fertilisers in the milpa system. The findings suggest that the Milpa system in El Tablón is dynamic and that farmers seek to conserve traditional landrace diversity while also adopting modern practices. The study shows that the Milpa system has an important cultural and personal value for smallholder farmers, who select seeds and crops based on both agronomic traits, and personal preferences. This highlights the need for further research and to promote *in situ* conservation, to secure agroecology and food sovereignty in Guatemala, and support long-term sustainability of the Milpa system.

Keywords: Agroecology, traditional agriculture, crop diversity, Guatemala, *in situ* conservation, intercropping, landrace diversity, maize-bean-squash, milpa