
Biodiversity and food production in the Neotropics

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Abstract

My study investigates whether land sparing (segregating food production and biodiversity conservation) or land sharing (integrating the two objectives on the same land) offers the best chance to preserve populations of birds and trees, and maximise carbon storage, in Yucatán, Mexico, whilst also producing beef. Several studies have investigated land sparing and land sharing but none have been based in Mesoamerica, and none have investigated the full range of possible livestock systems in a region.

I have surveyed birds and trees across 25 sites in Yucatán, from zero-yielding forests to high-yielding technified pastures and feedlot systems and have conducted interviews with the owners and managers of these ranches to determine the yields (production per unit area) of these sites. Due to the inherently complex nature of livestock production, my analysis uses novel techniques to account for the off-farm impacts of breeding and finishing ranches. I will present preliminary results that show that the majority of species are favoured by preserving as much natural habitat as possible, and that there is the potential for sparing land in Yucatan. Another aspect of my PhD investigates the social, economic and political landscape of cattle ranching in Mexico and I will be discussing the opportunities and challenges for integrating environmental protection and agricultural policy and contrasting this with the situation in the EU.

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