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Assessing the relevance of traditional market channels for potato diversity on the Peruvian Andes

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Abstract

In the Peruvian Andes, family farmers maintain over 3.000 potato varieties on their farms. Although the motivations for conserving varieties are mainly cultural, they are also economically driven. The persistence of agrobiodiversity relies on the ability of farmers to secure their livelihoods through the commercialisation of their produce. Located in remote and poorly connected areas, potato farmers must travel long distances and pay high transport costs to commercialise their produce. In this context, local markets held weekly in villages, represent the main market channel for family farmers and often their only source of income. This study assesses the relevance of traditional markets for potato diversity and identifies which market channels absorb greater levels of family farmers' agrobiodiversity. By applying an inductive quantitative research approach, we carry out a cross-case comparison of local and regional markets (n=35) located across 9 study areas along the traditional Andean road network, the Qhapaq Ñan. Through a diversity analysis, we quantify market-linked varieties based on richness, uniqueness, evenness, and Shannon-Weaver indexes. Drivers influencing the occurrence of agrobiodiversity at the different market channels are identified by means of a multiple linear regression analysis. In total, we recorded 150 potato varieties across all markets, 61 of them as unique varieties, ranging from 2 to a maximum of 35 varieties per market. Higher levels of diversity were recorded at regional and local markets involving predominantly local producers, displaying thereby associative processes and a stronger social fabric. Lower diversity was observed at local markets with an increasing tendency of urbanisation and at small local markets located in potato production hotspots. Our results demonstrate that the market-linkage of agrobiodiversity is mainly determined by spatial factors, as well as aspects related to accessibility, consumer awareness, and fair pricing. Market-based organisational processes are key for enabling a fair retribution for producers. Although market linkage is crucial for sustaining farmers' livelihoods, the occurrence of native potatoes at markets remains marginal, contrasted to the modern potato varieties that dominate the markets. We emphasise the need to strengthen market-linkage of family farmers' produce by fostering associativity processes within the existing network of localised markets.

Keywords: Agrobiodiversity, family farming, farmer markets, local food systems