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## Quality Seeds in Traditional Systems: Evidence in Household Consumption of Indigenous Crops in Peru

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### Abstract

The traditional Peruvian production systems, which concentrate the greatest agrobiodiversity areas, and constitute one of the centers of origin of crops, have gained international relevance in the last two decades as providers of food security and strategies for adaptation to climate change: The International Year of Potato (2008) and International Year of Quinoa (2013), two native Peruvian crops, were declared by FAO as examples of that; also, the 75 % of Peruvian family farms have subsistence farming, concentrate in the Andes, and uses their own seeds as the most relevant input in their fields. However, the inclusion of this system in agrarian policies, particularly in agrarian laws of seeds is still incomplete: the agriculture sector has a technological transformation posture, based on high yields per crop, and high demand in urban and international markets. The legal framework promotes the use of certified seeds. For these reasons, traditional or ancestral production systems have been replaced progressively, based on the premise that it only shows low yields per crop. The regulatory Peruvian framework on seeds does not fully integrate traditional production systems as suppliers of quality seed and doesn't include all native crops, especially some crops with high domestic consumption in the Andes. For these reasons, the study analyzes the historical changes (2000–2020) in the yields of high native crops that exclusively use seeds from traditional production systems, which are not being included in Peruvian seed regulation, and that not counted with certified seed (national or imported), but they are native seeds widely consumed in local and national markets: Peruvian pumpkin (*Cucurbita ficifolia*), Peruvian squash (*Cucurbita moschata*) and Peruvian hot pepper (*Capsicum pubescens*). The analysis has shown that the seeds worked under traditional systems, providing sufficient yields that allow guaranteeing food security and resilience supported by their sustained sowing in subsistence family agriculture. In other words, the inclusion of the traditional system and domestic native crops needs their inclusion in agricultural policies.

**Keywords:** Formal seed system, native crops, Peruvian Andes, quality seeds, traditional production systems