

The Chirapaq Ñan Initiative: establishment of a long-term on-farm monitoring network for potato landrace diversity

Stef de Haan*, Severin Polreich, Henry Juarez, Flor Rodriguez*, Raul Ccanto, Carmen Alvarez, Milton Pinto, Sergio Moreira, Carlos Venegas and Julio Kalazich

International Potato Center, Peru

**Corresponding author: s.dehaan@cgiar.org and s.rodriguez@cgiar.org*

Abstract

A major shortcoming of on-farm conservation initiatives in centers of crop origin and diversity concerns the lack of functional long-term monitoring systems. Without such systems in place, no solid evidence can be attached to claims about genetic erosion, landrace loss or enrichment. CIP and partners in Latin America have recently started a regional network to facilitate in-depth baseline studies in selected hotspots to allow for future systematic comparisons of the temporal-spatial dynamics and conservation status of potato landraces. Initially, an applied methodology to determine contemporary landrace hotspots was developed, taking into account: (i) expert opinion, (ii) genebank passport data, (iii) geographical distance, (iv) inclusion of endemic species, (v) ethnicity, (vi) presence of conservation threats, (vii) presence of solid partnerships, and (viii) community interest. Baseline documentation of contemporary potato diversity is based on standardized methods and indicators that are replicable, comparable and robust at different system levels, and include: (i) genetic diversity, (ii) landrace diversity, (iii) geospatial diversity, (iv) collective knowledge. In 2012 baseline documentation started in two hotspots in Peru and in 2013 two additional hotspots, one in Chile and one in Bolivia, were added. The objective is to expand the network to at least eight complementary benchmark sites by 2016, including hotspots in Argentina, Ecuador and Colombia. Incentive systems and mechanism for recognition of custodian farmers are tested at the pilot level, including linkage of conservation to (formal) education, practical benefit sharing mechanisms and rapid open access sharing of research data and results. A major challenge for the initiative concerns future sustainability which is basically a function local participation at the hotspot level, national support and long-term commitment, and financial means.

Keywords: In-situ conservation, Andes, Chiloe Islands