



Tropentag, September 17-19, 2013, Stuttgart-Hohenheim
“Agricultural development within the rural-urban continuum”

Linking Genebanks and Farmers to Urban Markets: Native Chili Peppers in Peru and Bolivia

MATTHIAS JÄGER¹, MAARTEN VAN ZONNEVELD², MARLENI RAMIREZ¹, KAREN AMAYA¹

¹*Bioversity International, Colombia*

²*Bioversity International, Managing and Understanding Biodiversity, Italy*

Abstract

Agricultural biodiversity has been on a steady decline for the last century at both the crop and variety level. This decline, which is still continuing today, started in the middle of the 19th century with the rise of international agricultural commodity markets and food industry. Neglected and underutilised species and local varieties of commodity crops have been particularly marginalised in such a process. Diversity can be a great potential source for income especially in those areas where conventional markets and value chains are not succeeding. Native chili peppers in their centre of origin in Bolivia and Peru have great potential for high-value product differentiation in urban niche markets and income generation for the poor, but multi-disciplinary research is needed at all levels.

A BMZ funded project, coordinated by Bioversity International, with participation of three German Universities and several partner organisations from Peru and Bolivia, has been combining innovative germplasm selection and characterisation methods with participatory market research, value chain assessment and upgrading strategies facilitated and guided through multi-stakeholder innovation platforms to demonstrate how native chili pepper farmers' income can be increased by exploiting diversity that is currently underutilised. One of the largest and most diverse collections of chili diversity has been assembled in national genebanks in Peru and Bolivia. Taxonomic, agromorphological, molecular, biochemical and sensorial characterisation plus the systematic screening for commercially valuable traits that meet market opportunities have been undertaken.

Innovations from environmentally friendly solar drying technology and the establishment of good practices for improved production, post-harvest and processing methods have been part of the research, as well as helping to forge mutually beneficial institutional and commercial alliances between small farmer organisations, processing companies, retailers, service and input providers, research organisations, local governments and development organisations. As a result, new and traditional products using native chili diversity have been developed and are now successfully sold in urban supermarkets.

This approach is applicable to other country contexts and crops including farmers growing underutilised native mangoes in India or sweet potatoes in Uganda - areas struggling with declining commodity prices and looking for diversity-based opportunities to increase their incomes.

Keywords: Agricultural biodiversity, high-value differentiation, neglected and underutilised genetic resources, value chain research and development