Sovereignty: fostering *in situ* conservation of unique traditional potato varieties by empowering farmers for organic production and commercialization

Juan Leonardo Almanza¹; José Antonio Rivero¹; Paulo Eduardo de Melo²

¹ Researchers, Fundación ProInpa, Cochabamba, Bolivia ² Researcher, Embrapa – Secretariat of International Affairs, Brasília- DF, paulo.melo@embrapa.br

The Candelaria District (Colomi county, Central Bolivia, 3.200-4.200 m asl), is the cradle of an impressive diversity of traditional potato varieties, which are key to food sovereignty in Bolivia. In spite of that, the fast growing urbanization, along with migration from rural areas are jeopardizing this heritage. We would like to favor the *in situ* conservation of this valuable germplasm, not only to preserve its dynamism over time, but especially in the benefit of farmers, who have been its guardians for generations in a row. To this end, we are aiding Candelaria farmers to improve their production standards and to narrow their gap to market, which has niches that welcome such traditional varieties. The objective is to foster conservation through strengthening usability and profitability, while the challenge is not discharacterizing ancient ethnical agricultural practices. After one year of work, we succeeded in (1) generating a comprehensive baseline information on the production and use of these varieties, in establishing (2) a Farmer Field School (FFS) and (3) a homely small bio-input unit (biofertilizer and lime-sulfur solution) in three communities (Kanco, P’Alta Loma y II Sora-Sora, the first exclusively for women; the second, a natural sanctuary to tuber seed production in the higher lands), and (4) in starting a market survey and articulation in Cochabamba (3rd largest city in Bolivia, 618.000 inhabitants, 50 km from Colomi). FFSs involved 45 families and focused on the organic production of tubers and seed tubers; sustainable production of bio-inputs; pest and disease identification, monitoring and control; and identification of leadership (FFSs are run in a participatory way and steered by the farmers themselves). FFSs knowledge is meant to be functional, i.e., farmers are expected to effectively use it to take adequate and timely decisions concerning their crops. Five videos documented the FFS’ experience in 2014 and were exhibited in Community Cines as part of the learning process. So far, results are substantial: farmers unanimously acknowledge FFS’s contributions. We recorded tuber multiplication rates as high as 1:22. Potato response to bio-inputs was so impressive that FFS farmers extended their use to other crops, while the sales of bio-input surpluses to non-FFS neighbor farmers made the business self-sustained. Finally, farmers already started discussing market issues with representatives of supermarket chains in Cochabamba. In the second year of the project, FFSs will continue with new contents. Additionally, we will put stronger efforts in preparing the ground for the lasting of current achievements beyond our project lifetime.

**Keywords:** S. *tuberosum* subsp. *andigena*; S. *x juzepczuki*; S. *stenotomum*; S. *goniocalyx*; genetic resources

**Financial Support:** Project funded by The Agricultural Marketplace Platform (www.mktplace.org)