

Title: Food sovereignty and underutilized crops: a case study of *Quinoa Real* on the Southern Altiplano of Bolivia

The food crisis experienced in 2008 has contributed to deepening the debate about food security and the right of people to define their own food systems. The Food Sovereignty concept, launched nearly 2 decades ago, is an attempt to address related issues within an integrated framework. However, the concept still needs to be more fully developed before it can be applied in a practical and sustainable way.

To this end, we have developed a conceptual framework integrating: (a) **a legal dimension**, regarding the obligations that governments have towards their own citizens to ensure access to food at the individual level and access to resources at farmer level ; (b) **a policy dimension**, regarding the role of public policies in safeguarding and effectively promoting local food systems; and (c) **a capability dimension**, regarding the effective role that stakeholders (farmers, processors, and other food value chain actors), play in food chains at both local, national and/or global level.

As a way to test this conceptual framework, we are currently carrying out research in Bolivia, focusing on the case of *Quinoa Real*. Quinoa, which is a formerly underutilized crop, which has over the last decade or so been experiencing a dramatic increase in production, including for export (>US\$80 million in 2012).

Drawing on survey results of 100 households located around the Salar (salt flats) de Uyuni in southern Bolivia, home of the most *Quinoa Real* production in the world, an analysis is undertaken relating to the impact of the quinoa export boom on quinoa farmers. This analysis is based on a number of key livelihood, environment and development indicators i.e. financial, human development, food security, environment and biodiversity conservation and cultural identity indicators. Trade-offs and linkages with the aforementioned dimensions are being identified.

Preliminary results show that the increased private incomes generated from quinoa production has permitted families to make investments to improve their living conditions (e.g. education, construction of new houses and sanitary services). The observed changes in dietary patterns, characterized by a reduction of quinoa consumption seems to have been compensated by better access to classes of foods previously poorly accessible (e.g. fruits and vegetables). Such changes were also found to be strongly related to broader changes in cultural and food preferences. The results additionally indicate that risks associated with the growth of quinoa are largely related to the overexploitation of the natural resource base (land) and associated conflicts related to its appropriation (sometimes generating intergenerational conflicts). Currently, producers seem more vulnerable to risks typically associated with new production systems where fallowing does not occur (e.g. resulting in increased risk of pest and disease attacks). Inequalities among farmers also seem to be increasing within communities, at least as evidenced by tractor ownership.

Interviews with agro-industry actors (both private firms and producers associations) and importers have also been realized in order to explore food sovereignty issues related to the governance of value chains and possible changes in power relationships along the chain that may affect producers' wellbeing.

With reference to the legal, policy and capability dimensions, we note:

- the initial process of upgrading by producers (due essentially to the organizational work of producer associations) permits the attainment of some basic livelihood improvements, although their overall position in the value chain is weakened as the chain becomes more demand-side driven;
- while the structure of the agro-industry sector permits the exploitation of opportunities deriving from high foreign demand, it seems to be unable to cope with new emerging threats. The risk is that quinoa production becomes an unsustainable "extractive activity".

During recent years, Bolivia has developed a legal framework within which to address food security and sovereignty issues (food security issues have been incorporated in the constitution and a number of laws explicitly have the goal of promoting food sovereignty), although there remains a lack of effective policy to promote the attainment of such goals, with a preference still being accorded to other export crops (especially soya). Moreover, there remains a lack of agreement amongst private actors regarding public policy goal definition (e.g. with regard to domestic quinoa market development). Renewed coordination among private and public actors is needed to more effectively reconcile the multiple dimensions of the food sovereignty concept.

Keywords: food sovereignty, neglected and underutilized species, Bolivia, quinoa

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