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Adults' Education And Agricultural Innovation: A Social Learning Approach

Christian Barrantes [a] *, José Luis Yagüe [b]

[a]*Universidad Nacional Agraria La Molina, Av. La Universidad S/N La Molina, Lima 12. Perú*
[b]*Universidad Politécnica de Madrid. Escuela Técnico Superior de Ingenieros Agrónomos. Av.Complutense S/N. Madrid,28040. España*

Abstract

Social learning processes can be the basis of a method of agricultural innovation that involves expert and empirical knowledge. In this sense, the objective of this study was to determine the effectiveness and sustainability of an innovation process, understood as social learning, in a group of small farmers in the southern highlands of Peru. Innovative proposals and its permanence three years after the process finished were evaluated. It was observed that innovation processes generated are maintained over time; however, new innovations are not subsequently generated. We conclude that adult learning processes and innovation based on social learning are more effective and sustainable; however, the farmers internalization in innovation processes is given longer term.

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Keywords: innovation; social learning; adults' education; agriculture;

1. Introduction:

The current situation of small farmers is far from being solved even though development strategies have been investigated for many years. Until a few decades ago, these strategies were based on the need to introduce new technologies tested in experimental centers; the biggest dilemma was how to get farmers to adopt these new external technologies (technology transfer). This linear approach positioned farmers only as beneficiaries of the new technologies.

* Christian Barrantes Tel.: +51-1-344-3696; fax: +51-1-349-5761.
E-mail address: chbarrante@lamolina.edu.pe

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However, experience shows that many of the new technologies in the rural countryside failed to produce the expected results due to the lack of interest on the part of the farmers, little flexibility to adapt to personal preferences, and lack of proactivity. This strategy started to change in time as professionals faced questions such as: Are technicians assuming a role that is not theirs? Facing new technologies, does the lived (or traditional) experience- knowledge of the farmer not have any value? The answers to these questions, along with the poor results of technology transfer, provided evidence that the adult education, including that of farmers, cannot start from scratch, but must be based on the fact that these adults already have certain experiences that have taught them to act in one way or another. The experience and actions of farmers are influenced by their culture and worldview. This means that the farmer needs to be looked upon as a person with the same potential as anyone else, but with a different path of knowledge. The concepts of participation and appreciation of local culture are now recognized as important and have led to a number of strategies that put the farmer at the center of his/her development, thus leading to development processes that are mainly endogenous. However, these processes cannot reduce the agricultural producer´s context only to his/her geographical space. The current reality of many farmers implies their relationship with the context, which, due to the effect of globalization is not limited to the physical bounds of the territory, but the whole world and trends that are set in it, which are observed in a changing market and the political, social and environmental processes to consider. It is this changing and complex environment that requires farmers to become innovative. The majority of the rural population in Peru (58%) is located in the Andean region (Instituto Nacional de Estadística e Informática, 2008). The Andes are characterized by a rugged topography with altitudes that range from 2,000 meters above sea level (MASL) to up to 4,000 MASL. This creates a number of difficulties in transportation and in establishing fields with large tracts of land, thus small-scale farming is customary. On the other hand, Andean communities are still quite different from urban areas of Peru as there still exist such concepts as mutual aid and working together in the Andean culture. Within this context, innovation systems appeared as a way through which many of the Andean communities looked for an alternative solution to improve their economic and social situation without necessarily having to depend on the State (Fernandez-Baca, Montoya, & Yañez, 2010). For community development, it is necessary to promote a synergy between indigenous and external knowledge (especially scientific knowledge) to generate locally-adapted alternatives that can solve new problems (Quiroz, 1999; cited by Ortiz, 2006). The province of Aymaraes, located in the southern highlands of Peru, represents one example of the innovation systems approach. In Aymaraes, the construction of a new road that links the cities of Lima and Abancay, while also passing through several towns of the province, generated greater access to the market for small producers, but under unfair trading conditions. A group of small farmers in the province were selected to apply the methodology to generate agricultural innovation processes from the social learning approach and agricultural innovation systems. This paper aims to assess the effectiveness and sustainability of this methodology by the evaluation of its results over time.

2. Literature Review:

The term innovation refers both to the process and the achievement of results (Albuquerque, 2008). For this reason, it is no longer enough to demonstrate the generation of knowledge as a result of research projects, but it is necessary to show that these projects are being adopted and are generating wealth and well-being or are at least helping to expand the density of the "cloud of knowledge" which will eventually cause “technological rain” (Muñoz & Santoyo, 2010). The concept of innovation requires knowing and understanding the perceptions and dynamics of different actors because every innovation process affects different players with diverse and dynamic behaviors. People, particularly those with limited resources in developing countries, need to learn to innovate (Douthwaite, Beaulieu, Lundy, & Peters, 2009). It is necessary to leave the linear approach. Existing approaches to technology transfer do not fit the resource-poor farming context of the South (Scoones & Thompson, 1994; Chambers, 1993; Leeuwis, 2004). Theoretical approaches to innovation have been changing over the years, evolving from the linear and relatively simple approach of innovation diffusion to a more complex and as yet insufficiently explored approach to innovation systems, which fits well with the increased number and diversity of stakeholders currently involved in agricultural innovation (Ortiz, et al, 2013). Therefore, the participation of different actors, which share their knowledge and interests through a system, is needed to generate innovation. The innovation systems approach arose in the mid-1980s as a Schumpeterian perspective that was significantly influenced by the literature on