

Towards a sustainable model of small farms

An experience on the Peruvian north coast

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ABSTRACT

One of the main problems faced by small rural farming units is to establish an adequate management model and take advantage of its natural potential and boost its economic and productive development.

In order to mitigate the impact of this problem, this research (cross-section, exploratory-descriptive, non-experimental and prospective) was carried from 2008 to 2012; with the compromise of three sectors in order to establish the validity of the project: public sector (regional governments; La Libertad and Lambayeque), private sector (United Nations for Industrial Development Organization, UNIDO-Export Consortia) and the academic sector.

The contributions of the research are consolidated into a replicable model and the organization of partnership workshops on the Peruvian coast.

KEYWORDS

Viru, Partnership, Association, Theory of Commons

INTRODUCTION

The agriculture is one of the main strategic activities for the development of Peru. Its products are destined to satisfy the nutritional needs of the population and contribute to the country's economy and social growth.

The Viru valley, on the north coast of Peru, is a traditional agriculture zone. We had history reference since before Incas time, around 1000 BC. Currently this area has a large agribusinesses engaged in harvesting sugar cane, asparagus, artichokes and other products to export.

However, the small farmers, who own small lots from three to ten acres, do not manage their lands efficiently. Intermediaries get a large amount of the benefits and give the farmers lower price for their harvest.

According to Instituto Nacional de Estadística e Informática (INEI) [2], the main features of the sector are

- a. Employment: The contribution of the EAP (economically active population) at the national level is 26%; in rural areas, 65%. The contribution to the GDP (gross domestic product) is 8%.
- b. Population: 50% of the rural population depends on agriculture (estimated population of Peru: 28 million inhabitants; rural population: 7 million inhabitants). However, due to the lack training, they have low productivity, compared with Latin America indicators.
- c. Agricultural area: according to the latest agricultural census, the agricultural surface is 12 million acres (15% of Peru's surface). The area sown is 25%.
- d. Property: one-third of the land for agricultural use is registered officially. Most of the agricultural units have ten acres or less, with high transaction costs, fragmentation and low productivity.
- e. Environment: there is an inadequate management of resources and problems of "desertification, deforestation, salinization, loss of agricultural land, toxicity of vegetation, the depletion of water, ecosystems degradation and extinction of species" [3].
- f. Organization: there are cooperatives, rural communities, small and medium-sized producers associations and among others.
- g. Market: there is a lack of information on the market, disorder in crops and a lack of reliable information for a long term decisions.

The agriculture development report says: "with right policies and investments that support the local, national and international level, currently this sector offers new opportunities to break out the poverty for hundreds of millions of people in rural areas" [6]. However, we have small producers with inadequate resources, low productivity and insufficient access to markets.

METHODOLOGY

The research was carried in the Viru valley. The objective was designing a model that guides the economic development of small rural agricultural in this valley.

The population involved local farmers and authorities, organizations (companies, government entities, water management organizations, and agricultural associations) and representative actors in Viru.

The methodology, which combines several and different research tools such as observation, surveys, interviews, questionnaires and study trips that contribute to obtain a broad view of the valley, starts by identifying its problems and goes on to work out its lines of development.

a) Observation, in the first study trip. It was allowed to obtain a first context of the zone [5]. It also made possible to develop an initial scope of the following aspects:

- The main social and economic activities
- The development areas: economic, social and political
- The population's customs and behavior

b) Survey, important instrument in transverse descriptive, non-experimental research [1]. This instrument was applied in the second study trip with questionnaires focused on agricultural producers.

The survey was applied to 83 agricultural producers (64 males and 19 females) belonging to the villages of Huacapongo, El Niño Bajo, El Niño, Tomabal, Queneto, La Represa, Susanga, El Carmelo, La Gloria, Compositan, Zaraque, San Juan, La Calera, Santa Elena, La Gloria, San Jose, San Nicolas, Huancaquito Alto and Huancaquito Bajo.

The survey aimed to collect quantitative and qualitative information of economic activities (agriculture, livestock, and trade), land ownership, water uses, education, health and others.

c) Interview, in order to confirm the survey and collect information on the agricultural situation in the valley of Viru (strengths and weaknesses). The format was free, according to the interviewer, from 30 to 60 minutes, using digital recordings.

The main topics were focused on economic activities, water management, representative actors and development alternatives. The interviews were conducted in different study trips. In the second study trip, for example, there were 41 interviews from which it was

obtained valuable information on the potential of development and the problems of Viru.

Those interviewed were local and regional authorities, representatives of the organizations related of water management, companies, farmers and other actors of the area.

d) Delphi questionnaire was used to predict behavior or the future phenomenon or a problem. The anonymous questionnaire was conducted in two stages with the experts selected by their knowledge and skills. The application was virtually with a web page, each expert filled in the information online.

The first round had the objective of validating the results of the previous instruments (observation, surveys, and interviews), the problem tree and the first development model. The second round consolidated it and established development guidelines, and reach consensus.

Study trips

The first study trip was exploratory: established the problem, preliminary alternative solutions and gathered the information.

The second study trip aimed at the process of surveys and interviews, the design the first problem tree and objective tree. The information determined five development areas: agriculture, livestock, water resource management, non-traditional activities (tourist and aquaculture) and public policies improvement

The third study trip focused on Chavimochic irrigation project and its influence zone

The fourth study trip concluded with the first round of the questionnaire. Also, one guideline for the sustainability of research was the organization of associativity workshops. The proposals and its approaches served as the basis for planning the fifth study work and executing the second round of the questionnaire.

The fifth study trip, with the second round of the questionnaire, allowed validating the research; and establishing the base of associativity workshops on the north coast.

Associativity workshop – San Jose

The first associativity workshop was developed with the support of La Libertad Regional Government, Chavimochic special project (PECH) and UNIDO, from March 25th to March 26th 2011.

The objectives were:

- Establish the research sustainability through training small farmer leaders on issues of associativity and innovation.
- Promote discussion and proposals for innovation in the small rural agricultural units.
- Strengthen the relationship among the three sectors (private, public, academic) for the development of small rural agricultural in the Viru valley.

“Thinking about being competitive, promote crops by market, innovated production processes, reduce cost and promote the small farmer integration cannot complete without trust, common goals, export agriculture and a project goal, association”, said Humberto Landeras.

Associativity workshop - Olmos

It was from November 3rd to November 4th 2011, with the support of the Lambayeque Regional Government, Olmos Tinajones Special Project (PEOT) and UNIDO, the second workshop was organized.

The objectives of the workshop were three

- Encourage partnerships among leaders of agricultural unions, leaders and members of management committees of Olmos valley and the actors of the market chain.
- Promote and exploit development opportunities of Olmos-Tinajones irrigation project.
- Replicate the experiences obtained in Viru Valley and the associativity development model.

Organic production workshop, La Libertad

During 2012 and 2013 were formed associations of small farmers, differentiated by production areas, products and markets, under the auspices of the regional government of La Libertad.

Between September 12th and September 13th, 2013, was organized, for example, the first organic production workshop, with more than 450 organic farmers in the La Libertad region. In order to know and implement, the best practices of organic production.

In this meeting they founded the La Libertad organic producers network with Propalto (24 producers of Hass avocado), Ceprovasc (221 producers of Hass avocado, pineapple and vegetables), Asoproagro (22 producers), Asfrici (40 producers) and Ayni Lacta (15 producers).

“This associative project increased my revenue by demand abroad, achieved better bargaining power in price and the participation in a collective trade and managed to the sustainability of my farm”; Mrs. Catalina Leon.

RESULTS

The consensus and the actual organizations validate the small farmer sustainable model. This model proposes the development of an autonomous entity and the integration of the three sector (public, private and academic) with a sustainable uses of resources based on a competitive agriculture, efficient use of water resources, consolidate their park technology, develop non-traditional activities (tourism and aquaculture) and adequate public policies.

The model consolidates the vision of the Integrator, (European model) based on agriculture (agricultural development model and the development of an agricultural company) and its related activities (multifunctional model) with a joint between the public, private and academic sector in a flexible organization in processes of incubation and promotion of innovation and entrepreneurship (model of science and technology parks).

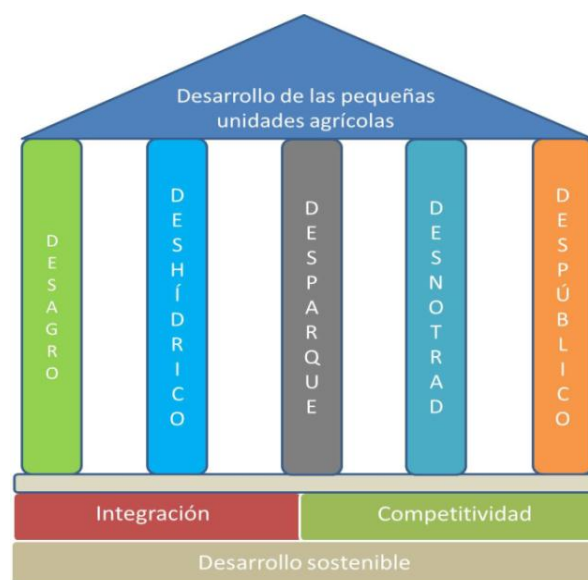


Fig.1. Small farms sustainable model

CONCLUSIONS

The research and the associativity workshops showed the potential of north coast in Peru, because of their geographic location, microclimates oriented to agriculture, irrigation projects, and logistic facilities. The variables “integration, competitiveness and sustainable” were important for the development.

The model sustainability must generate spaces for dialogue between the actors to achieve the sustainable development from the consensus and the construction of a framework based on equity, associativity, and the theory of commons.

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