

Developing a strategic vision for the potato sector in the Andean region

André Devaux¹, Miguel Ordinola², Rubén Flores³, Alberic Hibon⁴,
Jorge Andrade-Piedra⁵, Jorge Blajos⁶, Iván Reinoso⁷

¹CIP/Papa Andina (a.devaux@cgiar.org); ²INCOPA project (cip-incopa@cgiar.org); ³OFIAGRO S.A. (ofiagro@andinanet.net); ⁴Consultant (ahibon@speedy.com.pe); ⁵CIP/Papa Andina (j.andrade@cgiar.org); ⁶PROINPA Foundation (j.blajos@proinpa.org); ⁷Programa de Papa, INIAP (reinoso@fpapa.org.ec)

Abstract

The potato, particularly the highland native varieties, is a central element to families' and national economies in Bolivia, Ecuador and Peru. The Papa Andina Initiative from the International Potato Center (CIP) took advantage of the International Year of the Potato 2008 to promote, through an ample partners' network, the development of a strategic vision for the potato sector in the Andean region.

The building of this strategic vision was done in cooperation with PROINPA Foundation (Bolivia), the National Potato Program of the INIAP (Ecuador) and the INCOPA Project (Peru), and in coordination with public and private actors of the sector in each country. This process underwent the following steps: i) execution of an international diagnosis; ii) implementation of national surveys and analyses in Peru, Bolivia and Ecuador; iii) implementation of workshops to build up a joint strategic vision for the potato in each of the countries with the participation of the public and private actors within the potato production chain.

The partners in each country are using these results to support concrete undertakings for the development of the sector. In Peru, there have been promotional policies and technical regulation for the potato with an ample commitment from the public and private sectors. In Ecuador, as a main result of the strategic vision, a public fund of US \$ 32 millions was approved by the Ministry of Agriculture to strengthen the potato sector. Bolivia is analyzing the development of a strategic vision as a methodological tool to support the development of the sector.

Keywords: production systems, strategic vision, potato value chain, native potatoes, policy incidence, Andes.

Introduction

Potato, and particularly its highland native varieties, is a central element to families' and national economies in Bolivia, Ecuador and Peru. The Swiss Agency for Development and Cooperation (SDC) and the International Potato Center (CIP), with the participation of national organizations of the potato sector in the three countries, have supported potato producers in the Andes for several years, with very encouraging results obtained, such as better income for producers through access to dynamic markets and a more equal participation in the market chain. In commercial terms, the first native potato based products have started to reach national and international markets.

SDC has taken advantage of the celebration of the International Year of the Potato 2008 (AIP 2008) to promote, along with CIP, the potato sector in different areas, nationally as well as internationally. The CIP based Papa Andina Initiative and its partners (Proyecto *Innovación y Competitividad de la Papa*, INCOPA, from Perú; *Fundación para la Promoción e Investigación de Productos Andinos*, PROINPA, from Bolivia; y el Instituto Nacional *Autónomo de Investigación Agropecuaria*, INIAP, from Ecuador) worked together to implement the project called "*Celebration of the International Year of the Potato (AIP) in the Andean Region*" with two objectives: (1) to implement a diagnostic of the potato sector in Bolivia, Ecuador and Peru; support the participative development of a strategic vision for this sector and define priorities of action to strengthen it, and (2) to create and promote regionally, nationally and internationally, awareness about native potatoes and their culinary, cultural and economical potential for promoting development in the Andean region. This project was integrated to the strategy of Papa Andina Initiative, which is oriented to linking research with pro-poor

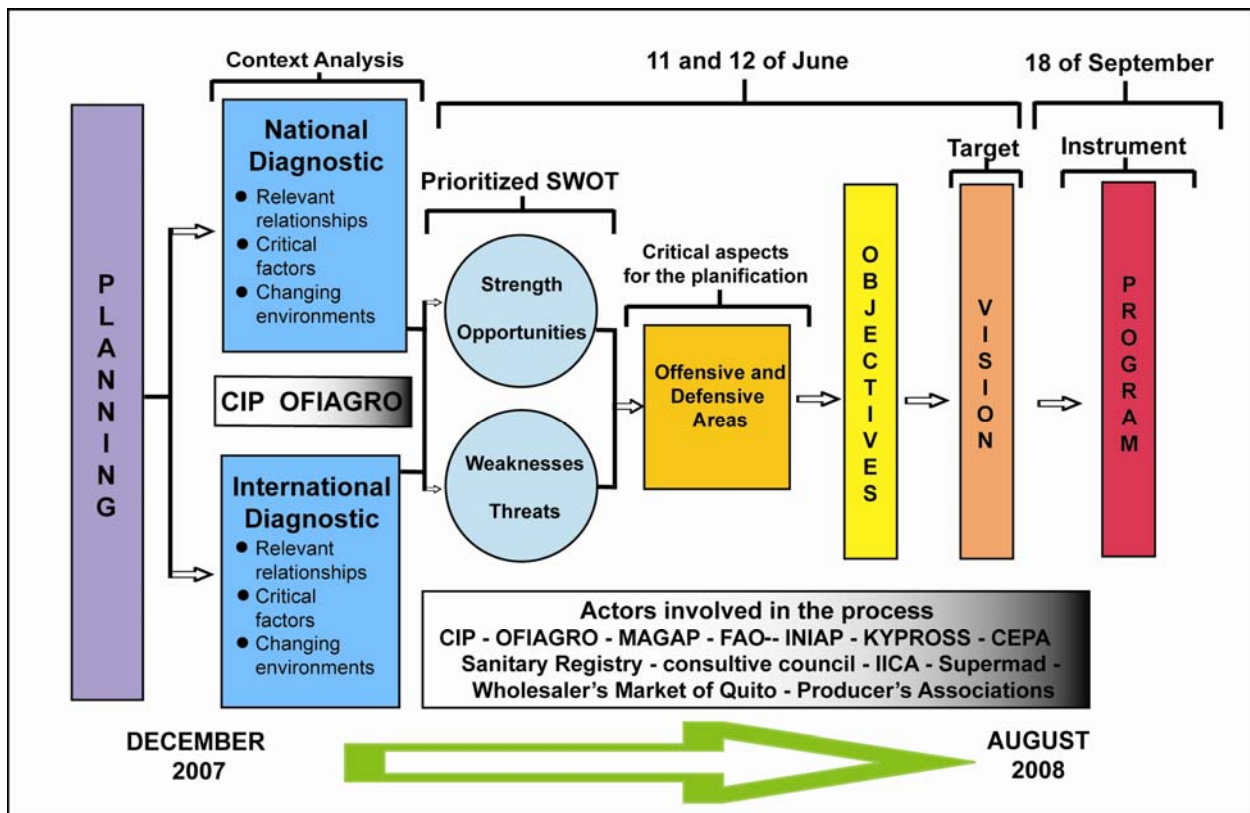
innovation systems and making use of results and impacts to influence policy and set potato on the political agenda (Devaux et al., 2009)

Methodology

The work has been done according to a plan of action and a methodology devised by a regional consultancy firm, OFIAGRO. A strategic vision was developed in line with the following steps:

5. Implementation of an international diagnosis and analysis of the potato sector and its market development in the international context. The main idea was to show and analyze world trends in potato production and trade, and relate them to the Andean region context proposing possible implications for the development of the potato sector in this region.
6. As a second stage, national diagnostics of the potato sector in Peru, Bolivia and Ecuador were performed.
7. Finally, workshops were implemented with the participation of the potato sector's public and private stakeholders, supporting organizations and public entities such as the Ministry of Agriculture, in order to build a strategic vision.

The methodological process was adapted in each country according to the local context, local public policies and requirements that arose from participants during the participative process. But a general common methodology was adopted containing the following elements: A SWOT analysis (strengths, weaknesses, opportunities, and threats) was carried out and the strategic vision was formulated, including offensive and defensive issues, strategic areas to be worked out, and strategic objectives. A summary of the general methodology based upon the Ecuadorian experience is shown in the following graphic. The main strength was the participative approach that allowed working with a wide range of public and private partners.



Source: Rubén Flores (2008). OFIAGRO, Quito – Ecuador

Results

The potato in the Andean region

The potato crop contributes 7.4%, 11.0% and 10.0% of the agricultural Gross Domestic Product (GDP) in Ecuador, Peru and Bolivia respectively, equivalent to a total added value of 1 055.6 million US\$ in 2006. It is estimated that there are more than 820,000 potato producers in the three countries, representing around 5% of the agricultural Economically Active Population, and more than 52 million workdays generated each year. In this sense, the potato is without a doubt one of the main labor and income sources in the rural Andes.

Regarding the production in these three countries during the period of 2002-2006, even if Peru fully exceeds both Bolivia and Ecuador's production with 3,248,000 TM/per year, its rate seems to remain at this level while Ecuador's production continues growing at an annual rate of 2.0% and Bolivia's farming area cultivated with potato increases 1.5% annually. Although they represent the centre of origin of the potato, the three Andean countries together represent today only 1.38% of the world production and less than 2.3% of farmed area. In the same period, 2002-2006, 82.3% of the potato's world production was concentrated in Asia and Europe; with only five countries (China, Russia, India, the USA and Ukraine) representing 53.3% of world production. However, while the industrialized countries' production has fallen to -2.4% annually, developing countries' production has increased by 8.4% per year, with China and India as leaders. Potato yields in Bolivia, Ecuador and Peru are well under the world average (17.6 t/ha) and very far behind countries like New Zealand (45.7 t/ha), Belgium (43.9 t/ha) or the Netherlands (43.2 t/ha). There are many reasons –agronomical, climatic, socio-economical, and institutional- that may explain those differences.

The primary production of these three Andean countries is characterized by a great dispersion of agricultural areas and a great variability in production systems due to various factors: type of producers, ecological area, farming season, altitude, rural and urban consumers' preferences, weather conditions, access to technological innovation, types of organizations, training and access to credit. At the same time, the major proportion of potato production (90% or more in the three countries) is consumed unprocessed, which is why fresh potatoes are still a basic staple for the great majority of the poor population, particularly in the rural areas of the Andes, where there is no adequate infrastructure to store or process it. Fresh potato consumption per capita for the period of 2002-2006 was 31.8, 43.3 and 68.4 kg/per year in Ecuador, Bolivia and Peru, respectively, which exceeded the world average (36.5 kg/per year).

It should be noted that there are thousands of varieties of native potatoes, traditional and commercial, in the Andean zone of the three countries, the sub-species *andigena*, *Curtilobum* and *Juzepczukii*, being the most important ones, that have been preserved in-situ by small Andean farmers, along with white improved varieties of the sub-specie *tuberosum*, selected by national and international research programs. Although these native potatoes have a potentially lower yield than the improved white potato, they present several advantages in terms of production (tolerance to low temperatures and resistance to pests and diseases), in terms of processing (high starch content, less consumption of frying oil) and in terms of consumption (color, texture and flavor). These multiple attributes of native potatoes are highly valued by the small producers in the Andes and mitigate the multiple agricultural risks (freezing temperatures, hail and drought), phytosanitary threats and market conditions they face on a daily basis to ensure their food supply. Ultimately, **native potatoes are beginning to position themselves in urban market niches** with high purchasing power, processed as potato chips and snacks, and as ingredients with interesting gastronomic characteristics for gourmet food and "Novo Andina cuisine". This new tendency should benefit small Andean producers who will require better coordination with the market chain actors in order to respond to the interest of the target consumers for their product (and in the preservation of the environment and the biodiversity.)

Building process of the strategic vision performed in Ecuador, Peru and Bolivia

Ecuador. The process was coordinated by OFIAGRO and implemented with CIP-Papa Andina, INIAP, FAO, the Ministry of Agriculture (MAGAP, *Ministerio de Agricultura, Ganadería, Acuacultura y Pesca*), the Consortium of Smallholders Potato Farmers (CONPAPA) and several universities, which formed a committee to organize the IYP in Ecuador.

The strategic vision was based on the diagnostic previously done. The main conclusions of the diagnostic were that it was necessary to carry on several activities: (1) strengthen farmers' organizations; (2) improve access to technologies to reduce production costs, (3) increase productivity and reduce environmental and health

impacts; (4) improve the relationships among potato market chain actors to reduce price fluctuations; (5) promote domestic consumption; and (6) consolidate potato supply within the country.

With this information, a workshop to construct the strategic vision for the potato sector in Ecuador was carried out following the methodology mentioned above. Thirty two people representing public and private organizations attended the meeting allowing for the identification of strategic areas to be worked out, and the strategic objectives

The diagnostic and the strategic vision were presented at a public meeting to celebrate the IYP in Ecuador (Quito, June 2008) in a positive political context, as the national government significantly increased its social investment, especially for the poorest sectors of Ecuadorian society. As a result of these efforts, a high official of MAGAP in charge of the highland region where potatoes are grown (*Subsecretaria de la Sierra*) decided to use the strategic vision as the basis for constructing an ambitious initiative: a Program to Strengthen the Potato Sector, focusing on low-resource smallholders. CIP-Papa Andina and OFIAGRO supported this initiative and coordinated its implementation. The public and private partners involved in the development of the strategic vision participated in the construction of this program.

A year later (June 2009), the same MAGAP authorities launched the program under the name "*Programa de Desarrollo Productivo y Fortalecimiento de la Cadena Agroalimentario de la Papa*". This program will be implemented by MAGAP over a period of 60 months, with a budget of US \$6,720,630 supported by a complementary budget of \$26,222,825 (through credits to smallholders farmers), and support to the following projects: (i) promotion and diffusion of information systems; (ii) promotion of scientific research and diffusion of adequate technologies; (iii) production and use of quality seed; (iv) strengthening the organization capacity and partnerships in the potato sector; (v) strengthening MAGAP's institutional capacity; and (vi) improving the participation of small-scale farmers in the marketing system.

In the case of Peru, the situation of the potato market chain was analyzed from different perspectives and a SWOT analysis carried out. The following themes were identified as requiring policy attention: i) revaluation of potato biodiversity and response to climate change threats; ii) orienting the market according to consumer needs; iii) promoting technological innovation as the basis of competitiveness; iv) implementation of innovative and differentiated strategies for commercial development; v) re-launching the potato's image nationally; vi) promoting different forms of entrepreneurial organizations and public-private alliances focusing on farmers' organizations.

In Peru, the First National Congress of the Potato "Science, art and business" was organized in the context of the International Year of the Potato 2008 in Huancayo. The congress objectives were to promote a process of knowledge sharing about scientific, productive, commercial, industrial and gastronomic experiences with the potato. After the congress, two additional events involving public and private actors of the potato sector were organized in close coordination with the Ministry of Agriculture and with the different institutions that were part of the Multisectoral Commission for the International Year of the Potato (IYP 2008).

The first event was the "**Entrepreneurial Meeting for the Development of the Potato Sector**" conducted in August 2008 calling together all the main entrepreneurial actors of the potato chain to discuss the present state, projections and the necessary policies to develop, from the entrepreneurial point of view, the potato sector in Peru. The Minister of Agriculture and his technical team related to policies of the potato sector attended the meeting, as well as 47 other people, mainly from the entrepreneurial sector.

Some of the most important private companies that are working in the potato sector analyzed the situation according to the following questions: i) what are the main potato products?; ii) what are the main problems facing these products; iii) what are the perspectives in the long term (10 years) for these products?; iv) what policies are considered necessary to stimulate entrepreneurial development for these products? With these inputs it was possible to obtain a matrix of various business plans and identify policies required to support the entrepreneurial sector linked to the potato sector in Peru.

The Workshop "**Elements for the Strategic Vision for the Potato Sector in Peru to 2015**" was the second event that was conducted in August 2008 aimed at defining priorities and strategies for the development of the potato market chain, taking as references the following aspects: production, processing, commercialization, research and development.

This meeting took advantage of the conclusions of the Entrepreneurial Meeting for the Development of the Potato Sector, the conclusions of the First National Congress of the Potato and information from the national and international diagnostics. Sixty three participants representing several organizations working in the potato sector (producers, ONGs, research centers, public institutions and cooking schools among others) attended the meeting. A SWOT exercise was run, defining the strategic vision and identifying strategic working areas, strategic objectives, action plans and budget.

As a result of the previous process, several actions were proposed for the potato sector, differentiating white potato and native ones including the yellow potato. These actions included technological, institutional and commercial areas based on the defined strategic objectives. With this input, the Ministry of Agriculture decided to develop several studies oriented to identify the competitiveness factors in promoting the potato sector: i) key factors to increase potato consumption in Peru; ii) market chains for French fries in Lima; iii) key factors to increase the use of high quality seed; iv) reception centers for potatoes to be marketed to urban markets in the Peruvian highlands and the need to support a new wholesale market in Lima. The details of these studies can be found on the following web page: <http://www.minag.gob.pe/congreso-de-la-papa/congreso-de-la-papa/4.html>

In **Bolivia**, the national diagnostic was completed with the PROINPA Foundation. It was shared with the *Ministerio de Desarrollo Rural, Agropecuario y Medio Ambiente* (MDRA and MA) for analysis and further comments before initiating the next steps in building and implementing the vision. The Ministry has prioritized the potato sector in the context of the creation of the *Instituto Nacional de Investigación Agraria y Forestal* (INIAF). A strategy to support the potato sector within INIAF based on a strategic vision has still to be defined.

Conclusions

The strategic vision exercise implemented in the Andean region has allowed the proposal of several priority areas requiring action for the development of the potato sector, such as: i) organizing the potato sector, promoting local consortiums that could converge in a national potato council playing a coordination role among the actors of the market chain and organizations supporting the potato sector, ii) developing lobbying abilities at producers, entrepreneurs and businessmen levels for policy influence in favor of the potato sector, iii) defining policies, programs and actions that would contribute to managing the risks generated by significant price fluctuations; iv) developing technologies adapted to the situation of each actor in the market chain to improve the efficiency of the potato production system in both the economic and environmental contexts.

The partners in each country are using the information generated in the process in coordination with the Ministry of Agriculture to propose concrete approaches for the development of the sector. In Peru, promotion policies and technical norms for the potato were promulgated indicating the commitment of the public and private sectors. Private investments were made to develop new potato based products and to build processing plants. In Ecuador, the strategic vision and the priorities identified have contributed to the development of a program supporting potato production and marketing systems with a public funding of \$32 million. In Bolivia, building the vision of the potato sector is considered a methodological tool by INIAF to develop its strategy for this commodity.

The success in the case of Ecuador can be explained by the following reasons. First, the context has been favorable for the construction of a strategic vision for the potato sector, and for designing a program to implement it. The government has drastically increased its social investment and has a clear focus towards the poorest sectors of Ecuadorian society, including smallholder potato farmers. Secondly, there has been stability within public institutions, allowing continuity in the initiatives launched by CIP-Papa Andina and its partners. Thirdly, MAGAP has assumed a clear leadership in the process, inviting and stimulating private and public organizations to contribute to this initiative. Finally, small-scale potato farmers organized in the CONPAPA consortium have put pressure on national and local authorities to get tangible support, which shows the capacity of this farmers' organization for advocacy (Cavatassi et al., 2009).

A common factor in the three countries analyzed in this exercise is the instability of the authorities or public leaders who are responsible for making and assuming political decisions. It explains the diverse dynamics and the different levels of progress achieved in building the vision and its implementation in each country. But, undoubtedly, as it is a participative effort, the different actors motivated by this process, who are also the true implementers, are responsible for continuing the promotion and realization of these actions in support of the sector in the medium and long term.

Bibliography

- Cavatassi, R., Gonzalez, M., Winters, P., Andrade-Piedra, J.L., Espinosa, P. and Thiele, G. 2009. Linking Smallholders to the New Agricultural Economy: An Evaluation of the *Plataformas* Program in Ecuador. Agricultural Development Economics Division (ESA), Food and Agriculture Organization (FAO). Working Paper No. 09-03.
- Devaux, A., Horton, D., Velasco, C., Thiele, G., López, G., Bernet, T., Reinoso, I., Ordinola, M. 2009. Collective Action for Market Chain Innovation in the Andes. *Food Policy*, 34:31-38.
- OFIAGRO. (2008). Diagnóstico de la situación actual de la cadena agroalimentaria de la papa en el contexto internacional y regional. Papa Andina. Centro Internacional de la Papa (CIP). Lima, Perú. 67 pp.
- OFIAGRO. (2008). Diagnóstico de la situación actual de la cadena agroalimentaria de la papa en Ecuador. Papa Andina. Centro Internacional de la Papa (CIP). Quito, Ecuador. 64 pp.
- Pro-Expansión. (2008). Análisis y diagnóstico de la papa en el Perú. Papa Andina. Centro Internacional de la Papa (CIP). Lima, Perú. 99 pp.
- Valderrama F., Terceros F. y Blajos J. (2008). Análisis y Diagnóstico del sector papa en Bolivia. Papa Andina. Centro Internacional de la Papa (CIP). Cochabamba, Bolivia. 85 pp.