Review of interventions for development of the organic peanut value chain in Cochabamba, Bolivia

by

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1- Background

In May 2012, the McKnight Foundation contracted ICRAF to provide recommendations for the design of interventions to advance the development of the organic peanut value chain (OPVC) based in Cochabamba, Bolivia. Jason Donovan, a marketing specialist with ICRAF based in Lima, Peru, carried out the fieldwork and review of documents that proved the basis for the recommendations. This report presents the findings of the review of documents and fieldwork, as well as recommendations for the design of future interventions.

The OPVC rooted in Cochabamba is the only one of its kind in Bolivia. The formation of the chain traces back to 2005, when Fundación Valles received financial support from USAID for working with nearly 7000 peanut farmers. Support from USAID consisted mainly in the development of new technologies and infrastructure for the production and processing of peanuts. In 2011, USAID withdrew its support for development of the OPVC, and the Foundation turned to the McKnight Foundation for future assistance in developing the chain. Collaboration with the McKnight Foundation has been carried out in 2 phases. Phase 1 of support covered the period 2010-2011, and focused on understanding the incidence of aflatoxins in peanuts and identifying effective and low-cost options for its control by smallholders. Phase 2 of support began in July 2011 and will terminate in 2013. Work during this phase was much broader in scope, addressing various issues related to the production, marketing, and consumption of organic peanuts.
In carrying out the review, the McKnight Foundation asked ICRAF to consider the following:

- **General impressions**: How innovative is the project? What is its potential for stimulating rural development and generating healthier food systems?

- **Review of existing information**: What are the strengths, limitations, and gaps of the existing documentation by Fundación Valles and external researchers?

- **Experiences from the field**: What are the major outcomes to date from interventions for the development of the OPVC? What are limitations for the development of the OPVC? What do experiences in the field suggest about the design of interventions?

- **Recommendations for the road ahead**: Based on insights from review of secondary information and insights from the field, what new actions are required for achieving increased economic, social benefits through the development of the OPVC?

### 2 - Methods

The review is based, in part, on an analysis of secondary information provided by the McKnight Foundation and Fundación Valles. The documents consulted included:

- **Estudio de Impacto del Ingreso en las Familias Campesinas que Trabajan con Proyectos Apoyados por la Fundación Valles (2011)**, by Fundación Valles

- **Work plans 2011-2011 and 2012-2013**, by Fundación Valles

- **La Teoría de Cambio Aplicada al Proyecto: Estrategias para la Sostenibilidad Institucional, Tecnológica y de Mercado de Productores de los Valles de Bolivia Vinculados al Agronegocio del Maní (2011)**, by Fundación Valles

- **Gobernabilidad y Articulación de Organizaciones Económicas Campesinas a Mercados: El Caso de la Asociación Integral de Productores de Aji y Maní del Municipio de Chuquisaca (Informe de Avance)**, por Diana Córdoba

Recommendations also incorporate insights gained during field visits and interactions with the staff of Fundación Valles. Field visits were carried out between Oct 22-26, 2012. During the first three days of work in the field, meetings and interviews were carried out with leaders of the producers associations, smallholders, and with representatives of Universidad Mayor de San Simon (UMSS) and Bolivian Agribusiness, S.A. (BAgrí). During days four and five, representatives from Fundación Valles (Tito Villarroel and Andres Quiroga) engaged with ICRAF’s representative to identify lessons learned during the previous three days, and their implications for the design of future interventions for supporting the OPVC. Recommendations draw on ICRAF’s experience in the design and assessment of VCD interventions in Latin America, as well as insights from the literature of VCD and sustainable rural livelihoods.
3 – Stakeholders in the OPVC, phase 2 interventions, and general impressions

The OPVC is comprised of two privately-owned corporations, four producers associations and hundreds of smallholders in Cochabamba. Most households produce peanuts on roughly half a hectare of land. Part of the harvest is reserved for household consumption, some is sold in local markets, and the rest is sold to one of four producer associations. The producer associations process peanuts for sale in national and international markets. Roughly 50% of the peanuts purchased for export by the associations are ineligible for export (often because of damage causes during processing) and sold in national markets. The remaining 50% is sold to Bolivian Agribusiness (BAgrí). BAgri also advances working capital to the producer associations so then can purchase peanuts from their members. Fundación Valles assists in negotiations between the producer associations and BAgri, provides technical assistance in peanut production to associations and producers, and provides subsidies for certain costs, including staff costs of the producer associations and certification costs. The Germany-based importer, Rapunzel (http://www.rapunzel.de/uk/p_nuesse.html) purchases the nuts from BAgri and further processes the nuts for sale to final consumers.

The 2011-2012 work plan submitted by Fundación Valles includes interventions of different types for development of the OPVC. These interventions build on their previous work with USAID and on their first phase of collaboration with the McKnight Foundation. In general terms, phase 2 interventions include:

- Selection of peanut varieties to local conditions for production
- Assessment of experiences in peanut rotation and association in Mizque and Aiquile
- Establish a system for the production and distribution of peanut seeds
- Generate business opportunities for the domestic peanut market
- Implement an agribusiness development strategy (based on the APAJIMPA case study)
- Monitor the incidence of aflatoxins in peanuts and other crops used in household consumption
- Support the ISO19025 aflatoxin detection accreditation of the CAPN-UMSS laboratory

The following impressions are offered based on the work plan and discussions with staff at Fundación Valles:

- **Multi-faceted approach to VCD with smallholders**: Effective interventions for VCD with smallholders must focus attention on building lasting business relationships among chain actors, while addressing the underlying constraints to the participation of smallholders and other resource poor actors in the value chain. The plan provided by Fundación Valles addresses both demand and supply related aspects of VCD. Among the innovative features of the plan are: 1) effort to identify viable solutions to aflatoxin control by smallholders, 2) a strong research-development focus (for example, improved seed quality and variety, technologies for peanut drying), 3) effort to support the development of services for the development of the OPVC (for example, laboratory for...
aflatoxin detection) and 4) focus on traditional product (peanut) in a new market (Europe), which is also important for the food security of producing households.

- **...but potentially important gaps remain:** Among the potentially important actions needed for effectively linking poor farmers to international niche markets for agricultural products are 1) learning related to the opportunities of peanut farmers to intensify or expand their peanut production (including issues related to assets, risk, enabling environment) and 2) options for building of an umbrella organization (or other type of marketing arrangement) that would unite the four producer associations. Such an organization would provide opportunities for increased efficiency in business operations, as well as facilitate the eventual exit of Fundación Valles from the OPVC.

- **High potential for contributing to rural development in Cochabamba:** Despite Bolivia being the center of peanut domestication, the export of certified organic peanuts remains a virtually unexplored opportunity in the country. Small-scale peanut production requires relatively few purchased inputs, is carried out in relatively short production cycles, and is relatively easy to store and transport. A major challenge to participating in international markets for organic peanuts is compliance with aflatoxin limits. Phase 1 interventions by Fundación Valles appear to have effectively identified the risk of aflatoxin at different points in the production process and have developed effective controls to contain the threat. The demand for certified peanuts is high and businesses, such as BAgri, are willing to engage smallholders and their associations for development of the chain.

- **...but there are considerable risks to achieve development goals:** The organization of the OPVC is a complex, long-term undertaking that comprises risks at various levels. For households, there is the risk that existing endowments of assets are too low for them to make the investments needed to intensify their peanut production. For producer associations, risks relate to weak management capacities, inefficient processing operations, withdrawal of existing NGO and donor support, and high costs to organize production and provide services to members. BAgri faces various risks related to logistics, changes in international regulations, and noncompliance by producer associations and their members. Understanding and mitigating these risks will be key to the sustainability of the OPVC.

**4 - Review of secondary information**

- **Estudio de Impacto del Ingreso en las Familias Campesinas:** This document presents findings on the impact of interventions of various interventions by Fundación Valles, including those for the development of the OPVC. Impact is assessed by calculating change in income between July 2010 and June 2011 between two groups of households. One group consisted of households that participated in interventions by Fundación Valles and another group consisted of households that did not. The difference in incomes is considered to be the impact of interventions by Fundación
Valles. In the case of peanut-related interventions, information was collected from households in 4 departments. Results indicate that the households in the treatment group had incomes between 27% and 100% higher than households in the control group (see Table 6). These results suggest that the interventions for the development of the OPVC have helped households to increase their income flow. However, the use of comparison groups for assessing impact is the subject of considerable debate in the literature, with many researchers arguing the impossibility of finding unbiased comparison groups. The methodology section of the report provides few details on efforts taken to ensure the validity of the results. Longer term monitoring and the incorporation of qualitative assessment measures would help Fundación Valles and its partners to better understand the impact of their interventions on income and other elements of household welfare.

- **Work plans 2011-2012 and 2012-2013**: The organic peanut project is guided by 10 specific objectives. Six of these objectives related to the production and processing of peanuts; three objectives related to marketing of peanuts, while one objective related to project assessment. The strong focus on production issues can be justified given the lack of experience in the production of peanuts for demanding international markets. The building of local business capacities and the exploration of marketing opportunities receive noticeably less consideration in the objectives. The lack of attention to business development opens the door to serious concerns regarding the sustainability of the interventions for development of the OPVC. The following observations on objectives 1, 4, and 5 are offered based on interactions with staff from Fundación Valles:

  o **Objective 1** (Adaptation of peanut lines and varieties to agricultural and environmental conditions in two communities in Toro Toro): Activities in the field have focused on identifying varieties of peanuts that have short production cycle. Future work may consider identification of peanut varieties (and genetic improvement) that take into account production issues, including disease and drought resistance, duration of production, and ease of harvest, as well as demand-side issues, such as oil content, color, size, and taste. More information is needed by project stakeholders on the demand for peanuts by different types of users in different markets and the potential to better respond to this demand through selection and improvement of seed.

  o **Objective 4** (Develop local and domestic market for peanuts and other crops with added value): Activities related to this objective included the carrying out of a marketing study (which identified dried peanut soup as a promising product) and work with a local university to design a production process for dried peanut soup. The production and marketing of dried peanut soup can be considered a long-term effort which would benefit from input (co-investment) from the private sector. Involvement of the private sector should be sought as soon as possible. The possibility of producing innovative, yet relatively simple, peanut-based products should continue to be explored. Innovation may be advanced with inputs provided from food and candy experts from outside the region. A national level marketing study on peanuts should be carried out and options for building
alliances with the private sector for processing and national-wide distribution should be explored.

- **Objective 5** (Application of agribusiness sustainability strategies led by organic peanut and aji grower organization-APAJIMPA case study): The research carried out focused on one peanut association and aimed to determine its overall level of sustainability. This association is not part of the 4 associations participating in the OPVC. However, among the four associations in the OPVC there are major issues that must be addressed for 1) Fundación Valles to have a viable exit strategy and 2) for the associations to diversity their contact in international markets for organic peanuts. How will the associations be able to consolidate their commercial (and perhaps processing) operations in order to manage relations with buyers, input providers, and development organizations? How will the associations (either individually or collectively) be able to increase the efficiency of their operations and expand and improve their services to members? Responding to these questions will require considerable dialogue among the relevant stakeholders.

- **Gobernabilidad y Articulación de Organizaciones Económicas Campesinas a Mercados**: This report identifies factors that are considered to have contributed to (and hindered) the development of the producer association APAJIMPA. The author highlights the important role played by projects in helping to develop new technologies for peanut production, as well as the role of Fundación Valles in establishing the link between AOAJIMPA and the company Agrinuts. Among the limitations for APAJIMPA’s future development are its 1) strong dependence on NGOs and projects for basic operations, 2) weak links between the association and its members, and 3) limited service offer for members. These results are similar in nature to observations made Fundación Valles and ICRAF during field visits carried out in the context of this report (see section 5 for details). Addressing these challenges will require that the producer associations elaborate useful strategies for building business management capacities, offering effective services to members, and engaging with different buyers and development organizations.

- **La Teoría de Cambio Aplicada al Proyecto**: The document contains two important graphs: 1) the logical model of the development problem and 2) the impact pathway of the project. The development problem is expressed as vulnerability of the smallholders’ livelihoods, which results from low income and food insecurity. Low income is considered to result from weak local capacities to process and market for peanuts. Similarly, food insecurity is considered to result from the consumption of peanuts with high levels of aflatoxins. Two comments are offered on the development problem: 1) the rural livelihoods framework and food security concept are applied in an incomplete manner (livelihoods are influenced by more than just income, and food security is determined by factors beyond peanut consumption and marketing), and 2) given that the project is about building links to international peanut markets, the problem should be considered at least 2 levels, one for households and another for producer associations. This would help to ensure a more systemic solution to chain development. The impact pathway considers impacts in terms of
strengthened rural livelihoods, which are to be achieved through higher income and access to higher quality (aflatoxin-free) peanuts for household consumption. The pathway includes various outputs (*productos determinantes*), for example, “plan for capacity development”, “research on add value peanut products”, and “implementation of a seed production and certification system”. In some cases, inputs are confused with outputs (e.g., research on add value peanut products). In other cases, the logical links between outcomes and impacts are not clear (e.g., the outcome “producer associations selling peanuts in local markets” does not necessarily translate into high income flows for households).

### 5 - Insights gained from field visit

The section presents insights gained during extensive discussions with Fundación Valles and interviews with actors in the OPVC. At the household level, the insights are based on a very small sample (n=5), thus there is no claim of representativeness. However, the insights can be considered useful for identifying future research and development needs for the development of the OPVC.

Table 1 presents a preliminary list of outcomes of the interventions (USAID, McKnight) and interactions (between producer associations and BAgri) that lead to the development of the OPVC. Outcomes are presented for four types of actors: producer associations, Bolivian Agribusiness (BAgri), the members of the producer associations, and other actors (UMSS and local governments).

**Table 1 – Preliminary list of outcomes of interactions and interventions related to the development of the OPVC (2010-2012)**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Verifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Producer associations</strong></td>
<td></td>
</tr>
<tr>
<td>2 producer associations (APROMAM, AIPE-Rio Caine) with the capacity to process organic peanuts and comply with regulations for organic certification</td>
<td>CERES certification, 4 containers exported, 30 persons contracted for peanut processing, 3 plants in condition for processing export-grade peanuts</td>
</tr>
<tr>
<td>1 producer association (APROMAJI) with the capacity to shell peanuts (Prior to 2010, the association had a peanut sheller, but did not carry out the processing)</td>
<td>CERES certification, various sacks of peanut shelled for future processing</td>
</tr>
<tr>
<td>New commercial relationships built between the producer associations and BAgri</td>
<td>4 containers exported jointly by the associations and BAgri, roughly 100K in pre-payments extended to farmers</td>
</tr>
<tr>
<td>New capacities built for business management and business organization by the producer associations</td>
<td>Management of roughly $100K pre-payment for peanut purchase; offer of new services to members (technical assistance, sale of certified seed, transport for harvested peanuts); hiring of 2 professional managers (with external funds); export of 4 containers of organic peanuts (generating $8K/association)</td>
</tr>
<tr>
<td>2 associations with the capacity to launch new peanut-based products in the local market</td>
<td>4 MT of peanut reprocessed and sold in the local market, contract with the regional government for supplying packaged peanuts to the school breakfast program</td>
</tr>
</tbody>
</table>

*BAgri*
More diversified product offer for international organic markets

$151K gross income from long-term contracts with the buyer in Germany, 2 containers exported, 2 more containers to be exported in 2012

New capacities for sourcing organic certified peanuts from producers in Cochabamba

Contracts generated with 4 producer associations, roughly $100K in prepayment extended to the associations

Producers of organic peanuts (linked to the 4 producer associations)

Access to international markets and additional income from peanut sales

Increase in the farm-gate price for peanuts by 3X since 2010, income is a main source of income for most producers

New capacities for the production of peanuts for sale and home consumption

Significantly reduced levels of aflatoxin presence in peanuts, elaboration of organic inputs for production, compliance with organic certification, improved peanut productivity with selection of seeds

Other actors

Universidad Mayor de San Simon: increased capacity and interest to work with the private sector for detecting aflatoxins in peanuts

New equipment and protocols for analysis of aflatoxins in peanuts, four professionals trained in the detection of aflatoxins

Local governments: incorporation of peanut production and marketing into the development agenda

Verbal agreement to provide $250K for the purchase of equipment and the development of infrastructure for smallholder peanut production

In addition, potential and actual limitations for the development of the OPVC were identified with the staff of Fundación Valles following the field visits. Limitations are presented for producer associations, BAgri, the members of the producer associations, and other actors (UMSS).

Producer associations

- Processing: high percentage of peanuts rejected for international market (40-50%) -- possible that equipment is not well calibrated, equipment may be not ideal for local conditions, and that knowledge of best practices in processing may be lacking; limited options for adding value to peanuts and peanut by-products (shells, broken nuts)
- Business management, marketing, and business organization: only one producer association has basic capacity for business management (APROMAM); in general, there is a lack of operational and strategic planning; low sense of belonging by members (“association is just another buyer of peanuts”); and high degree of informally between members and associations; limited understanding of international markets for peanuts
- Financial management: total dependence on BAgri for funds to pay producers for delivery of peanuts, dependency on Fundación Valles and others for payment of certification costs and other costs; no long term investment plan exists; chronic lack of operating funds; high costs for the delivery of services (for example, transportation) due to low number and high dispersion of membership base
- Service offer to members: potential inefficiently in offer of technical services to members (result of limited use of local persons, communications technology, monitoring plan for members’ farms,
monitoring plan for quality of services); no capacity to offer the following services 1) short or long-term credit for members, 2) low-cost resale of production inputs to members (for example, tubing for irrigation, tractor services)

- Collaboration and coordination: Limited collaboration and coordination between producer associations to share costs or identify and resolve common problems; limited collaboration and coordination with BAgri beyond that necessary for the export of peanuts; no contact with the final buyer of peanuts

BAgri
- Limited ability/willingness to further co-invest for the development of the OPVC: reported loss of $9K in export of first container to Germany (due to discrepancy between price paid by importer and price paid to growers); high cost associated with the export of organic peanut from Bolivia (for example, one month cold storage of peanuts before export while aflatoxin levels are tested in Europe); and overall high degree of vulnerability due to limited consolidation of producers associations and limited experience in the organic peanut market

Producers of organic peanuts (linked to the 4 producer associations)
- Limited availability of labor for peanut production and harvesting, due either to small household size (and often old-age) and/or limited supply of labor (due to rural out migration and the low population density)
- Lack of equipment and infrastructure for intensifying or expanding peanut production, among missing equipment and infrastructure are: infrastructure and equipment for micro-irrigation, high-efficiency tools for the preparation of soil and harvest
- Limited willingness/ability to expand area under peanut production due to 1) lack of labor for peanut production and harvesting and/or 2) high risk involved due to lack of irrigation for peanut production
- High-cost, traditional arrangements for peanut harvesting: before 2010, peanuts were a low value crop producer for home consumption and for sale in local markets at low prices; following the organization of the OPVC, prices for peanut increased 3x; however, payment for harvest, in some cases, continues to be made in peanuts (for every 3 bags of peanuts harvested, the harvester takes 1 bag for home consumption), rather than in cash (resulting in high opportunity costs for the producer).
- Partial uptake of good practices for the prevention of aflatoxins and for the improvement of the peanut quality – producers are paid according to the volume of peanuts that they deliver

Other actors
- UMSS: capacity exists in house for analysis of aflatoxins; however, mayor limitations exist to make the investment necessary to equip the laboratory in a way that would allow for international certification
In addition, field visits and interactions with staff at Fundación Valles allowed for the formulation of a tentative list of missing information. Addressing this gap would provide inputs for a robust long-term strategy for the consolidation and expansion of the OPVC in Bolivia. This list includes:

- Genetic varieties that are best able to respond to the demand of producers in different production zones (for example, drought tolerant, rapid growth, small shell/large seed) and to the demand of buyers (for example, taste, oil content, size)
- Importance of peanut production for livelihood strategies, household food security, household resilience, and the ability of households to build their asset bases through access to the OPVC
- Options for creation of a second tier cooperative that would coordinate 1) take charge of relations with buyers, NGOs/government agencies, and service providers (banks, fertilizer providers, tool manufacturers) for the production and bulk sale of peanuts, 2) coordinate and oversee technical assistance for members, and 3) standardize operations in peanut processing among base associations
- How to achieve efficiency in processing: what are best practices, what are the cost and benefits of decentralization of processing to each association (taking into account: income earned from services; costs for machinery purchase, staff training, and maintenance; additional costs of transport for shipping to centralized location)

6 – Conclusions and recommendations

Overall appreciation:

- BAgri is a good partner for development of the OPVC over the medium term, and perhaps further into the future. It has proved its willingness to co-invest in the development of the chain. It is transparent in its dealing with Fundación Valles and the producer associations. The company also recognizes that over time the producer associations should diversify their buyers in national and international markets.
- The producer associations have made considerable progress, including the hiring of professional management and agronomists, increased skills in the processing of peanuts, and the penetration of new markets for processed peanuts in Bolivia. However, there are major unresolved issues that result in a high degree of vulnerability of the entire chain: How to increase the efficiency of processing operations? What are the options for consolidating organizational and processing operations to make better use of scarce human and physical capitals?
- Fundación Valles has designed a solid approach to building a value chain from scratch; however, it does not appear to have an exit strategy and currently relies on one donor for the OPVC work. The building of capacities of smallholders and producer associations requires long-term investments and different types of skills. Fundación Valles is a critical partner in the development process; however, it cannot do all that is needed.
- For BAgri, Fundación Valles and the producer associations, international markets for organic peanuts remain a black box. Does fair trade represent an opportunity for the producer associations? What are competitive prices for organic peanuts from different sources? What is the
comparative advantage of peanuts from Bolivia? What are the characteristics of peanuts most desired by different types of buyers? These and other questions should be addressed in the near future.

The following recommendations are provided:

Short term (2012-2013)

- **Identify other sources of co-investment:** The development of viable producer associations and value chains is a complex and long-term process. There is urgent need for Fundación Valles to identify funding sources in addition to the McKnight Foundation to address the needs of the chain actors. There may also be need to identify other providers of services, which are able to complement the services provided by Fundación Valles (for example, organizations specialized in business organization). Organizations with potential interest in the support of efforts to develop the OPVC in Bolivia are small grant funds from Bolivian-based embassies and the “Hand and Hand” fund of Rapunzel, which is the sole buyer of organic peanuts from Bolivia. ([http://www.rapunzel.de/uk/download/flyer-hih-12seiter-export.pdf](http://www.rapunzel.de/uk/download/flyer-hih-12seiter-export.pdf))

- **Reconsider impact pathway:** The impact pathway should provide a basis for effective monitoring and assessment the interventions for development of the OPVC. The generic impact pathways presented in 5Capitals (see annex), one for producer associations and one for households, may represent a relatively easy to use option for Fundación Valles for guiding their work with the OPVC. These pathways consider outcomes in terms of five different types of assets. For each of the outcome indicators, a set of context specific indicators needs to be identified (suggestions are provided in 5Capitals).

- **Elaborate a work plan for the next 2 years that addressing the following critical issues for the development of the OPCV:** These issues include 1) options for improved efficiency in peanut processing and collection; 2) identification of a range of value adding options for sale of peanuts in national markets; 3) identification of partners for marketing of peanuts in Bolivia; 4) elaboration of a growth strategy for producer associations; 5) elaboration of a strategy for the fusion of the producer associations into a combined organization.

Medium term (2013-2015)

- **Identify options for the producer association(s) and BAgrí to obtain fair trade certification:** Fair trade certification offers increased stability in business relations, the potential to access special services for fair trade certified cooperatives (access to fair trade lending organizations), a social premium for farmers and their communities, and the potential for higher prices. There are examples of fair trade certified cooperatives in Bolivia that export high quality, but relatively limited volumes, of product (for example, El Ceibo).

- **Elaborate long-term development strategy with producer associations:** BAgrí provides the glue which holds together the OPVC. Given the overall low level of business development of the four producer associations, it is recommended to maintain strong links with BAgrí over the mid-
term. A long-term perspective, however, brings to the table the need of the producer associations to diversity their contacts with international markets for organic peanuts. This, in turn, requires that the producers associations and their members agree on a federated organizational structure that facilitates access to international markets and to service providers. This most likely implies the organization of a second-tier cooperative/association that incorporates the existing four associations and its members. The organization of a second-tier cooperative/association would also provide an important element of an exit strategy for Fundación Valles.

- **Assess the impacts of interventions in the development of the OPVC with 5Capitals:** Evidence from field visits suggests that outcomes from the VCD interventions may have had a significant impact impacts on rural livelihoods. Evidence also suggests that households may have significant barriers to future increase their benefits from participation in the OPVC. A deeper understanding of the opportunities and limitations of households to participate in the OPVC should allow for more tailored, and potentially more effective, interventions.

- **Seek out a dialogue with well-established Bolivian cooperatives,** including El Ceibo and the organizations that supported El Ceibo: This recommendation is considered essential to 1) identify lessons learned in organizational development of cooperatives/producer associations in the Bolivian context and the marketing of high value products in the national market and 2) identify opportunities for business partnerships in the national market.

- **Increase understanding of international markets for organic peanuts:** Neither BAgri nor Fundación Valles appear to have a clear picture of the market for organic peanuts in Europe, the United States, or in other potentially important organic peanut consuming countries. A better understanding of this market is critical for identifying opportunities to add higher value to peanuts (with more tailored product offer, for example) and for developing a strategy that will allow the producer associations to diversity their market outputs in the future.

- **Genetic improvement and diversity:** Efforts to diversity and improve peanuts seed have focused on shortening the production cycle. However, a broader range of factors should be incorporated in the selection of seeds. These factors should include both supply- and demand-side issues. A more strategic approach should be followed for genetic improvement and diversity. This will require long-term attention and new partners.

- **Increase understanding of innovation potential for the production and marketing of peanut-based products in Bolivia:** Fundación Valles is working to understand the potential to produce a high-value product for the national market (dried peanut soup). Efforts are currently focused on product development with a national university. It is strongly recommended that dialogue be established with the private sector in Bolivia regarding its interest in partnerships for the production and marketing of dried peanut soup. In general, it is recommended that greater efforts be made to identify innovative options for the production and marketing of peanut-based products in Bolivia. This will require expanded and deeper relations with the private sector in Bolivia (including other cooperatives), as well as inputs and insights from national/international experts in the production of peanut-based candies, snacks, foods, and oils.
Annex – Example of Impact Pathways for OPVC, derived from 5Capitals

![Diagram showing impact pathways](image_url)

**Fig. 1.** Generic impact pathway for producer associations

**Fig. 2.** Generic impact pathway for farming households