

Review of Experiences in Market-Oriented Agricultural Advisory Services

Case study

FDTA-Valles and the oregano program:

A successful experience in market-oriented agricultural advisory services

Name of Intervention: Unidad de Negocios de Especies y Condimentos, Sociedad Anónima (UNEC S.A)
Country: Bolivia
Time period under analysis: 4 years
Institutions/agencies involved: FDTA-Valles, SOCODEVI, AGROCENTRAL, Project MAPA, UNEC, SIBTA
Rapporteur:
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Brief summary of intervention objectives

The *Sistema Boliviano de Tecnología Agropecuaria* (SIBTA) was created in 2000 to develop the agricultural sector through innovations in production, transformation, and marketing in order to reduce rural poverty and improve environmental sustainability. A secondary SIBTA objective is to promote the market for agricultural service providers, thereby improving the quality of services available to farmers and achieving the necessary modernisation and sustainable development in the country's agricultural sector.

SIBTA is a permanent program of the Bolivian Ministry of Agriculture that, unlike most public programs, works through private local institutions based on the four macro-ecological regions of Bolivia. These institutions, called *Fundaciones para el Desarrollo Tecnológico Agropecuario* (FDTAs), are allowed to receive public and private funds in order to promote nation-wide agricultural development. Projects arise from producer and market demands and involve the active participation of small-scale farmers and other stakeholders at all levels of the prioritised commodity chains.

FDTA-Valles is one of the four FDTAs established alongside SIBTA. FDTA-Valles works in the valleys of Bolivia and contributes to the reduction of rural poverty by bringing an accessible market-oriented business model to small farm agriculture, applying a comprehensive approach that analyses the entire commodity chain and then targets components that are not functioning efficiently.

To give one practical example, in 2002 FDTA-Valles introduced oregano cultivation in a remote area of central Bolivia where only subsistence farming existed previously and where agricultural advisory services were virtually non-existent. In only four years, the oregano program has

incorporated more than 100 hectares of production and 800 farmers, initially in the Department of Chuquisaca and later in the southern Department of Tarija.

Commercialisation in this oregano project has been carried out through UNEC S.A. (Spice and Condiment Business Unit Inc.); a private for-profit company established with the participation of FDTA-Valles and five local producers cooperatives of central Chuquisaca. UNEC is charged with the responsibility of providing market-oriented agricultural services not only to oregano cultivation, but to other spices as well.

Summary of the interventions that FDTA-Valles carry out as a Market-Oriented Agricultural Advisory Institution:

- Increase productivity in selected traditional agro-productive chains (improved yield, reduced losses, improved quality and price increases)
- Introduce competitive non-traditional agro-productive chains
- Increase the value of basic production through the introduction of transformation and other value-added processes
- Access local, national, and international markets
- Improve organisational and management skills of agro-businesses
- Increase the competitiveness and incomes of small-scale farmers

The settings and arrangements for MOAAS

1.1 What does your agency hope to achieve by contributing to MOAAS and how does this relate to your agency's overall goals?

Among the principal objectives of FDTA-Valles are reducing rural poverty, increasing the competitiveness of the sector, supporting the sustainable use of natural resources, and supporting the modernisation of producer organisations by promoting and financing generation, transfer, and adoption processes that solve problems present in prioritised agro-productive chains.

The application of market-oriented agricultural advisory services by FDTA-Valle has rapidly proved to be a success. The strategy used by FDTA-Valles is to put into practice knowledge, low-cost practices, and technologies that can make a significant difference in promoting production and land management. The results are not only improved production, processing, and marketing of the specific crops of small-scale producers, but also strengthened local producer organisations and a healthier environment.

1.2 What is the context of the MOAAS intervention?

At the beginning of 1999, the *Sociedad de Cooperación para el Desarrollo Internacional* (SOCODEVI), a Canadian NGO, and the *Central Local de Cooperativas Agropecuarias de Chuquisaca* (AGROCENTRAL LTDA), a second tier cooperative, established activities in the search of a project proposal that could benefit the member cooperatives associated with AGROCENTRAL, specifically 5, looking to diversifying profitable crops. At the end of 2001 FDTA-Valles was approached in the development of a joint project in the production of spices and condiments, with an emphasis on large-scale oregano production.

The initial intervention of FDTA-Valles was based in the results obtained by the joint effort of SOCODEVI and AGROCENTRAL to the end of 2001. To that date the agro-economic viability of the crop had been tested and there existed proven data attesting to the market potential of the products. Additionally, the potential of new crops in the same aromatic spice and condiment industry was being investigated, such as capers and saffron.

In the middle of 2002 the three involved agents saw it appropriate to create a Unit that could be charged with the implementation of the project, supervising its programmed guidelines, set objectives, and goals. It was hoped that this Unit would develop skills in production, technical assistance, processing, commercialisation, and business management links of the agro-productive chain.

The *Unidad de Negocios de Especies y Condimentos* (UNEC) has implemented projects within this agro-productive chain, three to date in the valleys of Chuquisaca and one in the valleys of Tarija. The production zones involved in these projects are characterised by reduced and concentrated rainfall, nearly inexistent irrigation infrastructure, and poor transportation infrastructure.

Despite of these limitations, in just a few years UNEC has been able to consolidate the spice chain through the diversification of high added-value crops that allow the business to compete competitively in international markets, while transforming the lives of farmers in the Chuquisaca valleys.

UNEC is in charge of the management of agricultural, agro-industrial, commercial and business management components in the oregano agro-productive chain. UNEC has proven itself to be an excellent alternative for improving and increasing the incomes to small-scale farmers.

UNEC has been established as a corporation in which FDTA-Valles, SOCODEVI, and AGROCENTRAL, together with the 5 oregano production cooperatives, participate as shareholders.

1.3 What are the particular constraints for farmers to connect to markets?

There are various entry barriers that small producers must cross in order to be able to reach national and international markets successfully. In the present case, the principal barriers facing farmers are the following:

- Small-scale farmers do not have appropriate advising services available to them to be able to produce products of the quality and necessary volume required to enter markets with greater opportunities (export markets)
- The farmers themselves do not have solid training in commercialisation logistics
- An adequate institutional environment allowing for the development of profitable agro-business does not exist, for the most part
- Access to investment and operational capital that could allow small-scale farmers to access new markets is limited
- Land-holdings of minifundary characteristics (small family property) limit individual production on the commercial scale
- Information management that could allow for improved commercialisation is inadequate

1.4 Who provides the MOAAS services, how do they operate, what services are provided?

FDTA-Valles apply a methodology of “value agro-productive chains” in the analysis, planning, and implementation of its interventions. This methodology allows it to develop a Program vision, that is to say, to generate a strategic vision based upon the product-market relationship and to establish potential areas of intervention that will allow for overcoming adverse situations, reaching anticipated results, and contributing to the higher objective of reducing rural poverty. Within this framework the Spice and Condiment Program was established, including the production of oregano and other spices.

The areas of intervention of the Spice Program implemented through UNEC are the following:

- Agricultural Area: Technical assistance, provision of sowing materials
- Industrial Area: Programs in storage, processing, and packaging
- Commercial Area: National and international marketing and commercialisation
- Institutional Area: Strengthening of the involved cooperatives and AGROCENTRAL

Activities parallel to those mentioned above are carried out in what are called Farmer Field Schools (*Escuelas de Campo*, or ECAS), using an informal teaching methodology through which a group of farmers carry out practical exercises on a parcel of land. This is a way of sharing and interchanging experiences in improving production, yield, and knowledge, in addition to being a method for carrying out on-going monitoring of production through the framework of learning through doing, with the added contribution of group learning.

The clients of MOAAS

2.1 How many and what types of farmers use the services?

UNEC Works with five agricultural cooperatives from the Department of Chuquisaca (Redención Pampa, Tomina, Padilla, Sopachuy, and Villa Serrano) and with farmers from the Central Valley of Tarija. Presently the project implemented by UNEC involves 783 beneficiary families from the Department of Chuquisaca, including members and non-members of the cooperatives. The new phase of the project, which was begun in July 2006, anticipates reaching 1000 families in the Department of Chuquisaca.

Likewise, it is estimated that the project will reach a cultivated surface area of 120 hectares, consolidate 4 hectares of thyme and 2 hectares of basil, and carry out various experimental trials with other species.

In addition to oregano and other spices, corn, potato, hot pepper and peanut, in addition to lesser volume of garbanzo beans and lentils, are prominent crops in these production areas, with the first being marketable, while the rest are mostly for consumption and sale by the farming families.

2.2 Do the actual clients correspond with the types of farmers the service intends to work with?

The beneficiaries which whom UNEC works are minifundary farmers (small family property) with traditional production tendencies towards crops that are not profitable (corn, potato, etc.). The precarious economic situation of these farmers is shown in that their average income is US\$ 523 annually. The geographic areas of UNEC's intervention is characterised by a high poverty index that is above 90%.

2.3 How are the clients involved in markets?

The clients are directly participating in the market as they have been founding members in the creation and legal establishment of UNEC. At least this is the case for the small-scale farmers that are members of the cooperatives.

Cooperatives participate in UNEC via AGROCENTRAL by manner of possessing 33.3% of the shares of UNEC, with the other two-thirds being held by FDTA-Valles (33.3%) and SOCODEVI (33.3%). It is anticipated that both FDTA-Valles and SOCODEVI will transfer their shares to the cooperatives when UNEC achieves greater consolidation on organisational and commercial levels.

As can be seen, the long-term objective of UNEC is to provide farmers with a business-oriented entity that can work within the oregano agro-productive chain on a commercial level and that is able to carry out negotiations on agricultural, industrial, commercial, and organisation levels in order to generate dividends for its members (in this case, the members of participating cooperatives). In the commercial arena, UNEC pays its beneficiaries an estimated amount per kilo of dried oregano (\$US 0.74/kg). Currently UNEC is directly responsible for commercial negotiations.

The commercial strategy of UNEC is to establish clients in both internal and external markets. The external markets with which UNEC currently operates are Brazil, Uruguay, and Argentina, with hopes of carrying out negotiations in 2007 with two new clients in Brazil and of opening a new market in Paraguay.

In terms of internal market demand, UNEC has been able to strengthen relationships in already existing markets, both with wholesale markets and with legally constituted business in the central axis of Bolivia (La Paz, Cochabamba, and Santa Cruz), including Chuquisaca.

Sales by UNEC in both internal and external markets are principally with wholesalers and in lesser quality for industrial purposes or with alimentary businesses (pizza restaurants).

2.4 What motivates farmers to use MOAAS?

The factors which motivate farmers to participate with UNEC are various; however, its success in increasing income to farmers is one of the greatest. In addition, each participating farmer is able to receive permanent technical assistance, on-going training that allows farmers to increase productivity and reduce costs, as well as to have access to secure markets through UNEC and receive immediate payment for production sales.

Another incentive for farmers is the possibility of producing new crops that could be equally profitable (new spices, 100% organic production), providing the opportunity for improving economic income on an even greater scale.

2.5 Are there other clients to MOAAS services than farmers?

From the point of view of the shareholders of UNEC, negotiations carried out are entirely focused on technological innovation for the purposes of improving economic income to farmers, some of whom may not be direct beneficiaries of UNEC. In any case, the act of negotiating and establishing formal contracts with other actors in the agro-productive chain generates a general positive impact on the regional economy.

Approaches and methods

3.1 What kind of services do MOAAS deliver?

The assistance given to farmers by UNEC is provided at various levels within the chain, beginning with seedling production to crop management, harvest and post-harvest management, provision of agricultural inputs, and improvements and innovations in dehydration, classification, and packing processes.

Parallel to assistance offered in the field and in industrial processes, farmers are instructed in Farmer Field Schools (ECAS), as described previously. Participative workshops are also held with members of the cooperatives affiliated with AGROCENTRAL with the objective of achieving greater organisational strengthening. Training is also provided in order to teach farmers basic skills in the management and control of production costs by utilising market information.

These training seminars are of great benefit for each farmer, given that the skills learned can be applied not only to oregano production but also to other crops.

3.2 How do the MOAAS providers and the clients relate to each other?

UNEC, as the implementing agency of FDTA-Valles' project, is the direct means through which beneficiaries, that is, the farmers, relate to FDTA-Valles. UNEC also is directly responsible for carrying out all contracts established with farmers, as with end clients and other actors involved in the chain.

The continuous effort among farmers and UNEC has allowed for a level of interrelation such that the needs of farmers are attended to personally through ECAS and work carried out by UNEC's technicians. Technicians responsible for a given zone continually visit each area in order to maintain crops in optimal conditions. Likewise, under an agreement with farmer beneficiaries, UNEC carries out the planning of crops (new crops) in order to secure the necessary production to cover estimated market demand.

3.4 How are innovations in MOAAS being up-scaled?

Due to the encouraging results attained during the period UNEC has operated, the concept of creating a business model capable of bringing together various associations under a single entity is being replicated in other agro-productive chains that have reached a level of development appropriate for this new phase.

For the current year 2006, this very strategy is being implemented in the onion agro-productive chain with the creation of Bolivia Produce S.A. Thanks to the agreements and negotiations achieved to date, this new effort is being supported by FDTA-Valles and Project MAPA, and it is anticipated that this enterprise will be able to achieve great success in the onion chain, as has UNEC in spices.

The outcomes and impacts of MOAAS

4.1 How is MOAAS helping farmers to deal with market constraints?

Since UNEC has taken over commercial operations, many of the difficulties facing small-scale farmers in accessing markets have been removed.

- UNEC has been able to open new markets for farmers in a more efficient and direct manner
- By bringing together small production amounts the necessary volume for entering international markets has been attained
- Productivity and production quality has been increased in agricultural plots; that is, farmers have been taught how to achieve greater profitability in their oregano crops

Currently the work of UNEC is still developing. UNEC continues training new beneficiaries and working towards entering new markets, improving productivity, implementing 100% organic production, and investigating new spice and condiment varieties that can continue improving the quality of life of farmers.

4.2 What are the outcomes/impacts of MOAAS?

By June 30, 2006 UNEC had reached the following goals:

- The average income of beneficiaries increased by more than 26%, equivalent to \$US 211, through oregano sales to UNEC for those whose crops reached harvest
- There were 783 project beneficiaries to date
- Farmers benefited from the sale of the product harvested

- The oregano production area reached 98.42 hectares
- Production areas for annual anise and cumin crops reached 8.52 hectares
- Production areas for other validated spices with market potential reached 2.31 hectares
- There were 7 agro-industrial plants for drying oregano installed and in operation
- A total of 1,030 tons of fresh oregano was processed by this end of this phase
- A total of 1,013 tons of oregano were dried for sale
- The construction and/or improvement of micro-irrigation systems was supported
- A total of 17 tons of dried oregano was allotted for essential oil extraction
- More than 168 tons of oregano were commercialised both in national and international markets
- A total of 50 litres of essential oil of oregano and other spices were processed for national and international markets
- One hundred percent of annual spices (anise and cumin) were commercialised
- A national marketing system for oregano was developed
- A system for exporting spices was in operation and permanent expansion

4.3 Are there side-effects or unexpected outcomes of MOAAS?

Thanks to the work carried out by UNEC with the support of FDTA-Valles and SOCODEVI, the image of UNEC as a Bolivian spice exporting business with excellent quality products is being attained at national and international levels. This image and its label, earned little by little, now have a high impact when it comes to entering new markets.

Likewise, by achieving results such as increasing income to farmers and promoting economic development in their communities, mass migration from production zones to urban centres is being detained.

The active participation of women in production has been achieved. In the specific tasks involved, 2898 jobs have been created, 66% of which have been filled by women. Each of the cooperatives which with UNEC have worked has been strengthened, and a need and interest in incorporating new members has been created.

Even more relationships have developed among AGROCENTRAL and its affiliates, supporting the project through participation in events, seminars, and informative tours, as well as restructuring feeder roads, supporting business administration, and promoting organisational strengthening.

The role of development cooperation and other key stakeholders

5.1 What are the roles and functions of development agencies in MOAAS?

FDTA-Valles, as one of the principal driving forces in the development of the oregano agro-productive chain in the Department of Chuquisaca and now in the Department of Tarija, has carried out and supported the work involved in various links of this spice chain. To date, FDTA-Valles has installed 6 oregano drying centres, nurseries, an essential oil extraction plant, and a storage, selection, classification, and packaging centre.

The main functions of FDTA-Valles in supporting the operation of UNEC are the following:

- Promote the development and organisational strengthening of the cooperatives involved in the project so that UNEC can attain the appropriate participation and formation to operate as a business entity
- Support the production and planning of new crops

- Support technical assistance to farmers
- Support the process of transforming spice production into products apt for the market
- Be a co-financer of UNEC for the implementation of projects directed toward the development of the oregano agro-productive chain
- Be represented in the Board of Directors of UNEC, as it currently is

5.2 What are the roles and functions of the government (local and national) in MOAAS?

SIBTA is a system created by the Government of Bolivia, and it is a permanent Program of the Ministry of Rural and Environmental Development. It was established and is supported with the goal of developing and promoting technological innovation in agriculture, forestry, and agro-industry in Bolivia. The principal objectives of SIBTA are the following:

- Raise the level of competitiveness in agro-productive chains, from production to commercialisation
- Develop technological innovations in agriculture, forestry, and agro-industry
- Guarantee the sustainable use of natural resources
- Ensure the participation of producers and goods and service contractors in the technological innovation service market

The project in the Department of Chuquisaca still has not been able to obtain financial support from the Prefecture (Departmental Government); however, in the Department of Tarija the Prefecture has financed the first phase in introducing and establishing spice crops in the valleys of the department and in supporting a technical assistance program. To this point all of these activities have been financed directly by FDTA-Valles.

The municipalities of Chuquisaca completely support the operations and investments carried out by UNEC, and oregano cultivation is a priority in municipal development plans.

5.3 What are the roles of other stakeholders?

SOCODEVI is another direct promoter of development in the oregano chain. This Canadian NGO, together with FDTA-Valles, is part coordinator and co-financer of UNEC's operations. SOCODEVI also carries out various efforts and workshops principally focused on the strengthening of cooperatives.

The focus of SOCODEVI is to support the development of autonomous organisations in favour of their beneficiaries, while at the same time fortifying the skills of individuals in managing their own development. The role of SOCODEVI is similar to that of FDTA-Valles; that is to say, it offers financial, technical, strategic, organisational, and commercial support through UNEC.

The role of AGROCENTRAL and its cooperatives is to bring together oregano farmers and participate in sessions and bring about consensus, in addition to offering its own services to rural cooperatives.

The role of UNEC is to link producers to market demand through the interpretation of demand in terms of quality, variety, packaging, volume, frequency, and so forth and by taking this demand to farmers through technical assistance and the provision of inputs. This process should generate profit in order to guarantee the future sustainability of both beneficiaries and the system.

5.4 What are the implications of these roles and functions?

Each role held by project participants and the teamwork involved have helped fulfil the principal objective of the project, which is to achieve economic increases among the farmers participating in the project.

A business model able to bring together small-scale farmers under a single entity has been achieved. Rural development and local economic growth has occurred. Barriers to new markets have been broken. Likewise, farmers have learned how to implement new technologies in their crops, allowing for increased production volumes, reduced loss, and improved product quality.

The results obtained prove the effectiveness of the proposed strategy and of all activities that have been carried out.

Linkages between MOAAS and other types of services

6.1 What other relevant services exist and how are they linked to MOAAS?

One of the primary services involved in this project is transportation for export. Once having secured markets, established a production plan, and estimated sales volumes, it is possible to carry out negotiations and contracts with transport businesses in order to arrive at optimal agreements with regard to freight costs. These negotiations involve cost reduction and greater profit for shareholders, which in this particular case are the farmers themselves. This is a clear example of how the services offered involve the entire chain and various actors. The end goal of including the whole chain within a business entity is to attain a profitable, sustainable business over time.

Insights and lessons learnt from the case

The lessons learned are:

- Establishing an agro-productive spice chain, given that prior to the implementation of this project there existed no experience with the crop on a commercial level
- Carrying out a search for better adapted varieties; the development of these to the indicated time of harvest; the development, validation, and adoption of technologies for post-harvest processes; equipping for this process; and the identification and opening of national and international markets
- Achieving joint participation and teamwork among the actors involved in the implementation of this new strategy (FDTA-Valles, SOCODEVI, AGROCENTRAL, and UNEC)
- Being able to provide a business vision that is profitable and sustainable over time as a project in agricultural development
- Making farmers participants in this vision, that is, to include them through AGROCENTRAL in the establishment of the private business UNEC S.A. and, in the course to time, to have them become the principal shareholders in the business

What is not functioning and what do you think contributed to the dysfunction?

To date, only 42% of the total number of beneficiaries are active members of the cooperatives. This could be due to the fact that currently there are no differences between the services offered to members and those offered to non-members, despite the fact that members must fulfil certain obligations within their cooperatives, such as paying dues, attending meetings, and so forth. Nevertheless, in order to bring about greater participation of beneficiaries in the cooperatives, additional short-term benefits are being developed, that is, activities and benefits offered only to cooperative members.

7.2 Describe good practices that you recommend for other MOAAS

- Encourage the development of alternative agro-productive chains to traditional ones in order to attain commercial scale crops
- Encourage the participation of beneficiaries within the formation of a private entity that can secure the sustainability of the work carried out in the oregano chain, promote and represent farming cooperatives under a single entity, structure national and international supply, provide an executive character in business negotiations, and principally constitute an executive entity that offers a business vision within the oregano industry of Bolivia