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Cuatro Pinos and LA Salad: forging a French bean supply chain in Guatemala

This case study describes a business model that allows poor small farmers to successfully and sustainably access a demanding retail market in the USA.[1]

Background

The Cuatro Pinos Co-operative, located 35km from Guatemala City, and the Los Angeles Salad Company (LA Salad) have been trading partners in the supply of French beans for over ten years. Cuatro Pinos manages the overall production system in Guatemala, working with more than 2,000 smallholders to supply LA Salad, which markets the produce to clients such as Costco, the second largest warehouse retailer in the USA. The co-operative's smallholder suppliers live in municipalities that measure well below the national average both in terms of the official poverty line and the UNDP's HDI figures.

The areas where the production of French beans has expanded the most during the past four growing seasons have high levels of poverty and the majority of producers involved in the programme have limited access to land. A report comparing poverty figures with the physical distribution of Cuatro Pinos French bean producers (for the 2005–06 harvest) showed that more than 90 per cent of them are located in municipalities that exceed departmental averages for poverty. Most of the smallholder producers supplying beans are not actually members of the Cuatro Pinos co-operative, and are located up to six hours away. A programme such as the production of French beans has clear potential to contribute to increased income levels in these communities.

Due to increasing demand from Costco for this profitable line, more production volume was required; in particular, the business model had to respond dramatically to growing demand for French beans during the US fall and winter. However, production of beans during the dry season in Guatemala, from January to May, is difficult unless farmers have access to irrigated land.

Key champions

There were clearly identifiable champions in each organisation who drove the development of the value chain, shaping the business model of Cuatro Pinos and LA Salad. All shared a desire to combine business development with social development.

Cuatro Pinos is a co-operative with a turnover in excess of $10m annually, of which approximately half comes from sales of French beans. This level of income has enabled Cuatro

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[1] The source of this document is research undertaken by CIAT and the information presented refers to the 2005–2006 production season.

Pinos to invest in professional staff and the innovative delivery of services to smallholder suppliers; it has become a specialised smallholder trading company. Integrated with its marketing and distribution functions is the delivery of extension services, including transport, targeted applied crop research, and high-quality inputs.

LA Salad, founded in 1939, is a specialised US food service provider that markets fresh-cut vegetables into US retail and fast food sectors. Alongside product and market development, the company has adapted its business model to deliver technical assistance and quality assurance training to suppliers in Guatemala and Mexico. In Guatemala, co-investment with Cuatro Pinos has enabled the development of local packing and food safety testing facilities. Crucially, the development of a refrigerated ship-based distribution system has enabled economies of scale in distribution relative to air freight, which is the mode of transport normally used for distribution in the non-traditional fresh fruit and vegetables sector.

Costco is the second largest warehouse retailer in the US and has more than 490 membership stores throughout the world. It specialises in volume trading of branded goods, targeting high-income consumers. The company has a high-volume distribution system that aims to source product direct from the manufacturing/processing sources of branded suppliers, in order to reduce intermediary costs. Its annual turnover is about $65bn; in 2006 it reported sales of $60.16bn. It has 13,600 employees.

How it works

In order to reduce the risks of supply shortages and to address the food safety issues inherent in the fresh vegetable sector, Cuatro Pinos and LA Salad had to work closely together to develop a business model that guaranteed an adequate supply of high-quality produce as well as packing materials, and to ensure that the produce met quality and traceability standards in both Guatemala and the USA. Costco, a key client of LA Salad's, wanted to analyse how smallholders were integrated within its French bean supply chain and, if possible, wanted to form preferential purchasing agreements with smallholder suppliers.

Most vegetables in Guatemala are produced by smallholder farmers. In the case of French beans, there is a mix of smallholder-owned and plantation production schemes. Cuatro Pinos trades only smallholder produce but has an informal arrangement with San Juan Agroexport, a plantation scheme for larger farmers, under which the two companies share supplies to meet buyer demand (i.e. top off each other's orders). Cuatro Pinos' business vision involves working with smallholders rather than with large-scale plantations to expand volume; had it wished, it would have been simpler to deal with a few large growers rather than with many widely-dispersed smallholder farmers.

Although both LA Salad and Costco were aware that they were sourcing from smallholders, Costco did not know that these were mostly indigenous and very poor people, farming on a very small scale and located up to six hours away from the main packing facility. Initially LA Salad and Cuatro Pinos expressed concern about opening up the value chain to external review, given the perceived risks associated with sharing a more complete picture with Costco. Concerns focused particularly on the implications of the Costco direct purchase model, such as cutting out critical actors (i.e. LA Salad) and ratcheting down prices. A process of trust building between the individuals involved and formalised in a memorandum of understanding was necessary in order for the study to occur.

French beans from Guatemala are moved in refrigerated cargo containers by ship to both the Pacific and Caribbean coasts of the USA. Shipping produce by sea rather than transporting it via air freight makes it much cheaper, but it also required significant research into packing and shipping technologies. This work was carried out principally by LA Salad.

In addition, LA Salad and Cuatro Pinos have developed an innovative risk management mechanism, whereby 10 per cent of the value of each box of French beans sold is placed in a settlement account, which they jointly manage. Funds in this account are used to write off damaged produce and as a contingency. Both parties have agreed that the primary use of these funds is to guarantee payment to farmers, with other expenses being of secondary consideration. In the 2005–06 season, nearly $230,000 was disbursed to write off loans issued to farmers who lost their crops as a result of Hurricane Stan.

Costco has (informally) adopted more flexible purchasing practices, allowing greater leeway on the volumes received against those in the order. Cuatro Pinos has developed advisory services for producers and affordable access to high-quality inputs and irrigation, which are critical to building the capacity of smallholders. To this end, nearly $1.7m has been leveraged from the Guatemalan Government's Social Investment Fund (FIS in Spanish) to support the installation of irrigation and packing facilities at strategic locations around the country. Cuatro Pinos has provided ongoing coaching to partner organisations on how to access funds for infrastructure and support for social development projects in education and health care. These services provide a 'turn-key' opportunity for poor rural producers to produce French beans for a set market under clearly established terms, and create incentives for them to remain suppliers to Cuatro Pinos.

The role of intermediary organisations between Cuatro Pinos and the widely dispersed smallholder farmers is of increasing importance, as more and more French bean production comes from non-members of the co-operative. During the 2005–06 season, non-member farmers provided 82 per cent of the French beans purchased by Cuatro Pinos, with the remainder coming from member farmers. Cuatro Pinos provides in-kind funding in the form of seeds and fertiliser inputs to non-member farmers, via the lead farmers.

As the result of the chain assessment a non-profit organisation, the Juan Francisco Garcia Camparini Foundation, has been established to manage a social development fund, to which each member of the value chain contributes a fixed value for each bag of produce sold. This money is then invested in social development initiatives – health care and education, focused principally on women – in poor producer communities. The fund officially initiated activities in late 2008 and has carried out its first round of financing. This initiative creates incentives for smallholders to invest in trading through Cuatro Pinos, while also attracting new smallholder suppliers.

In the initial stages, external support for Cuatro Pinos came from business partners, especially LA Salad. This support, in the form of grants, was channeled directly to partners in Guatemala such as Swiss group Alcosa and the Latin American Agribusiness Development Corporation (LAAD) to support investment in irrigation and packing facilities, and in social development such as health, education, housing, and training for both women and men.

Certain things have not worked, such as the inclusion in the supply chain of communities that have benefited from land reform. With one or two exceptions, these communities proved unable to manage agricultural investment projects, despite substantial governmental assistance, and struggled to maintain their participation in the supply chain.

Furthermore, the direct provision of credit by Cuatro Pinos to farmers proved to be problematic, leading the co-operative in 2006 to start looking for a specialised micro-finance institution to provide this service. Cuatro Pinos provides credit in-kind in the form of production inputs and payment is discounted from production, with 25 per cent of the loan value being retained each week. In cases where the farmer is behind with payments, this percentage increases to 50 per cent. Interest rates are 12 per cent per annum. In August 2006, the co-operative had a total of $910,413 in outstanding loans. Finding an appropriate financial institution has been a challenge due to limited experience in Guatemala of providing rural credit, high interest charges, and little desire among institutions to serve the poor. Another problem is that the French bean production system is not always transparent in that farmers sometimes practice side selling – either on their own or by being 'poached' by other export firms once Cuatro Pinos has made an initial investment in production technology and know-how.

Post-intervention/innovation situation

The evolution of the supply chain has been driven by business need (i.e. demand for more produce), opportunity (smallholders are located in good areas for French bean production, have some organisation and infrastructure, and are keen to participate), and a willingness to work with small producers in innovative ways.

For the **Cuatro Pinos Co-operative,** Costco's commitment to source exclusively from non-co-operative members has enabled it to expand its purchasing policy to proactively target poorer communities and producers. In addition, Costco's commitment to purchase additional products besides French beans from the co-operative promises to increase volumes and to stabilise demand over time. The development of a social investment fund has also allowed it to support social development in producer communities.

The supply chain has grown from 450 producers clustered around the Cuatro Pinos packing facility (smallholders, though not the poorest farmers) to more than 2,000, of whom a large percentage live in the rural areas of poor municipalities.

LA Salad buys French beans in Guatemala and in Mexico. The company's Guatemalan experience has encouraged it to investigate ways to ensure that its trade in these supply chains helps to foster social development.

Costco has initiated a range of initiatives in other supply chains to assess the social and environmental impacts of its procurement – e.g. aquaculture in Thailand, organic milk production in the USA, cashews in Africa, etc. The retailer has started to bring its purchasing into line with its sustainable business agenda over time.

Business costs and returns

Return on investment (ROI) is approximately 50 per cent for smallholders, while Cuatro Pinos, LA Salad, and Costco all make a profit. Difficulties inherent to fresh product supply chains exist and need to be dealt with, such as occasional disconnects between production and sales volumes, information management, and logistical issues.

Costco has invested much time and relationship capital in analysing its supply chain to understand how it can replicate this business model elsewhere. Its research showed a year-on-year doubling of French bean volume in the seasons from 2002–03 to 2005–06. During the 2005–06 season, Costco purchased 4.2m pounds of French beans from Guatemala. From those purchases, $1,512,000 went directly to farmers, with an average of $779 per family.

For each box of French beans sold through a Costco warehouse, farmers receive 24 per cent of the final sales price, while Cuatro Pinos receives 22 per cent, LA Salad 11 per cent, and Costco 9 per cent. The remaining 35 per cent is shared by all actors in the chain and covers items such as the settlement account, packing, shipping, product degradation, and loss at the retail end of the chain. These are gross distribution figures and do not reflect the actual profits of each actor.

Social costs, benefits, and sustainability

After accounting for inputs, labour, and irrigation expenses, in 2006 the average smallholder family received $596 of net profit per French bean cycle. This figure represents 82 per cent of the official poverty line and 163 per cent of the extreme poverty line.

Most French bean production occurs on small plots, with the crop managed principally by family members. As such, treating family labour as an expense does not reflect the reality for producers. When family labour is included as income and not as an expense, the average family received $1,504 or 206 per cent of the poverty line measure and 412 per cent of the extreme poverty line measure. In Guatemala, family labour does not represent an expense because no money actually leaves the household.

In addition to farm level impacts, the French bean production chain generates significant off-farm employment in sorting and packing activities, which are undertaken mostly by women. During the 2005–06 season, post-harvest activities generated a total of $827,400 in income for 546 people, 84 per cent of whom were women. Nearly half of this total could be attributed to the sorting and packing of French beans.

In 2005–06, French bean production contributed $25,437 to scholarships and $16,411 to on-site health-care activities. Cuatro Pinos implemented a profit-sharing model that distributed an additional $85,607 to French bean producers at the end of the season through co-operative dividends and other mechanisms.

Families reported using income from French bean production to invest in access to health-care services, school tuition and clothes for their children, home improvements, land purchases, and other pressing needs. For many families, such as those located in the Department of Quiche, French beans provide a viable path towards a dignified life that includes primary and secondary education for their children, improved housing, and more frequent access to health care.

All Cuatro Pinos employees receive incomes in excess of Guatemalan legal statutes. In addition, they have access to educational opportunities ranging from literacy training to university scholarships and benefit from subsidised, on-site health care for themselves and their families.

How replicable is the innovation?

- International donor and Guatemalan public support has facilitated infrastructure investments in packing facilities and irrigation schemes. Unlike in many cases, however, these investments have been clearly linked to a product with market demand and a functional value chain. In several cases, Cuatro Pinos was able to identify previous investments in both physical and social infrastructure (i.e. farmer organisations) that were under-utilised and bring them on board quickly by providing a low-risk commercial opportunity. The critical issue here is targeting subsidies to support a functional business that is beneficial to poor people.

- The Cuatro Pinos business model has been shown to be commercially viable and scalable both in terms of production volumes and employment, having grown from 450 producers to encompass 2,000+. A number of incentives aimed at increasing scale can be replicated:
    - Risk-sharing mechanisms for damaged produce
    - Integrated social investment alongside farm investment
    - Leveraging of government support for infrastructure development

    - Advice for producers, affordable inputs, and finance, which have attracted new smallholder suppliers.

- Investment in value chain analysis was required for Costco to understand the reach of the existing business as well as to target trade towards the poorer suppliers within the chain.

- The LA Salad and Cuatro Pinos models reflect the dynamics of the fresh fruit and vegetable sector and may not be easily replicable in other sectors.

- Trust has been built between LA Salad and Cuatro Pinos over a period of more than ten years; it may not be easy to replicate a relationship of this kind quickly.

- An absence of direct competition in the Costco supply chain (until the appearance in 2008 of a new market entrant) allowed Cuatro Pinos to invest in producer development and helped to limit smallholder side selling.

Lessons for businesses

- The guarantee of consistent, good-quality supplies that met its standards created incentives for Costco, the lead company, to broaden the range and increase the volume of its purchases.

- Developing smallholder extension, finance, and transport services, all of which were costed into the business model, enabled the expansion of the smallholder supplier network.

- Long-term trading relationships and contracts can leverage public and private investment.

- Co-operation and the sharing of risks created incentives for building long-term business relationships.

- Transparency on trading issues and pricing enabled innovation and risk-taking.

- Investment in local processing facilities ensured that employment was created for women.

- The commitment of champions and entrepreneurs was important to drive investment and to gain the support of senior management for adapting business models.

- The inclusion of specialised intermediaries, in this case both LA Salad and Cuatro Pinos, is critical if the buyer hopes to reach large numbers of dispersed smallholder farmers. Rather than increasing costs, these intermediaries add value and make the overall system work.

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