

Case Study:

Dairy Sector Supply Chain Development in a Conflict-Affected Region of Colombia

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Synopsis

The Colombian private dairy processor Alquería has grown rapidly since 2005. As the company expands its supply of raw milk, it has also facilitated the growth of small and medium enterprises (SMEs) in its supply chain. These linkages are motivated by real business benefits for both parties, and have been supported by Alquería's supplier development programs, as well as government and donor assistance. Government and donor assistance has consisted of funding and equipment donations, primarily at the departmental and municipal level, but also at the national and international level in post-conflict consolidation zones. Alquería has also partnered with the government to deliver training programs to farmers in its supply chain, and the company offers customized technical assistance to SMEs through its milk buying program. This case highlights the integral role of Alquería's supplier development activities in facilitating mutually beneficial supply relationships. Comparatively examining SMEs in the departments of Cundinamarca and El Meta, the study finds that the assistance provided by Alquería and the opportunities for SME growth have evolved as the company pushes into conflict-affected areas with unique challenges and different modes of production.

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Introduction: Alquería's Expansion

Colombia's third-largest dairy processor, Alquería S.A., collected 877,000 liters of raw milk per day on average in 2014, and earned \$242 million¹ through sales of milk and milk products (Alquería 2015, 63). The operation relies on a supply chain that encompasses seven processing plants, 14 regional collection centers, and an estimated 13,000 dairy farmers, supported by hundreds of contractors, intermediaries, and service providers (Alquería).

To expand the company's growth, Alquería has sought new ways to increase the quality and quantity of its raw milk supply while reducing costs. Following the launch of pilot programs to improve farmer productivity, notably with El Meta in 2008, Alquería has come to regard supplier development as integral to its milk buying operation, helping the company achieve a better value on raw milk and overall cost savings. The strengthened linkages between Alquería and the dairy producers and intermediaries in its supply chain have improved the competitive position of all stakeholders, fostered new and expanded small and medium enterprises (SMEs), and increased revenues throughout the value chain.

In 1958, Dr. Jorge Cavalier founded Alquería to supply fresh pasteurized milk in Sabana de Bogotá, the fertile highland valley that surrounds Colombia's capital. For years, Alquería's growth out of the Sabana was hindered by Colombia's profound political, economic, and security crises. Yet as the business environment improved in the early 2000s,² Alquería began a series of acquisitions that would allow it to break into the national market. Alquería acquired regional processing plants near Calí (2004), Medellín (2011), Santa Marta (2013), and most recently in Santander (2015, financed by the IFC).

¹ 728,386,000,000 COP/year in sales.

² The political paralysis caused by drug trade scandals left the country particularly vulnerable to the global financial crisis of the late 1990s (Steiner and Vallejo 2010: 148). As Colombia entered a recession, Alquería, like many Colombian companies, fared poorly, and in 1999 the company entered into a special bankruptcy process for viable businesses hit by the recession. By 2005, however, Alquería had reestablished its creditworthiness in record time (Avecido 2012, 57-58).



Alquería has also positioned itself as a high-quality, higher-priced brand, offering a range of milk products to Colombia's growing middle and upper classes. The company has taken a number of steps to solidify this position in the last 15 years. Through joint ventures (for example, Danone in 2008) and acquisitions, Alquería has expanded into dozens of milk product types, including sweets, desserts, yogurts, and milk derivatives. Alquería now rivals Colombia's top private dairy processor³, and is considered an industry leader in high value-added liquid milk products⁴ and yogurts.

Dairy Market Conditions, Challenges and Opportunities

A buyer's market: raw milk supply in Colombia

Colombian dairy processors like Alquería have grown in the last 10 years through higher value addition and product diversification, but producers of raw milk have encountered persistent challenges. Extreme climatic cycles⁵ have hurt production while input costs have remained high. Meanwhile, new free trade agreements have allowed for the importation of powdered milk, a low-cost raw material alternative, enabling processors to suppress the price paid to dairy producers during times of scarcity. While raw milk is essential for dairy processors like Alquería,⁶ producers have borne the burden of production setbacks and low competitiveness, even as processors have worked creatively with SMEs to move into new milk collection areas.

3 In terms of raw milk collection, Colombia's largest dairy processor, Colanta, is organized as a cooperative. Alpina and Alquería are the country's second- and third-largest processors, respectively, and the largest private companies in the industry (Superintendencia de Industria y Comercio SIC 2013, 58). The SIC study estimated in 2013 that Alquería's share of Colombia's daily formal milk collection was 7 to 10 percent, Alpina was 8 to 15 percent, and Colanta was 20 to 30 percent. Alquería's share has likely grown through further acquisition in 2015.

4 These include ultra-high temperature (UHT) pasteurized liquid milk products like skim, lactose-free, semi-skim, and chocolate.

5 El Niño and La Niña

6 The Colombian government limits the percentage of reconstituted powdered milk in liquid milk products.

Milk production conditions vary dramatically in Colombia, but government policy broadly distinguishes between two modes of production found in two different climate zones:

- specialized dairy farms in the tropical highlands, and
- Dual-purpose farms in the coastal and tropical lowland climates.

The tropical highlands, especially the departments of Antioquia, Cundinamarca, and Boyacá,⁷ have a tradition of dairy farming. These regions easily support high-producing European breeds, which are used exclusively for milking. Often located near Colombia's major cities, these farms tend to be smaller, constrained by higher real estate prices (Niño and Alcarón 2015, 14-18).

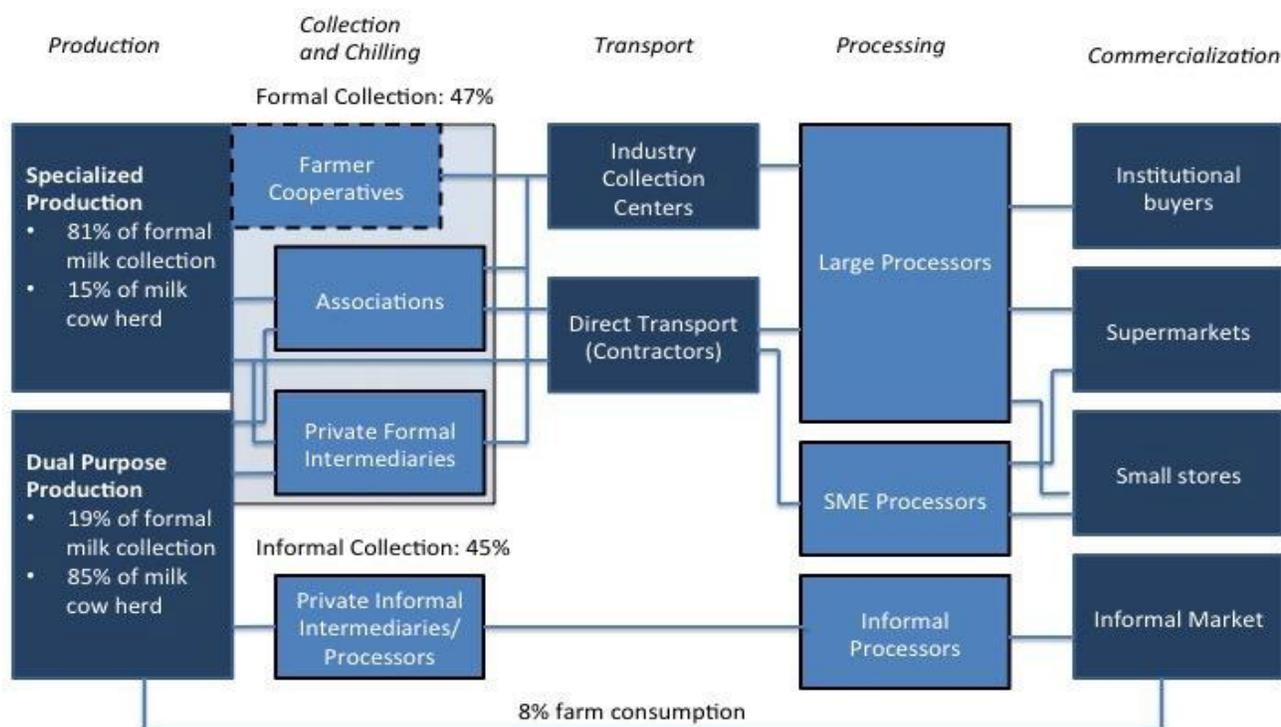
Dairy farming in the tropical lowlands tends to be more opportunistic. When the price is right, farmers milk their less productive (about 2 to 4 liters per cow) tropical breeds or European-tropical crosses. Otherwise, the cows nurse calves for meat. While exceptions exist, dual-purpose farms tend to be located farther from processing plants, which presents hurdles in getting milk to market.

The raw milk market in Colombia is characterized by a small number of large companies buying from a large pool of small vendors (Superintendencia de Industria y Comercio 2013; FEDEGAN 2013). The top four industrial processors (Colanta, Alpina, Alquería, and Nestlé) collect half of the country's formal production, while the 10 largest companies collect nearly 80 percent (Superintendencia de Industria y Comercio 2013, 71). On the producer side, there are just under 500,000 farms selling raw milk, and 66 percent of these farms have fewer than 25 animals (Niño and Alcarón 2015, 23). Small farms are important not only for the quantity of milk they contribute to the market⁸, but for rural employment and livelihoods (Niño and Alcarón 2015, 23).⁹

7 The official tropical highlands departments include: Cundinamarca, Boyacá, Antioquia, Quindío, Risaralda, Caldas, Nariño, Cauca, y Valle del Cauca. Tropical lowlands departments include: Cesar, Guajira, Atlántico, Bolívar, Sucre, Córdoba, Chocó, Magdalena, Norte de Santander, Santander, Caquetá, Tolima, Huila, Meta, Orinoquia, y Amazonia. Though this classification is not absolutely accurate—"lowland" departments include specialized production and vice versa—it is used for pricing policy (Superintendencia de Industria y Comercio 2013, 17-20).

8 23 percent of total milk comes from farms with fewer than eight animals.

Figure 1: Colombia Dairy Sector



Sources: Niño and Alarcón (2015), FEDEGAN 2013

Recognizing the asymmetries in information and market reach between producers selling raw milk and the purchasing processors, the Colombian Ministry of Agriculture and Rural Development (MADR) has taken steps to control the prices paid to producers. The current pricing structure, called “payment for quality,” calculates the price of a liter of milk purely on composition and hygienic qualities.⁹

⁹ The SIC (2013) estimates that dairy farming represents 3.18 percent of Colombia’s total employment. According to Niño and Alarcón (2015), there are 618,000 total jobs in dairy farming. Small farms of less than eight cows can be estimated to employ 134,500 workers—21 percent of jobs in the sector—assuming six jobs per cow. Farms of less than 30 cows employ 301,100 using the same logic. (Extrapolations are based on Niño and Alarcón 2015, 23 and 74.)

¹⁰ Though this approach represents a move away from a previous minimum price scheme, buyers complain of insufficient price competitiveness during times of surplus, which they argue encourages informality and makes export competitiveness difficult.

Alquería’s expansion and sme growth opportunities

Despite the considerable challenges faced by dairy producers—including high input costs, unpredictable climate cycles, poor international competitiveness, and asymmetry with buyers—the sector has witnessed a gradual increase in formal production, and subsequent opportunities for SME growth.

This case study uses the term “formal SME” to denote organizations—such as farmers’ cooperatives, associations, and private intermediaries—that are officially registered with the government. Formal SME organizations offer individual dairy farmers opportunities to reduce input costs, improve price and demand stability, and increase output. Moreover, dairy processors like Alquería are expanding into former conflict regions that have been historically



isolated from the national economy, generating demand for organizations to incorporate thousands of small new entrants to the sector.

Formal SME organizations often provide similar value-added functions to the supply chain: collection, chilling, and quality check of raw milk, and in some cases, transportation. However, their legal structures and profit schemes can differ: Some are cooperatives or associations of farmers, but others are truly private intermediaries. They range in employment depending on their size and capacity, from one to more than 15 employees. Importantly, formal organizations like cooperatives and associations allow farmers to benefit from ministerial and departmental support programs, which have been introduced in response to the sector's recent climatic challenges.

Within the milk supply chain, Alquería directly buys milk or services from¹¹

- **Individual farms.** Alquería collects about 20 percent of its raw milk supply directly from 1,479 farmers (Alquería 2015). These farmers tend to specialize in dairy production and are located nearby collection centers or processing plants. Alquería only purchases chilled milk directly from farmers; therefore, while these farms range in size, each necessarily has sufficient capital investment in equipment to chill milk on the farm immediately after milking.¹²
- **Collection and chilling intermediaries.** Alquería collects the remaining 80 percent of its milk from various types of SME intermediaries, indirectly drawing from 5,887 farmers. While fulfilling similar value-added

¹¹ Alquería has outsourced all of its transportation, for both distribution and supply, to third party contractors. Transporters provide two types of services: milk collection routes near Alquería's plants, and milk relocation between Alquería's collection centers and plants, or between plants. Alquería maintains a high degree of control—trucks are required to be on call at all times, assigned to rotating routes by Alquería. Alquería also limits the number of trucks provided by a single firm to three, though this does not necessarily limit the growth of transport SMEs, as they can provide transport services to other companies (with other trucks and drivers) as well.

¹² These farms tend to be larger and more commercial within the context of specialized dairy regions (i.e., more than 20 cows), but farm size in these regions is generally constrained to less than 50 cows by the rugged geography and high land prices. While there are experiments with mega-farm operations in the lowland llanos, this has yet to become a proven business model or part of Alquería's supply.

functions, these intermediaries tend to fall into three categories of legal organization:

- **Cooperatives.** These formal organizations bring together individual farmers to collect, chill, and sell milk on better terms or a larger scale. In addition to providing shared equipment and technicians to collect and test milk, cooperatives often assist farmers in obtaining inputs and veterinary services at discounted rates by negotiating as a group. They might also buy, collect, chill, and sell milk from individual farmers who are not due-paying members of the cooperative. Profits are reinvested or redistributed to members. Members serve as managers of the cooperative, and they may or may not be compensated depending on the organization.
- **Associations.** Unlike cooperatives, associations are nonprofit entities that must reinvest all earnings into the organization or social activities for producers or the surrounding community. Associations are typically formed by a core of dairy producers, though they often purchase milk from other farmers and sell it to Alquería. Associations are similar to cooperatives in their management and hiring of employees.
- **Private Intermediaries.** These businesses purchase, collect, and chill milk from small farmers, often purchasing at a lower price than the MADR's "payment for quality" guidelines and selling to Alquería at a markup. Intermediaries have gained a negative reputation in the dairy sector for this practice, but they have played an important role in Alquería's expansion. A private intermediary may be as simple as an individual with a truck who delivers to one of Alquería's collection centers, or a midsize business with a collection, chilling, and transformation facility.

Alquería's Supplier Development And Training Activities

Supplier development activities are a fundamental pillar of Alquería's milk buying operation. Alquería's milk buying division, *Fomento Ganadero* (or "farmer development" in English), is responsible for both negotiating purchases and administering technical assistance. This dual role represents a strategic vision for increasing supply by increasing the quantity and quality of output from small producers.



Alquería's earliest efforts to offer technical assistance focused on finding a lower-cost mode of production, but it quickly became apparent that with relatively little resource investment, Alquería could dramatically increase the quality and productivity of their providers. While not reducing the farm-gate price of raw milk, the improvement in farmer productivity has benefited Alquería's supply expansion in at least two ways: First, higher productivity per farmer (or per intermediary) means that Alquería can increase supply without incurring new marginal costs related to expanding its collection operation. Second, while higher-quality milk commands a greater price, it lasts longer and offers a better value for creating derivative products, which depend on fats and solids rather than volume.

Fomento Ganadero's primary measure for the success of its technical assistance program is the quantity of production (in annual liters per hectare) over a given area. By Alquería's own admission, this is an imprecise measure at best, as production quantity is heavily dependent on seasonal and climatic factors. Therefore, without a direct link between the technical assistance program and variations in production, it is difficult to calculate a cost-benefit analysis of supplier development programs for Alquería. Similarly, the ancillary benefits of supplier development activities—such as increased supplier loyalty and positive public relations—are difficult to determine from this business case. Nonetheless, the integration of supplier development and raw milk buying has represented an evolving experiment for the company, and the program's continued existence suggests it has been valuable in helping Fomento Ganadero achieve its targets and expand its supply network.

Any producer, cooperative, association, or private business within Alquería's supply chain is eligible to participate in the company's formal assistance programs. This assistance can be divided into three categories: government-administered training programs, participatory development programs delivered by Alquería, and material assistance. Fomento Ganadero agents have the discretion to determine the appropriate level of training or material assistance for each enterprise, often with the goal of incentivizing, rewarding, or improving a vendor's relationship with Alquería.

Government-administered technical training

Alquería's first government-assisted trainings were carried out in partnership with the Servicio Nacional de Aprendizaje (SENA), a public technical training institution to which all Colombian companies are required to contribute funds. SENSA maintains a network of centers that offer training programs that are relevant to the local economy. Corporations like Alquería typically send their employees to SENSA for training in management, accounting, or logistics. In 2005, when Alquería began searching for new ways to improve supply, it proposed a unique solution to have SENSA extend its training to producers.

Alquería's agreement with SENSA resulted in two programs: The first, *Formación Complementaria*, enrolled producers regardless of age or education in pre-existing SENSA programs on good farming practices, feeding and land management, farm financial management, and insemination. Producers visited a SENSA center on weekends, and over the course of several months could earn a certification. *Formación Complementaria* was funded by Alquería's legally-required contributions to SENSA, and there were few adjustments to the curriculum of the pre-existing government program to meet Alquería's specific needs.

The second SENSA program, *Herederos de Tradición* ("inheritors of tradition"), was aimed at youth connected to Alquería's supply chain. Young people spend one and a half years at a SENSA training center to become certified dairy technicians, and then six months in an internship in their region of origin. While SENSA provides room and board and the core training, Alquería contributes additional in-kind support to the program, offering soft skills training in leadership or interpersonal communication and a minimum wage salary to participants throughout the two-year program. In contrast to *Formación Complementaria*, which was a pre-existing government program, *Herederos de Tradición* was developed in partnership with Alquería and tailored to fit their needs.

Alquería-administered trainings

Alquería has two additional programs that evolved out of pilot projects in La Macarena region of El Meta. In 2007, the government convened a conference of private companies under a regional "consolidation" program with the goal of directing investment to the region, which had been affected by guerrilla and paramilitary activity and coca production. In 2008, Alquería launched a pilot project in partnership with the German Society for International Cooperation



(GIZ) and the United States Agency for International Development (USAID) to begin collecting milk from small farmers in the region. The program was launched by the national and departmental governments, who instructed GIZ and USAID on where to invest resources.

Through the course of the program, Alquería's *Fomento Ganadero* agents encountered significant challenges in establishing trust and positive relationships with small farmers. These challenges led Alquería to introduce two new methodologies focused on facilitation and group learning, rather than simply technical training.

The first methodology, known as *Escuelas del Campo de Agricultores* (ECA), adapted the United Nations Food and Agriculture Organization's "farmer field school" approach to the dairy sector. Now scaled to Alquería's national operations, ECAs are facilitated directly by *Fomento Ganadero* agents and consist of six sessions with a group of producers who are brought together by an intermediary, cooperative, or association. ECAs give producers more agency to determine the methodology and content of technical assistance, although Alquería insists on the delivery of certain modules, such as lessons on good milking practices and the MADR's payment procedure.

The second methodology, called *Plan Finca* ("farm plan"), consists of a year-long program in which *Fomento Ganadero* agents work directly with farmers to design site-specific plans for pasture, herd, and feeding management. *Plan Finca* is Alquería's most cost-intensive supplier development activity in terms of staff time.

As *Fomento Ganadero* has progressed, Alquería's qualitative and early quantitative assessments have favored the ECA methodology over other programs in terms of cost effectiveness and gains in productivity. As the program requires considerable time spent off site, SENA's *Formación Complementaria* has proven to be incompatible with the needs of small producers in tropical lowlands, given their distance from SENA's training centers. In comparison, the ECAs have improved Alquería's direct relationship with small producers and allowed for immediate application of technical training material.

Material assistance

The SENA and participatory programs form part of the toolkit that *Fomento Ganadero* agents use in nurturing supply. However, agents also draw upon company resources to offer customized assistance to small and

midsize enterprises, often in the form of equipment loans (like chilling tanks) or personalized trainings and management advice. For example, when Alquería was competing with another buyer for a cooperative's raw milk supply, Alquería's agents brought a technician to reactivate a defunct milk chilling tank on the cooperative's facility, lent a milk collection truck, and then trained one of the cooperative's employees in lab work. With this increased capacity for chilling and collection, the cooperative hired an additional employee and nearly doubled its business with Alquería simply by collecting raw milk that had never been a part of the cold chain. In this way, *Fomento Ganadero* agents develop relationships with farmers, and dispense assistance and even equipment according to a holistic assessment of its potential effectiveness.

RESULTS - EXAMPLES OF SME LINKAGES AND GROWTH

Dairy production SMEs servicing Alquería have grown in both number and size, mirroring the company's exponential growth over the past 15 years. Dairy producers have responded well to market growth and customized technical (and sometimes material) assistance, as demonstrated by the three examples discussed in the following section.

Alquería has a different relationship with its supply chain in the established dairy production regions in the highlands in comparison to the new production regions in the lowlands. Until 2005, Alquería exclusively collected from the tropical highlands, which have a long history of specialized dairy farming. All the major dairy processors collect from this region, and it is a site characterized by high productivity and intense competition for supply. As illustrated by the COAGROLAS example below, Alquería has still managed to form new relationships with dairy farmers and cooperatives in the tropical highlands, despite the region's apparent saturation.

Alquería's expansion into the lowland El Meta department has followed a unique trajectory. El Meta has been a stronghold of Colombia's largest insurgent group, the FARC-EP, which exercised *de facto* control over large swaths of land between 1998 and 2002. In 2002, the Colombian government reestablished a security presence in the region. Alquería's pilot project in La Macarena represented the first investment for the company in the region, and was followed by rapid

expansion in other areas. El Meta has a long tradition of cattle ranching with tropical and mix-breeds. Market access to Alquería has also incentivized small-scale farmers to switch to dairy farming.

The following examples explore three collecting and chilling intermediaries—a cooperative, an association, and a private intermediary—and their growth as a result of their business linkages with Alquería. The intermediaries represent two departments (Cundinamarca and El Meta) that are distinct in their geography, mode of production, infrastructure, proximity to processing facilities, and security challenges.

Organization Type:	Cooperative
Average Daily Collection:	2,400 – 3,900 liters
Pre-linkage production (2008):	750 liters
Annual Revenue:	1,100 million COP (est.) \$367,000
Employees:	1 (plus one contractor)
Affiliated Producers:	28
Value added processes:	collection, chilling, cold storage

COAGROLAS - Cundinamarca, Sabana de Bogotá

The cooperative COAGROLAS was founded in 2008 by 20 dairy farmers who hoped to collectively market their milk in the Cundinamarca town of Suesca. Located 40 kilometers from Alquería's main plant in Cajicá (just outside of Bogotá), COAGROLAS has worked with Alquería since its inception, initially as a simple assembly point where farmers could bring canisters every morning to meet the Alquería collection truck. By 2015, COAGROLAS had grown its daily collection from 750 liters to a high of 3,900 liters. Its membership grew by 40 percent to 28 small and midsize producers. Some farmers have as many as 30 cows and others have as few as one.

Over the course of its relationship with Alquería, COAGROLAS has benefited from the company's material support and technical training programs. In terms of material support, Alquería provided one of the cooperative's three chilling tanks (1,950 liters) as an equipment loan. Alquería does not require (nor is it legally allowed to require) exclusivity contracts with producer organizations and other small and midsize suppliers. Yet as a condition of equipment loans, Alquería requests that SMEs use the company's equipment exclusively for milk sold to Alquería. After a three-year agreement, the parties can continue with the loan, the SME can return the equipment in perfect condition, or the SME can purchase the equipment from Alquería. COAGROLAS is currently in the second three-year period of this arrangement.

Alquería has also provided technical assistance to COAGROLAS. The cooperative's members have participated in the SENA-administered certification program *Formación Complementaria*, and at the time of the interview, COAGROLAS and Alquería were in discussion to begin the more participatory Alquería-administered ECA program, as well.

The president and manager of COAGROLAS spoke positively of the cooperative's relationship with Alquería and the assistance received over the years. Nonetheless, they emphasized that it was a business relationship in a hard time for business. As a result of the drought conditions in 2016, many dairy farmers could barely make ends meet, even as Alquería's prices increased slightly. Within six months, the cooperative planned to become certified in good dairy practices, which would add 10 pesos per liter to the price structure they negotiated with Alquería.

COAGROLAS continues to sell exclusively to Alquería; Alquería has proven to be a reliable and fair partner, purchasing as much milk as the cooperative is able to produce. In the long term, however, COAGROLAS sees the greatest potential for higher margins and profits in the value-added derivatives, especially cheese, sold outside of Alquería's supply chain.

Alquería's demand for raw milk has been essential to the growth of COAGROLAS since 2008, yet the company's supplier development activities represent just one aspect of a mosaic of funding and capacity building that the cooperative has procured. Indeed, a major impetus for its founding was to access government grants available only to farmer cooperatives. The first investment by COAGROLAS—its collection facility—



was jointly financed by personal investments from members and donations from the municipal government. The cooperative has subsequently procured equipment grants, loans, and technical assistance from the Cundinamarca departmental government, CONDENSO (Colombia's electric corporation), and MADR. The cooperative purchased a collection truck through a savings plan with capital from members, as well.

Agrolecheros – El Meta

Agrolecheros is an association of dairy producers based in the El Meta piedmont town of Mesetas. The association was founded in 2007 by dairy producers in Mesetas who came together to commercialize their raw milk for sale in larger markets. The growth of Agrolecheros during its partnership with Alquería has been remarkable, beginning with 500 liters per day and reaching a high of 19,000 liters per day.

Unlike in Cundinamarca, Alquería's demand for raw milk in Mesetas has been transformative for the local economy. Mesetas was one of the municipalities located in the *zona de distensión* (de-escalation zone) established by an accord of the government and the FARC rebel group in 1999. As a result, the municipality was *de facto* FARC territory until a renewed effort by the Colombian army pushed them out and underground. Nonetheless, the FARC maintain a presence in the countryside. Until the eradication campaigns between 2006 and 2008, coca and other illicit cultivation were the basis of the economy.

Alquería's relationship with Agrolecheros—as well as its investment in El Meta more broadly—was a part of a strategy to expand into lowland, dual-purpose production regions in order to obtain lower-cost supply. Bolstered by government and international donor co-investment, Alquería accepted the additional risk of sourcing from this unstable region.

Alquería's demand for raw milk created an alternative to coca livelihoods lost with the return of the government to the region. When Agrolecheros was founded, prices were unstable and the only raw milk buyers in the area were informal *queseros* offering 250 pesos per liter. In response to these conditions, the association was founded by a core group of 10 producers with sufficient personal wealth to invest. Yet when Alquería's payments and collections began on a regular 15-day schedule, small producers flocked to sell raw milk. With Alquería as a buyer, the association was able to pay 550 to

Organization Type:	Association
Average Daily Collection:	15,000 – 19,000 liters
Pre-linkage production (2007):	500 liters
Annual Revenue:	4,000 million COP \$1.3 million
Employees:	9 (plus 5 contractor)
Associates:	10
Producers:	246
Value added processes:	collection, chilling, cold storage, cheese (incipient)

FIGURE 2: AGROLECHEROS EXPERIMENTS WITH CHEESE PRODUCTION.



600 pesos per liter. Over the years, the association has helped producers make significant gains in the hygiene and volume of the milk they provide; for example, some farmers who initially produced 5 liters of milk per day now have daily yields of 80 to 100 liters.

Like COAGROLAS, Alquería's supplier development activities are one of several sources of assistance for Agrolecheros. Alquería has loaned Agrolecheros two 2,000-liter chilling tanks, which represent only 10 percent of the association's total capacity. Alquería also provided technical assistance to Agrolecheros' producers through its *Escuelas del Campo* program, which offered workshops on themes requested by participants, such as milk pricing, pasture management, good milking practices, and hygiene. The workshops were discontinued when safety issues emerged for participants traveling from distant farms. More recently, a young member of the Agrolecheros network participated in the SENA *Herederos de Tradición* program.

This assistance represents only a small portion of the investments that have allowed Agrolecheros to grow. Agrolecheros has benefited from partnerships with the Colombian government's consolidation program (supported by the United Nations), USAID, and soon, the G7. Much of the association's equipment has been purchased with the personal capital of association members, including two chilling tanks (5,600 and 4,000 liters) and two cold-storage silos (5,600 and 15,500 liters). Agrolecheros was also the recipient of an "ice bank" milk chiller from USAID (valued at 230 million pesos or US\$77,000).

Agrolecheros is now the largest business in the Mesetas area. The association is seeking to double its daily milk collection to utilize its full storage capacity; however, it faces considerable competition from local formal and informal cheese makers for supply. The average daily collection of the entire Mesetas area is just over 40,000 liters daily, a benchmark Agrolecheros that hopes to meet. This considerable increase in collection will need to come from improved productivity from existing providers. Agrolecheros has also drawn up plans to begin transforming raw milk into cheese, and has experimented with processes and packaging. While the association still needs crucial equipment, it is well on its way to achieving the goal of adding value through transformation.

AGROLAC – El Meta

AGROLAC is a private intermediary based in Puerto Lleras, El Meta. Selling exclusively to Alquería since its incorporation in 2008, AGROLAC has grown at a slower rate than Agrolecheros, beginning at 240 liters and reaching a high of 5,500 liters.

Alquería has been the only provider of technical assistance to AGROLAC, arranging for a young person associated with the intermediary to participate in the *Herederos de Tradición* program. The young person has spent the past year and a half training at SENA's center in Villavicencio, and will spend six months as an intern with AGROLAC, working with about 80 of the intermediary's producers to implement a version of Plan Finca that focuses on improving the genetics of the herd.

AGROLAC has received no assistance from Alquería or other sources in financing its facilities development. In this regard, AGROLAC is penalized by its geographic location and its legal status as a private business. The municipality of Puerto Lleras falls outside the historical *zona de distensión* and as a result has been passed over by the government and international donor aid programs. This policy choice does not reflect the reality of Puerto Lleras, which was the site of violent clashes between the military, paramilitaries, and the FARC prior to 2006. The economy has been equally affected by a history of coca production and FARC extortion.

Organization Type:	Private Business
Average Daily Collection:	5,500 liters
Pre-linkage production (2008):	240 liters
Annual Revenue:	2,000 million COP \$700,000
Employees:	3 (plus contractors)
Associates:	8
Producers:	125
Value added processes:	collection, chilling, cold storage



FIGURE 3: AGROLAC RECEIVES MILK FROM A LOCAL TRANSPORT CONTRACTOR



AGROLAC began as a private business with a social mission of providing livelihoods to former coca growers. After the government's eradication campaigns reached the area in 2008, devastating the area's agricultural livelihoods, AGROLAC sought to provide enough income to keep farmers on their land. AGROLAC's founders considered incorporating as an association; however, they were concerned about the perception of associations as vehicles for government funds. In 2008, they incorporated as a private business.

Without access to public assistance, AGROLAC founders raised capital investment for basic collection and chilling equipment by bringing in additional shareholders, including a local property owner with a facility that could be converted into a collection center. The other shareholders paid him out over time to ensure their shares were equal.

Over the last three years, AGROLAC has struggled under multiple pressures. First, the company faces a significant formal tax rate based on its income. As a private business, AGROLAC has a higher rate than that of cooperatives, associations, or informal processors. Second, AGROLAC's producers have experienced particularly low yields as a result of weather conditions, and several producers have discontinued production altogether. Third, AGROLAC has faced competition for supply from both informal cheese processors and other formal intermediaries, which offer similar services to producers. These pressures have forced AGROLAC to lay off two employees at its collection center, and defund social programs the company had provided to producers, such as ranching and traditional dance classes for children. The company's medium-term strategy for addressing these constraints is to increase farmer productivity through training from *Alquería's Herederos de Tradición* program.

Lessons Learned

Lesson 1: Alquería-SME linkages are motivated by real business benefits to both parties.

The business linkages between Alquería and agro-processing SMEs are driven by the desire to achieve outcomes that are mutually beneficial. Alquería, the lead firm, aims to improve its productivity and product quality by developing sustainable relationships with suppliers that will ensure sufficient quantity and quality of raw material supply. The agro-processing SMEs aim to improve quality standards and productivity and secure a reliable relationship with a buyer. These win-win relationships have fostered productive collaboration, positive growth trajectories, and reduced risk for all parties involved.

Lesson 2: Public programs administered through public-private collaboration were an important element in developing SME capacity.

This case discusses the history, motivations, and benefits associated with private sector-led linkages and supplier development activities. However, many of the linkages also benefited from government and donor assistance that addressed institutional capacity constraints or infrastructure gaps, particularly in post-conflict zones. These public efforts reduced or even underwrote the risks associated with Alquería's linkages with SMEs. Furthermore, the government's SENA programs—*Formación Complementaria* and *Herederos de Tradición*—and complementary support from Alquería continue to improve the capacity and productivity of dairy enterprises.

Lesson 3: Alquería's growth created new markets for agro-processing (dairy) SMEs, but supplier development activities were needed to improve productivity and reduce risks associated with milk quality and quantity.

As Alquería expanded to meet growing demand from Colombia's expanding middle-income population, so did its need for raw material supply. The company sought growth opportunities in the country's lowland and post-conflict areas in addition to the well-established

highland areas. However, faced with a highly fragmented supply chain, thousands of low-productivity dairy producers, and risks associated with climate variation, the company found it necessary to reduce supply chain risk and improve supplier capacity through direct supplier development activities. Alquería's supplier development efforts have become important to its growth and market differentiation business model.

Lesson 4: Supplier development activities required customization to suit SME needs.

The evolution of Alquería's supplier development activities reflects the company's increasing engagement with dual-purpose dairy producers. As Alquería expands into areas where good dairy practices differ from the specialized model toward which most extension services are oriented, the company has seen the need for a "learning" model of supplier development that takes into account the different needs of dual-purpose producers. Alquería's increased use of ECAs and Plan Finca reflects this emphasis. Conversely, standardized, government-administered training provided through SENA has had limited applicability as Alquería has expanded geographically. While certifications and weekend coursework were beneficial for those in the highland regions with good access to SENA training facilities, the program has proved to be impractical for producers in remote regions.

Lesson 5: Improvements in Colombia's enabling environment played a significant role in creating opportunities to expand linkages between lead firms and SMEs.

Political security and macroeconomic stability played a pivotal role in increasing the impact of linkages between dairy processors and producers. The comparative growth trajectory of COAGROLAS, Agrolecheros, and AGROLAC speaks to the importance of changing context: COAGROLAS grew within an environment that had supported specialized dairy farming for years. Thus, the growth of the cooperative is best explained by the increased productivity of its original farmers. (The cooperative has grown from 20 to 28 farmers.) Conversely, the extension of physical security and new infrastructure has greatly improved the environment for formal milk collection in El Meta. Agrolecheros and AGROLAC have grown as much through their networks of new entrants as through improved farm-level production: Agrolecheros grew to encompass 246 producers, and AGROLAC grew to 125.



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Interview List: Due to the politically sensitive regions in which many of the SMEs are operating, the authors of this case study have decided to withhold the names in final publication of the SMEs and the individuals that participated in interviews for this report. There were 16 total organizations and SMEs that were interviewed.

Further information may be provided to interested parties upon request.



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