



*Promoting social business and  
environmental opportunities  
in Central America and the Dominican  
Republic*

## **SUCCESS CASE**

**Company:** Productores de Monteverde S.A.  
**Country:** Costa Rica  
**Year:** 2010

### **THE COMPANY**

In 1953, a group of Quaker families from the United States founded the “Fábrica de Quesos Monteverde” (Monteverde Cheese Factory) with just two employees and nine founding stockholders. At present, the company provides jobs to more than 400 people. The Monteverde Producers’ Plant is located at the heart of the Monteverde community and currently produces about 26 different kinds of cheese, in addition to other dairy products.



The company soon became the driving force behind the region’s social and economic development, a status still kept over the years, and passed from receiving approximately 400 liters of milk per day to processing nearly 50,000 liters on a daily basis nowadays. This was how the market opened its doors to the milk produced in 250 small and medium farms from the Monteverde, Bijagua de Upala and Miravalles region.

### **DESCRIPTION OF THE PROJECT**

Through the Oikocredit – ICCO – CEGESTI partnership, SMEs in Central America and the Dominican Republic have access to credit and technical assistance, with the purpose of promoting social and environmental business opportunities through the access to innovative financial resources and technical assistance.

The SCHOKLAND-SME CA&DR Fund provides these funds through the Netherlands Ministry of Foreign Affairs.



**MAIN OUTCOMES**

**Strategic Framework**

New approaches were defined within the organization’s strategic framework, aimed at the concept of sustainability:

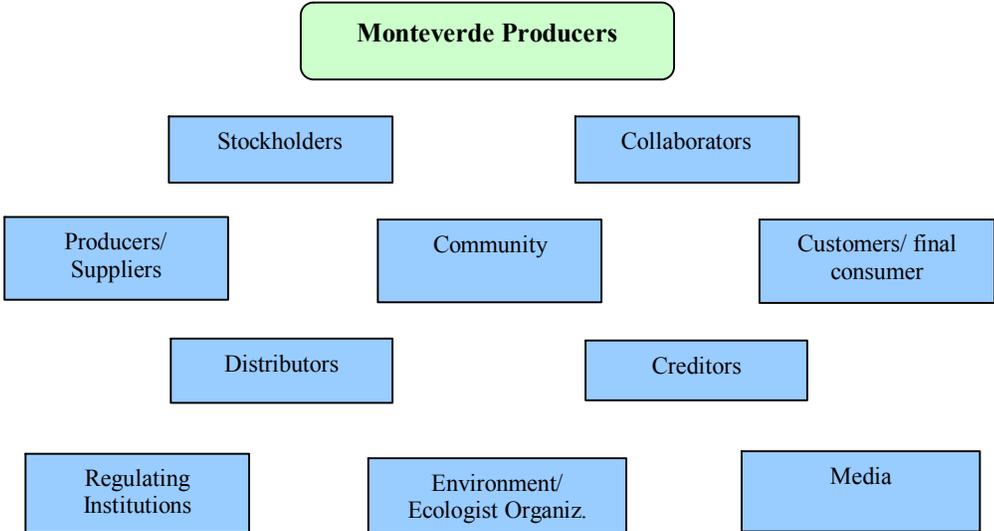
**MISSION**

*“We are a well-established and leading company in the production and commercialization of top quality food and services that satisfy the desires and needs of our customers and consumers. We adhere to the highest ethical principles and respect towards the human being. We are fully aware of our social and environmental responsibility and strive to attain the continuous betterment of our company”.*

**VISION**

*“Be widely recognized for producing in harmony with the environment and for our presence within the community, strengthening our leadership in the quality and innovation of the products and services in the Corporation’s target markets”.*

**INTEREST GROUPS**



## ENVIRONMENTAL DIMENSION

For greater efficiency in the use of the organization's resources, different actions were taken to strengthen the area of production. The company conducted workshops to identify problems in each process area and their causes. For the implementation of measures, priority was given to those aspects that have a greater impact on the plant's production.

Initial Diagnosis	Obtained Improvements
<b>ELECTRICITY CONSUMPTION</b>	
<ul style="list-style-type: none"> <li>• High electricity consumption in the plant, mainly due to the use of machinery. The lack of awareness of the plant personnel and administrative staff contributes in this regard.</li> <li>• Poor maintenance of the seals of one of the chambers generated a loss of cold air, and therefore, additional energy consumption.</li> </ul> 	<ul style="list-style-type: none"> <li>• Reduction in energy consumption in relation to 2009 (savings of up to <b>6.8%</b>). This decrease resulted mainly due to the awareness of each plant collaborator and administrative personnel, as well as the improvements made by the Maintenance Department and the production head.</li> <li>• The Maintenance Department has stopped using the chamber and is changing the sealing system to prevent the loss of cold air.</li> </ul>  <ul style="list-style-type: none"> <li>• More modern machinery was acquired which has saved greater amounts of energy. The process has also been optimized with this change.</li> <li>• Changed were made to the schedules for the use of machinery for these to be used during off-peak hours and not using all at once.</li> <li>• The plant's general fuse box was changed and placed inside a closed central box only to be accessed by maintenance personnel.</li> </ul>
<b>WATER CONSUMPTION</b>	
<ul style="list-style-type: none"> <li>• High consumption of water in the production plant and little awareness of adequate consumption.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of water consumption in relation to 2009 (savings of up to <b>6.7%</b>). This decrease came about mainly due to the consciousness generated in each of the plant's collaborators and to the improvements made by the production head.</li> </ul>

## FUEL CONSUMPTION

- Fuel is used in three basic points: in the boiler's bunker (generation of vapor), diesel in the electric plant and diesel in the company's trailer.



- Decrease of **8.7%** in the consumption of the boiler's bunker by controlling leaks, isolating pipelines and establishing schedules for the use of vapor and its distribution through the piping system. A preventive maintenance chronogram was established for the vapor transport system.



- Reduction in the trailer's consumption of diesel by **7.8%** by optimizing the route from the plant to the Distribution Center.
- Efforts will be made to diminish the use of the electric plant; however, during the last months, many and extended blackouts occurred, complicating the implementation of improvements in this specific point.

## SEWAGE: CHEMICAL PRODUCTS AND WHEY

- Part of the problem with the sewage is the amount of chemical products it contains. The company used very strong cleaning products, which sometimes caused problems in the adequate operation of the treatment plant.
- The system used to recover the whey from the tanks failed to suck up all of the whey and transport it through the pipelines to the porcine plant; therefore, it was spilt over the floor to empty the processing tanks, taking to the sewage treatment plant.

- Some of the chemical products used for cleaning purposes were changed for others with a higher degree of biodegradability. The company began the practice of requesting the chemical products supplier a product biodegradability test (time and percentage of degradation), to be used as an additional criterion in the selection of suppliers of this type of products.
- The pumping system that sucks up the whey from the production tanks was improved, and adjustments were made to the production planning to prevent the processes from ending at the same time, and using the pump in one tank first and then in another one, without delaying production.
- The amount of whey on the floor decreased up to **56.4%** (therefore, preventing its flow into the sewage treatment plant), making it possible to use it in the porcine farm to feed the pigs.

## ORGANIC SOLID WASTE

- One of the critical environmental issues was the amount of cheese remnants produced, which made evident that the product was being wasted, generating even more waste when it fell on the floor. Although these remnants are used to feed the pigs, it still represents a loss for the company.



- A reduction of **38.4%** was achieved in the generation of remnants. This significant reduction represents an important economic impact on the process and it was obtained by improving the cheese-cutting process to minimize waste. Adjustments were made to the slicing process and the molds were changed to improve the cheese shapes and to diminish the adjustment per cut in the packing process.



## INORGANIC SOLID WASTE

- The company failed to have an adequate inorganic solid waste management which would enable the implementation of a separation, reuse and recycling program.



- Efforts have been made to reduce the use of cheesecloth to shape the cheese; although these have always been reused (**43%** reuse), some of the processes make their reuse impossible.

- An effort was made for a better recollection of inorganic waste generated by production, to guarantee its appropriate withdrawal and classification for recycling or reuse purposes.



- A reduction of **16.5%** of the total waste produced during the production process has been achieved.
- Up to August, 2010, **62%** of the cheesecloth has been reused by improving its manipulation and hiring a collaborator in charge of cleaning the cloth. This has resulted in significant savings in production costs.

## ENVIRONMENTAL AWARENESS

- Due to the company's nature and location, the collaborators should have a high degree of environmental awareness, which should be reinforced through strategically planned activities.

- A plan to raise environmental awareness and sensitization was developed, taking into account a series of actions involving collaborators, people outside the company and relatives.
- An awareness-building process on environmental topics was conducted with the Cheese and Dairy Products Plant collaborators.
- During the 1st of May celebration, interactive games included the analysis of behaviors or activities to reduce the consumption of water, electricity and fuel, among others. Activities were carried out around the topic of taking care of the environment, plants and animals.



- A voluntary survey was conducted to learn about the collaborators' environmental habits at home, at the workplace and in the community. The results were communicated to the entire company.
- Talks are delivered to the company personnel with the support of the Asociación Conservacionista de Monteverde (Monteverde Conservacionist Association). The first talk addressed the importance of forests and water from an environmental and economic standpoint.
- The General Manager stated that he has always considered those practices having a positive environmental and even social impact will be sustainable only if an economic indicator also moves in a positive direction. In this way, the reduction of the indicators of the generation of blackouts, as well as fuel and energy consumption are examples of social, environmental and economic sustainability.

## SOCIAL DIMENSION

The organization worked on aspects involving improvement of the employees' working conditions, as well as on the company's presence in the community influenced by its activities.

Initial Diagnosis	Achieved Improvements
<b>COMFORT IN THE WORKPLACE</b>	
<ul style="list-style-type: none"> <li>The lack of space is a serious problem in the plant. While production has increased at a significant rate, the infrastructure remains unchanged, causing the employees to work under uncomfortable conditions. This situation cannot be solved physically as the site has no space for any further extension.</li> <li>Most tasks were performed during the same schedule; therefore, all employees were in the plant at the same time.</li> </ul> 	<ul style="list-style-type: none"> <li>With the purpose of preventing the overcrowding of personnel, several tasks were changed to other work shifts for a better use of the available space. For example, cheese shredding and packaging tasks were passed to afternoon shifts. Now the collaborators work under more comfortable conditions.</li> <li>Rearrangements were made to maintain more order in the different areas of the plant, creating a better working environment.</li> </ul> 
<b>OCCUPATIONAL HEALTH AND SAFETY</b>	
<ul style="list-style-type: none"> <li>Lack of technical training on the topic of Occupational Health.</li> <li>There was no identification of hazards in the plant.</li> <li>Lack of an emergency plan.</li> </ul>	<ul style="list-style-type: none"> <li>The company sought and began technical training to educate supervisors in occupational health, with the support of Instituto Nacional de Aprendizaje (National Learning Institution) for a group of eight collaborators from the company.</li> <li>Hazards were identified and the company began to implement improvements.</li> <li>The emergency plan was developed and the personnel started to receive training for emergencies.</li> </ul>

- The emergency exits were blocked and the locks were difficult to handle.



- It was difficult to open the truck's entrance gate which opened inwards; this would be an obstacle should the employees have to exit the plant quickly in case of an emergency.
- There was no information available regarding the safety of chemical products used in the plant.
- Deficiencies in the selection, management and use of personal protection equipment.



- Poor condition of gas cylinders which were fastened with an unsafe cord.

- The emergency exit doors were freed from obstacles. The locks were changed to facilitate opening them from inside. Lettering and improvements to doors are still pending.



- The loading zone gate can now be opened outwards, and a mechanism was installed that permits the gate to be opened easily by just pushing it.
- Safety information on the chemicals products was placed in accessible places near the areas where they are used.
- Selection of personal protection equipment is more adequate and in keeping with each worker's tasks. The handing out of equipment is managed in a better way and the employees are trained on how to use it correctly. Improvements were made to equipment for people who manipulate chemical products, mainly the caustic soda, according to the manufacturer's recommendations.



- The gas cylinders were provided a better accommodation and were secured to the wall with a chain. In addition, the cylinders were painted and those that were rusty were changed. The valve system was also changed.



- Many of the older equipment lacked protection devices to prevent accidents or lettering indicating danger.
- In the property surroundings there were several very high and old cypress trees that represented a dangerous situation should they fall.
- There was little or no signposting in the plant, or the signs were in very poor shape.



- Inadequate use and maintenance of extinguishers.
- The containers' ladders were too steep, with very narrow steps and had no handrails in some cases.



- The new equipment is duly labeled with the possible associated hazards when used and the labels are visible and comprehensible (graphs and in Spanish).
- Some cypress trees that jeopardized the parking area, the fuel storage tanks and the administrative section were cut down, taking into account that their roots were too weakened.
- After a walk around the entire facilities, a list was drawn up indicating lettering needs. Advances have been made regarding this topic.



- The existing extinguishers were refilled and placed in appropriate spots. Quotations are in progress to acquire the missing ones.
- The ladders' steps were enlarged to provide maintenance to the refrigerated containers. In addition, their inclination was extended to make it easier to climb up and come down and a handrail was installed for greater safety.



- Motorcycles could be found anywhere outside the plant (trailer entrance, administrative offices exit door, blocking the emergency exit doors, etc.).



- More than 35 spaces were delimited for safe motorcycle zones that do not obstruct people's passing.



### PRESENCE IN THE COMMUNITY

- Due to the characteristics of the zone where the company develops its main activities, care for nature is encouraged by several local organizations. A variety of activities also promote tourism in the area. The company often participates in the organization or sponsorship of some activities.

- Planting endemic trees at the Cerro Plano farm in Monteverde. This activity was carried out by volunteers from the company and their families, and with the support of the Pájaro Campana Biological Station and the Boy Scouts.



- Being the main source of employment in the zone, priority is given to people from the community who wish to put their professional knowledge into practice.

	<ul style="list-style-type: none"> <li>• Support programs for milk producers are provided that focus mainly on improving their productivity and environmental Management (use of biodegradable disinfectants, reforestation, substitution of wood posts for cement ones, worm compost and biodigesters to make good use of the farms' organic waste, reduction of water consumption in cleaning processes, substitution of gases that are using up the ozone layer in milk tank cooling units in the producers' farms). In some cases, up to 100 producers participate in these programs.</li> </ul>
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### REMARK BY THE ENTREPRENEUR

"For many years, our company has stood out for its efforts and contributions in environmental issues. However, the technical assistance provided by CEGESTI has enabled us to amplify our vision significantly in regard to the different areas related to environmental and social responsibility and regarding productivity, mainly through the establishment of procedures, indicators and measurement parameters that will facilitate controlling our progress in this field in the future. CEGESTI has led us to a model of discipline and order that will ease the way towards a continuous improvement process that is essential in today's industrial processes".

**José Luis Vargas**  
**General Manager**  
**Corporación Monteverde**



The Netherlands  
 Ministry of Foreign Affairs

