

## Sustainable Development in Central America and the Dominican Republic

Project: Poverty Reduction and Environmental Improvement: An Integral Sustainable Development strategy.

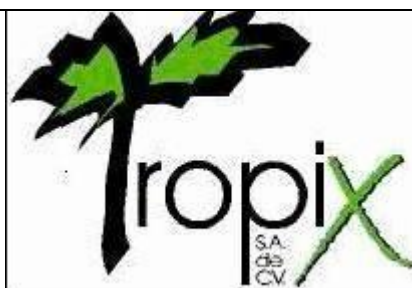
Company: **Tropix**

Country: El Salvador

### The Company

TROPIX started operations in 2002 with the mission of producing and commercializing powder products for traditional beverages in El Salvador. In 2005, they also introduced the frozen *pupusas* line (a traditional Salvadorian meal made from corn flower and stuffed) in different presentations, always seeking to adapt to the current market's demands that require quality products with less preparation time.

Currently, the plant is located in Colonia Mirilla 2, Municipio de Mejicanos, San Salvador and has approximately 17 employees– half of them in production.



### Products

The company's main products are:

- *Horchata* (a rice based drink)
- Barley
- Atoles
- Species
- *Pupusas*



### Markets AND SALES

The company produces for the Salvadorian market and for exportation to the United States and Central America. Besides processing their own brand, they *maquila* in larger quantities for the institutional market. Their production volume is 2.8000.00 pounds of *horchata* per year and they are at a strong period of growth.

### PROJECT DESCRIPTION

The Integral Sustainability Development (ISD) is a new approach to managerial management that seeks to develop within organizations the ability to “re” discover added value in their activities and define innovation strategies that incorporate the social and environmental requirements. Under this concept, companies seek a balance between the three sustainability dimensions: economic, environmental and social. Through this project an integrated methodology in the production area that includes the Good Manufacturing Practices (GMP) and the Cleaner Production (CP) concepts was implemented. Through a diagnosis, the improvement options were identified and later on training and technical assistance were provided for the implementation of actions in each of the topics labeled as priority.



- Dimensión Social
- Dimensión Ambiental
- Dimensión Económica

This project was jointly executed with the *Fundación CENTROMYPE*. Technicians from the entity accompanied CEGESTI's consultants during all visits to the company to learn the applied methodology.

## Improvements in Good Manufacturing Practices

- Plant personnel were trained on Good Manufacturing Practices, on its importance and impact on their work.
- Documentation improvement:
  - o Support was granted on the development of the documentation needed for GMP:
    - Pest control program
    - Induction process for new company personnel.
    - Maintenance program.

Currently, this documentation is at the revision stage to later on be implemented in the company.

- o Tropix installed signs for adequate hand washing.

### - Improvements in the plant's cleanness and orderliness:

- o A plant cleaning took place.
- o Better space distribution.

### - Improvements in personnel management:

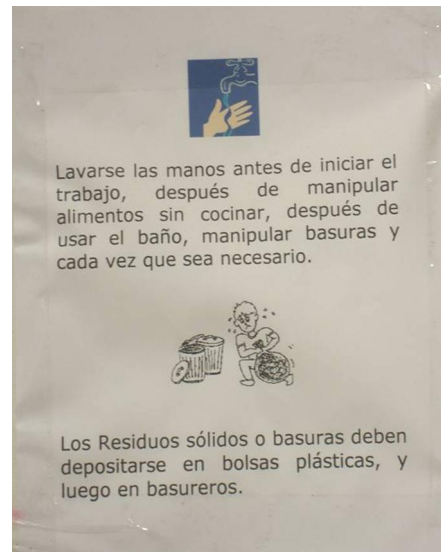
- o Installation of hall-stands and lockers.
- o Personnel - without adequate clothing - have restricted entrance to different areas.
- o Change in the awareness.
- o Execute inspections to ensure that workers who do production labor comply with the GMP's regulations for food manipulation.

### - Improvements in raw materials storage:

- o Better orderliness in the product's storage.
- o Better handling of finished product.

### - Recommendations for the plant:

- o Ensure that the washing stations have the necessary accessories according to UACA's GMP regulations.
- o Maintain orderliness and cleanness at the plant.
- o Keep disused articles away from materials storage.
- o Train a food safety team to carry out inspections to the plant with the objective of identifying improvement points.
- o Reinforce the personnel's knowledge of Good Manufacturing Practices.



## Improvements in Cleaner Production

- Personnel were trained in the C+P methodology and awareness was developed on the environmental impact generated by the company.
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- Improvements in energy efficiency:
  - o Documentation of a new preventive maintenance plan for all company equipment.
  - o Training will be provided for workers by a technician on the mills basic care and functioning.
  - o Use of mixers during "non-peak" hours.
  - o Change in the *pupusas* production programming to only make one batch and save gas.
  - o Gas and electricity consumption monitoring.
  - o Decrease from 4.6 to 3.3 kWh consumed/1000 pounds produced, and from 71.77 to 51.83 pounds of gas/1000 produced *pupusas*.
- Improvements in raw materials consumption and solid waste generation:
  - o Documentation of the raw materials inspection process.
  - o Awareness development on the optimizing of raw materials use.
  - o Use of sparklers to turn on equipment to stop the purchase of matches.
  - o Bags sale.
  - o Reuse of cardboard boxes.
  - o Use of non-conforming *pupusas* for tastings.
  - o Design and quick fabrication of an adequate deposit to store solid waste.
- Improvements in the decrease of labour risks:
  - o Elimination of improvised electrical installation for lighting.
  - o Programming of training for personnel on fire extinguishers use.
  - o Masks wearing when silicon dioxide is used.
  - o Collection of safety sheets for all chemical products.
- Improvements in orderliness and cleanness:
  - o Increase of the orderliness and cleanness index from 66.7% to 73.3%.
  - o Training in the 5S methodology (by putting the plant in order).
  - o Beginning of the rearrangement of the *pupusas* area.

