

# 2011

Report

# SUSTAINABILITY



Granjas Carroll de México, S. de R.L. de C.V.



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# Letter from the Director

At Granjas Carroll Mexico, we know the big commitment involved in food production for the current and future population in Mexico and the world. At the same time, while Keeping our commitment to achieve sustainability, we continually seek new methods and techniques to make sure food production is met without risking natural resources for future generations.

In 2011, our company successfully faced the challenge of competing in the domestic market against the most powerful pork industry in the world: the United States. We are proud to say that we have been able to do so in full compliance with the environmental regulations demanded in our country and at the same time being a key factor in the development of the communities in which we produce.

The purpose of this report is to highlight our experiences from last year. Some of them have been more

successful and we will share them with you hoping they serve as ideas to be implemented in their respective environments.

As an example, I will mention the use of wood saving stoves. These have benefited the recipient families by changing their lives in terms of health, and they have also had a favorable impact on reducing the use of wood. It is estimated that about 15 trees are saved every year per stove installed.

We project to adhere, in the coming year 2012, to the UN Global Compact. This in order to achieve global sustainability parameters, for which we align with its 10 guiding principles.

So dear readers, I expect this report to be pleasant and useful for you.

Sincerely,

*Víctor Ochoa*



# Human Rights

Granjas Carroll de Mexico (GCM) is a Mexican pork production company dedicated to the sale of cattle that leads the national market in the pork industry.

True to our motto *Feeding our Mexico* we contribute to the food sovereignty of the country by supplying the market with the best quality meat, for this purpose we follow the highest standards in national and international technology, hygiene and environment care.

The full production of Granjas Carroll is for domestic market. GCM has 17 technologically advanced farms installed in the states of Puebla and Veracruz, they contribute with 13% of total pork produced in the country; we are ranked 24th worldwide. The production process is called “Segregated Early Weaning System” and it includes three phases that are developed in our farms:



Site 1. Farrowing (delivery units)

Site 2. Nursery (piglets units)

Site 3. Finishing (grow units)

Last year, Our feed mill processed 377,687.13 metric tons of pelleted feed to feed our herd. This pelleted feed is made from grains, plant products, plant protein, amino acids, vitamins, minerals, fats, enzymes and additives. The resulting 12 types of feed are set according to the age and role of each group of pigs, the groups are: Pregnancy, Lactation, EarlyWean, Prestarter, Starter, Grower 1, Grower 2, Developer, Finisher 1 and Finisher 2 Gilt Developer and Stallions.

*The social and environmental performance of the company in 2011 made us obtain for the sixth consecutive year the SRC distinction, and it was received in the first quarter of 2012. At the same time, the company also kept its Clean Industry Certification by Profepa.*



*In 2011, the 72 existing sites produced for sale: 1 million 156 thousands 274 pigs at different stages of life.*





## Vision

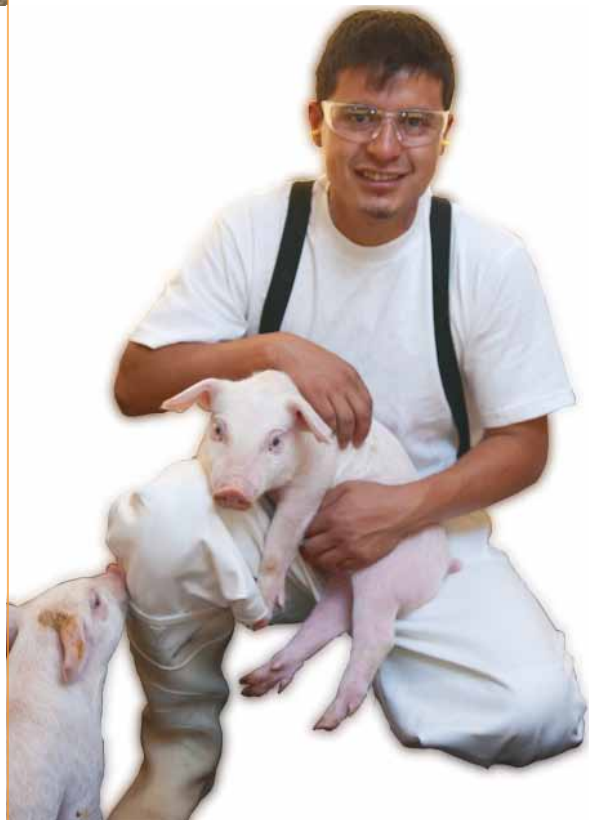
To be the most profitable and sustainable pork company in the Mexican Republic.

## Mission

To be leaders in the Mexican pork market by producing the highest quality cattle for the consumer.

To keep a high commitment to the community in which we operate, the environment and business productivity.

To find all this by making emphasis on personal and family development encouraging our values at all times.



## Values

GCM staff share attitudes and principles that result in an effective and committed performance:

**Responsibility:** We are responsible for our decision-making and actions, thus we accept the consequences.

**Respect:** We treat our colleagues, our company, our customers, suppliers, neighbors and the environment as we would like to be treated ourselves.

**Attitude:** We strongly believe that by keeping an open and positive mind, we can face any situation or challenge by finding best possible solutions.

**Discipline:** We do our part, when we have to and we do it the best possible way.

**Integrity:** We do the right thing under any circumstance.

**Innovation:** We trust our intelligence, discipline and creativity; thus our work will always find new and better ways to perform.

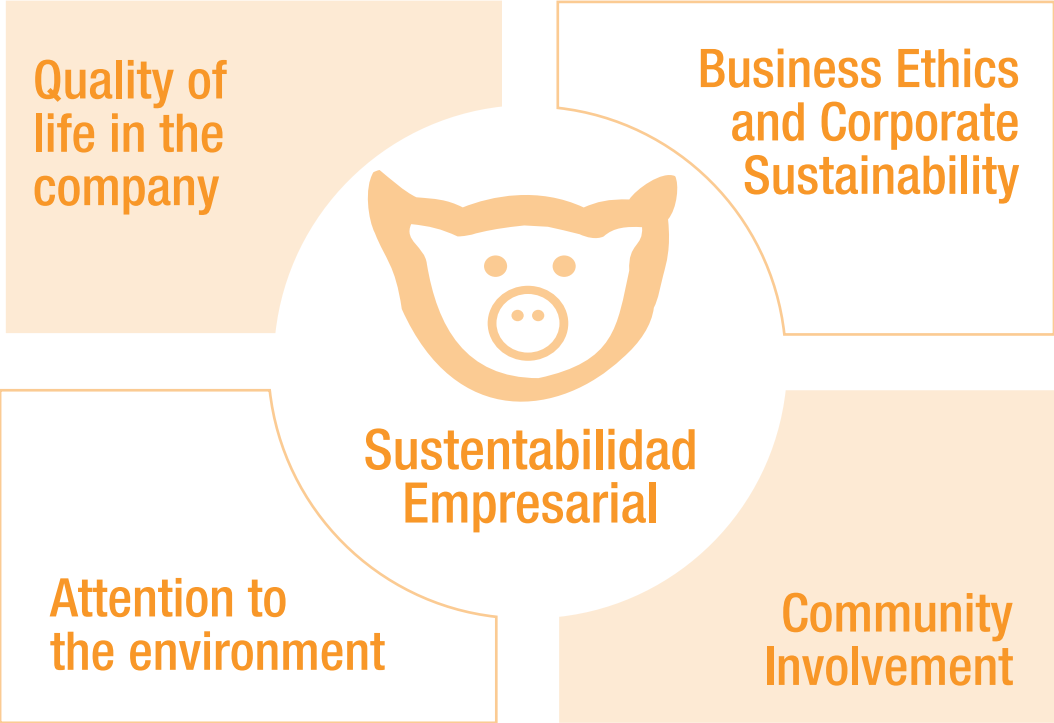
**Commitment:** We do our best to stand out as individuals and as employees; thus we exceed our expectations and those of our customers, both internal and external

**Leadership:** We hope that our example will positively influence the immediate environment in our families and in our company, thereby we improve our quality of life and that well-being transcends across the country.



# The four core principles of sustainability

As a socially responsible company, Granjas Carroll worked on the four components that will be the subject of this 2011 Sustainability Report.



## Community Involvement

In terms of social responsibility, the company invested \$ 3,760,188.98 in this area. Granjas Carroll Foundation developed action plans to support the inhabitants from the adjacent regions to the company. During the reporting year the foundation intensified its work with the respon-

sible participation of our groups of interest, livestock producers, common land owners, organized groups of women and children, suppliers, public and private institutions, as well as the active participation of GCM Volunteering.





## Community Development

Community activities were professionalized based on participatory rural studies conducted in several communities in Puebla and Veracruz, it was done by developing the skills of the inhabitants.

4,900 people were benefited directly or indirectly; courses given and projects implemented in both entities made this possible.

### 1. Backyard vegetable gardens

- 5 communities in Veracruz and 3 communities in Puebla
- 11 exact copies

### 2. Illustrative hybrid maize plots (variety Aspros 722 and Asgrow Z60)

- 2 communities in Veracruz and 2 communities in Puebla
- 6 exact copies
- 6.3 tons harvested per hectare in Puebla and 3.8 tons in Veracruz

### 3. Workshop on fur

- 4 communities in Veracruz and 1 community in Puebla
- 5 exact copies
- 110 pelts tanned





#### 4. Making cheese from goat milk Workshop

- 4 communities in Veracruz
- 4 exact copies
- 650 liters processed
- 400 products made

#### 5. Industrialization of fruits and vegetables

- 1 community in Veracruz
- 1 exact copies
- 12 different products, and 220 units total production

#### 6. Production of pork

- 3 community in Veracruz
- 3 exact copies
- 350 kilograms of pork processed
- 35 different products, and 105 units total production



### 7. Reuse of solid waste

- 4 communities in Veracruz and 6 communities in Puebla
- 11 exact copies
- 1,480 products made: key rings, bags, flowers, decorations, etc.

### 8. Production of Organic fertilizers

- 2 communities in Veracruz and 2 communities in Puebla
- 4 exact copies
- 12 kilograms of earthworm and 150 kilograms of organic fertilizer produced

### 9. Blankets

- 1 community in Puebla
- 1 exact copie





## Support and Donations

1. Donation of native seed to the CONANP ranger.
2. Repair of water pumps in wells that provide water for communities in Veracruz and Puebla
3. Farming by contract
4. Donation of swine manure to neighbors
5. Support in-kind to a AA group in Perote
6. Support in cash to build the Nursing Home “Unidos por una Ilusión” AC.
7. Support to government institutions
  - Repair of the Red Cross Ambulance Perote delegation
  - Donation of computer equipment and radios to the Perote Municipal Transit Delegation
  - Donation in kind to the Delegation of the Federal Preventive Police (PFP)
  - Donation of posters to Peroteño Institute of Women



- Donación de carteles al Instituto Peroteño de La Mujer
  - Donation of 6 protection equipment to the Department of Animal Sanitation
  - Support in kind and payment for speakers at the Goat Expo Jalapasco 2011
8. Support in kind for community fiestas
  9. Building and maintenance of local roads
  10. Donation to “Jugueton”, an event organized by Azteca TV
  11. Donations in kind to the Food Bank AMBA
  12. Support to construction projects
    - Delivery of supplies for the construction of a bridge in the Rio Valiente community, Tlachichuca municipality, Puebla.
    - Construction of Sidewalks and paving of roads
    - Support in kind for the carpentry workshop in El Paisano community, Las Vigas municipality, Veracruz



## Volunteering events at GCM

- Collection of food to join the National Campaign of the Food Bank (AMBA) “Mexico Without Hunger”
- Internal campaign to collect clothes and toys
- Christmas party in El Paisano community, Las Vigas de Ramírez municipality, Veracruz. Toys, clothes and sweets were distributed in this place.
- Support for the celebration of Epiphany in Quechulac community, Puebla; 800 toys and candies were donated.
- Donation of pantry staples



## Education

We have partnership agreements with different institutions: academic, professional, and research, these assist us with courses, workshops and training

1. Veracruz Goat Species Product System (Sipecav)
2. Training Unit for Rural Development No. 2 (Uncader)
3. High School of Agricultural Technology, Center No. 86 (CBTA)
4. Veracruz State University
5. Institute of Ecology, AC (INECOL)

In terms of education, more than 20 institutions were supported in kind and cash:

- The Telesecundaria in Frijol Colorado was supported in order to obtain its SEP register
- Donation of computers
- Rehabilitation of bathrooms and bathroom furniture donation
- Construction of walls
- Donation of gasoline
- Materials for backyard vegetable gardens
- Support for transportation for school trips
- Support for meals and transportation
- Donation of books
- Donation of paint to schools
- Donation of pigs for school parties
- Rehabilitation of schools (classrooms, sports fields, sidewalks)





In this year, Pachuca Polytechnic University and Tehuacán Institute of Technology joined our initiative, we endorse our relationship with the following institutions:

- Puebla Autonomous University
- Veracruz State University
- Xalapa Institute of Technology
- Xalapa University
- Tepeaca Institute of Technology
- Tecamachalco University
- Libres, Puebla Institute of Technology

- Teziutlán, Puebla Institute of Technology
- Veracruz Athens University
- Perote Institute of Technology
- High School of Agricultural Technology
- General Manuel Rincón High School

*Ceremony in which a collaboration agreement was signed between GCM and the Pachuca State University.*



## Health

13,138 free medical consultations were provided in Puebla and Veracruz in 2011, of which 2,546 were for GCM employees' families

- 7,069 in Veracruz
- 6,069 in Puebla

### 1. Health campaigns

- Early Detection of Cervical Cancer (D.O.C.) 2011
- 75 hybrid test were administered
- Referring patients to the Medical Center for Cancer (CECAN)
- Payment of travel expenses to 61 patients who suffered from CaCu
- Maintenance and Rehabilitation of Health Centers in Puebla and Veracruz
- Health Training for our medical staff



## 2. Dental Health Campaign

We partnered with the Veracruz State University to provide dental care to 2,400 patients in five communities in Veracruz. This campaign was carried out in three stages;

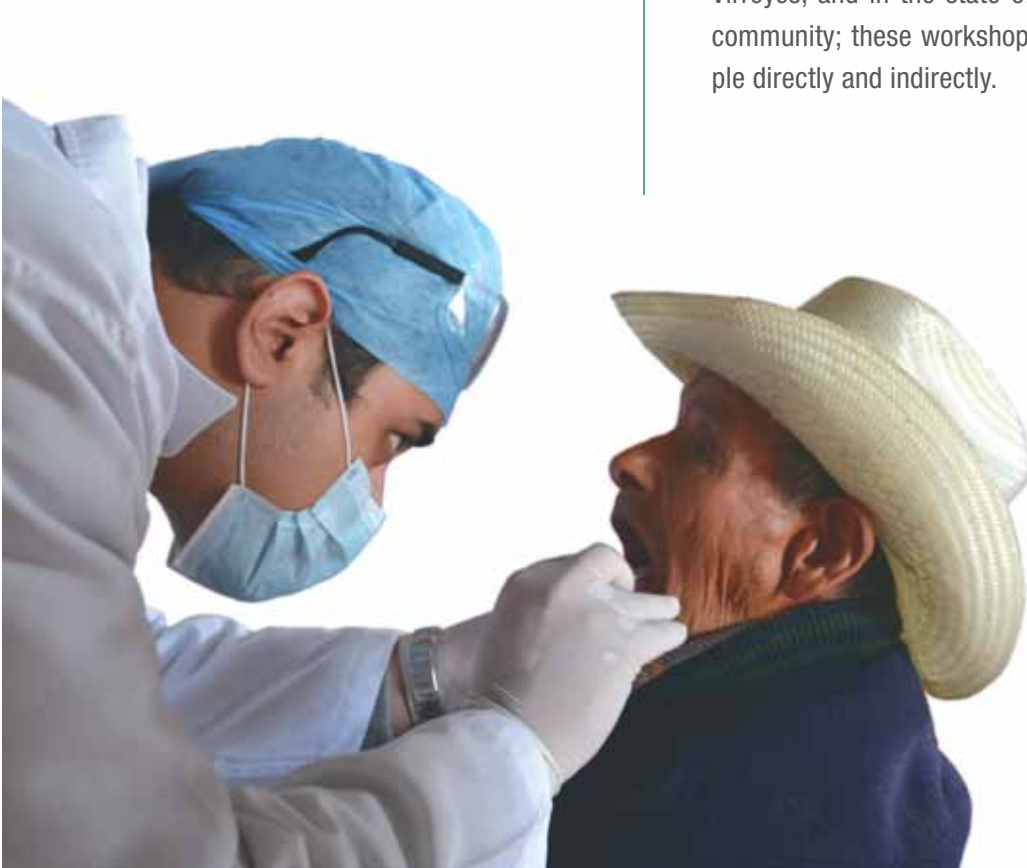
1. Diagnosis
2. Extraction
3. Full dental prosthesis

## 3. Getting Drug donations

- Donations of drugs through laboratories such as Pfizer, Bayer, Boehringer, DIF and State secretariats of Health of Veracruz and Puebla.

## 4. Workshops in collaboration with Pfizer

- We worked with Pfizer through a roaming mobile unit providing care for people suffering from chronic degenerative diseases. In 2011 new communities were benefited with these workshops; in the state of Puebla the following communities: Miravalles and Virreyes, and in the state of Veracruz the Zalayeta community; these workshops benefited 1,800 people directly and indirectly.





### 5. Pork Donation Agreement

- Donation of meat and other supplies to “Sayago” Nursing home in Xalapa, Nursing Home “El Abue” in Puebla, and Puebla Food Bank

### 6. Health Talks

- Nutrition talks “Let food be thy food and food your medicine”:
- 280 attendees in 5 communities in Veracruz and 8 communities in Puebla





# Labor Rights

Satisfaction and personal growth of the employees in a company is an essential factor to achieve corporate social responsibility.

## Training staff

Constant training is essential for a workforce to be motivated, updated and integrated as a team. Last year, through Prestadora de Servicios Profesionales (PRESPO), courses and workshops were offered to 312 employees.

- The 7 Habits of Highly Effective People
- Negotiation and conflict management
- NLP
- Emotional Intelligence
- Statistical reports SPC production
- General topics of Safety and Industrial Hygiene
- Program A.L.E.R.T.A. (Logical Actions to Prevent Accidents and Occupational Hazards)
- First Aid training course
- Use and management of vaccines for animal health care

- Necropsy process and sampling for laboratory
- Planning and production flows
- General topics of Human Resources
- Production and general processes in Plant Food and supply chain

750 farm partners were trained in the following courses, by PRESPO:

- Induction GCM
- Biosafety Course to new staff
- Fundamentals and Safety
- Ventilation in pig farms
- Core activities in the area of Motherhood
- Core activities in the area of Weaning
- Core activities in the fattening



## Scholarships

The benefit of our business philosophy also extends to the employees' children. By awarding scholarships that amounted to 600 pesos a month, we promoted the education of students. They are students of any institution in the national education system, public or private, primary, secondary and high schools, excluding only the education system for adults.

Granjas Carroll de Mexico, S. of R.L. de CV in association with Prestadora de Servicios Profesionales y Operativos, SA de CV, and in coordination with the incumbent union of the collective employment agreement, CROM, awarded scholarships to children of workers with excellent academic performance. 30 scholarships were awarded to unionized employees and 10 for non-unionized employees. A total of \$177 (thousands of pesos) was invested.





## Recreational and sporting

Last year, we organized the following events:

- **Children's Day:** We entertained the children of the workers with two parties, one in Veracruz and other in Puebla; 1,600 children participated.
- **May 10:** Working mothers had this day off and received a voucher that could be redeemed at a department store for 500 pesos.
- **future moms,** received a voucher worth 350 pesos.
- **Summer Course for Children:** 120 children participated in these recreational workshops.
- **Hiking at Cofre de Perote:** 35 people participated including employees and their families; they got to the top of the volcano.



- **Annual Christmas dinner:** We celebrated Christmas with 2300 attendees including employees and their guests.





- **Christmas Gift Cards:** Each of the 1,081 workers was given a redeemable card, it was worth 350 and could be redeem at department stores.

Sports activities were:

- **Internal Soccer Championship:** A total of 380 employees made 17 teams last year
- **GCM Runners Club:** Competing in 5 and 10 K, a group of 15 men and 1 woman represented us in:
  - Roadrunner Race in the port of Veracruz, Veracruz
  - AvánRadio Race in the city of Xalapa, Veracruz
  - 10 K Race in Puebla, Puebla.

For these events the investment was \$ 1,686,600 and 3,164 people were benefited both children and adults.





## Incentives for productivity

### Integration Trips

- 60 employees stayed at Mexico Verde campsite including supervisors and farm managers as well as staff from other production areas. Team spirit and fair play were encouraged through dynamics.
- The service managers stayed in Cancun and also did integration exercises. Both trips served as recognition

for the good results in productivity.

### Prize for the best farm, 2010

- The site 1-1 scored the highest production rates. As a result, they were entertained with a special lunch, and jackets given to the 32 people who work in this site.





## Health Care

GCM was certified as a Responsible Employer by the Veracruz Northern Regional Delegation of the Mexican Social Security Institute (IMSS), which accredits the timely completion of the employer-employee obligations.

The Company meets the health care coverage and preventive health parameters with its staff as well as other requirements such as having a clearly defined job risk premium, paying dues on time, having no default payment difference among other factors; the company won this recognition for the first time.

It also demonstrated compliance by meeting service coverage to all employees. All of this thanks to the addition of programs like Vicorsat (Monitoring and Control in Health and Labor Risks) and PREVENIMSS. It was made sure all employees had their IMSS ID's. Because of all this, the company was awarded the [White Flag Certification](#), which recognizes the positive health indices.

The program PREVENIMSS consisted of attending the Oral Health Fair, measuring weight and height, testing blood pressure and receiving tetanus vaccination.



In the second year of the implementation of the Vicorsat program (Monitoring and Control in Health and Labor Risks), 1,081 employees were evaluated. That was the workforce the company had at that moment. The results of the Vicorsat program were positive showing that the working population has optimal levels in parameters such as blood pressure, cholesterol, triglycerides, blood glucose and fitness.

In addition to statutory social security benefits, we have ongoing medical care for staff and their immediate families provided by medical personnel during working hours in the offices of the company.

We promote health at all times, that is why prevention campaigns are conducted and awareness is raised on public health issues such as obesity, diabetes and influenza stationary.

*The campaign to prevent cervical cancer is carried out in the company every year, and it is aimed at employees and their direct family members such as wives, mothers and daughters.*



## Health and Safety

This recognition was given to GCM after an international tour made by the directors of Smithfield, in which they found that ALERTA (Logical Actions to Prevent Accidents and Occupational Hazards) is the best ongoing program among partner companies because it guarantees the safety of the company and its members. All this thanks to the full compliance with the Federal Regulations on Safety, Health and Working Environment, as well as acting in accordance with the international standard of 5 S: Eliminate unnecessary stuff, remove unnecessary stuff, Remove dirt, report anomalies, and continue improvement.

The International Award for Outstanding Smithfield Performance in Health and Safety Management is awarded at the Annual Safety Congress of Smithfield from 1st to August 4th in San Antonio, Texas. Although it is an event that has been carried out for 11 years, it is the first time that the U.S. partners rewarded the performance of foreign companies. Our Feed mill was recognized as the best of the Smithfield group.

*Granjas Carroll was recognized as the firm with the best performance in terms of safety among the partners from the international consortium Smithfield Foods Company; this includes American, Rumanian, Polish, French and Spanish companies.*





## Anticorruption

The size and responsibilities of our organization require a structure oriented to the respect of our business philosophy. GCM has adopted sound corporate governance practices that reflect our commitment to maintaining the highest standards of ethics, transparency and enforcement of Mexican standards following our own statutes.

The Board of Managers annually evaluates the performance of the General Director of GCM. Both figures are elected by the General Assembly of Members.

Committees, adhered to the law and regulations that govern us, were formed to help monitor the timely implementation of the goals and projects of the company:



- Executive Nomination and Compensation Committee
- Finance and Audit Committee
- Environment and Social Responsibility Committee
- Purchase Committee

The Board of Managers is the core part of our corporate governance and represents one of our main strengths for the commitment and timely performance of its duties. GCM is composed of an equal partnership between:

**Agroindustrias Unidas de Mexico, SA (AMSA):** Mexican company specialized in the marketing of agricultural products; it supports the domestic agriculture by funding and consulting; it is present worldwide nowadays.

**Smithfield Foods:** American Company, world leader in production and marketing of pork with businesses in France, Spain, Poland, Romania, United States and Mexico.



## Business Ethics

The Ethics Committee monitors and regulates compliance with the Code of Ethics of Granjas Carroll, which demands transparency in all business acts and is applicable to all staff regardless of the hierarchical level.

This code also establishes the rights and obligations of any person who has a relationship with the company such as shareholders, suppliers, consultants, contractors, grantees, clients and authorities.

The zero tolerance towards corruption, bribery, bribing, discrimination, harassment, conflict of interest and influence peddling, is what makes Granjas Carroll de Mexico S de RL de CV a company that respects the human and labor rights of its employees.



*Anonymous complaints are received at the Ethics Hotline (01800 0003283) and at the email [lineaetica@ecomtrading.com](mailto:lineaetica@ecomtrading.com), they can be of any kind of misconduct against the staff desired behavior.*

The Committee is composed of seven members, they hold office as long as they are still working for GCM.

**President:**

Víctor Manuel Ochoa Calderón, *Director General*

**Secretary:**

Marco Antonio Muñoz Moreno, *Controller*

**Members:**

Anel Coéllar Sánchez, *Human Resources*

José Luis Romano Hernández, *Internal Audit*

Álvaro Bravo Zepeda, *Operations*

Tito Tablada Cortés, *Public Relations*

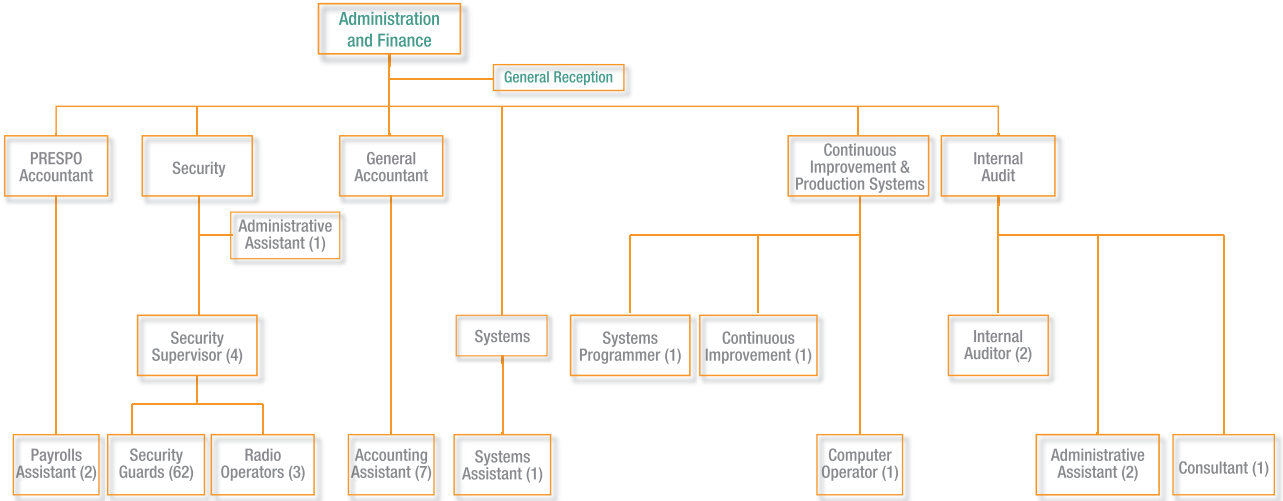
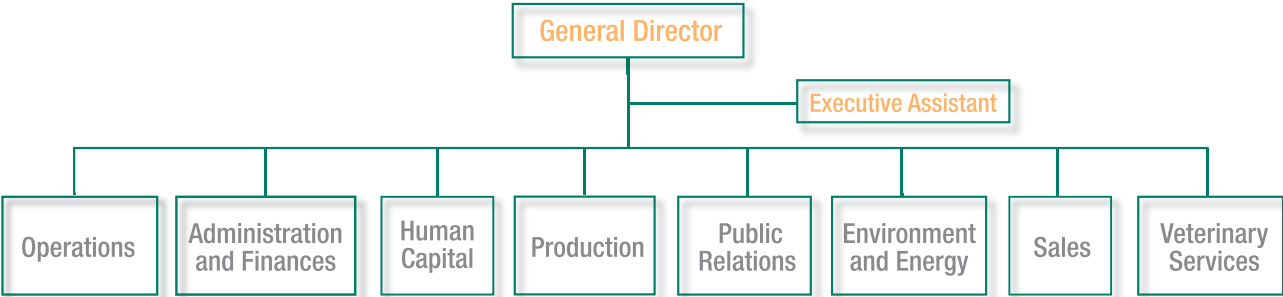
Through the Ethics Committee reports were not received during the reported period. Through the Ethics Hotline 9 reports were received, 7 of them were resolved in 15 days and 2 were followed up by an investigation that lasted two months.

Types of reports received:

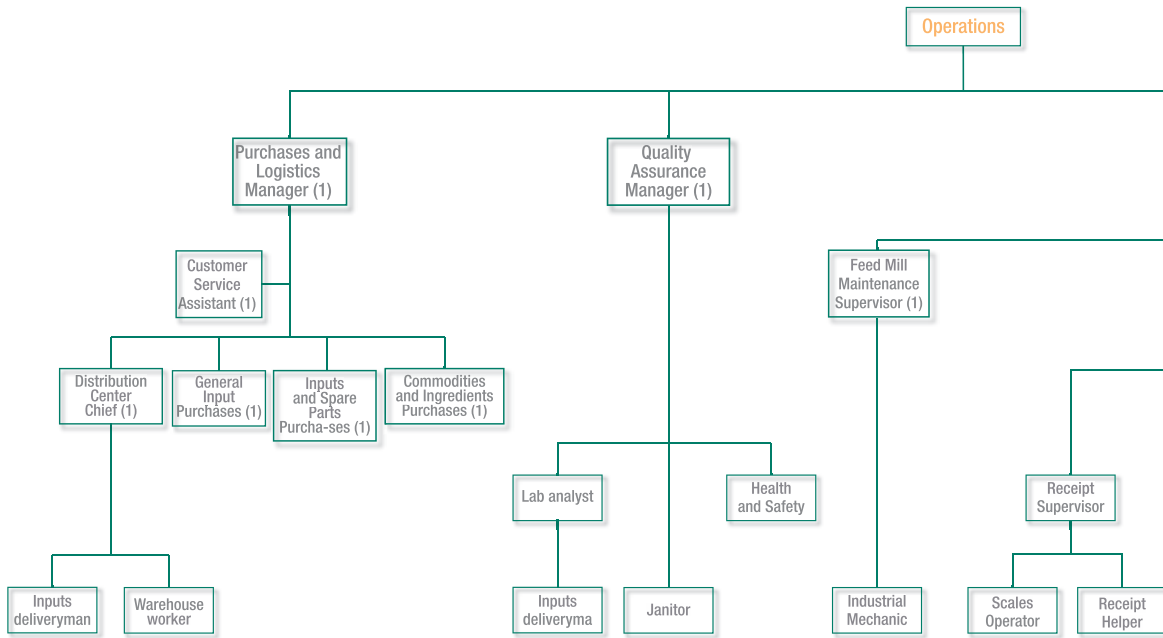
- 5 related to supervisors' inappropriate behavior towards colleagues
- 2 related to bullying in the workplace
- 2 related to property damage and abuse of authority

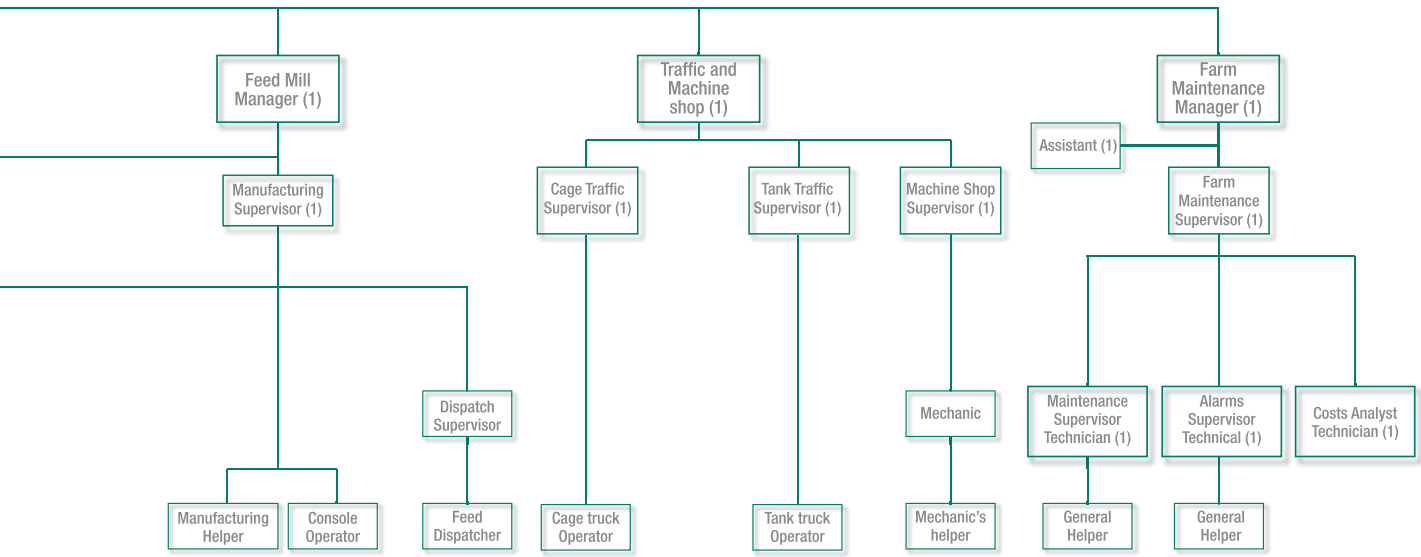


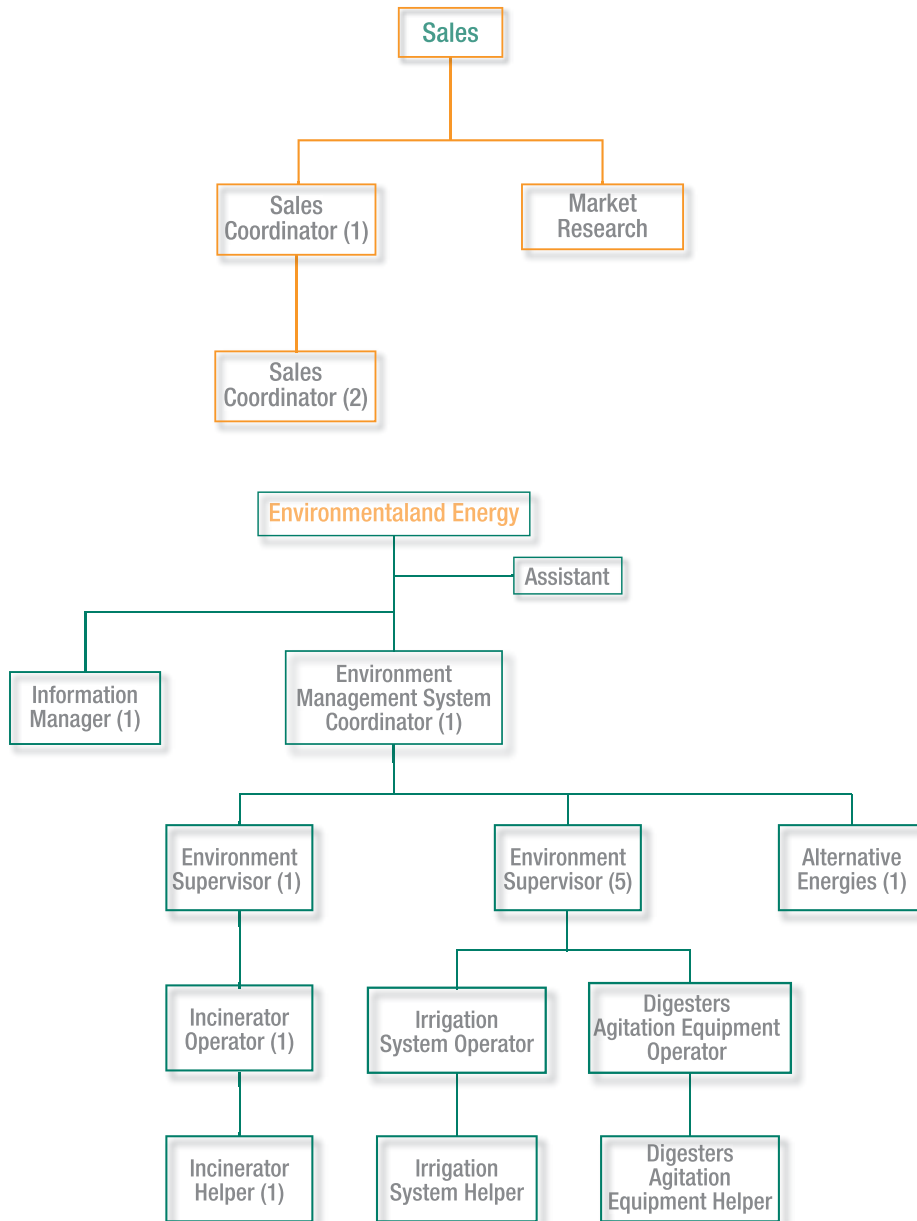
# Corporate Structure

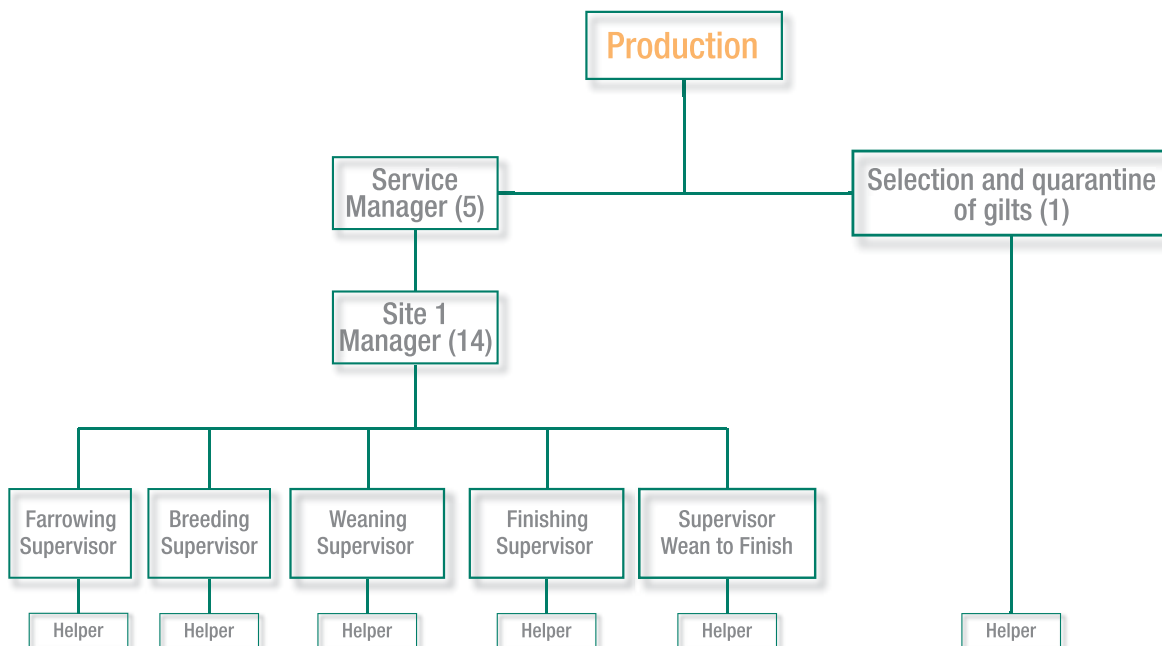
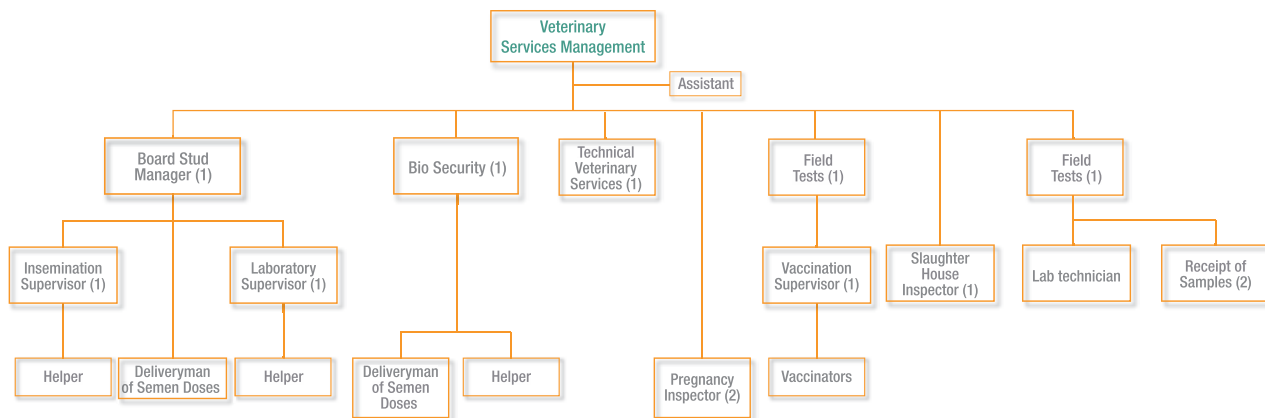




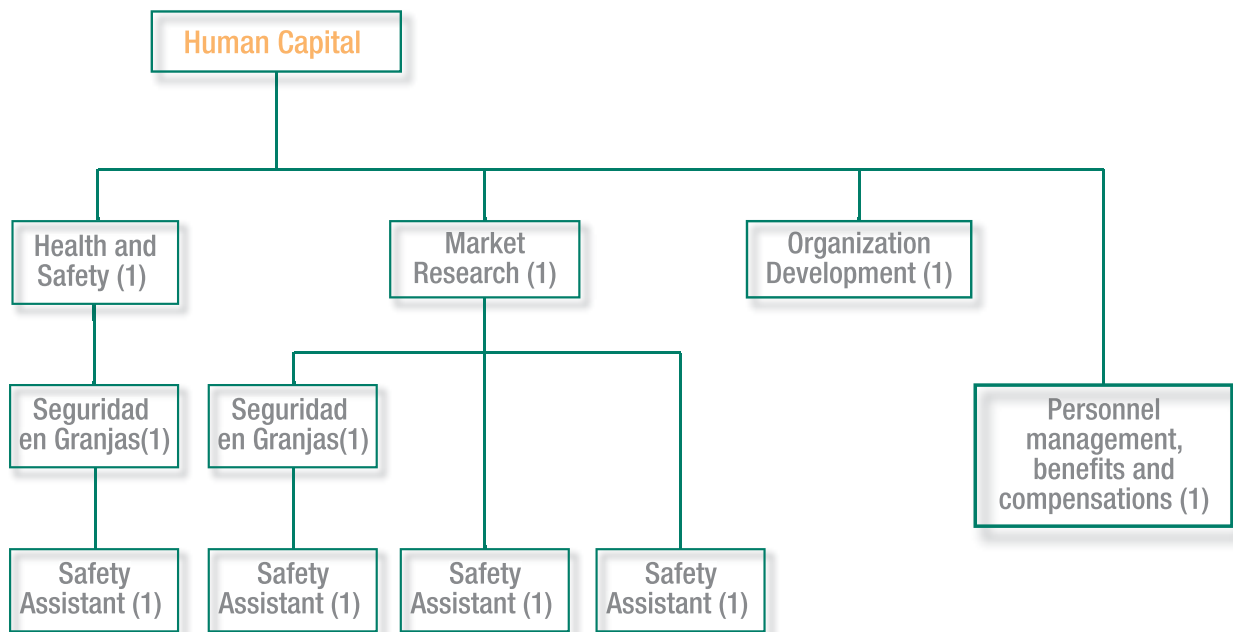
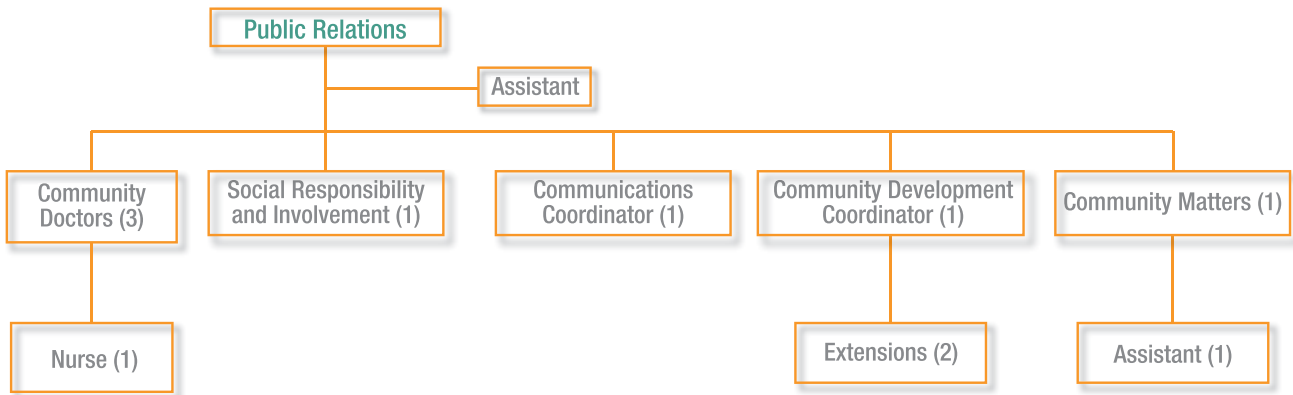












# Groups of interest

The productive chain that makes possible our business activity also includes other secondary things such as freight services, shipping, the communities that sur-

round us and the bodies with which we interact; all these form our groups of interest; we divide them as follows:



## Internal

### Partners:

- Agroindustrias Unidas de México
- Smithfields Foods

### Customers:

- TIF slaughter houses
- Meat sellers

### Workers:

- The 1.083 employees, our families and the union.

## External

**Resident neighbors:** Inhabitants of the region

**Organizations:** Organized groups of civil society and academia

**Provedores:** Regional and national companies, international companies

**Government:** federal, state and municipal

### Private Associations:

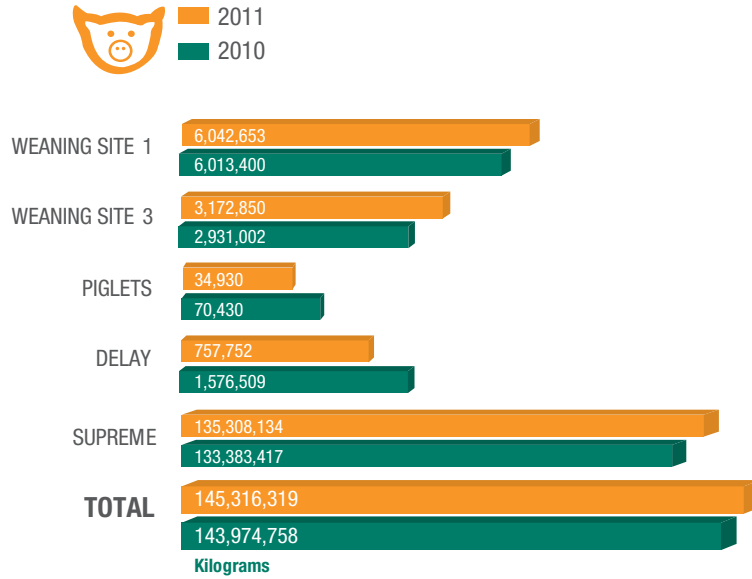
- AMEPA (Mexican Association of Food Producers AC),
- CNA (National Agricultural Council),
- Canacintra Puebla and Xalapa (National Chamber of the Manufacturing Industry)
- AIEVAC (Industrialists Association of the State of Veracruz),
- Puebla Association of Pork Producers AC,
- Veracruz Pig Farmers Livestock Agency AC,
- National Organism of Swine Certification and Verification AC,
- Mexican Hog Farmers Confederation AC,
- Fomexporc (Promoting Consumption of Pork)
- Conafab (National Council of Feed Manufacturers and Animal Nutrition AC)
- CAMEXA (German-Mexican Chamber of Commerce and Industry AC)

## Business Ethics

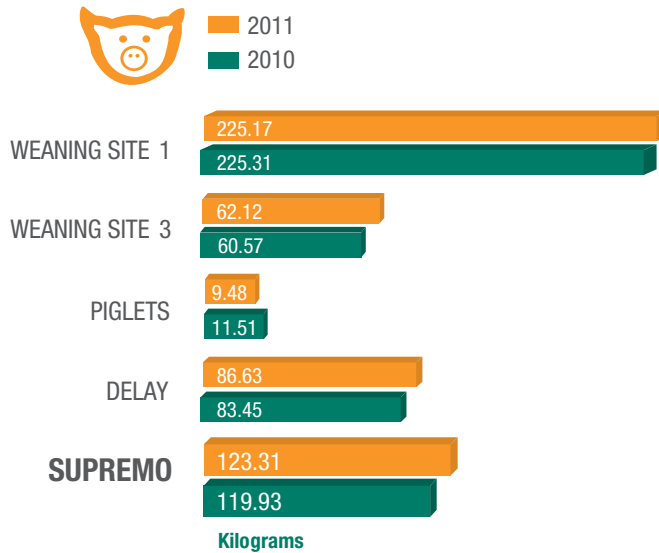
Our clients trust us and are loyal to us, because of the trading conditions we provide for them. At the same time, our policy of transparency in business allows us to present sales reports over the last year.



## Sales per kilogram of meat



## Average weight of Pigs





The average weight of the supreme hog during 2011 was 123.31 kilos, exceeding the 2010 average weight of 119.93 kg.

In 2011 we had 39 customers, some of the main ones are:

- Abastecedora de Carne de Cerdo La Perla
- Granjero Feliz, S de RL de CV
- Porcinos Mexicanos SA de CV
- Promotora de Cerdos Tlalnepantla SA de CV

55.87% of the sale was distributed in the State of Mexico and the Federal District, the following states were also targeted:

- Guanajuato
- Guerrero
- México
- Morelos
- Oaxaca
- Puebla
- Tabasco
- Tlaxcala
- Veracruz



*1,156,274 heads: total figure*

*145 millions 316 thousands 319 kg of meat were sold in the market*

## Transportation

The shipping of pigs is classified in internal and external or market shipping.

For internal shipping and handling, there were 13 trucks, 1 gooseneck trailer, 2 tepexilera cages, 1 tubular cage, 9 aluminum cages and 2 pick-up trucks. For external shipping and handling there were 3 gravel trucks, 28 trucks, 11 two-story cages and 16 three-story cages.

Kilometers traveled in 2011::

Internal Shipping	292,532
External Shipping	3,794,261





# Environment

# Environmental Care

In 2011 the amount invested for environmental care actions in one of the main areas in the company production processes amounted to \$ 33,968,217.00.

## 1.- Campaigns

- Participation in the campaign “You decide your role and Temporary Storing”

Collected:

- 240 kilograms of paper
- 610 white paper
- 240 kilograms of colored paper

It was all donated to the Veracruz State DIF

- Participation in the campaign “Recycling and helping Perote” in coordination with Semarnat Veracruz.

Collected:

- Paper ◦ Cardboard ◦ Newspaper ◦ 1,658 piles
- Participation in the campaign “Reciclón” coordinated

by Semarnat through the enterprise REMSA:

- 62 electronic devices ranging from printers to telephones were donated.
- Participation in the HP Planet Partners program, 240 used cartridges were donated for recycling.

## 2.- Private Conservation Area

The nursery is currently operating in a fraction of 2,500 m2 within the area comprising the private conservation area “La recompensa”. It covers an area of 26-48-10 hectares (26.4810 hectares) and is located in the polygonal area within the site P13 -1 in the common land Estanzuela, Altotonga municipaity, Veracruz.







*As every year, GCM carried out a reforestation campaign, which this time was in the park Caja de Agua (Perote, Veracruz) during the World Environment Day, groups of interest participated.*





BENEFICIARIES		NUMBER OF PLANTS	SPECIES	SURFACE (hectares)
Production Sites Puebla and Veracruz	47.00	3981.00	White Cedar, spreading leaved pine, Teocote pine, stone pine, chokeberry tree and Chinese elm.	3.54
“La Gloria 1 ” Common land	1.00	33000.00	Stone pine	30.00
“Caja de Agua” Park	1.00	600.00	Teocote pine	0.55
Schools in Puebla and Veracruz	16.00	2410.00	White Cedar, spreading leaved pine, and stone pine.	2.19
Donations to common lands, municipalities and others.	5.00	10070.00	Spreading leaved pine	9.15
<b>TOTAL</b>	<b>70.00</b>	<b>50061.00</b>		<b>45.43</b>

Production of plants in the nursery was stopped because the nursery is going to be moved to the site 16-1. In this site, a more technologically advance nursery will be built to spread the endemic species in the areas where the production sites are located.  
The nursery stock is:

TREE SPECIES	FINAL INVENTORY
 White Cedar	8,416
 Stone Pine	2,038
 Montezumae Pine	618
 Spreading leaved pine	0
 Chokecherry tree	225
 Stakes of willow tree and Chinese elm	0
<b>TOTAL</b>	<b>11,297</b>

### 3. Collecting of Biogas

Granjas Carroll de Mexico has 11 anaerobic digesters, which collected 2,454,184 m3 of biogas in 2011. This biogas is produced by the anaerobic degradation of organic matter from the pig excreta, which are discharged through a PVC pipe connected to a stainless steel closed type burner in order to be burnt and thus this process





transforms the existing biomethane in carbon dioxide and water. This action reduces 21 times the global warming potential effect of the gas.

#### **4. 9,422,348 m<sup>3</sup> Recycled Water**

In Granjas Carroll Mexico, activities such as raising and fattening pigs produce significant volumes of wastewater. In this regard, we have two systems of wastewater treatment: oxidative or specialized lagoons and anaerobic digesters. In both systems the

first step involves the organic matter degradation through native environment bacteria and sludge sedimentation. All this takes place in the oxidation lagoons and / or anaerobic digesters; after that, the treated wastewater passes to a second reservoir from where it is recycled to the production process and thus it reduces the controlled exploitation of wells.



## Environment Care

Donations and support for the national parks Cofre de Perote and Pico de Orizaba

- Corn seed donation
- Construction of the toll booth for the National Park Cofre de Perote
- Support for staff equipment

### 1. Reforestation Campaign “Creciendo de tu Mano”

In 2011, the company initiated a reforestation campaign in schools located in Veracruz and Puebla; high schools, secondary schools, elementary schools and kinder garden schools participated in this campaign.

- 2,410 planted plants
- 16 schools participated
- 6 communities in Veracruz
- 9 communities in Puebla
- 1,200 participants among children and teenagers



## 2. Reforestation Campaign World Environment Day

The site Caja de Agua was reforested, participating Volunteers from GCM, suppliers and GCM customers, schools and municipal authorities; more than 200 people participated in this campaign.

- 600 planted plants
- Tree Specie: Pinus Teocote
- 90% probabilities of survival

## 3. Recycling Campaign (PET) in schools in Puebla

## 4. Making ecological stoves workshop

- Donation of 30 ecological stoves (to Dipro-UV, Cofre de Perote National Park and communities in Puebla)

## 5. Agreement INECOL-GCM

- Monitoring the preservation of the endemic squirrel in Perote Valley. PEROTENSIS XEROSPERMOPHILLUS (Chichilote)



**Solidarity is**  
the reflection of a society  
**that Advances towards progress**

**Granjas Carroll**



Granjas Carroll de México, S. de R.L. de C.V.

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