

## Sustainable Agriculture

### **Jaguar Conservation and Cattle Production in the Honduran Mesoamerican Biological Corridor**



#### **Summary**

On September 3, 2008, the Wildlife Conservation Society, the Escuela Agricola Panamericana Zamorano, Panthera Foundation and the Association of Cattlemen and Agriculturalist of Atlantida held a meeting of meat and dairy producers from the jaguar corridor to present jaguar conservation objectives and hear the producer's concerns and priorities. The desired outcome for the meeting was to generate the information needed to start a program in the Honduran Jaguar Corridor that addresses both production and conservation concerns. The agricultural college Zamorano has technical expertise in dairy and meat production, while Panthera and the Wildlife Conservation Society have expertise in biological conservation and cat-cattle co-existence. These themes can be linked. The attendees spoke freely expressing their concerns and needs as producers and conservationists. The resulting information provides the raw material and endorsement needed to engage producers and work towards a chain of jaguar-friendly ranches in the Honduran Jaguar Corridor. Northern Honduras has high tourism potential with cultural and scenic attractions including mountains and beaches which can complement environmentally friendly ranching. The proceeding's conclusions pave the way for project development.

## Origins of the Meeting

This meeting had its origin in La Escuela Agrícola Panamericana Zamorano (EAP) in Honduras when the Wildlife Conservation Society (WCS) Jaguar Conservation Program (JCP) Coordinator John Polisar first met Animal Science faculty member Isidro Matamoros in June 2007. In response to an invitation from the Director of the Central American Commission for Environment and Development's Zamorano-based Institute of Biodiversity, Jorge Ivan Restrepo, Polisar had come to develop the relationships needed obtain Honduran cooperation in the jaguar dispersal corridor. Isidro Matamoros explained that ranches in the Honduran Jaguar Corridor were far smaller than those in the vast savannas of South America. Honduran producers operated on a much more basic economic level. Given their basic needs, it was likely that attention and even assistance to their priorities would facilitate local embrace of a jaguar corridor. In order to know which ranchers to engage, progress had to be made in identifying the corridor.

The Honduran desire for a meeting with ranchers was subsequently stated as a priority by the Honduran delegation to the inauguration of the Mesoamerican Jaguar Corridor in Costa Rica in July 2007. That priority was re-affirmed in the Launching of the Honduras National Jaguar Corridor in November 2007. In the year that ensued the Corridor Ground-truthing team led by Kathy Zeller and Roberto Salom and assisted by Leonardo Maffei and approximately 23 Honduran conservation personnel covered considerable ground in identifying a jaguar dispersal corridor between Sico and Punta Sal. Roberto Salom formerly in WCS JCP and now in Panthera Foundation lead the field work under Kathy Zeller's (also formerly WCS JCP now Panthera) supervision. In July of 2008 the ground-truthing crew was close to producing its first draft map of a section of the jaguar corridor along the Honduran Caribbean Coast. John Polisar visited Zamorano and proposed the concept for this meeting: 1) convene the producers from in the corridor, present the jaguar corridor and how to manage cat-cattle conflicts, and ask the corridor occupants their priorities in terms of production and conservation; 2) subsequently use the information generated to develop proposals and a program.

The meeting was organized by Zamorano faculty Isidro Matamoros and Jorge Ivan Restrepo, with considerable assistance from the Cattlemen's Association of the Atlantic. Support for the meeting came from a CAFTA Environmental Cooperation grant to WCS from the U.S. Department of State. Zamorano organized the meeting and the following tour of the ranches of the Caribbean plains of Honduras. A key actor in the event's success was Panthera Foundation Special Adviser Rafael Hoogesteijn, who with twenty years managing livestock in jaguar range in Venezuela, has the ability to establish immediate rapport with cattlemen. The purpose of the meeting was to introduce the jaguar corridor to the meat and dairy producers occupying it, solicit their perspectives and

priorities, and generate endorsements for a collaborative program with ranchers in the corridor.



**Zamorano Animal Sciences Faculty Professor Isidro Matamoros describes current programs to the producers of the Caribbean Jaguar Corridor**



**Wildlife Conservation Society Jaguar Conservation Program Coordinator John Polisar describes the purpose of the meeting**



**Panthera Special Adviser Venezuelan cattleman and jaguar biologist, Rafael Hoogesteijn covers cat-cattle conflicts and management options**

### **Meeting Structure**

The meeting was held in the city of La Ceiba in the facilities of the Association of Cattlemen and Agriculturalist of Atlantida (AGAA for its Spanish initials). Eighty two people participated including leaders of the cattlemen, representatives of government agencies and non-government organizations, and the event organizers. Attendees included the centers for milk storage and cooling (CREL's according to the Spanish initials). The AGAA was of an enormous help with the organization of the workshop. They contacted the press and consequently our interviews were on national television and in two national newspapers the next day. The 46 CREL's also helped in the workshop organization. Independent cattlemen also attended the event.

The workshop provided a quick introduction to the priorities of the cattlemen of the Caribbean-Atlantic zone in Honduras. Professors Matamoros and Restrepo were key to its success. Professor Matamoros was very generous with his time, and thanks in great part to him we left the Caribbean area of Honduras with a very good knowledge of the cattlemen and jaguar situation.

The meeting was composed of presentations in the morning and a plenary meeting in the afternoon which the attendees were divided in four discussion groups (with an additional report on the Mosquito zone) to express their opinions.

The presentations included

- Introductory Remarks delivered by Luis Ramirez, President Asociacion de Ganaderos y Agricultores de Atlantida (AAGA), with brief remarks from Jorge Restrepo (Zamorano), Carla Carcamo, Director of Wildlife, Institute of Conservation Forestal (ICF), and Leonardo Lanza (Dirrecion de Biodiversidad, Secretaria de Recursos Naturales y Ambiente DIBIO-SERNA).
- Isidro Matamoros provided an overview of Zamorano's programs with ranchers and the state of ranching in the Atlantic region of Honduras
- John Polisar presented the regional jaguar conservation program, advances made thus far, concepts and tools, and the purpose of the meeting.
- Rafael Hoogesteijn presented options and tools for managing cattle in jaguar range, including ways to reduce losses and improve co-existence.

During the afternoon session, the following questions were asked to the four groups in which the participants were divided:

- 1) What are the main problems that Honduran cattlemen have in relation to large predators – jaguars, pumas, and others?
- 2) What are the main difficulties of the Hondurans cattlemen in relationship with cattle production, cattle health and markets?
- 3) What would be their goals to improve integration of meat and dairy production and environmental conservation, including A): Improvement of the production; B) Reducing losses; 3): Resolution of conflicts with large cats; and 4): Conservation of general environmental values and biodiversity.
- 4) Priorities of the cattlemen (production and environment) in the Jaguar/Mesoamerican Biological Corridor in Honduras.

## **Detailed Group Responses**

### **Group 1 Responses:**

1. In the Pico Bonito and Cuero Salado areas there are few predation problems, there are several protected areas, poaching is low and there is abundance of natural preys for the jaguar.

2.-The main needs are genetic enhancement/improvement of the cattle and animal nutrition. There is very little sanitary control from the government and there is not a stable market during the year (some times production exceeds demand and other times there is not enough production to meet demand).

3. Goals to improve:

A) The Country needs to be stratified to better plan appropriate use of the soils and conservation of the environment and the natural resources.

B) Producers lack genetic and nutritional improvement programs.

C) They lack modern technology to produce and process their products and value-added products, instead selling only raw materials.

D) Translate the direct benefits from conservation of protected areas and corridors to the producers who are taking care of the natural resources but often are the ones who do not receive benefits (there is the belief among cattlemen that NGO's and governmental organizations receive money from donors and that biologist and researchers have huge salaries and do nothing). The cattlemen are the ones who defend these areas, face poachers and illegal fishermen, and even deter some "campesinos" who are extracting timber illegally. Cattlemen do this alone, without any governmental help and did not receive any revenue for this or help in vigilance. There is an urgent need of implementing a well oriented control of the deforestation and poaching. The cattlemen cannot do it alone and while doing so they generate enemies.

**Group 2 responses:**

1. Representatives of group 2 are distributed in the zones of Jutiapa, Lean, Esparta, and Sonaguera. Twenty five years ago an attack on domestic animals was reported in Salitrán, Jutiapa. In 2007, in the same area they killed a jaguar cub, and several times they have observed jaguars due to the large amount of native prey such as guatusas (*Dasyprocta punctata*), and tepescuintles (*Agouti paca*). There have not been recent reports on attacks to domestic animals but only presence of jaguars. However, In the Camelias, in the La Masica zone close to the Perla River there has been reports of attacks to horses and dogs in the farm of Ing. Osmán Celan Nolazco.

2.

A) In the time of year when there is higher production there is not enough market, and vice versa. The lack of market and the over production causes a 50% profit loss.

B) There are not incentives from the government for milk production (no subsidies or incentives to the producers).

C) Prices are high for food concentrates, vaccines, vitamins, and other drugs for diseases prevention and treatment.

3.

A) Improved nutrition (fertilization, and improved pastures).

B) Genetically high-quality cattle.

C) Access to reasonably priced, good quality inseminating bulls, or low cost artificial insemination.

D) Its necessary to bring better technology in ranches and have a secure market for the production, as well as a diversification of production.

E) The AGAA presented a reforestation project for the ranches of the zone but this was never realized. Since the association was born at least there have been a major communication and there has been security for products in the market.

F) The use of electric fences and cattle confinement during night hours (to avoid cattle thieves) are the techniques more common applied.

G) The diversification of ranch production with activities like eco-tourism, the use of bio-digesters to reduce costs and cultivation of protein fixed plants like "Madreado" or "Mata-Raton" (*Glyricidia*), *Leucaena*.

4. Market improvements, training in environmental topics with emphasis in options of hygienic production, and a deeper understanding of biodiversity in their areas. As an additional point they discuss the benefits of the no eliminating of reptiles, foxes, owls, and hawks, as a way to control rodents and avoid diseases transmissions like Leptospirosis.

### Group 3 Responses:

1. There are several recent reports of predation in Camelina, Falda Sur de Cordillera Nombre de Dios, Santa Rosa de Aguan, Ceibita Way, Cefalú, and Mezapita.

2. There are difficulties in the marketing of production.

- a. The production is seasonal
- b. There are not control in prices
- c. Lack of technical assistance

- d. Lack of irrigation systems
- e. Need more product diversification
- f. Lack of people trained in intensive production
- g. Lack of motivated farm personal
- h. Lack of added value to the products and inadequate market development

3.

- a. Training in Agro-Silvo-Pastoral production systems.
- b. Management plans at the ranch level without damaging the forest and the environment.
- c. Reforestation plans at the ranch level.
- d. Need of help to further integrate the CRELs. Need information over potential alliances, Certification training.
- e. Effective control of poaching. Conservation of the food web and their habitats. Raising awareness campaign among producers for the environment and the biodiversity.

4. Implement new technologies in ranches with an integral focus of conserving the natural resources and enhancing the productivity.

#### **Group No 4 Responses:**

1.

- A) The large cats are a threat because the pressure on the forest caused by the burning and deforestation will push the large cats toward the cattle zones.
- B) There is not certainty on the land tenure.
- C) In case of cats attack who should we report, denounce, or ask for help?
- D) There are also problems of cattle predation by crocodiles (*Crocodilus acutus*).

2.

- A) Market: we don't have a formal market, there is not buyer for the milk we produce, rather for the milk that the processing plants want to sell (the problem of over and under production).
- B) The semen is sold at an excessive price, and there is not implementation of specific artificial insemination for the genetic herd improvement.
- C) Regarding the meat sell the market is saturated with meat from other countries that is imported into the country without taxes.

- D) We want to ask the government:
- 1) We can provide the milk for the student lunches by sending it to the local schools.
  - 2) Regulate the milk price, provide a better price at the producer level, because the processes plants that buy milk (Leyde and Sula) pay a minimum cost and sell it to a higher price.
  - 3) In the animal health sector - the prices of medicines are high and there is not governmental control.

3.-

- A) Production diversification, assuring a market for the products.
- B) Genetic improvement.
- C) Better nutrition by enhancing the pastures, using and having access to good quality concentrated food and mineral salts, at lower costs.
- D) Implement alliances improvement with NGO's and other governmental organisms, for the implementation of certification to bring economics benefits to the primary producer like: "Jaguar friendly meat, milk and cheese." Help in the eco-tourism strategies of the cattlemen.

4.

- A) Government agreements to assure and improve national and international markets.
- B) Information centers when there is presence of large cats in the area o predation problems.
- C) Keep an ecological equilibrium in the ranches.
- D) Protected the forested areas that are "sources of water".

### **Observations from Mosquitia Representatives:**

Franklin Castañeda, researcher of AFE-COHDEFOR (Rio Platano Biosphere Reserve and Zone of Gracias a Dios, near Punta Lempiras), Fredy Amed Posas Nuñez AFE-COHDEFOR, civil engineer and coordinator of the six protected areas in Olancho (Parque Nacional Sierra de Asalt, Parque Nacional Patuca, Refugio de Vida Silvestre El Armado, Reserva de Biosfera Tawahka/Asangni, and Monumento Natural Boquerón)

There are numerous problems reported in 2008 related to jaguars and pumas attacks. Sometimes they attack pigs too. In the Culmi zone near Agalta, there were cattle attacks like 10 or 15 years ago, as well as the Malacate area. In 1994, the attacks occurred near Rio Blanco when the agricultural frontier was there, now that the frontier has moved to Matamoros, the attacks are there.

There are some organizations, such PROBAP and the production projects. (Ej. Mario Guifarro). There are cattlemen associations in Patuca as well as in Tawahka

Cattle ranching is extensive in part due to jurisdiction/land tenure issues. The access to the area is difficult and that elevates costs and makes it difficult to selling products too.

There are intensive hunting on some jaguar prey species such as white-lipped peccary (Jabali, Chanco de Monte o Jaguilla).

There are forest patches among the cattle ranching areas and cattle roam freely between grasslands and forest. The cattle are primarily for meat.

There have been some organized groups that hunt and kill jaguars and some cattlemen offer rewards for the killed jaguars.

The INA has offered land titling to the owners inside protected areas.

In Olancho there are ranches of between 200 and 1000 cattle head in production

The only market available is the Empacadora de Catacamas or the animals are send to Tegucigalpa.

The problem in the SICO market is mainly the long distance and the lack of roads, In Sico they sent all the products to Iruya. The cattle ranching is totally extensive. There are not investments because of problems in land tenure. There is not intensive cattle management and only meat and cheese are produced. The cattlemen in Sico have between 500 and 2500 cattle heads.

Around Brus Laguna the cattle ranching in Brus Laguna is small to medium scale, many Miskitus only have between 5 to 10 cows, but a few have between 500 to 800 cattle. In this zone and since mid's 1990's there have been many attacks by large cats on livestock, especially to the calves but also to adult cattle and horses. Many cattlemen have offered between 200 and 1000 lempiras (between 10 to 50 US\$) for the hunters that can show proof that they killed a jaguar recently. A cattleman lost 63 calves and 5 adults in a period of 5 years. In the same period of time the cattlemen killed 14 jaguars and the problem was not reduced at all.

### **Visits to Cattle ranches in the zone of the corridors**

In September 4, the core group visited several cattle ranches in the jaguar corridor. The first one was Captain Luis Danilo Ponce's Hacienda San Luis adjacent to a the Nombre de Dios range. The ranch has milk producing cows, horses, lambs and several wild species in a private zoological park. Last year, workers from this ranch killed (without the owner consent) a young jaguar male in the mountain near the ranch. We walked half of the path to the that reaching a

vista which gave us the opportunity to see the San Luis Ranch from above and beyond on the other side of the main road, the African oil palm plantations.

Ranchers in this area agree that the African palm plantations pay better than the extensive cattle ranching but not than intensive cattle ranching. The majority of ranchers see value and security in diversification.

We visited another ranch that had combined cattle production with and recreational pools in natural thermal waters, a forest canopy-cable ride and a restaurant.

We also visited the Tierra Firme ranch owned by Mr. Fernando Valdéz. This ranch has milk producing cows and also oil palm plantations. Mr. Valdéz took us on a boat tour in the Cuero y Salado Wildlife Refuge which is adjacent to his property where we visited "La Quebrada" and "Laguna de Garcia" in the picturesque estuarine complex. The soils in this area appear rich, the grass and the vegetation exuberant, and the reserve is a mix of rivers, ponds, lagoons, swamps and solid ground. The rivers have snook, tarpon, crocodiles and manatees. The forests have jaguars, peccaries and large rodents.

Finally, we visited the Hacienda of Mr. Javier Zelaya, who produces milk, and is developing an ecotourism hotel along Rio Bonito which exits Pico Bonito National Park. Waterfalls descend into a huge rock line natural swimming hole, adjacent to where Mr. Zelaya is building a high end tourist hotel and restaurant.

The areas around La Ceiba include pineapple farms owned by the Dole company. The export port is through Puerto Cortez and the pineapples arrive in three or four days to Miami or Texas.

La Ceiba is a busy city, the third largest city in Honduras after Tegucigalpa and San Pedro Sula and renowned for its Caribbean rhythm and flavor. It is the source of the Garifuna originated punta music and dance, a lively annual Carnival, and as the departure point for the world famous destination resorts on the Bay Islands of Roatan and Utila.

The agriculturally productive areas around La Ceiba lay adjacent to the Nombre de Dios mountain range which rises 2000 m (>6000 feet) above the city. There are beaches along the coast from Tela to Trujillo, and several rivers from the mountains end in the sea, some providing white-water rafting opportunities enroute. The diversity of ecosystems ranges from cloud to coral reefs. Lodges such as the Pico Bonito Lodge embedded in the national park, already capitalize on some of the tourist potential. The Javier Zelaya ranch with one half cattle ranching and one half nature centre with an elegant hotel under construction is an example of how tourism can be integrated with production in this section of the Mesoamerican Biological Corridor. The area was a focus of Paseo Panthera in the 1990s and it shows. Its tourism potential remains, albeit under threat, and

certain to benefit from more closely integrated production and conservation planning.

On September 6, John Polisar and Rafael Hoogesteijn met with Jaime Rosenthal in Banco Continental in San Pedro Sula. Mr. Rosenthal had recently bought 7,000 hectares of cleared and prepared cattle rancing land on the Honduran side of the Rio Coco across from the Tuburus station in Nicaragua where the Saint Louis Zoo/Wildlife Conservation Society Bosawás project has stored equipment and boats. Mr Rosenthal was very interested in future collaborations, and invited us to his property which he plans to plant with mahogany increase its value and improve the watershed. The Rio Coco corridor is threatened by uncontrolled ranch development and we hope to visit Mr. Rosenthal and his property. Several days after our visit he communicated his decision to invest 200 million Lempiras (\$10,000,000) to create “Fundacion Biologica Educativa Jaime Rolando Rosenthal Hidalgo (FUNBIORROSEN)” to help Honduras preserve the fauna and the flora.

## **SUMMARY OF THE ACTION POINTS RAISED BY RANCHERS**

### **Production**

1. Regarding the lack of stable market for the milk. Sometimes in the rainy season (when good forage results in high production) the market is saturated and producers have to sell at low prices or amounts. The market is defined by the least productive season which is the dry season when forage is poor. Its possible to better plan the calving season, but it also makes sense to store silage. The better storage of silage can make the dry season more productive. Regarding the question of increasing the market for dried milk, the quality has to increase substantially. **Action point – increase silage production.**
2. Regarding the point that there is not financial help for the producers (such as small loans), many of them don't have land titles, and without that it is difficult to qualify for a loan. Also many do not keep financial records and without that they again are difficult candidates for loans. It is possible to help with the process of land-titling and also provide training in how to maintain financial records. **Action point – assist land titling and provide training in financial record-keeping.**
3. Regarding the difference between costs and benefits of production, in reality there are adequate profit margins, but due to the scale of the profit (low), the producers can have a perception of a negative balance. versus the positive balance, in real there are always positive balance but the proportion is small in the bad times versus the good times. So producers have a biased perception that the balance is negative.

4. The hopes for irrigation systems is a response to climate change and strong dry seasons. However, such systems may be too expensive and complicated for broad applications. Better to **conserve silage during the rainy season**.
5. Regarding diversification of ranches. We can write proposals to FINTRAK to promote non-traditional agriculture in the area. Also if the Zamorano International Center for Vegetable Harvests starts, that can help.. Rambutan is an example of a non-traditional crop. **Action point – proposals to help ranch diversification**.
6. In reference to the lack of qualified labor. It is possible to provide training in the areas. There are two options: 1) intensive training for people for one week in Zamorano; 2) training in the CRELs. **Action Point – decide which is preferable and develop it**.
7. Regarding imparting added value to the products, the products have to be of very high quality and high sanitary standards to be certified. One problem is that the large milk companies are in Costa Rica (Dos Pinos) and in Nicaragua (Parmalat). The tax situation in Honduras is problematic. The import taxes for dairy products are so low (10%) that there is no incentive for these companies to invest in the development of dairy plants in Honduras. are low and only symbolic for taking the milk out of Honduras (10 %). It would be good if Parmalat had a plant in Honduras. **Action Point – political process, see below**.
8. Training in the CREL's to become cooperatives relates to preceding above. Cooperatives have more lobbying power and influence. Zamorano can help in training the 46 CREL's in "Cooperativismo" with their Programa Empresarial (PRO-EMPRESA). Fundacion Covela also has the same training capacity. **Action Point – Develop training for CRELs in "Cooperativismo"**.
9. Regarding potential business alliances. They can have a person in the Associations of Agriculturists and Ranchers (AGAs by the spanish initials) that would serve as center of communication for markets. This AGAs could do this and Zamorano could train them. **Action Point – Develop training for AGAs in market development**.
10. Training in agrosilvopastoral systems is possible and good to increase its availability. **Action Point –Explore this with CATIE. Develop opportunities**.

## **Conservation**

1. Training in certification as Jaguar Friendly or Environmental Friendly ranches and farms. Wildlife Conservation Society and Panthera should consider this, the conditions and processes. **Action Point – Polisar inquired about this to appropriate WCS support staff, was guided to links, needs to pursue and develop. Panthera should consider. Three way conversation**.

2.
  - A) Support ranches to develop management plans;
  - B) Help ranches with reforestation plans;
  - C) Campaigns to raise environmental awareness in the producers to protect the biodiversity;
  - D) Provide technical assistance to the ranches, improve productivity, linked with integrated conservation of natural resources
  - E) Intensify the operations to allow space for conservation;
  - F) All the above can be related to green, certified, jaguar friendly ranches.

**Action Points – Develop Proposals, support, capacity for this program.**

3. Improve the control of illegal hunting, trespassing hunters, this is something that the Institute for Conservation Forestal (ICF) and DIBIO-SERNA could assist.  
**Action Point – WCS and Panthera talk with ICF and DIBIO-SERNA. Agencies decide on how to improve current situation. Action from agencies.**

4. If the cattle ranchers are also protecting against poaching it would be good to better recognize that, design new models, potential benefits, and pay more attention to private conservation. **Action Points - WCS, Panthera, ICF, DIBIO-SERNA discuss and develop options that better recognize private conservation.**

5. There should be a better control of indiscriminant forest destruction by timber interests. For the moment (September 3, 2008) it seems that the government agency has no control. The agency needs to improve, needs to improve and advance the situation and make certain that timber extractors don't damage public and private lands. **Action Points - Improve proactive interventions by ICF.**



**View from La Ceiba to Pico Bonito National Park. The north face of this mountain range abruptly climbs approximately 6,000 feet.**



**View from the flank of Nombre de Dios – Hacienda San Luis and African Palm Plantations beyond. Caribbean Sea in distance.**



**The Nombre de Dios Range viewed from the Cuero y Salado Wildlife Refuge**



**Scenic wetlands of Cuero y Salado**





**Drummers Carnaval La Ceiba**



**Parade La Ceiba**



**Caribbean Coast Northern Honduras**

**LISTA DE ASISTENCIA  
TALLER DE GANADERIA Y CORREDORES BIOLÓGICOS EN EL LITORAL ATLÁNTICO**

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4	Rosa Zelada Diaz	CEYDE S.A.	Superior C.L.C	99988652
5	Enrique Rios	Saint Rainer	ESPARTA	3387971
6	ANGEL ANTONIO DUBOIN	TECNICO AFAA-LEYDE	ASIST. TECNICA	902 651 47
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9	Fernando Valdez	Independiente	La Union	97755550
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12	Hector Samon Andez	Ctel Rubilio B'A	Secretario	3358-82-55
13	Luis Danilo Ponce	Independiente	Propietario	9983 62 74
14	Jose Guadalupe	Carthago 2-1111	Ph-abante	9961921
15	Jose Cardenas	CREL Turcios Sarmiento	Tesorero	95 94 95 90
16	Tulio Turcios	Celc Turcios Sarmiento	Presidente	438-91-07
17	William Murphy	CREL Turcios Sarmiento	Administrador	9914 26 35
18	David Escalante	CREL Mezquita S.C.B.	Sono	9686 61 30
19	Nennin Soriano	Mesquita	Socio	98598975
20	Fredy Amad Ponce	AFCOINTEFOE Okendo	Coord. Hdo. S. Inter	95202292

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21	FOLETTI CARLO	PROYECTO PROCORREDORES SERVA	ASISTENTE TÉCNICO-FERRETERIA	95790246
22	Geoffredo Martinez	CREL (MVA) Elexir	FISCAL	9995-31-04
23	Carlos Ambrósio Duarte	CREL Elixir	Vice-presidente	9954 22 07
24	Felipe Marcel Hernandez	CRUZ AGUILAR Y ASOCIADOS	Socio	9746-05-54
25	Jose Funez	CRUZ Aguilár	Socio	9935 6832
26	Neerol Henzada	CRUZ Aguilár	Socio	
27	Virgilio Rodriguez	CREL Agua Amarilla	Junta de Vigilancia	97176095
28	JOSE RAMOS	CREL Agua Amarilla	UDCAL	9838-0164
29	William Medora	CREL Agua Amarilla	Representacion - Presidente	95 80 83 91
30	Adm Dñeiz Escobar	CREL Padilla-Somaria	Socio	—
31	Dilson Estrain Padilla	CREL Padilla-Somaria	Presidente	99340278
32	Romallo Quintero	CREL Padilla-Somaria	Comite Vigilancia	9888-3966
33	Jose Abel Escobar	Directivo ASAA	Secretario	99987214
34	Jose Atelma Chinchilla	Coordinador SENASA	Coordinador Regional	33439214
35	Mauricio S. Mercado	Zamorano	J.P.A.	33363405
36	ROGER A MEDRANO	INDEPENDIENTE	SOCIO	9683 3644
37	A. Davis Bernador	Independiente	Socio	98569968
38	Manuel Montalvo	Humberto y Asociados	Presidente	33-03-38-90
39	Abis Muro Torres	Humberto, Baylón y Asociados	Secretario	97-39-55-25
40	Jose Gerardo Guardado	CREL Castros y Asociados		9914 82 83
41	Renerio Mera	CREL de Tomala	Administrador	96-25-67-91
42	Enrique Diaz Monje	CREL de Tomala	Secretario	97012236

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N.	NOMBRE	CREL O INDEPENDIENTE	CARGO	TELEFONO
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45	Federico Ayala	CEROS CLAROS	FISCAL	98-94-6474
46	Marlain Guardado	CEROS CLAROS	Tesoro	97283978
47	Leico Delmo	Monte Siglo 21	Presidente	98-81-15-98
48	Chuton Delmo	" "	Socio	97-28-56-21
49	Amot Nery	Monte Siglo 21	Tesoro	
50	Luis Cardona	El Monte	Presidente	
51	José Manuel	Monte Siglo 21		9748460
52	Rosa Salvador Rivera	CEROS CLAROS	Presidente	98-28-62-58
53	Graciela Herrería	PROLANSATE	Coord. Promoción y Asesoría	33317160
54	Edwilda Zayas	PROLANSATE	Directo Ejecutivo	9731686/2042
55	Quintín Perla A.	Bohía de Telles	Especialista Amb.	448301 99558966
56	Fito STELVEIT B	RESERVA ESTERNA	ASesor	998A-0600
57	Antonio Rivas C	RESERVA ESTERNA	PRESIDENTE	4412106/4414021
58	Rodrigo Torres	Organización	Presidente	
59	Rodrigo Cardona	Organización	Tesoro	99329554
60	Nelson Ulloa	Proy. Fertilizante	Responsable Amb.	33-12-8425
61	Yvonne Zúñiga	FURNANO	Administradora de Ecoturismo	9854-0902
62	Tipis Delgado	AFE - COADEFOR	Coord. Areas Protegidas	412-28-33/38-00
63	Muna Padilla	CREL # 52-07	Administrador	3380-63-77
64	Juan Barrera	CREL Monte pobre	Tesoro	3251-9440

**LISTA DE ASISTENCIA  
TALLER DE GANADERIA Y CORREDORES BIOLÓGICOS EN EL LITORAL ATLANTICO**

N.	NOMBRE	CREL O/ INDEPENDIENTE	CARGO	TELEFONO
65	Melida Cruz	Riquelme Valle	Tesorera	3371-37-84
66	Marcebalino Reyes	-	socio	9916-90-89
67	Franklin Castañeda	AFE-CHDEFOR	Biologo	233-1337
68	Carla Patricia Calcano	AFE-COHDEFOR	Jefa V. de Silvestre	243-4346
69	José Ramon Praugrand	CREL Augusto Praugrand	Socio	32700257
70	DSE M. MORA B.	ZAMORANO	Profesor	9865 0384
71	MARY MONTAÑA	INDEPENDIENTE.	SOCIO	96424036
72	ALEJANDRO MONTAÑA	INDEPENDIENTE	SOCIO	96441916
73	Cantaleiro Andino	Administrador AGAA		3342-2173
74	Xiomara Romero	Secretaria AGAA		9589 3343
75	Manuel Rivera	CREL Salitran	Socio	9698 4150
76	Jorge Bonilla	Fund. pmdimite	Socio	9691 2845
77	Carlos Duarte	CREL el ipix	Socio	99790951
78	Godofredo Morales	CREL el ipix	Socio	-
79	Cesar Valdez	INDEPENDIENTE	Socio	-
80	Mario Ramirez	INDEPENDIENTE	Socio	-
81	Mario Macedo	TESORERO		9995-2183
82	Arnando Portillo	Salitran CREL	Presidente	9346-8355
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84				
85				
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