

January 23, 2011

Xiomara Acosta Diaz Head, International Relations ANAP

Dear Xiomara;

Attached is our Project Report on the December CPA visit of Morgan and Darryl Donneral. Thank you so much to everyone for the wonderful coordination support ANAP provided for this visit. It was much appreciated by all of us. The CPA did a wonderful job preparing for Morgan and Darryl's arrival, and because of their hard work, the visit was very successful.

Morgan and Darryl's report reviewing the wonderful results that have been achieved by the CPA is a delight to read. We would all like to compliment Juanito and the members of the CPA for doing such a fine job to realize the objectives of the project. It is very rewarding to see all of our joint decisions implemented so effectively, and to see the results reflected so strongly in the financial returns to the cooperative members.

We would encourage the CPA to remain focused on the following priorities in the months leading up to our August 2011 Project Visit.

- 1. Continue to remove all King Grass that re-establishes itself in the pedestals.
- 2. Complete works to bring irrigation to second field of rotational pastures east of Agropecuaria.
- 3. Run the pumps at night when the electrical voltage is more stable.
- 4. Continue to remove scrap metal from the fields. This can be very injurious to cattle.
- 5. Continue to follow the strategic plan (also attached) to develop/enhance nutrition capacity.

We are sending down a few more materials needed by the CPA with Ontario farmer Pete Huitema (a second visit, he also came in 2003) who arrives in Varadero the 31st as part of Delegation #29:

leather gloves wire calume grip come-a-long pair of boots two multi-tools couple of pocket knifes pick kit and nose bag two hack saws hack saw blades switches auger drill bit and hand drill

We will deliver them to the CPA when we visit on Thursday Feb 3rd. It would be very helpful to have some documents to show to customs to support this donation.

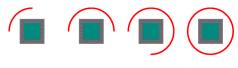
After this Delegation, I will return to Havana February 14th and 15th and look forward to meeting with you at that time!

In solidarity and respect:

Wendy Holm, P.Ag.

Dendy R. Holm P. As

cc Orlando Lugo Fonte, Mario La O, Maria del Carmen, Juan Carlos Loyola Florat, Aurelio Alvarez Mendez, Morgan and Darryl Donneral, Jim and Gladys Millson, Jane McRae, Sustainable Cities



Sustainable Cities

Mejorar la Capacidad de Producción de Leche Sostenible en Cuba Plan Estratégico 2011 – CPA 26 JULIO

TAREAS

- 1. Completar los trabajos en el sistema de irrigación para cubrir las 6 hectáreas de pasto para raciones y agregar las últimas 15 hectáreas de pasto rotacional al sistema.
- Los miembros de la CPA con la responsabilidad de mover el ganado entre los pastos y los pedestales asistirán a una conferencia que brindará Aurelio Álvarez Méndez, perteneciente a la IIPF, la misma tratará acerca de cómo optimizar la rotación de los pastos.
- 3. Reexaminar y medir cual será la capacidad de raciones de las que la CPA podrá disfrutar una vez que se completen los trabajos de irrigación y haya sido renovado hasta el último pedestal eliminando el King Grass; con vista a responder las siguientes preguntas: ¿Qué parte de las raciones requeridas por los becerros, terneros, toros, vacas y búfalos puede suministrar la CPA con 3 hectáreas de pasto leguminoso en pedestales, 30 hectáreas de pastos rotacionales mejorados y 6 hectáreas de pasto para raciones? ¿Está todo listo para que se produzcan raciones diferenciadas? De ser así ¿Cuál sería la composición nutricional de cada una? ¿Cuál sería el proveedor que utilizaríamos para los minerales necesarios para las raciones? ¿Pudiera la CPA llegar a ser autosuficiente (que no se necesite nada del exterior de la CPA) si así se decidiese?
- 4. Asegurarnos de que el programa de cría de becerros está marchando sin problemas de ningún tipo, de que los mismos están saludables y de que las raciones están disponibles. Además resolver cualquier problema que pueda aparecer en este punto.
- 5. Revisar todos los componentes eléctricos que alimentan la cerca para comprobar que todos estén funcionando correctamente. Investigar el problema que está causando la corta vida de las baterías y los cargadores. Reemplazar tres baterías marítimas de celda profunda que se encuentran ya sin carga (por favor podría la ANAP investigar si es posible abastecerse de estos componentes en Cuba). Determinar problemas y posibles soluciones.
- 6. Identificar los costos que requeriría la renovación de la construcción en el agropecuario (aquella que dicen fue la casa del maestro de José Martí) y transformarla en un centro de entrenamiento para el programa de Campesino a Campesino. Con capacidad para albergar 12 campesinos y un salón de reuniones equipado con sillas y un pizarrón.
- 7. Hacer una revisión del proyecto en conjunto con los otros socios (CPA, ANAP, IIPF, equipo de trabajo), de modo que se identifiquen las necesidades futuras del proyecto y las mejores formas a utilizar para la medición de resultados.

ESTRATEGIAS

Que la ANAP y la CPA nos informen acerca de cuándo se planea terminar las tareas del sistema de irrigación.

Una vez que el sistema de irrigación esté completado que Aurelio Álvarez Méndez, prepare su taller acerca de la optimización de la rotación de cultivos.

Que Morgan y Darril visiten la CPA en las fechas entre año nuevo y Navidad (es el único periodo que Darril tiene libre), para ayudar con el completamiento de las tareas 3,4 y 5.

Que la ANAP trabaje con la CPA para acometer la tarea 6.

Wendy, Jim y esperamos que Gladys, visitaremos la CPA en agosto del venidero año 2011, parareunirnos con la CPA; la ANAP y la IIPAF, para revisar los puntos que arroje la visita de Darril y Morgan, y además acometer la tarea 7.



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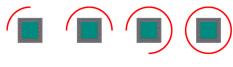
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Sustainable Cities

Enhancing Sustainable Dairy Production Capacity in Cuba 2011 STRATEGIC PLAN CPA 26/7

TASKS:

- 1. Completion of the irrigation works to support the 6 hectares of ration crop production and bring the last 15 hectares of rotational pasture into irrigation.
- 2. Members of the CPA with responsibility for moving the cattle between pastures (and pedestals) attend an on-farm workshop given by Aurelio Alvarez Mendez, IIPF, on how to optimize grazing rotations.'
- 3. Review and measure the on-farm ration capability that the CPA will enjoy once irrigation works are complete and the last pedestal is renovated out of king grass... How much of the daily ration required by calves, heifers, cows, bulls and buffalo can be met by the CPA's 3 hectares of grass/legume pedestals, 30 hectares of improved rotational pastures and 6 hectares of on-farm ration crops? Are the processes in place to produce the differentiated rations? What is the nutritional component of each? Where can we source the needed minerals? Could this CPA be self-sufficient (need nothing from outside) if it chose to be?
- 4. Ensure the calf-rearing program is running smoothly, calves are healthy, ration is available. Identify and solve any problems that arise...
- 5. Look over the electrical systems supporting the fencing to make sure the components are all functioning optimally. Identify why there have been some problems with the life of batteries and chargers. Replace three existing (dead) deep cell marine batteries (ANAP please identify if these can be sourced in Cuba or not?). Try to determine cause and solutions, if available.
- 6. Identify the costs to renovate the building in the agropecuario (that we are told was once the home of the doctor of Jose Marti) an turn it into a training centre for farmer-to-farmer extension. Bunks to sleep a dozen visiting farmers plus and meeting room with blackboard and seating.
- 7. Review with all Project Partners (CPA, ANAP, IIPF, Project Team) all aspects of the Project, identify any further project needs, and decide how to best measure results.

STRATEGY:

ANAP and CPA tell us when you expect to complete the irrigation improvements (Task 1).

Once proper irrigation is in place, Aurelio Alvarez Mendez, IIPF, prepare and deliver his planned workshop on optimizing rotations.

Morgan and Darryl Donneral visited the CPA between Christmas and New Years to help with Tasks 3, 4 and 5.

ANAP to work with CPA to undertake Task 6.

Myself, Jim and hopefully Gladys visit during the first two weeks of August 2011 to meet with the CPA, ANAP and IIPF to follow up on any points from Morgan and Darryl's visit and undertake Task 7.

Sustainable Cities - Cuidades Sostenibles

Sustainable Cities: 604-569-0965 ext 311, www.sustainablecities.net

Project Visit to CPA 26 Julio December 18-23, 2010 Morgan and Darryl Donneral



Background

In 2004, the CPA was in debt to the bank for approximately 1 million pesos. Juanito, President of the CPA, told Lugo Fonte, President of ANAP, that he would like some help to get the CPA turned around and profitable. Lugo said that he had a project with Canadian farmers in order to help the CPA. When Wendy arrived Juanito could tell that she was unsure if this CPA could become her reference CPA, but Lugo reassured her and the project began. (Wendy's note: I never had a doubt!! ①)

Dairy

They are milking once a day in the dry season and twice a day in the rainy season. Their calving interval is 13-14 months and they breed and calve all season. Three to four months after calving, they give the cow estrogen to bring her into heat and breed them artificially to Holstein sires. (Although I did see a bull in with the cows, probably for clean up breeding.)

Recently the CPA has purchased their own milk cooler, which was shipped in from Panama and is the same size as the one issued to them by the State. They also have a new, portable mechanical milking machine with two milk jars for automatic milking. They are not using it yet because they don't have the proper power in the milking area.



Calves are separated from the cow after one or two days and fed by bottle. The calves are fed a milk replacer called "Raltec" which is supplied by the Empressa "Pequaria del Sureste". They also get a ration which is made up of mainly ground corn, some yucca, sorghum, soybean and mineral (supplied by the Empressa) also a king grass, sugarcane, and caravale (the whole plant) mixed and chopped up as forage.



Aurelio Alvarez Mendez, from IIPF (Instituto de Investigaciones de Pastos y Forajes) has come many times to the CPA and they are working under his and ICA's (Instituto de Ciencia Animales) advice. The calves are fed milk in a bottle for two months in an area close to the milking area. Then they are moved to an area by the Jose Marti house where they get milk in a bucket until four months old. After feeding them milk they are shown how to drink water (via finger sucking). This area has calves three- six months old.



The calves are rotationally grazed in 32 small fields spending three days in each field. They said that this also helps with disease control. After six months the bulls are sent to be raised for meat and the heifers go to the heifer yard.



Yahima is the lady in charge of all the dairy calves. She, her husband and three young boys live in a small house that was built by the pig area. At feeding time her boys are right in the pen helping feed and sort out the calves that have been fed (future calf raisers).



Yahima says that she does not lose any calves and when they get skooty-poo's she gives them a vitamin B complex needle. She said that the calves are not as fat as when the cow was raising them but they are still growthy. She also has a water Buffalo calf that was rejected by its mother and was not eating, but she managed to nurse it back to health.







Marta Suarez, who came to Canada for training in July 2009, is in charge of the 2 Hydrometers and receiving/testing milk from other farmers. She said when they first received the hydrometers they caught a couple of people with water in the milk and rejected the milk. Now they are having no problems with milk quality. We spoke to the person in charge of the milk contracts and he says that this CPA has very good milk quality and they are the only ones in the province with Hydrometers.

Rotational fields

Currently (in the dry season) they are pasturing in the first set of rotational pastures because they have irrigation. They have water troughs placed out in the fields and have a person in charge of filling them. Juanito showed us a 1000 ft role of water line that he plans on using to get water to the troughs using the float that was donated from his trip to Canada. He said that he has three 1,000 ft rolls to get water out to all the fields. I went around a checked all of the electric fence, overall it was in good shape and I felt they had the correct understanding of the fencing system. The only problems were that they need to tighten the wire once a year, because stretching of the wire makes the fence loose. Also there were a few broken insulators on the rebar posts. They had the fencer working off of a tractor battery, which seemed to be doing alright. I checked the fence with the smart fix it said it had 2.2v or 2200v at the fencer (which is a reasonable shock) at the far end of the new fence it was 1.2v and 1.8v, top and bottom wire respectively. At the end of the old fence it was 1.6v and 1.3v. I thought this was really quite good and it still gave a pretty noticeable shock.



I asked Juanito about the pedestals and the king grass and he said that they took the king grass out two years ago, but I thought that there was a lot still in there. He said that it is very hard to kill and they have to dig it out.

They have planted a fast growing tree called "Framboyan" for shade and selective cut lumber in the rotational pastures (they are maybe 2-3 feet tall right now).

Irrigation

The CPA has three irrigation motors working and plan on connecting all of them with underground irrigation pipe so if one motor fails they don't lose the entire crop. Juanito says that he has 52 ha of irrigated pasture and after the new pipes arrive he will have a total 88 ha irrigated for crops and pasture. The new irrigation pipes purchased with the \$32,000 donated from the Canadian Embassy's Canada Fund have not yet arrived but Juanito is expecting them in the first few days of January, and the latest by February 15th.





We installed four meters to measure the voltage and the amperage the motor we sent was using. Darryl found that the pump was experiencing low voltage and therefore drawing more amps, which is hard on the motor. So we explained this to Juanito and that if he ran the pumps at night the voltage may be better because there is less demand for power at that time. Darryl, Juanito, Blais, and Inti went out after 10:30pm turned the pumps on and measured the voltage. The voltage was at the perfect level. So we strongly encouraged Juanito to run the pumps at night to protect the motors, while saving money because power is cheaper at night, also there is less loss of water to evaporation. I believe he will now run the pumps at night.

Beef Cattle

Five years ago, Juanito started with fattening 10 bulls for the State, he is now up 60 bulls for slaughter this year. He now makes contracts with the State (Army) saying that he will supply so many bulls for slaughter a year. (They shipped 35 while we were there). The State has agreed to provide one kg of ration per beef animal per day ex. yearlings and bulls. The army is very pleased with the CPA; they have supplied a machine for the CPA to grind the feed and are increasing their purchase orders. Juanito says that it is better to sell to the Army then the open market because he gets a good price and extra resources to fatten the bulls he wouldn't otherwise get. Juanito gets paid based on the weight of the animal: the heavier the better. For an animal that is over 400 kg he will get \$8.90 pesos/kg and the next lighter category (360-400 kg) gets \$8.00/kg. When we were there he shipped a truckload of 15 bulls and got \$56,076.67 Cuban peso's for 6,413 kg of bulls, with an average individual weight of 427 kg. This year they had 120 calves/yearlings and bulls, and next year Juanito is predicting to have 200 calves/yearlings and bulls. The bull feed lot was also renovated; the thatched roof was replaced with a new steel roof and they feed the bulls in the center instead of the outside.





Water buffalo

The CPA in the beginning was given 10 water buffalo cows and one bull. Now they have 120 water buffalos and just sold 20 for meat. The CPA was given a building previously use by the old factory (beside the tractor shop) to milk the water buffalo. They are also expanding the water buffalo herd.

Pigs

This year the CPA had 130 pigs shipped at 85 kg. They average 12-13 piglets per litter. In the pig area the manure water goes into a small tank at the end of the barn then over flows out. Juanito plans on building a type of terraced settling/filtering ponds to clean the waste water/manure better.





Tractors/supplies



Since the CPA has become so productive, the State has given Juanito the option to buy three new tractor motors and new tires for all of the tractors. The CPA has also refurbished their dump truck and plan on doing the same to the CPA's car. Juanito plans on fencing off all of the cropping fields in order to graze the cattle in the field after the crops are harvested. The State has also supplied the CPA with rolls and rolls of barbed wire to do so. The storage area off the tractor shop was just full of new supplies like paint, barbed wire, rope, milk jars, field tools, saddles, vet supplies, etc... all given to them by the State.

Hammer mill

When we got there the hammer mill was tripping the switch and not working. So Darryl opened it up and found that it was drawing too much voltage and tripping out. He tested the lines and found that the voltage drop over the lines from the tractor shop to the pig area was too great because of the long distance and small wire used to carry the power. So they decided to move the mill to across the road from the office where the voltage would be better and they could use it to grind stuff for the town as well. Until they have an area built for it they put it in the tractor shop to work on for now. After further investigation, Darryl found the bottom motor that runs the exit auger was getting seized, overheating and tripping everything out. Out of all three motors on the mill, the lower auger motor was the best on to burn out because now they can disconnect the bottom portion and the mill will work again.

Financial situation

Before the project began, the CPA was in debt to the bank and now they are clear of all debt with money in their bank accounts. In 2007 their gross sales were \$900,000 pesos, in 2010 it was \$1.4 million pesos gross and in 2015 they are predicting \$2 million in sales. This year they had \$350,000 left after all expenses. At the end of the year, half of this money is put back into the CPA to purchase new things and the other half is split between the members as an end-of-year bonus. (If a worker decided to take a day off work with out any good reason, they would have 10 days worth of "bonus money" deducted from their end-of-year bonus. For example, if the workers end-of-year bonus was 10 pesos/day, a worker who missed one days work for no good reason would be penalized 10 days bonus or 100 pesos.) Now, when Juanito walks into the bank, they say his business is not good for them because he has no dept and only uses them for the savings account. They say the CPA 26 Julio has the best economic outlook in the entire region.

Vermiculture and Intercropping

The CPA's new worm composting facility is now producing worm humus to important provide soil micronutrients and we continued to see good examples of intercropping – the picture shows and beans and sugar cane planted in association.



Over all

The CPA is becoming noticed as a profitable and growing CPA and will likely soon be named a CPA Referencia Nacional. They are benefiting through support from the State, ICA, IIPF and ANAP. Currently they have 786 ha of land and the CPA has requested 36 ha more from the State land to improve for the cattle. The overall moral of the people is up, more young people are interested in becoming members of the CPA, and the salary of the average member has increased four times. Out of 86 members, there are five or six members under the age of 25, and 14 women members. Members want to produce as much as they can because the more they produce the more they make. On Christmas day, the CPA threw a big party - the CPA provide two roast pigs, beer, and a big cake. All members and their families were invited and also brought one dish. This is the third year the CPA has been profitable enough to do so.



Because of the success of the CPA, ANAP's first meeting in the new province of Artemisa will be held at the CPA¹. Juanito says that many people ask him how much does he pay the Canadians. When he tells them he does not pay us they find it unbelievable and say it is incredible what we are doing for no money. We told them that our payment is the pleasure of seeing the success of everything working. Blais said that "the members are required to be here but the Canadians are not, so our contributions are appreciated 3 times more." Also "what we have done to help the CPA overcomes all the crazy things he has done." One of the members who used to work in the sugar cane industry says that the CPA is growing, is profitable and the future is promising. While on our visit we attended a party were the municipal people from ANAP were attending

and Juanito was informed that CPA 26 Julio had received an award for having the most superior production in the region. Juanito said that ANAP President Lugo Fonte visits quite often and he is very pleased with the success of the CPA. In the beginning people thought Juanito was crazy for thinking he could do so much but now he has proven them wrong.

¹. The province of Havana has been split into two provinces: the eastern portion is Artemisa, the western is Mayabeque.