



*Cooperative Program in Agricultural Research and Technology for the Northern Region  
Programa Cooperativo en Investigación y Tecnología Agrícola para la Región Norte*

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## REPORT OF THE FIFTEENTH ANNUAL MEETING

BOARD OF DIRECTORS OF PROCINORTE

March 5-6, Ottawa, Canada

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## **1. Background and Main Objectives**

The 15<sup>th</sup> Annual Meeting of the PROCINORTE Board of Directors (BoD), corresponding to the programming year from August 2012 to December 2013, took place at the Central Experimental Farm, Agriculture and Agri-Food Canada (AAFC), in Ottawa, Canada March 5-6<sup>th</sup>, 2014. The main objectives of the meeting were:

1. To review the PROCINORTE activities from August 2012 to December 2013
2. To review the Task Forces' (TFs) composition, annual progress and achievements, and progress made in the implementation of their Strategic Plans
3. To discuss the proposed PROCINORTE Strategic Plan 2013-18
4. To discuss budget and other relevant issues

## **2. Opening Ceremony**

The meeting initiated at 1:45 pm with welcoming remarks given by Dr. Gilles Saindon, Associate Assistant Deputy Minister of the Science and Technology Branch in the Ministry of Agriculture and Agri-Food Canada.

Dr. Caird Rexroad, President of PROCINORTE initiated the meeting indicating the BOD's appreciation for the institution's continuous commitment to promote agricultural research and collaboration among the three countries. He also stressed the scientific advances that PROCINORTE can deliver to other countries in the Hemisphere through PROCINORTE. A round of introductions of the participants in the meeting followed (Annex 1).

## **3. Approval of the Agenda**

As proposed by the Chair, the BOD approved the agenda adjustment for the later start (Annex 2).

## **4. Approval of the Minutes of the XIV<sup>th</sup> Meeting and Follow-up**

The decisions taken by the BOD during the XIV Meeting in Guadalajara, Mexico, were read out by the Executive Secretary (ES) and were ratified by the BoD. Dr. Fraleigh requested that draft minutes be available to the BOD members soon after the annual meeting, to allow for comments and earlier finalization.

It was requested that the institutions continue to quantify their in-kind contributions to PROCINORTE to demonstrate the commitment from the three countries. Canada has made an effort to quantify its in-kind contributions to the work of the TFs.

## **5. Report of PROCINORTE's Activities in 2012-13**

The Executive Secretary (ES) presented a Report on the activities from August 2012 to December 2013 in support of PROCINORTE's technical work (Annex 3).



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The main changes in the composition of PROCINORTE for the period occurred among the Canadian representatives. In March 2013, Dr. Denis Charlebois replaced Dr. Clement Vigneault in the Tropical and Sub-tropical Fruits TF, and was recently succeeded by Dr. Peter Toivonen, Research Scientist in Food Safety and Quality (AAFC) in February, 2014.

In September, Dr. Gilles Saindon was appointed as Canadian representative on the BOD. Dr. Brad Fraleigh who has a long and successful trajectory in the Board, continues to be involved in supporting Dr. Saindon.

Dr. Stephen Kappes, Deputy Administrator ARS/USDA, will succeed Dr. Caird Rexroad as US Representative in the BOD.

The ES indicated that the changes in technical personnel had an effect on the timely execution of activities in several TFs. Mr. Hatch noted there are several pressures in IICA affecting PROCINORTE's budget: IICA's own zero real growth budget; each year the budget of PROCINORTE must be defended within in IICA; skepticism about value provided by PROCINORTE; and the need to document in-kind contributions as far as possible.

The current composition of the Board and Task Forces is presented in Annex 4.

## **6. Task Force accomplishments during the period**

The chairs of each Task Force presented the activities carried out during the period since the previous BoD meeting as follows:

**NORGEN** is a very active technical group led by Dr. Fernando de La Torre Sánchez, Director of the National Genetic Resources Center of Mexico. The representatives of the US and Canada are respectively Dr. Peter Bretting – Head of Crop Production and Protection (USDA) and Dr. Axel Diederichsen - National Curator for Plant Germplasm (AAFC). The main results of the PROCINORTE collaboration for the period are (click [here](#) for presentation):

- A network of Mexican curators were trained to be knowledgeable on the use of GRIN-Global, an easy-to-use global plant genetic resource information management system<sup>1</sup>. NORGEN aims to improve the capability of Mexican genebanks to provide data to a global accession-level information system, which will make it possible to more accurately assess the “State of the World” for plant genetic resources, and to identify priority global needs for plant genetic resource conservation.
- Information exchange about the status of *in situ* and *on farm* genetic resources conservation of selected native crops of importance for food and agriculture. Researchers and curators from Mexico, Bolivia and Guatemala exchanged experiences and knowledge with local farmers on the participatory strategies implemented in their communities for

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<sup>1</sup> GRIN-Global is a version of the Germplasm Resource Information Network (GRIN), used by the USDA/ARS National Plant Germplasm System.



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conservation of genetic resources for important crops (maize, quinoa, beans, cacao, and cotton) (*International Workshop: In Situ Conservation and Utilization of Plant Genetic Resources in Oaxaca, Mexico*).

- Outreach with Latin American countries to promote conservation and sustainable use of genetic resources by participating in the *IX International Symposium of Genetic Resources for Food and Agriculture in Latin America and the Caribbean*. As a result of the participation of NORGEN delegates, the international Symposium of Genetic Resources for Latin America and the Caribbean (SIRGEALC, for its name in Spanish) agreed to include Canada and the U.S. in the event, which will now have a hemispheric theme.
- Dr. De La Torre updated the BOD members on the situation of the *Phaseolus* bean germplasm that was collected with support from NORGEN and the Sistema Nacional de Recursos Fitogenéticos (SINAREFI, Mexico). As per agreement of the BOD, the germplasm was deposited at the CNRG, and should be transferred to be studied in Canada and the US. Dr. De La Torre indicated that this germplasm will be incremented at CNRG to be sent to Dr. Axel Diederichsen at AAFC according to Mexican regulation.

**Plant Health TF:** Dr. Debora Fravel, Chair, participating by teleconference, indicated that the TF has followed up its 2011 decision to focus on invasive plant pathogens, insect pests, and weeds of high agronomic or environmental consequence for the three countries. Initial emphasis is on the Brown Marmorated Stink Bug (BMSB). This pest is the number one invasive species of interest for USDA as it is causing severe damage to tree fruit, small fruits, vegetables, row crops, and vineyards. A network of specialists has been formed to share knowledge and information, and contribute to research on this highly significant pest. The emphasis of this work is in understanding the bug's epidemiology and behavior. Control of stink bugs is a priority for USDA which has developed an artificial pheromone that can be used to bait traps.

A preliminary forecast, using a simulation developed by Mexican researchers, indicated that the BMSB could rapidly spread in Mexico and cause substantial damage to many food crops. Supported by PROCINORTE, researchers are continuing to identify likely bio-control agents from the indigenous insects of Mexico, working from herbarium collections. Annex 5 contains the report.

**Animal Health TF:** The Animal Health TF is continually monitoring new crises related to animal diseases that constitute areas of concern for agricultural trade in the Northern countries. The TF seeks opportunities to respond with joint strategies between the three countries for the most important diseases that might limit regional agricultural trade.

Dr. Eileen Thacker, Chair of this TF, participating by teleconference, pointed out the major results of the collaboration, carried out by an extensive group of researchers from USDA, INIFAP and the Canadian Food Inspection Agency (CFIA), as well as regulators from APHIS (US) and SENASICA (Mexico). Click [here](#) for presentation.



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- Sixteen researchers and regulators are proficient in the use of immuno-histochemistry to detect Bovine Spongiform Encephalopathy, and histopathology and immuno-histochemical staining techniques for classical and atypical BSE. The procedures have been harmonized according to standards used in the Canadian/OIE BSE Reference Laboratory. In 2013, the United States obtained negligible risk classification from the World Organization for Animal Health (OIE), while currently Canada and Mexico are under controlled risk.
- Scientists from the three countries monitored the Highly Pathogenic Avian Influenza H7N3 outbreak in Mexico, concluding that since a good understanding of epidemiology of this disease is lacking, this was a good area of work for PROCINORTE. Through consultation among specialists, the TF has identified areas of collaboration: (1) a study of the ecology of microorganisms (which could be submitted to NSF/NIH/NIFA for funding), (2) the need for training in epidemiology and surveillance, and (3) phylogenetic studies of the H5N2 LPAI in collaboration between the three countries (could be co-funded by the US Poultry and Egg Association).
- It is in the mutual interest of the three countries to collaborate on developing approaches to controlling bovine tuberculosis because of its implications for trade and human health. This TF has contributed to improve the capacities of researchers and regulators to use molecular techniques for detection of the causal agent, *Mycobacterium bovis*. The emergence of this pathogen in wildlife poses a serious and growing risk because once the disease has spread into ecosystems with free-ranging maintenance hosts, it is almost impossible to eradicate.

**Fruits TF:** The Tropical and Subtropical Fruits TF has had a long tradition of collaboration under the PROCINORTE umbrella. Since the TF origins, fruit researchers from Mexico and the US have focused on production and post-harvest technologies. Canada is a net importer of tropical fruits; therefore Canadian scientists are more interested in issues that affect fruit quality and standards.

The appointment of Dr. Toivonen will complement that of the other members as he brings expertise in approaches to storage and post-harvest physiology, and also has close ties with the fruit industry. With the new TF composition, it is expected that the TF will focus its work to address issues of fruit quality of tri-lateral importance for trade.

In 2013, scientists from Mexico and the US participated in the InterAmerican Society for Tropical Horticulture (ISTH) meeting in Querétaro, Mexico, and presented posters on their joint work sponsored by PROCINORTE. They carried out a field mission to several avocado orchards in Mexico to continue the work to develop a portable NiR analyzer to measure avocado maturity *in situ*. A short report is presented in Annex 6.

A lively discussion ensued on the achievements, roles and future work of the four TFs.



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***BoD Decision: to change the name of the fruits task force to “Tree Fruits Task Force” to further facilitate the participation of Canadian researchers in its work. The BoD requests the TF to focus its work on issues of quality that impact tri-lateral trade.***

***BoD Decision: accept the ES’s annual report and thank the ES and TF representatives for their presentations.***

## **7. PROCINORTE and Task Force Strategic Plans**

The Executive Secretary indicated that all the activities of the TF during 2013 are based on the TF Strategic Plans. However, these will need to be reviewed and updated in light of a new PROCINORTE Strategic Plan which was discussed the next day of the meeting.

## **8. Recent Developments in Science and Technology Branch, AAFC**

Dr. Saindon explained recent developments in the Science and Technology Branch of AAFC and its approach to innovation (Click [here](#) for presentation). He described briefly the AgrilInnovation Program, a five-year initiative, funded up to \$698 million, under the Growing Forward 2 policy framework. The program’s aim is to enhance economic growth, productivity, competitiveness, adaptability and sustainability of the Canadian agriculture, agri-food and agri-based products sector and assist in capturing opportunities for the sector in domestic and international markets. It is designed to accelerate the pace of innovation by supporting research and development activities in agri-innovation and facilitating the demonstration, commercialization and/or adoption of innovative products, technologies, processes, practices and services.

Out of the total \$698 million, a budget of \$468 million is available for funding projects based on applications from industry. The remaining funds go towards AAFC-led research, development and knowledge transfer activities as well as program administration that complement industry-directed initiatives.

## **9. Fourteenth Meeting of the FORAGRO Executive Committee**

On Behalf of PROCINORTE, Dr. Steven Kappes attended the Fourteenth Meeting of the Executive Committee of the Forum for the Americas on Agricultural Research and Technology Development (FORAGRO). FORAGRO’s mission is to promote dialogue and knowledge exchange among the main public and private stakeholders in agricultural research in the Hemisphere. This meeting was held in coordination with PROCISUR and PROCITROPICOS. Presentations were made representatives of EMBRAPA, FORAGRO, and CGIAR. The new Chair of FORAGRO is Dr. Juan Lucas Restrepo, from Colombia. IICA will be responsible for organizing the next meeting. The dates and theme of the next FORAGRO meeting are yet to be determined.

The BOD discussed how to improve the opportunities to include inputs from Canada and the US



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in FORAGRO's priorities, agendas and decisions. It was pointed out that Canada and US are technical cooperators with the LAC countries, as sources of knowledge and information, and as part of FORAGRO their priorities are also considered. Dr. Kappes explained that priority areas are identified by different processes, and that the regions (PROCIs) come together and discuss priorities under the FORAGRO umbrella.

***BOD Decision: to strengthen representation of PROCINORTE countries in FORAGRO with support from IICA, by contributing to set the agenda, provide inputs and follow up on themes of interest.***

## **10. PROCINORTE Strategic Plan**

Mr. David Bathrick, a US economist who was retained to assist in developing the draft PROCINORTE Strategic Plan 2013-18, made a presentation highlighting its major components. The proposed plan would maintain PROCINORTE's current structure. It proposes four areas for PROCINORTE's strategic agenda and a suggested response for each one that would improve PROCINORTE's technical and operational effectiveness. [Click here for the link to the document.](#)

The BOD discussed the proposed draft Strategic Plan in some detail, agreeing that maintaining the status quo in the level and scope of actions over the next five years does not appear to be a viable option. Continuing a "maintenance mode" may bring into question the longer term viability of PROCINORTE. The BOD agreed that PROCINORTE is addressing critical issues pertaining agricultural production and trade. They also recognized that funding is becoming scarcer and there is a need for PROCINORTE to become more effective and visible in delivering services to its constituency. More emphasis on the role of PROCINORTE in the agendas of FORAGRO and the G-20, and participation in other regional bodies, was also discussed.

***BoD Decision: to charge a working group formed by Ryan Moore (USDA), Brad Fraleigh (AAFC) Arturo Cruz (INIFAP), and Priscila Henríquez (facilitator), with reviewing the proposed Strategic Plan and make modifications and recommendations for its implementation by December 2014.***

## **11. Financial Issues and Work Plan 2014**

IICA reaffirmed its commitment to PROCINORTE in providing 40% of the time of the ES to PROCINORTE; however the operational funds that IICA provides have been variable over the last years. IICA allocated \$70,000 to PROCINORTE's operations during the period covered in this meeting, which used as follows: Animal Health TF: \$16,479, NORGEN: \$18,960, Fruits and Plant Health: \$21,559 and Executive Secretary and Board: \$3,267's. A current balance of \$6,932 indicates 86% total budget execution, a 2% improvement from the previous year, despite postponement of the annual BOD meeting.



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The budget approved for 2014 is the same amount as the previous year and will be allocated to the scientific work of the four TFs, and to support the participation of PROCINORTE's delegates in regional forums and meetings. The ES indicated that it is becoming increasingly difficult to obtain a timely program from the TFs as the funding is diminishing and the scientists may see it as complementary funding for traveling to workshops.

Several other possibilities to obtain funding from alternative sources were discussed, including submitting regional projects to external investors, by demonstrating that PROCINORTE can provide a valuable mechanism of collaboration on research issues with the Hemisphere. These ideas will need to be developed in more detail in the new strategy. The work plan for 2014 is presented in Annex 7.

***BoD decision: the members BOD approved the work plan in Annex 2 and engaged to continue efforts to identify in-kind contributions to PROCINORTE's activities.***

## **12. Election of the New President of PROCINORTE**

David Hatch indicated that he is moving to a position in IICA HQ, and that IICA will appoint another representative to the BOD. Dr. Rexroad indicated that he will soon retire from ARS/USDA and that Dr. Kappes will officially assume the US representation in the BOD. There were tokens of recognition to Drs. Fraleigh, Rexroad and Hatch for their valuable contributions to PROCINORTE.

On behalf of the Board, David Hatch expressed appreciation for the important work of Dr. Caird Rexroad, President of PROCINORTE. The other members of the Board also indicated their satisfaction with the support and leadership demonstrated by the President during his tenure.

Mr. Hatch recommended that Dr. Gilles Saindon (Canada) be elected President for a two year term (eligible for a third year). The motion was unanimously accepted and Dr. Saindon accepted this nomination acknowledging the support and follow-up provided by Dr. Brad Fraleigh in representing AAFC who will continue aiming to provide insights and contributions.

## **13. Various Issues**

The Board members expressed their satisfaction with PROCINORTE's activities during 2013 and congratulated the members of the TFs for their excellent collaboration in their areas of expertise. The BOD agreed to meet in Costa Rica the first quarter of 2015 to have the opportunity to share PROCINORTE's main results, Strategic Plan 2014-19, and regional forums with IICA authorities.





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## **14. Presentations by AAFC Staff**

Dr. Michèle Marcotte, Director of Research and Development, at the Eastern Cereal and Oilseed Research Centre (ECORC) presented the centre's history, priorities and main results in crop development, covering corn, soy, spring wheat, winter wheat, oats and barley (click [here](#) for presentation). The Centre covers 425 hectares of experimental fields and plots, 27000 m<sup>2</sup> of laboratory space; and 2300 m<sup>2</sup> of greenhouses. She indicated that research focuses on three areas: (1) crop genetic enhancement and genomics; (2) biodiversity of vascular plants, fungi and bacteria, and invertebrates; and (3) integrated assessment of long-term environmental effect of agricultural practices.

Drs. Steve Gleddie, Nick Tinker and André Lévesque presented “DNA barcoding and new sequencing technologies - opportunities and potential risks (click [here](#) for presentation)”, “Oat Molecular Toolbox: Toward Better Oats” (click [here](#) for presentation) and “Defining the Fusarium/host interaction through genomics and proteomics” (click [here](#) and [here](#) for presentations), respectively. The results demonstrated by these projects exemplify efforts at ECORC to find solutions to important obstacles faced by Canadian farmers, through sound science and international partnerships.



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Annex 1. Lis of participants

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- Dr. Eileen Thacker, Animal Health Task Force Chair. National Program Leader. Animal Health USDA - Agricultural Research Service. 5601 Sunnyside Avenue, Beltsville, Maryland 20705-5148. [eileen.thacker@ars.usda.gov](mailto:eileen.thacker@ars.usda.gov)

ECOR Staff:

- Dr. Michèle Marcotte, Director of Research and Development, at the Eastern Cereal and Oilseed Research Centre (ECORC)
- Dr. Steve Gleddie, Research Scientist Genomics and Biotechnology
- Dr. Nick Tinker, Research Scientist
- Dr. André Lévesque, Research Scientist Mycology



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Annex 2. Meeting agenda

<b>Tuesday March 4 /Martes 4 Marzo</b>	
Arrival of participants: Members of the BOD, Representatives of Task Forces, IICA staff Llegada de los participantes: Miembros de la Junta Directiva, Representantes de Fuerzas de Tarea, Personal de IICA	
<b>Wednesday March 5 /Miercoles 5 Marzo</b>	
13:30 – 13:40	<b>Welcoming remarks / Palabras de bienvenida</b> <ul style="list-style-type: none"> <li>• Dr. Gilles Saindon -Associate Assistant Deputy Minister at AAFC</li> </ul>
13:40 – 13:50	<b>Opening Session/ Apertura de la Reunión</b> <ul style="list-style-type: none"> <li>• Dr. Caird Rexroad, President of PROCINORTE</li> </ul>
13:50 – 14:00	<b>Approval of draft agenda / Aprobación de la agenda propuesta</b> <ul style="list-style-type: none"> <li>• Dr. Caird Rexroad</li> </ul>
14:00 – 14:30	<b>Approval of Minutes XIV Meeting of PROCINORTE BOD and follow up/ Aprobación Memoria XIV Reunion PROCINORTE y seguimiento a acuerdos</b> <ul style="list-style-type: none"> <li>• Dr. Caird Rexroad</li> <li>• Dr. Priscila Henríquez, Executive Secretary of PROCINORTE / Secretaria Ejecutiva de PROCINORTE</li> </ul>
14:30 – 15:00	<b>Report PROCINORTE activities 2012/ Informe de actividades de PROCINORTE 2012</b> <ul style="list-style-type: none"> <li>• Dr. Priscila Henríquez</li> </ul>
15:00 – 15:30	<b>Coffe break</b>
15:30 – 16:00	<b>Task Force Achievements and Strategic Plans Advances/Logros y Avances en Planes Estratégicos de Fuerzas de Tarea</b> <ul style="list-style-type: none"> <li>• Plant Health Task Force: Dr. Dev Fravel</li> <li>• Animal Health Task Force: Dr. Eillen Thacker</li> <li>• NORGEN: Dr. Fernando De La Torre Sánchez</li> <li>• Fruits Task Force: Dr. Ricardo Goenaga</li> </ul>
16:00 – 17:00	<b>Discussion Task Force Achievements and Strategic Plans/ Discusión Avances en Planes Estratégicos de Fuerzas de Tarea</b> Board of Directors, TF Representatives
15:30 – 16:00	<b>Presentation “Recent Developments in Science and Technology Branch, AAFC”</b> Dr. Gilles Saindon - Associate Assistant Deputy Minister at AAFC
16:00 – 16:30	<b>Comments/ Comentarios</b> <ul style="list-style-type: none"> <li>• All</li> </ul>
16:30 – 17:00	<b>Impressions of the XIV meeting FORAGRO Executive Committee /</b>



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	<b>Impresiones sobre XIV Reunión del Comité Ejecutivo de FORAGRO</b> <ul style="list-style-type: none"> <li>• Dr. Steve Kappes</li> </ul>
<b>19:00</b>	<b>Official dinner –Location TBD</b>
<b>Thursday, March 6 / Jueves 6 Marzo</b>	
9:00 – 9:30	<b>Presentation “Recent Developments in Science and Technology Branch, AAFC”</b> Dr. Gilles Saindon - Associate Assistant Deputy Minister at AAFC
9:30 – 10:00	<b>Impressions of the XIV meeting FORAGRO Executive Committee / Impresiones sobre XIV Reunión del Comité Ejecutivo de FORAGRO</b> <ul style="list-style-type: none"> <li>• Dr. Steve Kappes</li> </ul>
10:00 – 10:45	<b>Presentation proposed PROCINORTE Strategic Plan 2013-18/ Presentación de propuesta de Plan Estratégico de PROCINORTE 2013-18</b> <ul style="list-style-type: none"> <li>• Mr. David Bathrick (consultant)</li> </ul>
10:45 – 11:00	<b>Coffee break / Café</b>
11:00– 11:30	<b>Discussion proposed PROCINORTE Strategic Plan 2013-18 and next steps for implementation / Discusión de propuesta de Plan Estratégico de PROCINORTE 2013-18 y próximos pasos para su implementación</b> <ul style="list-style-type: none"> <li>• All</li> </ul>
11:30 – 12:00	<b>PROCINORTE Financial Issues and Work Plan 2013 / Asuntos Financieros y Plan de Trabajo 2013</b> <ul style="list-style-type: none"> <li>• Dr. Priscila Henríquez</li> </ul>
12:00 – 12:30	<b>Additional Business / Asuntos Adicionales</b> <ul style="list-style-type: none"> <li>• Next PROCINORTE meeting (Date &amp; Place) /Próxima Reunión del PROCINORTE (Fecha y Lugar)</li> </ul>
12:30 – 14:00	<b>Lunch</b>
14:00 – 16:00	Presentation of Research activities at ECORC
16:00	<b>Closing/ Cierre</b>
<b>Friday March 7 /Viernes 7 Marzo:</b> Participants return to their countries	



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**Annex 3. SUMMARY REPORT ON PROCINORTE ACTIVITIES AUGUST 2012 TO DECEMBER 2013**

Activity	Output	Remarks	Next steps
<b>Board of Directors and Executive Secretariat</b>			
Formulation/Update of PROCINORTE Forces Strategic Plan (SP) 2013 - 18	Strategic Plans formulated and draft sent to Board of Directors	Participatory process involving PROCINORTE constituency	Plan to be discussed and approved by Board
XV Annual Meeting of the Board of Directors	Meeting was postponed for first quarter 2014	Due to US government shut-down	Reprogramed Ottawa, 2014
Participation in VI Meeting of the Executive Committee of FORAGRO, Brasilia, Dec. 12	Dr. Steven Kappes (ARS) represented PROCINORTE. Meeting carried out in coordination with PROCITROPICOS/PROCISUR	It is anticipated that in the future, the executive committee will meet by videoconference	FORAGRO Executive Secretariat will make report available
Dissemination of PROCINORTE mission and activities, progress and accomplishments	PROCINORTE news featured in IICA Office in the United States newsletter and IICA webpage		Permanent activity
<b>Tropical and Sub-Tropical Fruits</b>			
Participation in the Annual Interamerican Society for Tropical Horticulture (ISTH) September 2 – 6, Querétaro, México	Five members of the TF participated in the international meeting. PROCINORTE support was acknowledged in posters and presentations	Task Force has requested that this activity is supported annually	Board needs to make a decision to support this activity
Field mission to several avocado orchards in Mexico to continue the work to develop a portable NiR analyzer to measure avocado maturity <i>in situ</i> .	Five members of the TF participated in the mission	Canadian member in Task Force was unable to participate	
Field evaluation of Vis-NIR protocol and development of a portable spectral analyzer to measure avocado maturity <i>in-situ</i> .		IICA-PROCINORTE funds cannot be transferred to INIFAP, as requested.	
<b>NORGEN</b>			
Held "International Workshop on In Situ Conservation and Use of Plant Genetic Resources". Oaxaca, Mexico, October 29 to 31	26 international participants. Outreach to Bolivia and Guatemala. News featured on IICA's webpage.	Canadian and US representatives unable to participate due to previous commitments. Strong support and financial contribution from INIFAP.	Workshop memoirs in preparation.
Participation in the IX International Symposium of Genetic Resources for Latin American and the Caribbean, El Salvador, Nov. 25-27.	Chair of NORGEN presented PROCINORTE accomplishments. Meeting with heads of genetic resources networks from Latin America (NORGEN, REMERFI, TROPIGEN y REGENSUR). NORGEN's proposal to include representations from Canada and the US in SIRGEALC was accepted. INIFAP researcher presented results of participatory research and provided advice to cocoa farmers.	Two reports available	Next SIRGEALC meeting to be carried out in Brazil, 2014.



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Activity	Output	Remarks	Next steps
Transfer of beans germplasm to Canada.	19 beans accessions with passport information maintained at National Genetic Resources Center (CNRG, INFAP).	CNRG Director to obtain authorization from National Biodiversity Commission (Mexico) to obtain authorization for distribution.	INIFAP will send the bean germplasm to AAFC in 2014.
<b>Animal Health</b>			
Bovine Spongiform Encephalopathy (BSE), OIE2 Reference Laboratory for tuberculosis in Lethbridge, Alberta, November 5-9 and 26-30, 2012	Two workshops in coordination with Canadian Food Inspection Agency (CFIA): one for researchers, one for regulators.	Network of researchers and regulators formed	
A tri-lateral workshop on H7N3 HPAI, 27-28 November 2012, Southeast Poultry Research Laboratory, Athens, GA	Reviewed the background of the outbreak, control strategies, successes and failures, diagnosis, surveillance, available vaccines and knowledge gaps.	Activities identified: (1) a study on ecology of microorganisms to be submitted to NSF/NIH/NIFA if there is a call, (2) training in epidemiology and surveillance (Prince Edward Island Canada) subject to availability of funding, (3) phylogenetic studies of H5N2.	Funding will be sought that will include the US Poultry and Egg Association.
Held Tuberculosis Workshop, Ames, Iowa, September 10-11.	25 scientists and regulators from Canada, Mexico and the US shared the current status and recent developments, diagnosis and molecular epidemiology of the disease.	Report available. Network established. Summary report on presentations and discussions.	Second workshop planned for 2014.
<b>Plant Health</b>			
Participation in the Working Group on the brown marmorated stink bug (BMSB), 10-12 June, Vineland, New Jersey	Scientists from the three countries shared knowledge on pest's biology and integrated management.	Task Force to explore opportunities for work on Whitefly transmitted viruses of greenhouse crops.	Next meeting in Canada to on greenhouse production.
Annual meeting, PROCINORTE Plant Health Task Force, June 13, Vineland, New Jersey	Progress on BMSB and discussion of other potential topics for trilateral collaboration.		INIFAP to produce trifoliolate and distribute to farmers.
Training course for Mexican researchers on optimization of molecular pathogen diagnosis	Postponed	Not carried out due to unavailability of Canadian trainer to travel to Mexico.	

**BUDGET EXECUTION 2013 (IICA's Funding allocated to PROCINORTE):**

TOTAL ALLOCATED: US\$ 70,000.0, TOTAL SPENT: US\$ 61,546 (88%)

- Animal Health TF: \$16,480
- NORGEN: \$18,960
- Fruits and Plant Health: \$14,837
- Strategic Plan revision and formulation: \$8,000
- Executive Secretary and Board: \$3,269

<sup>2</sup> World Organization for Animal Health



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Annex 4. Composition of Board of Directors and Task Forces

Programa Cooperativo en Investigación y Tecnología Agrícola de la Región Norte – PROCINORTE

DIRECTORY OF PROCINORTE, UPDATED March 2014	
BOARD OF DIRECTORS	
<p><b>Dr. Gilles Saindon</b> Country <b>President (March 2014)</b> Representative (CANADA)</p>	<p><b>Associate Assistant Deputy Minister (Associate ADM)</b> <b>Agriculture and Agri-Food Canada</b> <b>Science and Technology Branch</b> 1305 Baseline Road Tower 5, Floor 6, Room 256 Ottawa, Ontario K1A 0C5 Canada Telephone : 613-773-1840 Fax : 613-773-1844 <a href="mailto:gilles.saindon@agr.gc.ca">gilles.saindon@agr.gc.ca</a></p>
<p>Dr. Stephen Kappes Country Representative (USA)</p>	<p><a href="#">Animal Production and Protection</a> General Biological Science Animal Production and Protection <a href="mailto:steven.kappes@ars.usda.gov">steven.kappes@ars.usda.gov</a> Phone: (301) 504-4700 Fax: (301) 504-4873 Room 4-2108 USDA-ARS-NATIONAL PROGRAM STAFF GWCC-BLTSVL ROOM 4-2108, 5601 SUNNYSIDE AVE BELTSVILLE, MD, 20705-5148</p>
<p>Dr. Pedro Brajcich Country Representative</p>	<p>Director General Instituto Nacional de Investigaciones Forestales Agrícolas y Pecuarias (INIFAP) Oficinas Centrales, Av. Progreso No 5, Barrio de Santa Catarina, Delegación Coyoacán, México, D.F. C.P. 04010 Tel: (55) 38 71 87 33, Fax: (55) 38 71 87 01 <a href="mailto:brajcich.pedro@inifap.gob.mx">brajcich.pedro@inifap.gob.mx</a></p>
<p>Mr. David C. Hatch IICA Representative</p>	<p>Representative in the US IICA Office in the United States 1889 F street N.W. Suite 360, Washington, D.C. 20006 T. (202) 458-6962, F. (202) 458-6335, <a href="mailto:dhatch@iicawash.org">dhatch@iicawash.org</a></p>
<p>ARS Asistente en Junta Directiva: Mr. Ryan Moore <a href="mailto:Ryan.Moore@ARS.USDA.GOV">Ryan.Moore@ARS.USDA.GOV</a></p>	<p>International Relations Specialist USDA/Agricultural Research Service Office of International Research Programs 5601 Sunnyside Ave., Bldg 4-1124-A, Beltsville, MD 20705-5141, USA Ph: +1-(301)-504-4535, Mobile: +1-(240)-393-8078 Fax: +1-(301)-504-4528 <a href="mailto:ryan.moore@ars.usda.gov">ryan.moore@ars.usda.gov</a></p>





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<p><b>Dr. Brad Fraleigh</b> Director, Multilateral S&amp;T Relations Assistant JD</p>	<p>Cross-Sectoral Strategic Direction Agriculture and Agri-Food 1341 Baseline Road, Tower 5-5, Room 133   1341, chemin Baseline, Tour 5-5, Pièce 133 Ottawa, Ontario   Ottawa (Ontario)   Canada K1A 0C6 brad.fraleigh@agr.gc.ca Telephone   Téléphone 613-773-1838 Facsimile   Télécopieur 613-773-1833 Cellular   Cellulaire 613-240-9786  </p>
<p>INIFAP Asistente en Junta Directiva Dr. Arturo Cruz Vásquez</p>	<p>Director de Talento y Desarrollo Oficinas Centrales, Av. Progreso No 5, Barrio de Santa Catarina, Delegación Coyoacán México, D.F. C.P. 04010 Phone: 8-4030-011-52-55-38.71.87.39 (o 31) <a href="mailto:cruz.arturo@inifap.gob.mx">cruz.arturo@inifap.gob.mx</a></p>
<p>Priscila Henríquez Executive Secretary</p>	<p>Specialist in the Management of Technological Innovation IICA Office in the US 1889 F Street N.W. Suite 360, Washington D.C. 20006 Tel (202) 458-6971 <a href="mailto:phenriquez@iicawash.org">phenriquez@iicawash.org</a></p>
<p>GENETIC RESOURCES TASK FORCE</p>	
<p>Dr. José Fernando De la Torre Sánchez Chair (MEXICO)</p>	<p>Director Centro Nacional de Recursos Geneticos C.E. CENTRO - ALTOS DE JALISCO KM. 8 CARRETERA TEPATITLÁN-LAGOS DE MORENO, COL. RANCHO LAS CRUCES TEPATITLÁN DE MORELOS C.P. 47600, JALISCO CNRG Tel: 011-52-37-81-06-50-20 Correo-e: <a href="mailto:delatorre.fernando@inifap.gob.mx">delatorre.fernando@inifap.gob.mx</a></p>
<p>Dr. Axel Diederichsen Country Representative (CANADA)</p>	<p>National Curator for Plant Germplasm Plant Gene Resources of Canada Agriculture and Agri-Food Canada, Room P 103, 107 Science Place Saskatoon, Saskatchewan, Canada S7N 0X2 Telephone: (306) 956-2839, Fax: (306) 956-7246 Internet: <a href="mailto:axel.diederichsen@agr.gc.ca">axel.diederichsen@agr.gc.ca</a></p>
<p>Dr. Peter Bretting Country Representative (USA)</p>	<p>Head Crop Production and Protection General Biological Science, Plant Germplasm &amp; Genomes Room 4-2212, 5601 SUNNYSIDE AVENUE, GWCC-BLTSVL BELTSVILLE, MD, 20705-5139 Phone: (301) 504-5541, Fax: (301) 504-6191 E-mail: <a href="mailto:peter.bretting@ars.usda.gov">peter.bretting@ars.usda.gov</a></p>



**Cooperative Program in Agricultural Research and Technology for the Northern Region  
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TROPICAL AND SUBTROPICAL FRUITS TASK FORCE	
<p>Dr. Ricardo Goenaga <b>Chair (USA)</b></p>	<p>Research Leader <b>USDA-ARS</b> Tropical Agricultural Research Station 2200 Pedro Albizu Campos Avenue, Suite 201 Mayagüez, Puerto Rico, 00680-5470, EE.UU. Tel: (787) 831-3439, Fax: (787) 831-3386 E-mail: <a href="mailto:rgoenaga@ars-grin.gov">rgoenaga@ars-grin.gov</a></p>
<p>Dr. Samuel Salazar-García <b>Country Representative (MEXICO)</b></p>	<p>Fisiólogo de Frutales Tropicales <b>Coordinador Nacional de la Red de Frutales Tropicales / National Coordinator of Tropical Fruit Crops Network</b> INIFAP-Campo Experimental Santiago Ixcuintla Km. 6 Entronque Carret. Internacional México-Nogales Apdo. Postal 100, Santiago Ixcuintla, Nayarit 63300, MÉXICO Tel./Fax (323) 235-2031 y 235-0710 Ext.139 Correo-e: <a href="mailto:samuelsalazar@prodigy.net.mx">samuelsalazar@prodigy.net.mx</a> <a href="mailto:salazar.samuel@inifap.gob.mx">salazar.samuel@inifap.gob.mx</a> Interntet: <a href="http://www.cesix.inifap.gob.mx/samuel.php">http://www.cesix.inifap.gob.mx/samuel.php</a></p>
<p>Dr. Jorge Osuna</p>	<p>Especialista en Post-Cosecha <b>National Coordinator of Tropical Fruit Crops Network</b> INIFAP-Campo Experimental Santiago Ixcuintla Km. 6 Entronque Carret. Internacional México-Nogales Apdo. Postal 100, Santiago Ixcuintla, Nayarit 63300, MÉXICO Tel./Fax (323) 235-2031 y 235-0710 Ext.139 Correo-e: <a href="mailto:jorge.osuna@inifap.gob.mx">jorge.osuna@inifap.gob.mx</a> Interntet: <a href="http://www.cesix.inifap.gob.mx/samuel.php">http://www.cesix.inifap.gob.mx/samuel.php</a></p>
<p>Dr. Peter Toivonen, Research Scientist in Food Safety and Quality  (Feb 18, 2014)</p>	<p><b>Pacific Agri-Food Research Centre - Summerland</b> Agriculture and Agri-Food Canada 4200 Highway 97 PO Box 5000 Summerland, British Columbia VOH 1Z0, Canada Telephone: (250) 494-6386 Fax: (250) 494-0755 Internet: <a href="mailto:peter.toivonen@agr.gc.ca">peter.toivonen@agr.gc.ca</a></p>
ANIMAL HEALTH TASK FORCE	
<p>Dr. Eileen Thacker <b>Chair (USA)</b></p>	<p>National Program Leader <b>Animal Health</b> USDA - Agricultural Research Service 5601 Sunnyside Avenue, Beltsville, Maryland 20705-5148 <a href="mailto:eileen.thacker@ars.usda.gov">eileen.thacker@ars.usda.gov</a></p>
<p>Jose Lopez, DVM, MSc, PhD Country Representative</p>	<p><b>National Manager</b> <b>Animal Health Research &amp; Partnerships</b></p>



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(Canada)	<p><b>Canadian Food Inspection Agency</b>  <b>1400 Merivale Rd. Tower 1, 1st Floor, Room 314</b>  <b>Ottawa ON K1A 0Y9</b>  <b>(613) 773-5293</b>  <b>Fax: (613) 773-5387</b>  <a href="mailto:Jose.Lopez@inspection.gc.ca">Jose.Lopez@inspection.gc.ca</a>  Country Representative (Canada)</p>
<b>Dr. Julio Vicente Figueroa Millán</b>	<p><b>CENID-PARASITOLOGIA VETERINARIA</b>  <b>Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias.</b>  <b>Km 11.5 Carretera Cuernavaca-Cuautla</b>  <b>Jiutepec, Morelos. C.P. 62550 Tel. (777) 319-28-48 ext 139 Fax (777) 320-55-44 ext 129 E-Mail: <a href="mailto:figueroa.julio@inifap.gob.mx">figueroa.julio@inifap.gob.mx</a></b></p>
<b>Dr. Assad Heneidi Director de Epidemiología Análisis de Riesgo</b>	<p><b>Dirección de Epidemiología y Análisis de Riesgo</b>  <b>Cuauhtémoc 1230 piso 12. Santa Cruz Atoyac.</b>  <b>C.P. 03310. México, D.F.</b>  <b>Tel. 52+ (55) 59-05-10-00 ext. 53213.</b>  <a href="mailto:assad.heneidi@senasica.gob.mx">assad.heneidi@senasica.gob.mx</a></p> <p><b>Le ayuda la medica veterinaria: correo:</b>  <a href="mailto:alejandra.leon@senasica.gob.mx">alejandra.leon@senasica.gob.mx</a></p>
<b>PLANT HEALTH TASK FORCE</b>	
<b>Dr. Deborah Fravel Country Representative (USA)</b>	<p><b>National Program Leader for Plant Health.</b>  <b>Beltsville, Maryland,</b>  <b>Phone 1-301-504-5450 and <a href="mailto:deborah.fravel@ars.usda.gov">deborah.fravel@ars.usda.gov</a></b></p>
<b>TDB, Country Representative (CANADA)</b>	<p><b>Environmental Health</b>  <b>2585 County RD 20, Harrow, ON N0R 1G0, Canada</b></p>
<b>Dr. José Isabel López Arroyo Country Representative (MEXICO)</b>	<p><b>Head Research</b>  <b>CAMPO EXPERIMENTAL GENERAL TERAN</b>  <b>Dirección: Km. 31 Carretera Montemorelos-China</b>  <b>Exhacienda Las Anacuas C.P. 67400</b>  <b>Teléfono: 01-826-2670260 (dial: 011 52 8262670260)</b>  <b>Tel.: (01826) 26-70-539</b>  <b>Asistente: Rosa Maria: <a href="mailto:rmlh01@gmail.com">rmlh01@gmail.com</a></b>  <b>GENERAL TERAN, NUEVO LEON</b>  <b>Correo-e: <a href="mailto:lopez.jose@inifap.gob.mx">lopez.jose@inifap.gob.mx</a></b></p>



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Annex 5. Summary Report of Activities 2014, Plant Health Task Force

March 5, 2014

The current PHTF is relatively recent. The PHTF met face-to-face for the first time in July of 2012 and at that time wrote its charter. The PHTF initially selected Brown Marmorated Stink Bug as a topic of mutual interest, and, as I will describe in a few minutes, has now expanded on this topic.

During the past year, the Plant Health Task Force of PROCINORTE has continued to address the brown marmorated stink bug (BMSB), an invasive agricultural pest. The BMSB is very destructive on an unusually wide range of agricultural hosts (as well as non agricultural plants), and is well adapted to a very large range of geographic ecotypes. The BMSB is well established in the U.S., is established in a few locations in Canada, and has not yet been reported from Mexico but has been reported from the southern U.S. states bordering Mexico. The PHTF held quarterly phone calls, participated in a 1.5 day-long workshop on identification of parasites and parasitoids of BMSB, attended a 1.5 day-long meeting of the U.S. BMSB working group ([www.stopbmsb.org](http://www.stopbmsb.org)), and met in person to discuss future plans. The PHTF used its 2013 budget for travel of three scientists from Mexico to this workshop and PHTF meeting as well as a small supplement for the Canadian representative to stay on day longer than the workshop in order to attend the PHTF meeting.

In our first full year of working together, the PHTF made a solid beginning as documented in the presentations at the BMSB meeting in Bridgeton, NJ on June 11-12, 2013. Members of the PHTF (José Isabel Lopez-Arroyo, Tara Garipey, Deborah Fravel) each made presentations and reported on advances in understanding the genetic population structure of the BMSB, as well as of its parasites and predators. Members of the PHTF also reported on climate matching from Mexico to predict where the BMSB might establish in Mexico, and identification of endemic potential parasites and parasitoids of BMSB in Mexico.

At the PHTF meeting on June 13, 2013 in Vineland, NJ, plant disease and insect problems the three countries have in common were discussed. While several diseases (whitefly or aphid-borne plant viruses) and insects (spotted winged drosophila) were included in the discussion, the discussion focused on invasive Hemiptera such as brown maromorated stink bug (*Halyomorpha halys*), kudzu bug (*Megacopta cribraria*), bragada bug (*Bagrada hilaris*), and aphids. The PHTF group indicated that we needed epidemiological information for the rapid and accurate identification of these pests as well as their natural enemies. In addition, management options and strategies, including the epidemiological data to support development of strategies and options, are needed for these invasive insect problems. The PHTF considered mechanisms to leverage resources solve these problems. The PHTF decided to



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focus on cataloging parasites, parasitoids, and other natural enemies (such as fungi) in each of the three countries that attack invasive species, beginning with parasites and parasitoids of Hemiptera. This work will be coordinated with and contribute to other ARS and university work to make publically available excellent images, Lucid keys, and a DNA database with bar coding for insects on a single web site. This will aid in the rapid and accurate identification of beneficial insects.

PHTF activities for the next year include visits of Mexican scientists to the laboratory of Tara Garipey, in London, Ontario to gain skill in molecular techniques for insect identification. Scientists from all three countries will conduct field collections of presumed beneficial species, with associated data on exact location, hosts, plant preferences and other data. These species will be identified and characterized, and the data and images added to a master database. If funding and circumstances permit, Dr. Garipey may conduct a training workshop in Mexico. A working title for the PHTF activities for the next year is Areawide Integrated Pest Management of Alien Invasive Pest Species. The title reflects our view that the work currently underway represents initial steps toward coordinated management of these invasive pests.

The PHTF will continue to seek ways to leverage funding and to grow the scope of the initial activities.



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Annex 6. Report of the Tree Fruits Task Force 2014

Participation in the Annual Interamerican Society for Tropical Horticulture (ISTH) September 2 – 6, Querétaro, México	Five members of the TF participated in the international meeting. PROCINORTE support was acknowledged in posters and presentations	Task Force has requested that this activity is supported annually	Board needs to make a decision to support this activity
Field mission to several avocado orchards in Mexico to continue the work to develop a portable NiR analyzer to measure avocado maturity in situ.	Five members of the TF participated in the mission	Canadian member in Task Force was unable to participate	
Field evaluation of Vis-NIR protocol and development of a portable spectral analyzer to measure avocado maturity in-sit		IICA-PROCINORTE funds cannot be transferred to INIFAP, as requested.	



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Annex 7. PROCINORTE ACTION PLAN 2014

OBJECTIVE 1: Promote dialogue to identify priority research issues common to the three countries and to influence the regional, hemispheric and global agendas.

<b>ACTIONS/ACCIONES</b>	<b>RESPONSIBLE</b>	<b>DEADLINE</b>
1.1 Approve Strategic Plan 2014-18	ES and BOD	March 2014
1.2 Implement PROCINORTE activities as indicated in the Strategic Plan	ES and BOD	December 2014
1.3 Take advantage of opportunities at relevant meetings to present PROCINORTE purpose, progress and accomplishments	ES and BOD	December 2014
1.4 Complete Business Plan in view of its adoption	The Executive Secretary & BOD	TBD by BOD

OBJECTIVE 2: To facilitate the exchange of experiences, information and training through the building of linkages among public and private country institutions of the Northern region (PROCINORTE) and between the major research and technology transfer actors in the region, hemisphere and the world.

<b>ACTIONS/ACCIONES</b>	<b>RESPONSIBLE</b>	<b>DEADLINE</b>
2.1 Present the accomplishments of PROCINORTE at meetings of agricultural research and technology forums (i.e. FORAGRO and GFAR)	President and ES	December 2014
2.2 Continuously improve and update the PROCINORTE web site with the Task Forces information and BOD reports and other relevant information (subject to inputs provided by PROCINORTE members)	ES, IICA, and TF	Ongoing
2.3 Identify issues PROCINORTE wants to collaborate with other PROCIs via teleconference with PROCIs or other means. Request Executive Secretariats of other PROCIs and FORAGRO to provide information on their activities, programs and priorities.	ES and IICA	Ongoing
2.4 Prepare a suitable project to disseminate innovations generated by PROCINORTE to other regions (subject to funding opportunities)	ES, TF	December 2014

OBJECTIVE 3: To facilitate collaboration among the countries to solve problems of mutual interest.

<b>ACTIONS/ACCIONES</b>	<b>RESPONSIBLE</b>	<b>DEADLINE</b>
3.1. Proactive development of means to address new emerging issues (e.g. videoconferences, calls for proposals, others)	ES and TF	Ongoing
3.2. Send a general communication to TF Chairs regarding national consultations (e.g. the need to focus on issues of tri-lateral interest, results-based work plan and budget, M&E mechanism)	ES	As needed



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3.3 Teleconference with Task Forces' Chairs to follow up on Strategic Plan implementation	Task Forces	Ongoing
3.4. Support Action Plans proposed by Task Forces within the allocated budgets <ul style="list-style-type: none"> <li>• Animal health: Tuberculosis tri-lateral workshop</li> <li>• Plant health: white flies and greenhouse production workshop</li> <li>• NORGEN: methodologies for GMO's identification in ex situ collections workshop</li> <li>• Fruits : Participation in international meeting and field mission to producing areas</li> </ul>	ES and TF	Ongoing

OBJECTIVE 4: Definition of PROCINORTE's institutional issues

ACTIONS/ACCIONES	RESPONSIBLE	DEADLINE
4.1 Prepare a mid year report for the BOD emphasizing accomplishments & constrains, both technically and financially, and other updates as necessary	ES	July 2014