



“Conservation and Development of Ancestral/Indigenous Plant Genetic Resources: Challenges, Tools and Perspectives. Sharing the Canadian, Mexican and American Experiences”

SUMMARY REPORT

Date : May 10 – 11, 2016

Venue: Room VND-1853, Pavillon Ferdinand-Vandry, 1050 de la Médecine ave.
Laval University, Quebec City, Canada

Organizers:

- PROCINORTE/NORGEN Taskforce on Genetic Resources
- Legal Research Chair in Food Diversity and Security, University Laval
- Agriculture and Agri-Food Canada (AAFC)
- Agricultural Society for Indigenous Food Products (ASFP)

AIM

The overall objective was to bring together key stakeholders from the United States of America, Mexico and Canada, including indigenous people, involved in conservation and utilization of diversity in crops plants with particular emphasis on crops relevant for indigenous agriculture. The participants including individuals from governmental and non-governmental organizations, from universities and seed savers were expected to share information and to elaborate the complementarity of each other's activities to the benefit of food security, economic and ecological resilience.

KEY OBJECTIVES

To increase understanding of the status and of the importance of indigenous plant genetic resources for food security:

- **Elaborate** the important role of diversity of cultivated plants for food security and the central role local communities play in their conservation and utilization;
- **Consider** the resilience of local communities by understanding the roles of seeds keepers and indigenous food product projects;
- **Look** at local communities, their know-how and technical expertise;
- **Recognize** the access and benefit sharing aspects when it comes to plant genetic resources and the rights of local communities

To present the Canadian Three Sisters project and share Canadian, Mexican and American experiences in conservation and utilization of plant genetic resources:

- **Understand** the context and the objectives of the Three Sisters project;
- **Share** insights among those attending the workshop, and share knowledge about other



projects throughout Canada, United States and Mexico;

- **Explore** strategies to enhance synergies for conservation and utilization of plant genetic resources;
- **Identify** possible obstacles that affect such projects;
- Discuss access and benefit sharing aspects affecting such projects;

To develop suggested next steps:

- **Identify** possible projects on indigenous plant genetic resources conservation and utilization in Canada, USA and Mexico;
- **Reflect** on information and communication strategies to maintain interactions within and among Canada, Mexico and the United States on the subject of conservation and utilization of plant genetic resources involving indigenous communities.

Programme

The Opening Session

Mr. Michel Gros-Louis of AAFC and member of the Huron-Wendat Nation of Wendake opened the session with traditional rituals. Representatives of each of the three host institutions (University of Laval, Agriculture & Agri-Food Canada and PROCINORTE/IICA) provided opening comments, setting the context, objectives and expectations of the meeting. Taking place on the heels of the news that the Government of Canada will remove its permanent objector status to the United Nations Declaration on the Rights of Indigenous Peoples, the meeting was very timely.

Mme. Linda Collette, former Secretary of the FAO Commission on Genetic resources who was the Moderator for the meeting observed that the 3 countries of PROCINORTE: USA, Canada and Mexico shared common genetic resources, however had different levels of commitment to the international agreements for genetic resource. This set the stage for interesting discussions. The programme included the following sub-themes:

- The Three Sisters' Project;
- Status, access and study of plant genetic resources and associated knowledge belonging to indigenous people – legal and technical aspects for respecting their rights - Indigenous Food Products projects;
- Conservation and Utilization strategies within the community (*in situ/on-farm*);
- Conservation and Utilization strategies in national genebanks (*ex situ*);
- Strategies for conservation and utilization of plant genetic resources by indigenous people in an economic context

The meeting concluded with a Round Table on Success Factors for the conservation and development of ancestral/indigenous crop plant diversity.



Summary of Presentations & Discussions

Objective 1: To increase understanding of the status and of the importance of indigenous plant genetic resources for food security

Using the UN Food and Agriculture Organization's definition of food security, information was shared on the loss of agricultural biodiversity globally and implications on food security. The importance of maintaining and conserving indigenous genetic resources at the community level for the benefit of food diversity and security was acknowledged by the Legal Research Chair in Food Diversity and Security of Laval University, who also spoke to the various international legal instruments relating to agrobiodiversity. It is important to note that the FAO Treaty on Plant Genetic Resources for Food and Agriculture, the Convention on Biological Diversity and the Nagoya Protocol are the relevant treaties that consider fair access and equitable benefit sharing when it comes to plant genetic resources and associated knowledge.

Representatives of indigenous groups in Quebec, scientists from Canada, Mexico and the United States shared practices and perspectives regarding the sustainable management and use of respective plant genetic resources. Speakers presented both *in-situ* and *ex-situ* conservation practices, highlighting the rich diversity of traditional crops that exist in the Americas.

At the national level, the Plant Gene Resources of Canada, the US National Plant Germplasm System and National Genetic Resources Center of Mexico, each with significant collections, recognizing the potential to impact food security, collect, preserve and make plant germplasm available for research, breeding and educational purposes.

While practices within indigenous groups varied from country to country, the value of their seeds was recognized in the 3 countries. Trust and respect were also common themes, which characterized interactions and collaborations at the community level and should be the model for further interactions. The meeting benefited from personal interaction with a seed keeper of the Six Nations of the Grand River in Canada, who displayed a range of seeds as well as a slideshow illustrating her customized operations. Presentations on practices in Mexico showcased their *in situ* conservation strategies, including participatory plant breeding. The role of community seed fairs for exchanging of germplasm, Mexico and Ecuador, was of particular interest to Canadian participants.

Recognizing the value of indigenous genetic resources as a source of food as well as medicine, participants also discussed utilization approaches. As an example, the increasing level of obesity and non-communicable diseases among indigenous communities, motivated organizations such as the First Nations of Quebec and Labrador Health and Social Services Commission to propose strategies for addressing this trend in relevant populations (including children). Initiatives to encourage more healthy eating habits include: promoting the use of traditional food in meal



preparation, community gardens and nutritional programmes in schools. Commercial activities in value-added preparations such as hominy corn and medicinal extracts demonstrated more entrepreneurial activities based on indigenous plant materials. Also complementing the workshop deliberations was a visit to the Wendake Museum where the socio-cultural history reflected the importance and use of plant genetic resources in the Huron-Wendat tradition.

Objective 2: To present the Canadian Three Sisters project and share Canadian, Mexican and American experiences in conservation and utilization of plant genetic resources

The 3 Sisters Project in Canada epitomizes cooperation and collaboration. With participation of the First Nation Community, Agriculture and Agri-Food Canada and Academia, participants spoke of their various roles and activities in an environment of transparency, trust and mutual respect. Where seeds used in research came from communities for example, shared decision-making took place at every stage of the project, agreements were established to ensure the protection of indigenous rights and data gathered on ancestral lineage shared.

Studies being conducted by the AAFC on the 3 Sisters - maize, squash and bean seek to enhance agri-food production, therefore seed preservation and adapting growing methods to suit the food use are among areas being explored. Research conducted at the AAFC Research & Development centres involved field work as well as characterization of functionality of the 3 sisters providing information on the varieties with most attractive properties – e.g high anti-oxidant levels were identified for continued study. Such properties are key in preparing value added products.

In Mexico, the centre of origin for maize and many other crops, cultivation practices by indigenous groups are similar. Workshop participants were informed of wide diversity of native material in Oaxaca, a region that also hosts both wild and cultivated species of beans and pumpkins. *In situ* conservation of the 3 Sister crop diversity (maize, garden bean, pumpkin) over the years has benefited from community seed banks, native seed fairs, training of custodians and farmers. In addition, participative improvement programmes are undertaken with active involvement of indigenous groups who exchange germplasm.

Objective 3: To develop suggested next steps

Speakers and participants who represented the 3 countries of North America concurred that the workshop to address issues pertinent to the conservation and sustainable use of indigenous genetic resources was a first and important step. Better understanding was gained on the various perspectives and interest stimulated regarding practices that are transferable between indigenous groups in the Americas.

A Roundtable discussion aired views by representatives of the 3 countries and First Nations groups in Canada on the conditions deemed necessary for successful conservation and development of ancestral/indigenous crop diversity. The following recommendations were proposed for guiding



next steps:

- The message that the law is not there to block, but to provide a tool for making relations better needs to be reinforced, while making efforts to acknowledge and collaborate with aboriginal cultural and legal systems
- The relevance of recognizing the strengths of *in situ*/on farm conservation by indigenous people and the complementarity of the *ex situ* conservation in national genebanks for conservations and utilization of plant genetic resources.
- Continue Research & Development activities in collaboration with the government bodies, with transparency and mutual respect.
- Future meetings should include representation of First Nations/Aboriginal people from the US and Mexico.
- Efforts should be made to investigate the ancestry &/or “relatedness” of selected plant genetic resources in Canada and Mexico
- Continue to increase the value of indigenous foods through food processing and medicinal extracts
- Explore undertaking a joint public awareness programme regarding the importance of ancestral genetic resources.
- Explore Government-funded capacity building projects in access and benefit sharing for Native groups across Canada



ANNEX - List of Participants

Speakers

1. Mr. Axel Diederichsen, Agriculture and Agri-Food Canada, Plant Gene Resources of Canada.
2. Mr. Carlos Hugo Avendaño Arrazate, Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias (INIFAP), Mexico.
3. Mr. Charly Jacob, Corn producer, Kanahwake, Canada.
4. Mr. Flavio Aragón Cuevas, Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias, Mexico.
5. Mr. Jean Sioui, Family Chief, Responsible for cultural development, the national archives and museum activities, Huron-Wendat Nation of Wendake, Canada.
6. Mr. José Fernando De La Torre Sánchez, Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias, Mexico.
7. Mr. Martin Mondor, AAFC, Quebec.
8. Mr. Michel Gros-Louis, AAFC, Quebec.
9. Mr. Peter Bretting, United States Department of Agriculture, Agricultural Research Service, Office of National Programs, National Germplasm Resources Laboratory, USA.
10. Mr. Sébastien Villeneuve, AAFC, Quebec.
11. Mr. Stéphane Gariépy, Knowledge and Technology Transfer Manager, Science and Technology Branch, AAFC, Quebec.
12. Mr. Thomas Burelli, Doctor Degree Student, University of Ottawa, Canada.
13. Mr. Vincent Lévesque, Owner, Les produits autochtones Terre de l'Aigle (Earth Eagle), Wendake, Canada.
14. Mr. Brad Fraleigh, Director, Multilateral Science and Technology Relations, Agriculture and Agri-Food Canada (AAFC), Ottawa, Canada.
15. Ms. Audia Barnett, Secretariat of PROCINORTE and Inter-American Institute for Cooperation on Agriculture
16. Ms. Geneviève Parent, Full Professor, Head of the Legal Research Chair in Food Diversity and Security, University Laval, Québec, Canada.
17. Ms. Linda Collette, Former Secretary of the FAO Commission on Genetic Resources for Food and Agriculture
18. Ms. Marie-Thérèse Charles, AAFC, Quebec.
19. Ms. Marjolaine Sioui, Executive Director, The First Nations of Quebec and Labrador Health and Social Services Commission, Wendake, Canada.
20. Ms. Nathalie Garon, Development Officer, Indigenous and Northern Affairs Canada, Quebec City, Canada.
21. Ms. Terrylynn Brant, Seed keeper, Six Nations of the Grand River, Canada.

Organizer Committee

1. Ms. Marie-Eve Buist, Coordinator, Legal Research Chair in Food Diversity and Security, University Laval, Québec, Canada.



Invitees

- 1.** Mr. François Carl Duguay, Quebec Reference Center for Agriculture and Agri-food (CRAAQ)
- 2.** Mr. Jean-Louis Rastoin, Montpellier SupAgro
- 3.** Mr. Michael Rice, Laval Junior Academy
- 4.** Mr. Pierre Bastien, Commission de développement économique des Premières Nations
- 5.** Mr. Steve Mccomber, Seed keeper
- 6.** Ms. Adrienne Lickers, Student
- 7.** Ms. Anne-Marie Granger Godbout, Conseil des appellations réservées et des termes valorisants (CARTV)
- 8.** Ms. Carolina Caceres, Environment Canada
- 9.** Ms. Élise Garnier, Student, Laval University
- 10.** Ms. Emily Missyabit McAuley, Agriculture and Agri-Food Canada
- 11.** Ms. Geneviève Motard, Faculty of Law, Laval University
- 12.** Ms. Jamie Monastyrski, Assembly of Chiefs of Ontario
- 13.** Ms. Joanne Lagacé, Quebec Reference Center for Agriculture and Agri-food (CRAAQ)
- 14.** Ms. Julie Landry, Société Agroalimentaire des Produits du Terroir Autochtone (ASIFP)
- 15.** Ms. Lise Bastien, Commission de développement économique des Premières Nations
- 16.** Ms. Marie-Claude Desjardins, University of Sherbrooke
- 17.** Ms. Seth Lafort,
- 18.** Ms. Solène D'Arexi, Student, Faculty of Law
- 19.** Ms. Tom Ignacchiti, Student, Faculty of Law