CacaoNet: Meeting of Delegates Interested in Developing the CacaoNet Action Plan.

Herradura Hotel, San José, Costa Rica 19:00 on 9th October 2006

Participants: **81 of the delegates attending the 15th International Cocoa Research Conference**
Meeting Chairman: **Freddy Amores**
CacaoNet Task Force: Jan Engels, Tony Lass, Freddy Amores
Rapporteur: **Michelle End**

A presentation on CacaoNet entitled "Moving Towards a Global Cacao Genetic Resources Network" had been given by Dr. Jan Engels during the first session of the COPAL 15th International Cocoa Research Conference and this evening meeting had been called to allow any interested delegates to find out more about the initiative and discuss the development of the CacaoNet Action Plan.

Dr. Freddy Amores, a member of the CacaoNet Task Force set up to explore the feasibility of a cacao genetic resources network, welcomed participants to the meeting. Genetic resources are essential for the development of the new varieties with the disease resistance, quality and agronomic characters which are so important to a sustainable cocoa economy. The concept of CacaoNet had been developed to address the need to coordinate and establish stable funding for cacao genetic resources and Dr. Amores wished the participants well in their discussions on developing CacaoNet and how they might benefit from participating in such an internationally coordinated network.

1. Introduction to the Meeting

Dr. Martin Gilmour, chairman of the interim steering committee of CacaoNet, gave an overview of the establishment of CacaoNet. Interest in cacao genetic resources had been re-kindled by the international germplasm exchange, evaluation and breeding activities of the two CFC/ICCO/IPGRI cocoa germplasm projects. It was clear that there were concerns over the lack of long-term stable funding for cocoa germplasm conservation and the need for further coordination in the genetic resources efforts and these were raised at a World Cocoa Foundation (WCF) meeting in 2004. The International Plant Genetic Resources Institute (IPGRI), has had a long interest in cacao genetic resources though cacao has not been one of its mandated crops. IPGRI manages genetic resource networks for several crops including bananas and coconuts and, in August 2005, it hosted an informal workshop to discuss the possibility of establishing a network for cacao. As a result of this meeting, an interim steering committee was established with representatives from many of the institutes and organisations with an interest in cocoa genetic resources together with the three person Task Force, led by Dr. Jan Engels of IPGRI, which has been contacting stakeholders for their views on the CacaoNet concept and has made presentations on the concept at the Spring 2006 WCF and ICCO meetings. A questionnaire was launched to gather stakeholder views and the Task Force met in September 2006 to analyse the responses received.

Dr. Gilmour also outlined some of the perceived benefits of CacaoNet, as reported in the questionnaire survey and from direct contact with stakeholders. CacaoNet could help to ensure that cocoa genetic resource management is efficient and cost-effective in the long-term, whilst ensuring continued access to germplasm, and sharing of knowledge on its characteristics and the technologies for its conservation and evaluation.

At this point, questions were invited from the floor. Roger Dehnel asked when CacaoNet would be fully operational given the level of apparent support for the concept. Dr. Gilmour replied that a step by step approach had been adopted to try to ensure that everyone is involved and Dr. Richard Markham added that although resources had been limited, momentum was now building up. Dr. Markham asked participants to consider how valuable the genebanks are to the cocoa community and it was generally agreed that they have immeasurable value for both the present and the future of the industry as reserves of material with disease resistance and quality characteristics, some of which we are actively seeking today and others as yet unknown.

Dr. Pierre Tondje commented that some countries do not have the facilities or resources to conserve their germplasm and that issues relating to local ownerships would have to be addressed, especially for types likely to contribute to recognised national or regional cocoas which attract a premium on the market.
Dr. Peter van Grinsven asked how the composition of the steering committee could be balanced so that it is representative of all regions. Dr. Gilmour emphasised that the aim was to create a network, though it was recognised that most cacao genetic resources originate and are still held in South America.

2. Summary of the networking survey
Dr. Engels gave an overview of the responses received from the survey designed to gather feedback on priorities and working principles of CacaoNet (full report available on CacaoNet website http://www.cacaonet.org/new/index.php). The survey had been sent to contacts on the INGENIC and World Cacao Foundation mailing lists in June 2006 and 86 responses had been received by the beginning of August from institutes and individuals well distributed within the cocoa community. Eighty-seven percent of the respondents fully supported CacaoNet and a further 9% suggested that they might be willing to participate. Results suggested that the highest priorities were ensuring the long term conservation of important germplasm, facilitating international partnerships and fund raising, collecting germplasm threatened with extinction, making germplasm available in the public domain and improving information availability with capacity building and training amongst the other priorities. The majority of respondents favoured a network whose membership was open and voluntary though 72% would be prepared to accept some obligations. There was strong support for the establishment of a steering committee who would make decisions based on technical guidance received from technical committees or working groups. Over three-quarters of the respondents believed that the Network should build on existing capacities and there was also strong support for a small coordinating body and a neutral institutional home. Although several institutes were put forward as possible coordinators, there was strong support for the idea of IPGRI providing the overall coordination of the network, but with the participating organisations undertaking as many as possible roles.
These results encouraged the CacaoNet Task Force to continue to develop the concept of CacaoNet and a further survey on conservation will be launched soon.

3. Need for public domain cacao germplasm
As outlined in the full paper to be included in the Proceedings of the 15th ICRC (available on CacaoNet website http://www.cacaonet.org/new/index.php), genetic resources of the most important food crops are held "in trust" under the auspices of the United Nations Food and Agriculture Organization (FAO), predominantly at Research Centres of the Consultative Group on Agricultural Research (CGIAR) as part of the International Network of *Ex Situ*

Germplasm Collections. This Network is one of the supporting components of the International Treaty on Plant Genetic Resources for Food and Agriculture (IT) that entered into force in June 2004. The formal placement of genetic resources under the auspices of the Governing Body of the IT ensures that this "designated" germplasm becomes essentially public domain material, that it is safely conserved for the long-term according to international standards and that it remains readily available to plant breeding programmes and other *bona fide* users world-wide and that the benefits that derive from their use are being shared in an equitable manner. These arrangements are in full compliance with the Convention on Biological Diversity. The first meeting of the Governing Body of the IT was held in June this year and agreement was reached on all the key components, including the standard material transfer agreement (MTA) necessary to ensure that material remains in the public domain and that benefits are fairly shared.

However, cacao is not listed as a crop in Annex 1 of the IT, and therefore germplasm exchange would have to follow the Convention on Biological Diversity, with its focus on wild species, even though it would be much more appropriate to follow the same procedures as for the crop plants which are included under the IT. If this situation is not resolved, there is a concern that this could seriously impact on cacao germplasm availability. Dr. Engels gave an update on the assistance that the CacaoNet Task Force has given to the two genebanks which have been designated as having international responsibilities for cacao, the International Cocoa Genebank, Trinidad (ICG,T) and CATIE, since these two collections could form the basis of a global cacao collection. CATIE has already placed its collection in the public domain, and thus it has a similar status to Annex 1 material, and is about to sign an agreement with Governing Body of the IT. The process is also underway for the ICG,T, with a note having been sent to the Cabinet of the Government of the Republic of the Trinidad and Tobago. Discussions have also been initiated with at institutional and governmental level in Brazil and Ecuador. CacaoNet would be willing to help other institutes achieve "designated" status for their germplasm collections, or part thereof.

The Global Crop Diversity Trust has been set up with the aim of accumulating US$250 million to support the maintenance of the crop germplasm collections, with the highest priority being given to the Annex 1 listed crops. The Trust fund has obtained approximately US$60million so far and is regulated by a network of governance bodies. It is likely that the Global Crop Diversity Trust would be willing to accept responsibility for the maintenance of a trust fund set up for cacao if this could be set up.

Operation aspects of CacaoNet

Dr. Markham described the possible structure and function for CacaoNet that had been developed by the Interim Steering Committee (available on CacaoNet website http://www.cacaonet.org/new/index.php). A central idea would be to create a "virtual global cacao collection" which would be a multi-site collection linked by an effective information system. Associated activities would include the collecting of wild/threatened germplasm, characterisation, evaluation and quarantine operations. A coordination unit was proposed to include a full time genetic resources expert/ coordinator plus part-time support from a web-manager/database programmer and administrator. An initial budget had been estimated at US$900,000 per year which was not that dissimilar to the current funding for the public collections, quarantine and information systems and it was anticipated that savings would be made by improving coordination and efficiency of the operations.

The Steering Committee would be the decision-making body and would be composed of representatives of the main stakeholders. A Standing Technical Committee, a panel of experts, was proposed to advice on the content of the global collection and priorities for collection/evaluation and Working Groups would be set up to address particular issues. Two Working Groups had already been initiated to address issues relating to the safe movement of cacao germplasm and information management.

Prof. Paul Hadley of the International Cocoa Quarantine Centre, Reading, had offered to coordinate the Safe Exchange of Germplasm Working Group, with Mr. Tony Lass as the convener. Prof. Hadley reported that he was drawing up a small group of experts who would be able to update the FAO-IPGRI Guidelines on the Safe Movement of Cocoa Germplasm, originally published in 1989 and updated electronically in the 1990's. He was planning to arrange a meeting for this Working Group later in the week and aimed to finalise the updated Guidelines by the end of the year.

Dr. Chris Turnbull of the International Cocoa Germplasm Database had offered to coordinate the Information Management Working Group. This Working Group would build on the existing databases, ICGD, TropGene and CocoaGen.db and seek to link with the USDA GRIN and IPGRI SINGER systems with the aim of developing a global cocoa information system. Dr. Turnbull was arranging meetings with experts at USDA, CATIE, CRU, CIRAD and INIBAP to develop a proposal for the new system. Dr. Lanaud asked for clarification on the possible links between the existing databases that include information on cacao germplasm and Dr. Turnbull confirmed that this was an area that the Working Group would be focusing on.

Dr. Markham thanked Prof. Hadley and Dr. Turnbull for initiating these working groups and invited discussion on the proposed structure/function of CacaoNet. Dr. Aikpokpodion asked why some institutions were missing from the interim steering committee and Dr. Markham replied that, although the committee was initially composed of some specialists and regional representatives, it was hoped that this could now be broadened. There followed some discussion on the proposal, the relative allocations for conservation and coordination and possibilities for securing long term funding for the network. The current proposal sustains the existing genebanks and systems but with the addition of global coordination, which will facilitate the participation of all interested institutions and improve the efficacy and cost-effectiveness of the cacao genetic resources effort. Current funding is mainly from the public sector and industry, but additional support would be needed over a two to three year transition period to get the Network up and running effectively. A Working Group was being established to consider ways to obtain this necessary support and contact potential donors. Although there was some concern raised that too much of the budget was allocated to management rather than conservation, others felt strongly that a coordination unit was essential. A show of hands indicated that the vast majority of participants considered that the proposal was well balanced.

Closing Remarks

Mr. Lass, a member of the Task Force, provided the following summary of the discussions:

- The CacaoNet initiative is proceeding slowly, step by step, to involve everyone as we build up momentum.
- Genebanks have an immeasurable value for both the present and the future of the cocoa and chocolate industry.

- Results of the survey encouraged the Task Force to continue to develop the concept of CacaoNet.
- Efforts are needed to ensure that cocoa would have a similar status to those crops in the CGIAR system and this put cacao germplasm in the public domain; IPGRI can assist in making this move on behalf of cacao genebanks.
- There is a large resource of valuable germplasm in national collections and this must be supported and catalogued as far as possible; some of the identified material might be put in to the public domain; work is underway in Brazil and Ecuador.
- Global Crop Diversity Trust is now in place and will have income to support the officially identified material in due time; formal governance for this is in place.
- The Safe Movement of Germplasm Working Group will start its work and hopes to have made progress on revising the "Guidelines for the Safe Movement of Cacao Germplasm" by end December 2006; a face-to-face meeting may be required during 2007 and this will be kept under review as the consultation moves forward.
- Information Systems Working Group: information already available; work underway and face-to-face meetings are to be expected over the coming months.
- CacaoNet website now exists and will be developed over the coming months; papers from this meeting will be made available on it.
- The booklet produced for this meeting, containing papers relating to CacaoNet including the San José Declaration, is state of the art; it will be sent out electronically to everyone who has put their names on the list.
- Based on the discussions at this meeting, the proposal for CacaoNet, including funding, is thought to be acceptable and we will move forward on this basis. UK industry will make a financial contribution of US$15,000 and USDA has agreed to provide further funding at a similar level.

Dr. Amores thanked everyone for participating in this meeting, and the institutions and individuals that had contributed their time in developing the CacaoNet concept. The financial contribution from USDA and in-kind contributions from IPGRI, BCCCA, CIRAD, INIAP, Mars Inc. and WCF had enabled the initial meetings to take place and the Task Force to meet stakeholders and develop the CacaoNet proposal. He thanked COPAL for hosting this meeting and Mars Inc. for providing the food and drink. Suggestions on opportunities for those interested in CacaoNet to meet were welcomed and it was proposed that the WCF stakeholder meetings might provide the forum for a progress review.

The Task Force and the Steering Committee were most impressed by the huge turnout for this, the largest public meeting so far of CacaoNet. This clearly indicates the high degree of interest and concern about cacao genetic resources. The size of this meeting can be seen as a clear endorsement for the activities of CacaoNet so far, but the discussions, concerns expressed and feedback from the meeting need to be taken on board