From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and participants from 18 countries, including official COGENT representatives and various stakeholders of the global coconut sector have endorsed 10 major international recommendations in the field of coconut research and development. The topics of these recommendations are the following:

1. An international initiative for sequencing the coconut genome and assessing the uses of genomics tools for coconut breeding and conservation.
2. Improvement and standardization of the controlled pollination technique for rejuvenation of coconut genebanks and urgent duplication of ageing coconut accessions.
3. Assessment and improvement of farmers’ technical and traditional knowledge regarding coconut biology, in order to increase farmers’ autonomy for production of good planting material.
4. Strengthening coconut genetic research, conservation and specific uses of traditional varieties in the Pacific Region.
5. Strengthening coconut research in Madagascar: characterization and conservation of traditional varieties in this context of earliest contact between the main 2 coconut genepools.
6. Collecting, conserving and breeding Dwarf coconut varieties from across the world within Latin America, the Caribbean and Africa.
7. Establishing an international multilocation coconut breeding experiment in Asia;
8. Understanding and addressing the constraint of the new lethal disease threatening the International Coconut Genebank for the South Pacific based in Papua New Guinea.
9. Developing In vitro culture and cryopreservation of embryogenic calluses and zygotic embryos as alternative coconut conservation strategies.
10. Strengthening communication on coconut research, conservation and use by producing video guidelines and other tools.

These 10 recommendations were endorsed by participants from the following 18 countries: Brazil, China, Côte d’Ivoire, France, India, Indonesia, Italy, Kenya, Madagascar, Malaysia, Mexico, Papua New Guinea, Philippines, Sri Lanka, the Sultanate of Oman, Tanzania, Vanuatu and Vietnam. The full list of participants to the meeting is given at the end of this document.
The International Coconut Genetic Resources Network

COGENT’s goal is to strengthen international collaboration in conservation and use of coconut genetic resources, to improve coconut production on a sustainable basis and to enhance livelihoods and incomes of coconut stakeholders in developing countries.

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Kochi, India, 10th July 2012

Official Recommendation Letter n°2012-1
An international initiative for sequencing the coconut genome and assessing the uses of genomics tools for coconut breeding and conservation.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- COGENT gathers 39 member-countries representing more than 98% of global coconut production, and hosting the 24 most significant ex situ coconut genebanks which provide germplasm and release advanced cultivars to millions of farmers.
- Many research teams from member-countries have shown interest in coconut genomics, ranging from coconut genome de novo sequencing and marker-assisted selection through to transcriptomics.
- The progress in conventional breeding is hindered by the relatively low nut production and the long generation time in coconut.
- Genomics studies will help to more effectively address crucial aspects of coconut breeding, such as disease resistance, genetic inheritance of the two kinds of dwarfism existing within the species, and the genetic components for high yielding varieties.
- The practical implementation of such research will take advantage of the subdivision of the species in two genetic groups or sub-species.

COGENT recommends:

- Encouraging efforts in genomics research for the benefit of the whole coconut community.
- Consultation and collaboration between research teams as a way to maximize the scientific advances in coconut genomics.
- Delivering genomics tools and scientific advances as a public good to maximize the benefits for the coconut community.
- Considering as a main actor the COGENT international thematic group on coconut genomics involving 7 countries and chaired by India. This group will develop a work plan gathering new initiatives in genome sequencing and the design of new coconut genomics tools.

The COGENT Coordinator, Dr Roland BOURDEIX,
Bioversity HRF, CIRAD-BIOS UMR CCEF

The COGENT Chairman, Dr Kouassi Allou,
CNRA, Côte d’Ivoire
Official Recommendation Letter n°2012-2

Improvement and standardization of the controlled pollination technique for rejuvenation of coconut genebanks and urgent duplication of ageing coconut accessions.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- The COGENT network gathers 39 member-countries representing more than 98% of global coconut production, and hosting the 24 most significant ex situ coconut genebanks which provide germplasm and help create advanced cultivars for millions of farmers.
- At a global level, ex situ coconut conservation is presently facing an emergency situation; about half of the 725 unique accessions were planted at least 25 years ago and are becoming very tall without being regenerated. If nothing is done in the coming years, these accessions will be lost, because it will no longer be possible to reach the inflorescences and make the controlled pollination necessary for regeneration.
- At least 16 genebanks, including three out of the five international genebanks, do not have sufficient capability, laboratories, equipment, manpower and/or budget needed to make reliable controlled pollinations.
- in the case of the coconut palm, controlled pollination is the only reliable method for true-to-type regeneration of allogamous varieties planted close together; but this laborious and costly method requires climbing many times many tall palms, and makes the total cost of a single coconut seedling as high as 8 USD.

COGENT recommends that:

- a concerted effort be made to regenerate ageing accessions in COGENT coconut genebanks to avoid losing valuable and unique germplasm.
• Countries follow the protocol described in the Stantech manual for regeneration, and especially the controlled pollination method. This latter method should be improved and standardized, with a special attention to the fabric and design of pollination bags, and to a simple and economic way to process coconut pollen. Results must be widely disseminated, ideally with all genebanks using the same bags and techniques, and diffused worldwide as international guidelines.
• Video guidelines be developed for the controlled pollination method, as many practical experiences have shown that it is almost impossible for a country to efficiently start controlled pollinations only by using written guidelines.
• The methods for climbing the coconut palms must be addressed globally and optimized in a way to increase efficiency, reduce cost, and provide greater safety to coconut climbers in charge of technical tasks.
• At least one Controlled Pollination Laboratory from the five COGENT International genebanks should be ISO certified within the next five years.
• Implementing and improving molecular techniques, such as microsatellite or other markers studies, in order to address efficiently two aspects: 1) detecting duplicate germplasm in COGENT ex situ genebanks and 2) developing a reliable method for checking the legitimacy of the crosses obtained by controlled pollination.
• The COGENT countries urgently update their data about conserved germplasm in the International Coconut Database (CGRD), as this database is the only tool for implementing a global appraisal of ex situ coconut conservation, and the only way to know whether a given accession has been rejuvenated or not.
• The COGENT Secretariat prioritizes those COGENT country members that have recently updated their data in CGRD. New research projects should be developed in priority with these proactive countries.

The COGENT Coordinator, Dr Roland BOURDEIX,
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The COGENT Chairman, Dr Kouassi Allou,
CNRA, Côte d’Ivoire
Official Recommendation Letter n°2012-3

Assessment and improvement of farmers’ technical and traditional knowledge regarding coconut biology in order to increase farmers’ autonomy for production of good planting material.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- Despite the enormous potential of the crop, coconut farmers often scrape a living below the poverty line. About 96% of the 10 million farmers, who collectively grow coconuts on 12 million hectares worldwide, are smallholders tending less than four hectares.
- The coconut industry is facing an important revival and a diversification of coconut products. In the future, some traditional varieties presently disappearing could be vital for developing new products and markets, and for improving farmers’ livelihoods.
- Farmers’ technical knowledge regarding the coconut reproductive system and the use of genetic markers such as germinating sprout colour is a key factor for breeding purposes.
- Both traditional and technical knowledge of farmers and other stakeholders regarding coconut breeding and its reproductive system are insufficiently assessed at the global level. But this technical knowledge certainly needs to be improved. For instance, in French Polynesia, at least 80% of farmers do not know that each coconut palm has both female and male flowers.
- Men and women farmers, private enterprise, members of NGOs and CBOs can easily be trained to produce good planting material autonomously.

COGENT recommends:

- Decision-makers at the local, national and international levels to adopt effective portfolios of strategies and gender-sensitive guidelines for conservation and sustainable use of coconut genetic resources to meet the needs of men and women stakeholders, and especially to ensure both effective conservation and availability of good planting material for replanting programmes.
• National Agricultural Services and breeders to allow farmers a primary role in making their own varietal choices, and consider advising against farmers growing only a single coconut variety, be it Tall, Hybrid, Dwarf or whatever.

• Seed-nut producers and agricultural services to provide farmers, at the national level, a range of at least six different coconut varieties, including Talls, hybrids, Dwarfs and eventually composite varieties; and to explain to farmers the specificity of each variety regarding environmental adaptation and cultural practices. Most of farmers will choose to plant more than one variety.

• Encouraging local stakeholders (men and women farmers, private enterprise, NGOs and CBOs) to become more involved in supplying quality germplasm, and to teach farmers and other stakeholders how to autonomously produce quality seedlings of hybrids and other varieties, using the Polymotu concept or any other adapted method.

• Assessing farmers’ knowledge regarding the reproductive biology of the coconut palm and the use of genetic markers such as sprout colour for breeding purposes. This study should be conducted by 1) drafting a standard gender-sensitive questionnaire by ethno-biologists and geneticists, 2) training local researchers on implementing the survey, and 3) interviewing at least 100 farmers in at least 20 countries of the 39 COGENT member countries.

• Developing a communication strategy to increase farmers’ knowledge regarding coconut reproductive biology and breeding methods, including training tools, video guidelines, media communication, and an approach for marketing of genetic resources.

• Conducting a similar survey with the same questionnaire five years after launching this process, in order to assess progress regarding the farmers’ knowledge.

The COGENT Coordinator,  
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The COGENT Chairman  
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Official Recommendation Letter n°2012-4

Strengthening coconut genetic research, coconut conservation and specific uses of traditional coconut varieties in the Pacific Region.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- For historical, social, economic and environmental (climate change) reasons, the huge genetic diversity of coconut in the Pacific region is seriously threatened. We are rapidly losing the wealth of traditional varieties created over centuries by Melanesian, Micronesian and Polynesian ancestors.
- The coconut industry is facing an important revival and a diversification of coconut products. In the future, Pacific traditional varieties will be vital for developing new products and markets, and for improving the livelihoods of islander-farmers.
- The situation is of particular concern in French Polynesia and Tonga, where there is no ex situ coconut genebank, no local strategy for in situ conservation, and no seed production system addressing the needs of farmers.

COGENT recommends that:

- The governments of Pacific countries consider adequate investment in coconut research and development in collaboration with the Secretariat of the Pacific Community and ACIAR.
- Each Pacific country creates at least one coconut research and development action team, and links their national researchers to COGENT and the APCC.
• In addition to the above, along with the assistance of regional development partners, the government considers ensuring that an adequate number of coconut R&D personnel are trained and existing in national programs.
• The international genebanks in Papua New Guinea, Brazil and India (in collaboration with the target countries and territory) organize surveys in the Cook Islands, Tonga and French Polynesia to collect and safeguard crucial traditional varieties such as compact Dwarfs, Sweet husk, Makapuno and other varieties.
• Along with regional development partners, the governments from the whole Pacific Region consider defining and implementing strategies for conservation of coconut genetic resources. This strategy may include *in situ* conservation based on the Polymotu concept (mix of old Polynesian traditions and recent advances in science) and/or *ex situ* conservation in coconut genebanks.

The COGENT Coordinator, Dr Roland BOURDEIX, Bioversity HRF, CIRAD-BIOS UMR CEFE

The COGENT Chairman, Dr Kouassi Allou, CNRA, Côte d’Ivoire
Official Recommendation Letter n°2012-5

Strengthening coconut research in Madagascar: characterization and conservation of traditional varieties in this context of earliest contact between the main 2 coconut genepools.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- For historical reasons, the genetic diversity of the coconut in Madagascar is unique. Indonesians travellers came to Madagascar more than ten centuries ago, bringing coconut varieties, when they created exceptional mixes between the two main coconut subspecies (Indo-African and Asian-Pacific).
- The coconut industry is facing an important revival and a diversification of coconut products. In the future, some traditional varieties presently disappearing could be vital for developing new products and markets, and for improving farmers’ livelihoods.
- Madagascar could significantly strengthen its role in providing coconut seed-nuts at the sub-regional level, on condition that the phytosanitary situation is adequate and well-documented, and generates income from this activity.

COGENT recommends that:

- The international genebanks in Côte d’Ivoire and India, together with international institutions, organize surveys to safeguard crucial traditional varieties from Madagascar; and conduct ethno-botanical studies to document the unique status of coconut genetic resources.
- The government of Madagascar considers adequate investment in coconut research, creates at least one coconut research team with researchers in breeding and plant protection, and links these national researchers to COGENT and the APCC.
With the help of the international coconut scientific community, the government of Madagascar defines and implements a strategy for conserving coconut genetic resources (Ex situ and In situ, linked to the coconut industry and ecotourism) and diversifying the planting material available for small farmer

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Official Recommendation Letter n°2012-6

Collecting, conserving and breeding Dwarf coconut varieties from across the world within Latin America, the Caribbean and.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- Due to an increasing market for coconut water derived products, the most rentable coconut plantations are those of Dwarf varieties for providing coconut water. Brazil has developed advanced intensive cultivation methods.
- The future of coconut agriculture is believed to be in Dwarf varieties. At 10-years old, the trunks of Tall varieties and Dwarf x Tall hybrids often reach 4 m, when the trunks of Dwarf varieties are less than 1.5 m. Tall and hybrids varieties are more difficult to harvest, more dangerous, and less precocious than Dwarf varieties.
- Two distinct different dwarfism syndromes exist within the species: Dwarfs with thin stems and reduced boles (like Malayans), and dwarfs with thick stems and large boles resistant to cyclones (like Niu Leka). This second type remains insufficiently studied by scientists.
- Although some countries (India, Thailand, Philippines) succeeded in recreating Dwarfs from Dwarf x Tall progenies, the genetic inheritance of the 2 dwarfism syndromes remains unknown.

COGENT recommends:

- The International Genebank for Latin America and Caribbean to focus on Dwarf introduction, conservation and improvement for the next 10 years.
• Launching an international breeding experiment testing new dwarf varieties, Dwarf x Dwarf hybrids, and F2 and F3 progenies of Dwarf x Dwarf hybrids in COGENT countries from Latin America and Africa.
• Private companies to be closely associated by hosting at least half of the field experiments under supervision of scientists from national institutions.

The COGENT Coordinator,
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The COGENT Chairman
Dr Kouassi Allou,
CNRA, Côte d’Ivoire
Establishing an international multilocation coconut breeding experiment in Asia

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- COGENT gathers 39 member countries representing more than 98% of global coconut production, and hosting the 24 most significant ex situ coconut genebanks worldwide. Twelve country members and 10 genebanks are located in Asia.
- During the last 15 years, international coconut breeding experiments were launched in Africa, Latin America and the Caribbean but not in Asia. Scientific collaboration and germplasm exchanges between Asian countries need to be significantly strengthened.
- Specific and crucial scientific questions must be addressed: many farmers are sowing seed-nuts harvested from Dwarf x Tall hybrids, and scientists have no idea of the value of this material; the genetic inheritance of the two Dwarfism syndromes existing in coconut remains unknown; Vietnamese farmers from the Mekong Delta have developed a method for reducing the growth of Tall coconut palms that could be useful to ex situ coconut genebanks worldwide.

COGENT recommends:

- Launching international breeding experiments in Asia that evaluate new varieties, including Hybrids, and Dwarf and Tall varieties as well as progenies of Dwarf x Tall hybrids.
- Assessing the method developed by Vietnamese farmers to reduce the vertical growth of the Tall-type coconut palms.
- Private companies to be closely involved by hosting at least half of the field experiments under supervision of scientists from national institutions.
Official Recommendation Letter n°2012-8

Understanding and addressing the constraint of the new lethal disease threatening the International Coconut Gene bank for the South Pacific in Papua New Guinea.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- Coconut germplasm is important for historical, social, economic and environmental reasons in the Pacific and this resource is seriously threatened.
- As a main strategy towards protecting this endangered germplasm COGENT and the Governments of Papua New Guinea and South Pacific countries (members of COGENT) agreed to and established the International Coconut Genebank (ICG) for the South Pacific, which is currently based in Madang Province, Papua New Guinea. The agreement was signed by the Government of Papua New Guinea, FAO and IPGRI (now Bioversity International) on the 10th of November 1998.
- The ICG now conserves 57 coconut accessions (3200 palms) from the region and has the mandate to receive more in the future.
- One of the main functions of the ICG is to conserve and also to facilitate access to and exchange of healthy, clean germplasm; this was a major basis for selecting PNG, as a country not threatened by any major pest or disease.
- Unfortunately, very recently a serious disease has been reported to be destroying coconuts and other crop species in plantations and smallholder farms within close proximity to the ICG in Madang Province. Preliminary analysis points to a phytoplasma-like disease, currently called the “Bogia Coconut Syndrome”. Research continues attempting to identify the causal agent and to better understand the disease involving a number of national research institutes, quarantine authorities, recognized laboratories, the ACIAR and the SPC.
- Article 2g of the agreement (Rights and obligations of the Parties to this agreement) stated that if the orderly maintenance of the ICG is impeded or threatened by whatever event, including force majeure, the Secretary of the TREATY and Bioversity International, with the approval of the Host Government, shall assist in its evacuation or transfer, to the extent possible.
• As a preliminary bio-security measure it has been reported that national authorities have restricted movement of germplasm and other planting materials from the diseased zone in Madang Province (where the ICG is located).
• The above will definitely have substantial repercussions on the conservation and movement of germplasm and risk undermining the fundamental objectives of the ICG.
• This is the first time for such a disease to be reported in the region and it is further endangering not only the germplasm but the industries of the crops species affected by the disease, especially coconut.

COGENT recommends that:

• An International team of experts consisting of Bioversity, COGENT, FAO, CIRAD visit PNG before the end of 2012 on a fact-finding mission with the following objectives:
  • Evaluate the sites affected; visit the ICG; talk to the local authorities, institutes and communities on the disease and its extent.
  • Provide Bioversity International and COGENT with recommendations on how this disease will impede or threaten the ICG and whether it should be relocated/duplicated (within PNG or outside of PNG)
  • Provide recommendations for the duplication and/or safe movement of germplasm from the current ICG.
• The findings of the above mission be relayed to the COGENT SC and the PNG Government for their final decisions; and be transmitted to international agencies and institutions such as FAO, the Global Crop Diversity Trust, ACIAR, the Secretariat of the Pacific Community, and the Asian and Pacific Coconut Community.
• The coconut accessions in the PNG ICG (and other non-collected accessions from the region) in addition to other important accessions from other ICGs be evaluated for their resistance to the Bogia Coconut Syndrome. This research should be carried out using either field experiments, cages with insect vectors, or in vitro transmission experiments. This could involve PhD studies.

The COGENT Coordinator, The COGENT Chairman
Dr Roland BOURDEIX, Dr Kouassi Allou,
Bioversity HRF, CIRAD-BIOS UMR CEFE CNRA, Côte d’Ivoire

\[Signature\]
Official Recommendation Letter n°2012-9
Developing In vitro culture and cryopreservation of embryogenic calluses and zygotic embryos as alternative coconut conservation strategies.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- Due to increasing risk of the COGENT’s genebanks in Papua New Guinea and the Ivory Coast of being affected by diseases, an alternative and safer way of conservation needs to be developed.
- Two alternatives of conservation viz. cryopreservation of calluses and slow growth callus culture, are potential either by themselves or combined, for coconut germplasm long term in vitro conservation.
- It is currently possible to produce embryogenic calluses from coconut explants; and these calluses can be induced to form somatic embryos that convert to plantlets.
- If we can manage to develop a culture medium and conditions to maintain the calluses in slow growth and/or conditions for cryopreservation of these calluses, keeping their embryogenic capacity and optimize conditions for transportation of plantlets produced from them, we could have the basis for an in vitro conservation system.
- In such a conservation system an accession will need to be introduced once in a lifetime and will be readily producing plantlets as a means of germplasm exchange and a source of germplasm for rejuvenation of genebanks.

COGENT recommends that:

- A project be implemented to address the need of an alternative conservation system based on the cryopreservation of embryogenic calluses and/or use of slow growth embryogenic calluses, involving a group of researchers from different COGENT country members.
• The research on *in vitro* cultivation of zygotic embryos and cryopreservation of zygotic embryos to be continued and the results compared with the new alternative conservation system based on embryogenic callus generation.

• Considering as a main actor in COGENT, the international thematic action group on coconut *in vitro* culture, involving 7 countries and chaired by Mexico, will develop a work plan gathering new initiatives in coconut *in vitro* culture for conservation of coconut germplasm.

The COGENT Coordinator, Dr Roland BOURDEIX, Bioversity HRF, CIRAD-BIOS UMR CEFE

The COGENT Chairman Dr Kouassi Allou, CNRA, Côte d’Ivoire
Official Recommendation Letter n°2012-10

Strengthening communication on coconut research, conservation and use by producing video guidelines and other tools.

From 8th to 10th July 2012, the International Coconut Genetic Resources Network (COGENT) organized its 16th Steering Committee Meeting at Cochin, India. The Steering Committee and representatives from various stakeholders of the global coconut sector attending the meeting have endorsed the following international recommendation.

Considering that:

- COGENT gathers 39 member-countries representing more than 98% of global coconut production, and hosting the 24 most significant ex situ coconut genebanks which provide germplasm and release advanced cultivars to millions of farmers.
- The substantial work achieved and conducted by COGENT coconut scientists remains too confidential and not sufficiently disseminated among stakeholders and the coconut value chain.
- Basic knowledge about reproductive biology of the coconut palm and breeding techniques is essential for farmers and other stakeholders to acquire a relative autonomy in producing hybrids and other good planting material by themselves.
- Both traditional and technical knowledge of farmers regarding coconut breeding and its reproductive system are insufficiently assessed at the global level, and that technical knowledge needs to be improved. For instance, in French Polynesia, at least 80% of farmers do not know that each coconut palm has both female and male flowers.
- The reproductive biology of the coconut palm is complex and strongly influences the value of the planting material. At certain periods of the year, the self pollination rate of tall-type coconut palms increases, then, because of inbreeding depression, the value of the planting material decreases by 30% to 50%.
- Avoiding self pollination could result in a global increase of 10 to 20% of the Tall-type planting material.

COGENT recommends:

- That TV channels be closely associated to COGENT communication, and exploit the attractive and original information available on Coconut research by making documentaries on international and national coconut genebanks and the most emblematic COGENT projects.
• Developing video guidelines for describing the following techniques: controlled pollination, measurements of stem, leaves and inflorescences, fruit analysis for field characterization, in vitro culture of zygotic embryos, climbing and harvesting the coconut palm.

• Portraying the development and behaviour of coconut inflorescences and leaves by producing a time-lapse video (one frame per minute) of a tall-type coconut palm during 3 months. This will help visualizing the periods of self-pollination that can reduce the value of the resulting planting material.

• This time-lapse video must be duplicated using an infrared camera. As the inflorescence is thermogenic and releases quite strong heat that intervenes in the pollination process, it will be useful and fascinating to visualize the gradient and the daily evolution of temperature within the inflorescences.

The COGENT Coordinator, Dr Roland BOURDEIX, Bioversity HRF, CIRAD-BIOS UMR CEFE

The COGENT Chairman, Dr Kouassi Allou, CNRA, Côte d’Ivoire
16th Steering Committee Meeting
of the International Coconut Genetic Resources Network (COGENT)
8-10 July 2012 - Kochi (Cochin), Kerala, India

List of participants - COGENT Representatives (1 of 3)

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