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Multi-Institutional Distance Learning Course on the *Ex Situ* Conservation of Plant Genetic Resources



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2. Genetic resources.
3. Germplasm collections.
4. Gene banks.
5. Plant collections.
6. Biodiversity.
7. Distance education.
8. Training.
9. Internet.
10. Cooperation.

Local descriptors in English:

1. Ex-situ conservation.
2. E-learning.

AGROVOC descriptors in Spanish:

1. Conservación del germoplasma.
2. Recursos genéticos.
3. Colecciones de material genético.
4. Banco de genes.
5. Colección de plantas.
6. Biodiversidad.
7. Educación a distancia.
8. Capacitación.
9. Internet.
10. Cooperación.

Local descriptors in Spanish:

1. Conservación ex-situ.
2. Aprendizaje electrónico.

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Project Partners



CIAT

Centro Internacional de Agricultura Tropical
International Center for Tropical Agriculture
www.ciat.cgiar.org

The International Center for Tropical Agriculture (CIAT) is a not-for-profit organization that conducts socially and environmentally progressive research aimed at reducing hunger and poverty and preserving natural resources in developing countries. CIAT is one of the 15 centers funded mainly by the 64 countries, private foundations, and international organizations that make up the Consultative Group on International Agricultural Research (CGIAR).



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REDCAPA

Red de Instituciones Vinculadas a la Capacitación en Economía y Políticas Agrícolas en América Latina y el Caribe
Network of Institutions Dedicated to Teaching Agricultural and Rural Development Policies for Latin America and the Caribbean
www.redcapa.org.br

REDCAPA is a non-profit independent association of universities and research institutions that are dedicated to the study and teaching of topics related to the agricultural and rural sector of Latin America and the Caribbean (LAC). Officially constituted in 1993, it now brings together dozens of institutions of different LAC countries, with European and U.S. universities and institutions as collaborators. REDCAPA is legally registered in Brazil and maintains a complete platform for distance education through the Internet, which is used by its member institutions (specifically their professors) to offer blended learning courses throughout Latin America.



CTA

Centre technique de coopération agricole et rurale
Technical Centre for Agricultural and Rural Cooperation
www.cta.int

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CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in this area. CTA's programmes are designed to: provide a wide range of information products and services and enhance awareness of relevant information sources; promote the integrated use of appropriate communication channels and intensify contacts and information exchange (particularly intra-ACP); and develop ACP capacity to generate and manage agricultural information and to formulate ICM strategies, including those relevant to science and technology. CTA's work incorporates new developments in methodologies and cross-cutting issues such as gender and social capital.

CTA is financed by the European Union.

Our Collaborators

The compilers of the original Spanish version of the *Multi-Institutional Distance Learning Course on the Ex Situ Conservation of Plant Genetic Resources*, Benjamín Pineda, Rigoberto Hidalgo, Daniel Debouck, and Mariano Mejía, are most grateful to the following people for their collaboration in writing up and improving several sections of the original version: Margarita Baena, María del S Balcázar, Carmen Rosa Bonilla, Carlos Iván Cardozo, Arsenio Ciprián, Norma C Flor, Tito L Franco, Dimary Libreros, Graciela Mafla, César Ocampo, Julio Roa, Manuel Sánchez, Orlando Toro, and Alba Marina Torres.

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- CIAT shall be in charge of placing the course materials in public repositories for distance learning to achieve greater dissemination and use of the same.

Furthermore, the English version of the course's materials shall carry visible and specific acknowledgements of CTA's support for translation and publication.

This information applies to all course materials identified with the logotypes of the participating institutions.



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Preface

Many developing countries possess germplasm banks that hold collections of crop species that are significant to humanity's survival. Yet, these banks are often unable to fulfil even the basic functions of conservation because they lack financial resources and adequately trained staff.

Three institutions working in the field of plant genetic resources (PGRs) have recognized this problem and have been collaborating over 10 years on various initiatives; these institutions are the International Center for Tropical Agriculture (CIAT, its Spanish acronym), Bioversity International (formerly the International Plant Genetic Resources Institute or IPGRI), and the National University of Colombia. One initiative was to organize three international training courses on conservation for professionals and technicians working in germplasm banks, botanical gardens, arboreta, and crop diversity projects. Recently, however, obtaining funding for these courses has become increasingly difficult, and distance education was seen as a possible alternative to meet the high demand for training. To embark on this new learning venture, a strategic partnership was established with a provider of computer-supported collaborative learning (CSCL) with over 10 years' experience, the Network of Institutions Dedicated to Teaching Agricultural and Rural Development Policies for Latin America and the Caribbean (REDCAPA, its Spanish acronym).

A coordination committee, made up of representatives from all four partners, defined the objectives of the learning venture and delegated specific staff to take responsibility for given project components. Course objectives and lesson plans were agreed upon jointly by the four partners. Lesson contents were compiled and developed by course tutors and an adult education specialist, with input from university staff and other experts in PGRs and germplasm conservation. The materials were organized into six modules that covered concepts of PGRs, germplasm acquisition, introduction, conservation, characterization, documentation, and germplasm bank management. Dr Daniel Debouck, Head of the Genetic Resources Unit at CIAT, reviewed and endorsed the materials, making valuable suggestions for improvement. The materials were then posted into REDCAPA's virtual classroom as the course developed. A rich bibliography, containing 234 references and 41 full-text publications, and a glossary of terms related to germplasm conservation were compiled and made accessible to all students.

More than 120 professionals applied for the course's first electronic appearance, but only 30 could be admitted according to clearly defined selection criteria. Those who missed out on the first selection, and another 50 new applicants, are expecting a repetition of the course, thus indicating the usefulness of this kind of training.

A detailed evaluation (available at www.ciat.cgiar.org/ccs/ex_situ.htm) of the course resulted in very positive feedback from students (mainly germplasm bank curators and other professionals), the tutors, and the students' supervisors. The organizers therefore decided to approach the Technical Centre for Agricultural and Rural Cooperation (CTA, its French acronym), based in Wageningen, the Netherlands. The Centre agreed to support the translation of the materials into English so that they can now be made available to a wider audience, both in print and on CD.

The four institutions who organized the *Multi-Institutional Distance Learning Course on the Ex Situ Conservation of Plant Genetic Resources* would like to thank CTA for its support in funding the translation and publication of the course materials. We sincerely hope that our publishing the course materials in English and in both print and CD will enable many more people to take advantage of these useful materials, whether for their own studies or for teaching the conservation of PGRs for humanity.

Course Objectives

- To help develop institutional capabilities in the conservation of plant genetic resources (PGRs) by training human resources of the countries participating in the course
- To improve the efforts of participating countries to conserve their PGRs and thereby increase the social benefits of such an activity
- To promote social appropriation of knowledge on the conservation of PGRs
- To strengthen the creative, analytical, and synthesizing capacity of the human talent currently responsible for managing the germplasm banks of Africa
- To contribute to the education and strengthening of the core of human talent oriented towards understanding such questions as:

Why conserve?

What should be conserved?

For who do we conserve?

How do we conserve?

- To provide an environment in which professionals of the participating countries can share their experiences and knowledge on the conservation of PGRs
- To provide an opportunity for professionals to update their training in the conservation of PGRs