



# Conservation & sustainable use of plant genetic resources in agriculture

The Netherlands, May 21 – June 29, 2007

## Introduction

Biodiversity in agricultural systems is under pressure worldwide. The loss of plant genetic resources and its declining use in modern agriculture has generated much concern about the future vulnerability of agricultural production and related pest and disease risks, food security and environmental stability. Various international conventions have addressed this topic; this has moved the conservation and sustainable use of plant genetic resources to the top of the international development agenda.

## Aims and objectives

The overall objective of the training programme is to enhance participants' capabilities to deal with contemporary issues in genetic resource management. Relevant policies, participatory and market-oriented approaches receive special attention. The programme aims for participants and facilitators to exchange experiences and to explore practical applications for the conservation and sustainable use of plant genetic resources in agriculture.

## Training methods

The courses provide the opportunity to learn from the broad range of international experience that is represented not only by our trainers, but also by other participants. Working in a job-orientated, interactive and experience-based setting, we facilitate the exchange of knowledge and experience through a variety of formats: lectures, practicals, group discussions and assignments. We use case studies and role-plays to illustrate theoretical concepts, and field visits and excursions to demonstrate farming practice in the Netherlands. The courses conclude with the development of proposals which integrate all course topics and relate them to the reality of the participants' working situations.

## Who can participate?

The training programme is designed for project co-ordinators, senior staff, managers, trainers, programme leaders and other professionals who aim to promote the

conservation and use of genetic resources for agriculture from policy, research, education or development perspectives. Participants are employed by research institutes, public/private seed companies, universities, NGOs or other organisations with an agricultural development orientation. Applicants should have at least a BSc or the equivalent in training and experience. They should have at least three years of professional experience in a relevant field and be proficient in English.

## Programme

Six two-week courses are offered. These courses are part of two overlapping training programmes (training profiles). Within each profile, two courses are held in parallel sessions (see programme schedule). The first programme, **Contemporary and participatory approaches in plant genetic resources conservation and use**, addresses (1) Genetic resource policies, (2) Agrobiodiversity markets and chains, (3) Participatory approaches to genetic resource management, and (4) Gene bank management. The second programme, **Advanced management practices towards sustainable use of plant genetic resources**, addresses (1) Participatory approaches in genetic resources management, (2) Gene bank management, (3) Participatory crop improvement, and (4) Biotechnology in conservation and crop improvement.

Each two-week course provides independent and comprehensive training. Based on professional interests and institutional needs, participants can combine two or three courses into a programme. A brief description of the individual courses is provided below.

## Genetic resources, rights and institutional policies

### May 21 – June 1, 2007

How can one deal with international agreements like CBD, IT-PGRFA and TRIPS at an institutional level?

This course focuses on the practical application of these policies at the institutional level in the fields of biotechnology, plant breeding and conservation. After



completing the course, participants will have increased their knowledge of intellectual property rights and mechanisms for access and benefit sharing and reinforced their capability to deal with these issues in research for development. Topics addressed are:

- International genetic resource policies.
- Systems approach towards institutional implications.
- Genetic resource access mechanisms and material transfer agreements.
- Intellectual property rights, plant variety protection and farmers' rights.
- Design of institutional policies concerning inbound and outbound intellectual property and genetic resources

### **Enhancing agrobiodiversity use: markets and chains**

**May 21 – June 1, 2007**

How can one manage supply chains and create markets for agrobiodiversity products?

This course aims to create awareness of the economic values of agrobiodiversity and to promote its use through strategic, market-oriented approaches. After completing the course, participants can assess the problems in agricultural supply chains and formulate solutions that contribute to the sustainable use of agrobiodiversity.

Topics addressed include:

- Economic perspectives of enhanced agrobiodiversity use.
- Market trends and sector analysis.
- Supply chain concepts and chain integration.
- Analysis of farm performance for under-utilised crops.
- Marketing concepts for niche markets.
- Business plan development on the facilitation of chain development in a selected chain.

### **Participatory approaches in genetic resource management**

**June 4 – 15, 2007**

How can participatory research and development in genetic resource conservation and management programmes strengthen both the formal and informal genetic resource sectors?

Using a systems perspective, participants will explore options for linking formal genetic resource conservation programmes with local genetic resource management activities. This course will help participants to incorporate participatory elements in their genetic resource management programmes with the aim of enhancing

efficiency and effectiveness by matching the outputs more closely with farmers' requirements. Topics addressed are:

- Stakeholders analysis.
- Methodologies and tools for participatory learning and action.
- Formal and informal genetic resource systems.
- On-farm conservation and participatory variety selection.
- Project design addressing participatory research and development in genetic resource management programmes.

### **Genebank management: conservation and promoting use**

**June 4 – 15, 2007**

How can genebanks best fulfil their aims regarding the conservation and utilisation of genetic resources? This course focuses on recently developed perspectives on germplasm collection management; it places genebank management in a wider development and agricultural research context. This course aims to provide the participants with the tools to adapt genebank operations to the objectives and to manage germplasm collections more effectively. Topics addressed are:

- Genebanks and national plant genetic resources programmes.
- Setting objectives for genetic conservation programmes.
- Conservation and utilisation concepts and strategies.
- Genebank management procedures.
- Rationalisation of collections.
- Documentation.
- Genebank economics.
- Design of strategic genebank management plans.

### **Advanced approaches in participatory crop improvement**

**June 18 – 29, 2007**

How can small-scale, resource-poor farmers in less favourable and more remote areas gain access to the crops and varieties they prefer? This course will assist participants in designing efficient and effective crop improvement programmes as well as actively involving farmers and farmer communities in variety selection and breeding procedures. This advanced course in participatory crop improvement builds on the introductory course *Participatory approaches in genetic resource management*. Topics addressed are:

- Breeding objectives and user groups.
- Variety characteristics and sources of germplasm.



- Designing participatory variety selection and plant breeding programmes.
- Genotype x environment interaction.
- Upscaling participatory crop improvement.
- Variety release.
- Designing participatory crop improvement projects.

### **Biotechnology for genetic resources conservation and crop improvement**

**June 18 – 29, 2007**

How can biotechnology, especially molecular marker technology, be used to solve questions arising from crop improvement objectives and diversity assessment studies? This course aims to provide participants with working knowledge on the application of biotechnology to the study of genetic diversity and plant breeding. Topics addressed are:

- Molecular biology and its applications.
- Marker-assisted breeding and QTL analysis.
- Genetic modification; transformation systems, applications and detection technology.
- Genomics and functional genomics.

For additional information on the programme please go to: [www.wi.wur.nl/UK/newsagenda/agenda/Conservation\\_\\_sustainable\\_use\\_of\\_plant\\_genetic\\_resources.htm](http://www.wi.wur.nl/UK/newsagenda/agenda/Conservation__sustainable_use_of_plant_genetic_resources.htm)

*The organising committee reserves the right to change the programme if necessary.*

### **Partners**

The training programmes are organised by Wageningen International and the Centre for Genetic Resources, the Netherlands (CGN, [www.cgn.wur.nl](http://www.cgn.wur.nl)) in collaboration with other partners of Wageningen University and Research Centre ([www.wur.nl](http://www.wur.nl)), Bioversity International ([www.bioversityinternational.org](http://www.bioversityinternational.org)), and other national and international organisations that play a key role in genetic resource conservation and use.

### **Fees and accommodation**

The fee for a two-week training programme is € 1850 for a four week programme it is € 3500 and a six-week programme costs € 5150. This amount includes administration fees, lecture materials and field trips, but excludes board and lodging and travel expenses. Participants will be accommodated in the Wageningen International Conference Centre (WICC) with full board and lodging. Prices are available on request.

### **Fellowships**

A limited number of fellowships are available from the Netherlands Fellowship Programme (NFP) for nationals of certain countries. Candidates who wish to apply for such a fellowship should begin the application procedure as soon as possible. Candidates must FIRST apply to Wageningen International for admission to the course. Acceptable candidates will receive a letter from Wageningen International indicating that they have been PROVISIONALLY accepted. Candidates can then apply for a NFP fellowship through the Netherlands Embassy or Consulate in their own country.

**Please note that NFP fellowships are available for a four-week training programme only.** Applications for NFP fellowships should be submitted to Wageningen International before **February 1, 2007**.

For additional information on fellowships, go to: [www.wi.wur.nl/UK/services/International+education+at+Wageningen+UR/Courses/Fellowships/](http://www.wi.wur.nl/UK/services/International+education+at+Wageningen+UR/Courses/Fellowships/)

Wageningen International cannot provide any funds to finance the participants and is also unable to assist applicants in obtaining sponsorship.

### **Application**

The admission deadline for application directly to Wageningen International, with funding other than an NFP fellowship, is **4 weeks before the start of the training**. Early application is recommended. For additional information and to download application forms, go to: [www.wi.wur.nl/UK/newsagenda/agenda/Conservation\\_\\_sustainable\\_use\\_of\\_plant\\_genetic\\_resources.htm](http://www.wi.wur.nl/UK/newsagenda/agenda/Conservation__sustainable_use_of_plant_genetic_resources.htm). Application forms, including a separate CV, should be submitted to Wageningen International (see address below). You can also submit an application on line.





### Programme schedule

May 21 – June 1, 2007 * Closing date: April 21, 2007	June 4 – 15 * Closing date: May 4, 2007	June 18 – 29 * Closing date: May 18, 2007
<b>Programme on contemporary and participatory approaches in plant genetic resources conservation and use</b> Code: 20/00 Closing date for NFP fellowship application: February 1, 2007		
Genetic resources, rights and institutional policies Fee: € 1850 Code: 20/20	Participatory approaches in genetic resources management Fee: € 1850 Code: 20/13	
Enhancing agrobiodiversity use: markets and chains Fee: € 1850 Code: 20/40	Genebank management: conservation and promoting use Fee: € 1850 Code: 20/31	
* Admission deadline for application directly to Wageningen International, with funding other than an NFP fellowship	<b>Programme on advanced management practices towards sustainable use of plant genetic resources</b> Code: 21/00 Closing date for NFP fellowship application: February 1, 2007	
	Participatory approaches in genetic resources management Fee: € 1850 Code: 21/13	Advanced approaches in participatory crop improvement Fee: € 1850 Code: 21/32
	Genebank management: conservation and promoting use Fee: € 1850 Code: 21/31	Biotechnology for genetic resources conservation and crop improvement Fee: € 1850 Code: 21/35

### Related courses

Wageningen International is also offering a **Training programme on plant genetic resources and seeds: policies for conservation and use** in Ethiopia, from September 17 – October 12, 2007.

The Central and West Asia and North Africa (CWANA) region is the centre of genetic diversity for some of the world's major food crops. However, this valuable diversity is threatened by genetic erosion. Local landraces are being replaced by 'improved' varieties; population pressure, urbanisation and environmental degradation caused by frequent droughts, overgrazing and desertification contribute to this process. The informal system – an indigenous, knowledge-based, farmer-managed crop production system – is still the main source of genetic resources and seeds for small-scale farmers.

For professionals working in the field of genetic resources and seeds in arid or semi-arid regions throughout the

world, Wageningen UR – in cooperation with the ICARDA, IPGRI and the Ethiopian Institute for Agricultural Research (EIAR) – will be offering a training programme in Awassa and Debre Zeit, Ethiopia. In four two-week courses, the programme will address: (1) Market and chain development for genetic resources and seeds, (2) Participatory approaches in genetic resources management and plant breeding, (3) Conservation strategies and genetic resources policies, and (4) Design of plant breeding programmes addressing drought.

Fellowships are available from the Netherlands Fellowship Programme. The application deadline for fellowships is June 1, 2007.

For more details about the programme and the application procedure, go to:  
[www.wi.wur.nl/UK/newsagenda/agenda/Conservation\\_\\_su\\_stainable\\_use\\_of\\_plant\\_genetic\\_resources.htm](http://www.wi.wur.nl/UK/newsagenda/agenda/Conservation__su_stainable_use_of_plant_genetic_resources.htm)