

GENERATION CHALLENGE PROGRAM

SP3 Status Report

June 2004

Working Title	CAGT workshop
Project Title	Crops with Appropriate Gene Technologies
Description of Overall Goals	The goal of the workshop is to define strategic approaches and research for using competitive enabling gene technologies to incorporate drought tolerance in priority crops.
Team Members	CAAS, EMBRAPA, CIAT, CIMMYT, CIP, ICARDA, IITA, IPGRI, IRRI, WU
Budget	US\$ 50,000

For June Report please edit project summary table if required

Planned activities during the first half-year:

1. Organize a workshop to discuss the following objectives:
 - identify suitable varieties for genetic transformation of asexually propagated crops: cassava, *Musa*, sweetpotato, potato in consultation with target countries;
 - determine the potential of existing gene technologies for drought tolerance engineering for the targeted crops;
 - distinguish the required enabling gene technologies for the targeted crops;
 - develop information and communication tools to share science-based knowledge and news on genetically engineered crops among scientists and other stakeholders;
 - evaluate freedom to operate with gene technologies needed by the program.
 - develop research plan / needs for the next 5 - 10 years on developing crops with appropriate gene technologies (CAGT).
2. Prepare and submit proposals contributing to the goal and objectives of the CAGT project.

Achievements:

1. CAGT workshop organization

CIAT and CIP organized a workshop entitled *CAGT – Crops with Appropriate Gene Technologies: drought tolerance for increasing performance under marginal conditions*” which took place at the ILRI campus, Nairobi, Kenya from 26 to 30 of April, 2004.

The goal of the workshop was to define strategic approaches and research for using competitive enabling gene technologies to incorporate drought tolerance in priority crops.

The workshop had the participation of scientists from 7 CGIAR Centers, national programs from Brazil, China, Colombia, Kenya, and from advanced research institutes at Wageningen University, University of Florida, and the University of California (list of participants attached). The program director and subprogram leader were also present throughout the meeting.

The workshop program was organized into 3 consecutive sessions:

Defining the state of the art. The state of the art of enabling gene technologies was presented: drought tolerance gene technologies by Dr. Alessandro Pellegrineshi (CIMMYT, Mexico), gene containment approaches by Dr. Henry Daniell (University of Florida, United States of America), alternative selectable markers by Dr. Christian Bachem (PRI, Wageningen, The Netherlands) and site-specific recombination in plants by Dr. David W. Ow (PGEC USDA, United States of America).

Setting the scene. Each participant made a presentation on its current activities in the application of gene technology to improve the challenge program crops. In total 14 presentations were done covering most of the crops.

Development of concept notes. As a result of both previous sessions, the participants identified more than a dozen researchable topics which would be of interest to the GCP. Through discussions and prioritization, they ended up with 5 high priority topics: multi-location field trials of drought tolerant transgenic plants, precision transformation (site-specific recombination), chloroplast transformation, abiotic stress gene technology, and biotic stress gene technology. The identification of leading institution and reduced number of participant was the last activity conducted at the workshop.

2. Proposal development

Four of the concept notes were developed into a pre-proposal and submitted to the competitive program of the Challenge program.

Planned activities for the second half-year

Two aspects will be considered during the second half of the year.

- Surprisingly none of the four GE pre-proposals passed the first round of selection to be submitted as full-proposal. The participants currently envisage new alternative sources of funding. Such outputs of the workshop need attention from the management of the subprogram and program. Together with workshop organizers, we will seek alternative funding sources in the second half of the year.
- A position paper will be drafted between the participants to help a better understanding of the policy issues surrounding the development and deployment of genetically engineered crops.



Crops with Appropriate Gene Technologies (CAGT) Workshop
ILRI Campus, Old Naivasha Road, Nairobi, Kenya
Anril 26-30. 2004

List of Participants

Christian Bachem

Wageningen Agricultural University and Research
Center
The Netherlands

Jasper Buijs

(CIP
Peru

Paul Chavarriaga

CIAT
Colombia

Jonathan Crouch

ICRISAT
India

Henry Daniell

University of Central Florida
USA

Swapan Datta

IRRI
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Carmen De Vicente

IPGRI
Colombia

Lilian Duplat

CORPOICA
Colombia

Jean-Vincent Escalant

IPGRI – INIBAP
France

Daphrose Gahakwa

KARI/NARO
Uganda

Bianca Ghazal

ICARDA
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Marc Ghislain

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Manoel Souza

EMBRAPA Genetic Resources and Biotechnology
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ISAAA, *Africenter*
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