



NBPGR

National Bureau of Plant Genetic Resources

New Delhi

Course

1. *In vitro* Conservation and Cryo-preservation of Plant Genetic Resources

Contact Person:

Dr S K Sharma

Director

National Bureau of Plant Genetic Resources

Pusa Campus, New Delhi 110 012 (India)

Phone:

+91-11-25843697

Fax:

+91-11-25842495

E-mail:

director@nbpgr.ernet.in

National Bureau of Plant Genetic Resources (NBPGR) was established in 1976 as the nodal agency at national level for management of plant genetic resources (PGR) for food and agriculture, and to carry out related research and human resource development. The NBPGR, with the network of its 10 regional stations located in diverse agro-climatic zones of the country, the 57 national active germplasm sites (NAGS) situated at different crop based ICAR institutions and state agricultural universities and other locations has been spearheading various activities on PGR management. The national PGR programme essentially includes-germplasm exploration and collection; germplasm exchange and plant quarantine; germplasm characterisation; PGR conservation- *ex situ* base collection, including seed bank (-20°C), cryo-bank (-156°C/-196°C) and *in vitro* bank; field genebanks for clonally propagated crops; medium-term conservation of active/working collections; on-farm conservation studies; back-up research on conservation regimes and protocols; registration of plant germplasm; PGR policy issues; DNA fingerprinting of crop cultivars; new areas related to PGR - regulation of exchange of transgenics and GMOs. Human resources development, training and postgraduate teaching in PGR has also been the major thrust.

1.

***In vitro* Conservation and Cryo-preservation of Plant Genetic Resources**

Objectives

The course is designed to improve skills of international and national participants in using tissue culture techniques and cryopreservation for conservation and management of PGR for crops relevant in their countries.

Faculty

The resource persons will be from NBPGR and Bioversity International and in specific cases international experts will be invited to give lectures.

Course Director : Dr S K Sharma

Duration : 2 weeks (November, 2009)

Course fee : US \$ 1,250

No. of trainees per course : 20

Accommodation : International Guest Houses at IARI or NASC Complex at Pusa Campus, New Delhi

Eligibility : Masters degree in botany/any branch of agricultural science preferably with experience in PGR

Course Contents

- Importance of *in vitro* conservation and cryopreservation techniques
- *In vitro* techniques in conservation and use cycle
- Methods of *in vitro* clonal propagation
- Methods of *in vitro* conservation
- Cryopreservation: principles and requirements
- Techniques of cryopreservation
- Cryopreservation of *in vitro* cultures
- Cryopreservation of non-orthodox seeds

