

Results of the 2009 Award Scheme: Enhancing the Value of Crop Diversity

Project Description	Institute(s)	Traits	Crop collection	Collection/ No Accessions	Country(s)
<p>Biodiversity in cassava (<i>Manihot esculenta</i> Crantz) in Malawi and Mozambique.</p> <p>Cassava germplasm from Malawi and Mozambique will be characterized and evaluated for starch content and analysed for leaf nutrient values, in collaboration with the University of Free State, South Africa.</p>	The University of Free State, South Africa, in collaboration with the Department of Agriculture, Malawi and the "Instituto de Investigacao Agraria de Mocambique"	Morphological and molecular characteristics, starch content of root and leaf nutrient values.	Cassava	60 accessions from 2 collections, Malawi and Mozambique	Malawi, Mozambique and South Africa
<p>Evaluation of minicore sorghum germplasm for resistance against multiple diseases.</p> <p>Sorghum germplasm will be evaluated for resistance to fungal diseases in the greenhouse and field and best performers characterised using SSRs.</p>	The Texas A&M University, USA in collaboration with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)	Resistance to fungal diseases: anthracnose, head smut and downy mildew	Sorghum	242 accessions of the minicore collection developed by ICRISAT	USA
<p>Characterisation and evaluation of sorghum (<i>Sorghum bicolor</i> L. Moench) collections from Tanzania using agronomic and morphological markers.</p> <p>Sorghum germplasm from Tanzania plus tolerant standard accessions from ICRISAT and BIOEARN will be characterised and evaluated for tolerance to aluminum toxicity and drought.</p>	National Plant Genetic Resources Centre (NPGRC), Tanzania in collaboration with Eastern Africa Regional Programme and Research Network for Biotechnology, Biosafety and Biotechnology Policy Development (BIO-EARN) and ICRISAT	Tolerance to aluminum toxicity and drought	Sorghum	200 accessions	Tanzania
<p>Evaluation and characterization of bean and cowpea landraces from Southeast Mexico: focusing on terminal drought tolerance, begomovirus resistance and yield traits.</p> <p>Bean, lima bean and cowpea germplasm recently collected from the Yucatan peninsula in Mexico will be characterised and evaluated for tolerance to drought and bean yellow golden virus infection.</p>	Instituto Nacional de Investigaciones Forestales, Agricolas y Pecuarias (INIFAP), Mexico	Morphological characters, tolerance to drought and bean yellow golden virus infection	Common bean, Lima bean and Cowpea	40 bean accessions 30 lima bean accessions 30 cowpea accessions	Mexico

Project Description	Institute(s)	Traits	Crop collection	Collection/ No Accessions	Country(s)
<p>Agromorphological characterisation of Burkina Faso rice germplasm in lowland and irrigated conditions.</p> <p>Rice germplasm in Burkina Faso will be characterised and evaluated for general agronomic performance in lowland rainfed/irrigated systems.</p>	Institut National de l'Environnement et de la Recherche Agronomique (INERA), Burkina Faso	Morphological and agronomic characters, biotic and abiotic stresses and yield	Rice	600 accessions	Burkina Faso
<p>Evaluation of pearl millet germplasm for sustainable production under changing climate: Heat Tolerance.</p> <p>Pearl millet germplasm from the minicore collection developed by ICRISAT will be evaluated for heat tolerance.</p>	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India	Heat tolerance	Pearl millet	238 accessions	India
<p>Characterisation and evaluation agromorphological of collections of sorghum and millet in Niger.</p> <p>Sorghum and pearl millet germplasm from Niger will be morphologically characterised and evaluated for agronomic performance, tolerance to drought, insect & disease resistance.</p>	Institut National Recherche Agronomique du Niger (INRAN) in collaboration with ICRISAT	Morphological characters, agronomic performance, tolerance to drought, insect and disease resistance	Pearl millet and Sorghum	213 accessions of pearl millet 1210 accessions of sorghum	Niger
<p>Screening of Papua New Guinea (PNG) highlands sweet potato germplasm for selected biotic and abiotic stresses.</p> <p>Sweet potato germplasm from PNG will be evaluated for disease resistance and cold tolerance under in-vitro and field conditions.</p>	National Agricultural Research Institute, Papua New Guinea	Disease resistance (scab) and cold tolerance	Sweet potato	800 accessions	Papua New Guinea
<p>Phenotyping the GCP barley reference collection for drought related traits</p> <p>The reference collection of barley developed by the CGIAR Generation Programme (GCP) will be evaluated in Syria and Jordan for a range of traits related to drought stresses.</p>	International Centre for Agricultural Research in the Dry Areas (ICARDA), Syria	Morphological, agronomic and physiological traits related to drought stress	Barley	300 accessions of the reference collection developed by GCP/ICARDA	Syria and Jordan

Project Description	Institute(s)	Traits	Crop collection	Collection/ No Accessions	Country(s)
<p>Wheat genotypes evaluation for high temperature and drought using photosynthetic performance and protoplasmic tolerance traits</p> <p>Wheat genotypes will be evaluated for tolerance to high temperature and drought by looking at growth and physiological traits under stressful conditions.</p>	<p>Instituto Nacional de Recursos Biologicos, IP/ L-Instituto Nacional de Investigacao Agrária, Portugal in collaboration with Instituto de Investigação Agronómica, Angola</p>	<p>High temperature and water stress (physiological traits of stomata and photosynthesis) and also biometric traits</p>	<p>Wheat</p>	<p>100 accessions</p>	<p>Portugal and Angola</p>
<p>Participatory evaluation of wheat and barley germplasm collections in Iran</p> <p>Wheat and barley germplasm will be characterized and evaluated by the Centre for Sustainable Development (CENESTA) in Iran, through a farmer's group and in collaboration with the Iranian genebank and ICARDA, under farmers' own field and management conditions. The project aims at integrating farmers characterization and evaluation of important germplasm collections with already existing information and thereby help to identify more appropriate germplasm for use by farmers and breeders in developing varieties adapted to climate change.</p>	<p>The Centre for Sustainable Development (CENESTA), Iran in collaboration with ICARDA</p>	<p>Cold resistance and agronomic traits under drought and heat stress. Also traits selected by farmers</p>	<p>Wheat and Barley</p>	<p>160 accessions of wheat 160 accessions of barley</p>	<p>Iran</p>
<p>Collection and evaluation of rice varieties tolerant to drought, salinity, brown plant hopper and bacterial leaf blight in Vietnam</p> <p>Rice germplasm will be collected and evaluated for tolerance to drought, salinity, pests and diseases, as well as analyzing grain quality characteristics.</p>	<p>Field Crops Research Institute, Vietnam</p>	<p>Tolerance to drought and salinity;</p> <p>Tolerance to pests and diseases (brown plant hopper and bacterial leaf blight);</p> <p>Agronomic characteristics and grain quality (including protein & amylose content)</p>	<p>Rice</p>	<p>200 accessions</p>	<p>Vietnam</p>

Project Description	Institute(s)	Traits	Crop collection	Collection/ No Accessions	Country(s)
<p>Assessing drought tolerance of wild and edible <i>Musa balbisiana</i> germplasm and the impact of drought on the activation of infectious endogenous BSV EPRVs</p> <p>Germplasm of wild and edible <i>Musa balbisiana</i> will be evaluated for drought tolerance and the impact of drought on the activation of infectious endogenous banana streak virus. This project aims at providing breeders with information and germplasm needed in the development of banana hybrid cultivars adapted to climate change challenges such as drought.</p>	The Institute of Plant Breeding, University of the Philippines Los Baños, The Philippines	<p>Genotypic variation in the response of <i>Musa</i> genotypes to a drying event;</p> <p>Effect of drought on the activation of the expression of infectious BSV EPRVs;</p> <p>Effect of drought on symptoms of BSV-infected plants.</p>	Wild and edible <i>Musa</i>		Philippines
<p>Participatory Characterization and Evaluation of Wheat and Barley, Lentil and Pea Germplasm Collections in Yemen</p> <p>Wheat, barley, lentil and pea germplasm will be characterized and evaluated by scientists at the Agricultural Research and Extension Authority (AREA) of Yemen in conjunction with farmers through a participatory approach in order to identify accessions with agronomically important characters associated with adaption to abiotic and biotic stresses.</p>	Agricultural Research and Extension Authority (AREA) in collaboration with the National Genebank of Yemen and ICARDA	<p>Drought tolerance;</p> <p>Pest and disease resistance including traits selected by farmers</p>	Wheat, Barley, Lentil, Pea	<p>178 accessions of wheat</p> <p>185 accessions of barley</p> <p>70 accessions of lentil</p> <p>30 accessions of pea</p>	Yemen
<p>On-Farm Evaluation of Yield Potential of Local Durum Wheat Accessions Under Saline Irrigation</p> <p>Durum wheat germplasm in Tunisia will be evaluated under on-farm field conditions to assess salt tolerance and resistance to fungal diseases under saline irrigation conditions</p>	Institut National Agronomique de Tunisie in collaboration with Institut National de Recherches en Génie Rural, Eaux et Forêts (INRGREF), Tunisia and ICARDA	Salt tolerance, disease resistance (fungal) and yield potential.	Durum wheat	15 accessions	Tunisia

Project Description	Institute(s)	Traits	Crop collection	Collection/ No Accessions	Country(s)
<p>Enrichment diversity of Vigna and Phaseolus germplasm collections - evaluation, maintenance and better utilization in correspondence with global climate change</p> <p>Cowpea and bean germplasm will be evaluated for tolerance to abiotic stresses, diseases and pests. Nutritional analyses will also be undertaken.</p>	<p>Institute of Plant Genetic Resources, Bulgaria</p>	<p>Physiological, biochemical and cytological analyses, pest and disease resistance.</p>	<p>Cowpea and Bean</p>	<p>50 cowpea</p> <p>30 bean</p>	<p>Bulgaria</p>