

## The Global Partnership Initiative for Plant Breeding Capacity Building

### Launches the Call for Studies and Analysis on

## State of Knowledge on Breeding for Durable Resistance to Rust Threatening Crop Production in the Developing World

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The international community, national governments, and the farming sectors have begun to work out how they should address climate change concerns. In the case of FAO, its governing bodies have called for climate change adaptability and mitigation to be given a high priority in its future work. At the level of the whole of FAO, reports have been prepared or are under preparation to describe what should be the framework for responding to climate change concerns.

Over the past five years, FAO has been involved actively in the development of GIPB - the Global Partnership Initiative for Plant Breeding Capacity Building (<http://km.fao.org/gipb/>), which is an internationally facilitated platform dedicated to enhancing the capacity of developing countries to improve crops for food security and sustainable development through better plant breeding and delivery systems. With GIPB, it should be possible to promote a framework for capacity building in sustainable use of crop genetic resources to help countries face challenges such as the ones expected with intensification of climatic and environmental challenges.

Special concerns have been raised by GIPB stakeholders on the potential impact of climate change on plant diseases of strategic significance to food security in the developing world. New and more severe diseases of wheat, rice and other cereals may arise during the next decades with catastrophic consequences, specially to poor countries. Impacts on geographical distribution of diseases and crop loss due to changes in the physiology of host-pathogen interaction as well as changes in the type, amount and relative importance of diseases are some of the expected threats, as the predicted climatic changes come true.

Given the rate of global warming, it is worth furthering our capacity to respond as well as understand the links between climate change and disease. Special attention must be given to the fact that host resistance may be overcome more rapidly due to accelerated pathogen evolution, which can be expected under high CO<sub>2</sub>, enhanced radiation and other environmental challenges. Better use of genetic diversity through pre-breeding and breeding for disease resistance, in association with improved production systems are being highlighted as the best ways to tackle the huge challenge of widening the genetic and adaptability base of cropping systems, especially in developing countries.

***This GIPB Award Scheme was developed to stimulate organization and analysis of expanded up-to-date information on the state of knowledge on breeding for durable resistance to diseases threatening crop production in the developing world. Alternatives like multilines should be considered. All interested parties are hereby invited to submit Letters of Intention, which are going to be considered for award in the first semester of 2009.***

***The following terms and conditions will apply:***

Priorities for support under this Awards Scheme:

Grants will be awarded to the best Letters of Intention for development of expanded up-to-date information on pre-breeding and breeding for durable resistance to a selected group of crops of high significance to food security in developing countries. The purpose of these studies is to support efforts directed to climate change adaptability and mitigation through enhanced and sustainable use of genetic variability.

Key elements to be considered in the preparation of Letters of Intention are:

**Crop species**

Crop species of interest under this Award Scheme are wheat (*Triticum aestivum* L.), and soybean (*Glycine max* L.). Only one specie must be considered per Letter of Intention. The same applicant may submit more than one Letter of Intention.

**State-of-the-art of knowledge on breeding for durable resistance to diseases of substantial risk to the crop**

Minimum elements to be considered in the proposed study are:

1. Introduction, 2. worldwide disease threats with high impact to food security (current and potential), 3. general approaches to breeding resistance to these diseases, 4. relevance of vertical resistance approaches, 5. relevance of horizontal, durable resistance, 6. the way forward

**Deliverables**

Comprehensive coverage study and analysis with pictures, tables, case studies, etc. A final document of 30 to 50 pages is expected, using single-spaced lines, Arial font, size 12.

Proposals content and format

Proposals should be presented as Letters of Intention (maximum 3-pages length, single spaced, Arial font, size 12) indicating the specie to be studied and outlining the authors' state of knowledge and proposed approach to produce a study that covers at least the elements indicated above. An updated full CV of the proponent must accompany the Letter of Intention.

Eligibility of grantees

Any individual or group of individuals working in recognized governmental, public, non-governmental and/or private institutions and civil society bodies are eligible to apply.

Size and duration of grant

All work must be completed no later than 31<sup>st</sup> August 2009. The approved proposals will be paid US\$ 4,000 upon delivery and approval of the work by the GIPB Secretariat.

Intellectual Property Rights

The GIPB and FAO will have full rights to use the information generated through this award scheme for the purpose of supporting efforts to empower countries and breeding programs to fight plant diseases of strategic significance to food security in the developing world.

Evaluation Criteria

Reviewers shall take into account the following factors when evaluating the Letters of Intention:

- (a) Substantiated information that indicate the applicant's knowledge of the indicated pathogens and of the state-of-the-art of genetic resources, pre-breeding and breeding work on disease resistance for the specie to be targeted by the study;
- (b) Substantiated information that indicate the applicant's knowledge and view on the potential of durable disease resistance approaches and strategies;
- (c) Qualifications of the applicant to conduct the proposed project, as indicated by the general content of the Letter of Intention and the full CV.

The Process*Submission of applications:*

All Letters of Intention must be made in English and sent electronically (either scanned or in PDF format with signature) to: [gipb.awards@fao.org](mailto:gipb.awards@fao.org).

or by hard copy or fax to:

The Global Partnership Initiative for Plant Breeding Capacity Building - GIPB  
Plant Production and Protection Division - AGPC  
FAO Office C-784/778  
Viale delle Terme di Caracalla  
00153 Rome  
Italy

Fax: +39 06 57056347

Only applications accompanied by a full CV of the applicant, in English, will be considered.

*Deadline for submission of applications:*

All applications must be received by 30<sup>th</sup> April 2009.

*Review of applications*

All applications will be reviewed by the GIPB Secretariat, that may enter into correspondence with the applicant in order seek any necessary clarification. Applications may also be reviewed by external reviewers.

*Notification of grant award*

Applicants will be notified of the outcome of their application by the end of May 2009. Successful applicants will be sent a Grant Agreement for signature.

Disbursement of the grant

Disbursement of funds will be made upon satisfactory completion of the work.

