

## Post-Doctoral Fellow in the Seeds of Discovery Project

The **International Maize and Wheat Improvement Center (CIMMYT)** is looking for an innovative and academically well qualified candidate to work within a global wheat research team. The position will be based at CIMMYT's Main Campus located 45 km northeast of Mexico City, Mexico. The appointment is initially for 2 years, with the opportunity for extension into a career position. The selected candidate will play a key role as a member of the maize Seeds of discovery team within the Genetic Resource Program (GRP). The Seeds of Discovery (SeeD) initiative has the ambitious goal of enabling a quantum leap in the development of high-yielding and climate-ready maize cultivars adapted to a declining and increasingly fragile agricultural resource base. To date only a minute portion of the vast diversity held in maize gene banks has been put to practical use in crop breeding. SeeD will leverage next-generation DNA-sequencing technologies and a network of like-minded partner organizations performing field trials, to mine maize collections for novel alleles and beneficial native traits, and to generate the most comprehensive accessible seed bank "catalogues" for any crop to this date.. As a Mexico-based member of the maize SeeD team, the selected candidate will also work closely with partners in advanced laboratories and national research programs worldwide.

### Main Responsibilities:

- Conduct studies to contribute to the evaluation of molecular genetic diversity of maize germplasm bank accessions from the entire CIMMYT germplasm bank and accessions from partner germplasm banks and institutions
- Identify novel haplotypes not yet represented in modern maize breeding lines
- Conduct selected studies to determine the genetic basis of novel variation for priority traits in collaboration with biometricians and bio-informaticians and partner organizations.
- Implement a pipeline for DNA isolation from thousands of germplasm bank accessions
- Conduct diversity analysis using data generated by GBS and identify novel haplotypes not present in modern maize breeding lines.
- Link trait data from phenotyping experiments of select accessions and crosses with high-density genotypic data. This will include haplotype analysis, allele mining, conventional mapping and association mapping approaches.
- Work with the CIMMYT germplasm bank and with maize breeders to implement and improve the application of molecular tools.
- Contribute to training and capacity building initiatives to enable adoption of molecular tools by partner institutions.
- Publish results in high-impact scientific journals.

### Skills and experience sought:

- A PhD in molecular genetics or an associated discipline.
- Experience in handling genotyping platforms, sequence and high-density genotypic data
- A good understanding of quantitative and population genetics.
- A demonstrated ability to engage in innovation and to work collegially and collaboratively in a multi-disciplinary team.
- Excellent written and verbal communication skills in English. Spanish is advantageous.

The International Maize and Wheat Improvement Center, known by its Spanish acronym, CIMMYT® ([www.cimmyt.org](http://www.cimmyt.org)), is a not-for-profit research and training organization with partners in over 100 countries. The center works to sustainably increase the productivity of maize and wheat systems and thus ensure global food security and reduce poverty. The center's outputs and services include improved maize and wheat varieties and cropping systems, the conservation of maize and wheat genetic resources, and capacity building. CIMMYT belongs to and is funded by the Consultative Group on International Agricultural Research (CGIAR) ([www.cgiar.org](http://www.cgiar.org)) and also receives support from national governments, foundations, development banks, and other public and private agencies.

CIMMYT has had enormous impact in the developing world. It is the center of excellence for work on two of the three most important food crops in the developing world. Its most famous employee, Dr. Norman Borlaug, is credited by many with saving more lives than any other individual in the history of the world. Borlaug's work dramatically increased yields of wheat in the Indo-Gangetic plains in the 1960s and 1970s, staving off starvation for hundreds of millions. For this work, Borlaug received the Nobel Prize in 1970. Scores of other CIMMYT efforts have saved or enriched millions of lives, from releasing disease-resistant varieties and varieties resistant to drought and heat and soil deficiencies, to dispersing techniques to reduce farmer costs and post-harvest losses. In developing countries, wheat varieties developed by CIMMYT and its partners cover 75% of the area planted to modern wheat varieties.

CIMMYT offers an attractive remuneration package paid in US dollars, with a range of benefits including housing allowance, life and health insurance, education allowance (for pre-school, elementary, secondary, and other pre-university grade levels), home leave, retirement fund, and relocation shipping assistance.

**CIMMYT is an equal opportunity employer. It fosters a multicultural work environment that values gender equality, teamwork, and respect for diversity.**

**Women are encouraged to apply.**

**[Apply online](#) no later than **September 16<sup>th</sup>, 2012.****

At [www.cimmyt.org](http://www.cimmyt.org), click on "About us – Job Opportunities- Position" -2012-39 Please complete the online application, including your cover letter, competencies and experience for the position, and a detailed CV/resume.

For further information, contact Dr. Sarah Hearne, Maize molecular geneticist, [s.hearne@cgiar.org](mailto:s.hearne@cgiar.org) or the Human Resources Office, [jobs-cimmyt@cgiar.org](mailto:jobs-cimmyt@cgiar.org). **Please note that only short-listed candidates will be contacted.**