



Applied Plant Geneticist – Dryland Legumes and Cereals

The International Maize and Wheat Improvement Center, known by its Spanish acronym, CIMMYT®, is not-for-profit agricultural research for development organization with partners in over 100 countries. Please refer to our website for more information: www.cimmyt.org

CIMMYT as a member of CGIAR and pursuing its mission to apply science to sustainably increase crop production and improve livelihoods, is establishing collaborative/shared breeding programs with regional NARES in Eastern and Southern Africa for sorghum, millets, groundnut, chickpea, and pigeon pea - collectively dryland legumes & cereals (DLC). These programs will be co-designed and implemented with national programs (NARES) and other partners.

CIMMYT is looking for an outstanding, self-motivated, and result-oriented professional for the position of Applied Plant Geneticist – Dryland Legumes and Cereals. The objective of this position is to enable delivery of higher rates of genetic gain for target traits by applying molecular genetics and genomics tools in breeding pipelines, from trait discovery to line/variety development. The position will work with CGIAR-NARES breeding programs to harness shared technology resources available to help them accelerate genetic gain and increase varietal turnover rates for DLC crops. The position will contribute to organizational change towards team-oriented breeding.

This position will report to the Breeding Lead, Dryland Legumes & Cereals. The duty post will be Nairobi or a mutually agreed location within the target region.

Specific duties:

- Create and implement a long-term vision for use of molecular genetics in trait discovery, pre-breeding and population improvement of DLC crops.
 - Develop strong partnerships with CGIAR and NARES programs to collaboratively identify critical germplasm, product needs, and define pre-breeding and trait discovery objectives.
 - Implement trait-focused research, prioritized by crop and trait value, and technical feasibility.
 - Develop a trait stage & gate pipeline to track progress and identify constraints to progress
 - Inventory existing genetic information for key traits, validate such information on relevant breeding material, and develop scalable deployment strategies across the network breeding programs.
 - Scout new technology/analytical tools that could improve efficiency and speed to develop varieties.
 - Seek & nurture regional & global collaborations with private/public partners (e.g. USAID Innovation Labs, Advanced Research Institutes) to assist trait discovery and pre-breeding for prioritized traits.
- In a team with breeders, informaticians, statisticians, molecular biologists, and others as appropriate, develop & implementation novel germplasm improvement strategies to:
 - Define and strengthen heterotic breeding pools for hybrid crops (sorghum & pearl millet).
 - Propose and implement cost effective routine fingerprinting of network breeding germplasm to better understand population diversity, germplasm strengths & gaps.
 - Develop and deploy novel genetic variation for traits with limited genetic variability.
 - Develop population improvement strategies to rapidly improve favorable allele frequencies.
 - Develop & operationalize a “back-cross factory” to improve base germplasm for critical traits.
 - Outline and develop the foundation for the near-future use of rapid cycling genomic selection.
- Provide capacity building support to upgrade the skills of network partners to deploy molecular markers, and contribute to develop training materials for:
 - Application of marker-assisted breeding strategies.
 - Use of molecular markers in breeding programs (e.g., confirming purity of F1 crosses, quality assurance in breeder and foundation seed, etc.).
 - Standard operation procedures to ensure effective marker-assisted breeding operations (e.g., sampling, labelling, harvesting).
- Collaborate with breeding informatics teams to identify or develop analytical tools, database and platform that provide access to genetic information of breeding material and support scale-up of marker analysis.
- Collaborate with CGIAR’s shared services (Breeding Resources) team and DLC crop improvement network partners to design cost-effective workplans that implement marker-assisted breeding.
- Understand the intellectual property landscape and create intellectual property options that enable the application of genetic knowledge to the breeding programs.





- Participate in project reporting, strategy design, and resource mobilization.
- Lead or participate in presenting project results, peer-reviewed publications.

Required qualifications, skills, and attitudes:

- Ph.D. in plant genetics, molecular breeding, genomics, quantitative genetics or related field.
- Minimum of 5 years of experience in practical application of molecular genetics to breeding program(s).
- Expertise in molecular plant breeding, applied genomics, quantitative genetics.
- Strong understanding of statistics, experimental design, and bioinformatics.
- Skills in analysis and visualization of large, diverse, and complex datasets.
- Ability to deliver results as a trusted member of a multi-cultural team, innovative thinking in problem solving, technology & process management.
- Leadership, initiative, and communication skills to instill an environment of continuous improvement and change.
- Demonstrated self-motivation and ability to motivate others.
- Strong networking and facilitating skills, with focus on enabling and empowering others to succeed.
- Successful experience and commitment to inclusive research design and implementation.
- Other requirements:
 - Fluency in verbal and written English is essential.
 - Willingness to travel internationally and domestically.
 - Experience managing staff and budgets is desirable.
- The selected candidate must exhibit the following competencies: Problem Solving and Decision Making, Critical Thinking, Client Orientation, Communication and Team Leadership.

The position is for an initial fixed-term for three (3) years, after which further employment is subject to performance and the continued availability of funds. CIMMYT's internationally competitive salary and benefits include housing allowance, car, comprehensive health and life insurance, assistance for children's education, paid vacation, annual home travel airfare, contribution to a retirement plan, and generous assistance with relocation shipment.

Candidates must [apply online](#) for **IRS22152_ Applied Plant Geneticist – Dryland Legumes and Cereals**.

Screening and follow up of applications will begin on **Friday, December 2nd, 2022**. Applications must include a CV and a cover letter. Incomplete applications will not be taken into consideration. For further information on the selection process, please contact Yessica Castillo, at y.castillo@cgiar.org

Please note that only short-listed candidates will be contacted.

This position will remain open until filled.

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.

