

Scientist - Crop Physiologist

International Recruited Staff

Reports to: Director, Biodiversity and Crop Improvement Program (BCI)

Location: Rabat, Morocco

Closing date: 16 February 2018

Main purpose of the position

The Crop Physiologist will play a lead role in running the ICARDA Crop physiology laboratory and will lead ongoing research activities on abiotic stresses physiology for agricultural research in ICARDA mandated crops, with a special focus on developing a better understanding of physiological stress adaptation and trait discovery across cereals and legumes.

About ICARDA

The International Center for Agricultural Research in the Dry Areas (ICARDA) is an international autonomous, non-profit, research organization supported by the Consultative Group on International Agricultural Research (CGIAR).

ICARDA's mission is to reduce poverty, enhance food, water and nutritional security, as well as environmental health in the face of global challenges including climate change. We do this through innovative science, strategic partnerships, linking research to development and capacity development that take into account gender equality and the role of youth in transforming the dry areas. ICARDA works in partnership with governments, universities, civil society, national agricultural research organization, other CGIAR research Centers, and the private sector. With its temporary Headquarters in Beirut, Lebanon, ICARDA operates in regional and country offices across Africa, Asia and the Middle East. For more information: www.icarda.org

Main responsibilities

- Lead the ICARDA Crop Physiology Laboratory that groups major physiological tools and equipment.
- Undertake research to better understand the physiological mechanisms of tolerance to drought, heat and salinity on ICARDA mandated crops. Research will include reverse-physiology approaches to dissect drought/heat/salinity resistance mechanisms in drought/heat/salinity resistant lines, as well as studies to improve our understanding of root water uptake under drought as well as shoot traits.
- Carry out basic physiological research on the putative key traits to a better heat/drought/salinity tolerance using well characterized materials in both legumes and cereals. The plant material that will be used to understand the key mechanisms involve gene bank material including wild relatives and RILs, transgenic materials and contrasting lines from the breeding programs, etc.
- Conduct assessment of the contribution of key traits in the adaptation of germplasm to water-limited environment made across reference collections of germplasm (in interaction with the GRS and the breeding programs).
- Manage the established drought precision phenotyping platform at ICARDA-Rabat.
- Expand the current large scale phenotyping protocols (in controlled and close-to-field situations) established at ICARDA by focusing on enhanced expertise in image analysis, both infrared and visible, and remote sensing techniques towards the

phenotyping of large number of entries to the benefits of genetic mapping/breeding purposes.

- Continue the physiological crop simulation modeling activities for ICARDA mandated crops that can help to explore options for yield improvement resulting from genetic alteration of specific traits and from altered cultural management practices.
- Use crop modeling to analyze and assess the value of physiological traits across a number of environments (Trait Discovery) and to understand genotype × environment × management (G×E×M) interactions. Identified desirable plant traits that may confer some degree of tolerance to abiotic stresses could be then incorporated individually or collectively into breeding materials.
- Analyze data and publish scientific findings in high impact ISI journals;
- Train young scientists in the above approaches and methods.
- Contribute to institutional capacity building of national partners through training, supervision and technical backstopping.
- Perform any other responsibilities assigned by the Director.

Education, qualifications and experience

- Ph.D. degree in Plant Sciences, Agriculture, Environmental Sciences or a related subject.
- At least 5 years' post doc relevant experience.
- Strong background and understanding of plant physiology, with a special focus on abiotic stress physiology.
- Strong background in abiotic stress tolerance and phenotyping. Working knowledge on drought, heat and salinity tolerance.
- Excellent interpersonal skills and ability to work effectively in in multi-disciplinary and multi-cultural teams.
- Proven publication record in ISI peer-reviewed journals.
- Excellent communication in written and spoken English; knowledge of French and/or Arabic is an asset.
- Excellent organizational and time management skills.
- Flexibility/adaptability, and positive attitude.

Terms of appointment, salary and benefits

This is an internationally recruited position for which ICARDA offers an attractive compensation package including a competitive salary, housing allowance, non-contributory retirement plan, medical insurance and leave provisions. All benefits are denominated and paid in US Dollars. The successful candidate will be offered an initial contract of 3 years, renewable subject to satisfactory performance and availability of funds. The first year will be probationary period.

How to apply

Please apply online at www.icarda.org/iea/ **by 16 February 2018**

We are an equal opportunity employer and encourage applications from qualified women.

Applications will be acknowledged, but only shortlisted candidates will be contacted.