Call for PhD Student

Thesis title:

Enhancing Crop Resilience: Developing and scaling up high-yielding bread wheat varieties with good quality and Multi-Trait resistance to biotic and abiotic stresses through Novel Methodologies

Description of the offer

Summary:
This research aims to enhance crop productivity and resilience under adverse environmental conditions through developing and scaling up high-yielding bread wheat varieties with inherent tolerance to multiple biotic and abiotic stresses. This research focuses on leveraging innovative methodologies and advanced approaches in plant breeding and genetics to identify elite lines suitable for release.

Global objective:
To enhance agricultural productivity and sustainability through the creation of and scaling up of high-yielding durum wheat varieties with good quality and Multi-Trait Resistance to Biotic and abiotic stresses

Specific objectives:
- Evaluation of elites lines bread wheat under multi location trials at INRA experimental stations.
- Use of high-throughput phenotyping digital and biotechnology tools in selection process.
- Implement participatory selection approach involving various stakeholders.
- Collect and analyze data on key breeding parameters to identify elite genotypes for release.
- large-scaling up and dissemination of resilient high yielding wheat to farmers
- Monitor productivity and assess the impact of technologies during the scaling-up process.

Key Words:
Sustainable Agriculture, wheat Resilience, Multi location yield trials, Biotic and abiotic Stress Resistance/Tolerance, high-throughput phenotyping digital and biotechnology tools, Technology Dissemination

Partners involved in the thesis: INRA and IAV scientists- Stakeholders- Farmers

Host institution: INRA –CRRA Rabat

Location of work: INRA Experimental stations- INRA/ IAV facilities- Farmers fields

Qualifications:
- Master's degree in plant breeding, genetics, agriculture, or a related field.
- Strong background in crop breeding, biotechnology tools, genomic selection, statistical analysis, digital tools and participatory research.
- Excellent communication skills and the ability to collaborate with diverse stakeholders.
- Passion for conducting research towards sustainable agriculture and global food security

Eligible candidates: Eligible candidates are those who have formal pre-registration at the Moroccan Centers for Doctoral Studies (IAV Hassan II, Moroccan Universities). In order to give themselves a chance, candidates must submit their application to these Centers on time.

Application file:

How to Apply: Interested candidates should submit the following documents to **imane.thamialami@inra.ma** and **moha.ferrahi@inra.ma**:
- Curriculum Vitae (CV)
- Statement of Purpose (max 2 pages) outlining your research interests and why you are interested in this project.
- Two reference letters

Application Deadline: 15 December 2023

Duration of the contract and amount of the scholarship: the amount of the **doctoral scholarship** is approximately **5000 MAD/month** for **3 years**, subject to the signing of a **contract** between **INRA** and the **candidate**.

About the host institution: https://www.inra.org.ma/