

Call for PhD Student

Thesis title:

Development and out-scaling of high yielding, large seeded size and Climate Resilient Chickpea (*Cicer arietinum L.*) varieties for winter-sown conditions in Morocco.

Description of the offer

Summary of the thesis project

The purpose of this research is to increase production and productivity of chickpea production through efficient and effective use of improved varieties. The present research involves innovative and advanced approaches to breeding, participatory selection processes, and the scaling up of improved varieties.

Global objective:

Enhancing food security and climate resilience in Morocco through developing drought tolerant and climate-resilient cultivars.

Specific objectives:

Rapid Development of High-Yielding chickpea Varieties with Resistance/Tolerance to Drought, Heat, and Diseases through innovative approaches.

Activities:

Activity 1: Identification of Chickpea candidate lines for release

- Evaluation of elites lines chickpea under multi location trials at INRA experimental stations.
- Use of high-throughput phenotyping and biotechnology tools in selection process.
- Facilitate participatory variety selection (PVS) in Morocco, involving various stakeholders.
- Collect and analyze data on key breeding parameters.

Activity 2: Scaling up of New Improved Chickpea Varieties

- Develop and implement a scaling plan for improved varieties over three years.
- Monitor productivity and assess the impact of technologies during the scaling-up process.
- Undertake evaluation and testing, under farmers' conditions, with their full participation.

Key Words:

Food security, Productivity, Breeding, Resilience, Biotic/abiotic Stresses, Resistance, Tolerance, high-throughput phenotyping, biotechnology tools

Partners involved in the thesis:

- **Dr. HOUASLI Chafika**, Institut National de la recherche Agronomique, INRA-Rabat
- **Pr. GHAOUTI Lamiae**, Institut Agronomique et vétérinaire Hassan II, IAV Hassan II ;
- ICARDA Partners
-

Host institution and location of work: INRA, Regional Center of Rabat Rabat, INRA Experimental stations-INRA/ IAV laboratories - Farmers fields

Qualifications:

- Master is degree in plant breeding, genetics, agriculture, or a related field.
- Strong background in crop breeding, biotechnology tools, genomic selection, statistical analysis, 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: 25 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/>