

Heat and Drought Wheat Research: Opportunities and Challenges – First in person meeting of AHEAD

The Alliance for Wheat Adaptation to Heat and Drought (AHEAD) network steps forward to meet the challenges of increasingly hotter and drier environments by seeking solutions around agronomic techniques, phenotyping as well as career options for young scientists in wheat research. The Moroccan National Institute for Agronomic Research (INRA) kindly hosted the meeting in its facilities in Rabat.

“This temperature is not normal”, says Dr. Moha Ferrahi, Head of the Breeding and Genetic resources Conservation Department at INRA Morocco, “this time of the year, normally its 10 °C less in Morocco.” Climate is changing dramatically; this is causing drastic problems for field crops and it leads to severe yield losses globally. The aim of this face-to-face meeting of AHEAD was to tighten its network, and make a step forward in the efforts to get closer to secure food availability and affordability regionally and globally. By facilitating development and delivery of new technologies AHEAD aims to ensure wheat varieties and agronomic practices.

Host Dr. Faouzi Bekkaoui, Director of INRA in Morocco and Dr. Greg Rebetzke, Chair of the AHEAD Steering Committee, and Wheat Breeder at CSIRO, Australia, opened the AHEAD workshop. Dr Bekkaoui stated, “The work of AHEAD is in line with the objectives of the Moroccan agriculture strategy ‘Green Generation 2020-30’”, which aims to develop a resilient agriculture in the context of climate change. The meeting started with dedicated discussions and identification of genetic and agronomic solutions, physiological understanding and phenotyping techniques, which can be used globally as well as breeding approaches in the development of heat and drought resilient germplasm.

The discussions also highlighted the early careers researchers and women in science. Solutions for the challenges posed and ways to support early career researchers to move to the next level in their scientific careers. PhD students from INRA and the International Centre for Agricultural Research in the Dry Areas (ICARDA) gave insight into experiences in training for careers in agricultural research.

Along with the scientific discussions, participants were able to visit laboratories at INRA and ICARDA as well as the INRA Sidi El Aydi Research Station for an introduction by Dr. Andrea Visioni into the Physiotron phenotyping facility, a fully automated Lysimeter for phenotyping heat and drought stress in crops, built and run by ICARDA.

“It was important to meet and hear from global researchers on recent scientific methods aimed at hastening the delivery of improved and reliable wheat production with the increasing threats of heat and drought. The discussions built understanding and opportunities for networking to better link and exchange ideas and information across research programs experiencing the same climate challenges.” summarized Dr. Greg Rebetzke. The community is looking forward to the next in person meeting, likely to take place at the International Wheat Congress in Perth Australia in October 2024.

For more information regarding AHEAD please visit www.ahead-wheat.org

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