

Fellowship Profile

IAEA PROGRAMS
AT ARGONNE NATIONAL LABORATORY

Crop Production

TRAINING SUMMARY

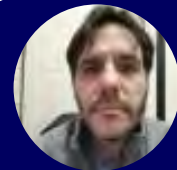
I participated in a 2 month training program on crop production at the Department of Crop and Soil Production at the University of North Carolina. During this period I was able to collaborate with post-doc researchers and Master's students under the direction of Researcher Amanda Cardoso, who is the head of the Plant Physiology Lab.

The training focused on the establishment, maintenance and evaluation of trials of water stress in various plant species (Soybean, Marigold, variety of grass, etc.) grown in phytotrons and its evaluation through measurements of CO₂ Assimilation and Stomatal Conductance (using the IRGA LiCOR 6800 Infrared Gas Analyzer). The collaborative work carried out in the Plant Physiology Lab was of high quality not only because of the level of researchers with whom I worked with but also because of the level of infrastructure and equipment that I was able to access.

WHATS NEXT?

The knowledge and skills acquired during the fellowship will be useful to plan the evaluations to be carried out within the framework of a project i am working on where it is required to identify potential individuals or mutant lines that have developed adaptive traits of greater tolerance or resistance to abiotic stresses (water scarcity or high temperatures).

The tools I learned to use during the fellowship are fundamental to evaluate the different species studied in my work at the Chilean Commission for Nuclear Energy's Plant Radiobiology Laboratory. They will allow the identification of possible new varieties generated by mutation induction using gamma radiation, as well as to understand and characterize the metabolic changes that are observed when stimulating the growth and development of plants through exposure to different types of treatments (gamma; non-thermal plasma; plasma torch; etc.).



“ Working and collaborating in a prestigious laboratory, collaborating with highly experienced researchers was not only a great opportunity for professional growth but also a great personal experience where you could learn about realities very different from your own”

Daniel Villegas - Chile

January 8th - March 1st 2024

Hosted by: North Carolina State University