Giovanni Melandri

I am a crop molecular physiologist and Assistant Professor in the School of Plant Sciences at the University of Arizona, Tucson, AZ. I earned my Ph.D. at Wageningen University under the direction of Dr. Harro Bouwmeester, I have been a visiting Researcher in the lab of Dr. Susan McCouch at Cornell University, a Postdoctoral Research Associate in the lab of Dr. Duke Pauli at the University of Arizona, and a Postdoctoral Researcher at the Institut National de Recherche pour l'Agriculture, l'Alimentation et l'Environnement (INRAE) in Bordeaux, France.

These experiences prepared me for my current position of Assistant Professor in Crop Molecular Physiology in Arid Lands at the University of Arizona. In my lab, we investigate how plant's internal (metabolism and oxidative stress status) and external (growth dynamics and photosynthesis) stress-induced physiological changes are associated to crop performance (yield and biomass). We are also interested in the integration of physiological and biochemical data with phenomics and genomics data to better understand and improve stress resilience in crops. Currently, my research program targets widened pools of genetic diversity for major crops, such as sorghum, durum wheat, cotton, and rice, in the attempt to bring in the effect of novel alleles associated with variation in physiological and biochemical traits. My research approach employs a mix of physiological phenotyping, omics analyses, predictive modeling, and genetic mapping that is applied to field trials mainly conducted in the Arizona low desert.

In my current position, I gained new experience in planning, organizing, and directing research projects, managing personnel, and controlling budgets. I have several active research collaborations with academics inside the University of Arizona, at other US academic institutions, and with agricultural commodity boards. I believe that my expertise in conducting and managing research activities would make me a valuable complement to the ASPB Western Section in a leadership position.