

Comparison of leaf morpho-anatomical characters in *Amaranthus* spp.: phenotyping as an investigative tool for environmental and agricultural sciences

N° ZGLMD

Submitted on: Monday 20 March 2023

Theme :

- Plant and algal development and evolution

Type of submission : Oral communication

If you are not selected for an oral communication, do you still want to apply for a poster : **Yes**

List of authors :

* *Orateur*

Order	Name	Email	Affiliation
1	DORA Scarpin *	scarpin.dora@spes.uniud.it	University of Udine, Department of Agriculture, Food, Environment
2	GIACOMO Este	este.giacomo@spes.uniud.it	University of Udine, Department of Agriculture, Food, Environment
3	FRANCESCA D'Este	francesca.deste@uniud.it	University of Udine, Department of Medicine (
4	ANDREA Milani	andrea.milani@ipsp.cnr.it	Institute for Sustainable Plant Protection (IPSP) - National Re
5	SILVIA Panozzo	silvia.panozzo@ipsp.cnr.it	Institute for Sustainable Plant Protection (IPSP) - National Re
6	SERENA Varotto	serena.varotto@unipd.it	University of Padova, Department of Agronomy Animal Food Natural Reso
7	MARCO Vuerich	marco.vuerich@uniud.it	University of Udine, Department of Agriculture, Food, Environment
8	FRANCESCO Boscutti	francesco.boscutti@uniud.it	University of Udine, Department of Agriculture, Food, Environment
9	ELISA Petrusa	elisa.petrussa@uniud.it	University of Udine, Department of Agriculture, Food, Environment
10	ENRICO Braidot	enrico.braidot@uniud.it	University of Udine, Department of Agriculture, Food, Environment

Abstract:

Plant phenotyping is an important tool that can provide insight into the interaction between plants and the environment, often as supporting information for genotype studies. The resulting knowledge can be useful in eco-physiological research, to understand how species adapt to their growing conditions and to biotic competition. In recent years, phenotyping techniques for the study of plant morpho-anatomical traits have developed in the field of the imaging analysis, starting from microscope images up to high-scale acquisitions through remote sensing. In this work, we focused on the detailed study of single-leaf morphometric traits through the processing of photographic and confocal microscope acquisitions. Four species of *Amaranthus* were used, being plants of interest due to their high invasiveness into fields. Their morphological traits could become a useful tool to describe their adaptative responses and to define strategies for the sustainable management of the agro-ecosystem.

List of documents associated to the abstract:

Title	Type	File
Abstract	Document	Attachement file