

Biography

José Enrique Fernández

(Castilleja del Campo, Seville, 1960). Director of the Institute of Natural Resources and Agrobiology of Seville. The Superior Council of Scientific Research. Ministry of Economy and Competitiveness, Seville.

Edited Agricultural Water Management, Chairman of the Group of Water Relations of the Spanish Society of Plant Physiology, chair of the Working Group on Sap Flow of the ISHS and director of the irnas.

Work in water relations of the system soil, plant, atmosphere, especially in arid and semi-arid environments. His main interest is the optimization of irrigation. Among its lines of work include the characterization of mechanisms of adaptation of plants to abiotic stresses, especially the stress; the management of deficit irrigation and the assessment of their impact on the growth, production and quality; the development of indicators of stress for the control of irrigation; the validation of mechanistic models of transpiration and photosynthesis; the development of systems for the automatic irrigation and precision.

He has worked with the main arable crops and wood of the Guadalquivir Valley, although specialises in the olive tree. The focus of its work consists in analyzing the ecophysiological behavior of the crop and, based on that knowledge, develop new strategies and programming methods of irrigation. He has worked with conventional water stress indicators, but their main interest is the development of new irrigation scheduling methods based on sensors that record automatically and continually variables of the plant such as the flow of sap, the diameter of the trunk and the potential of turgidity of the sheet, and which allow a remotely controlled by irrigation.