

Marisa Gallardo

Marisa Gallardo is currently a full professor at the Department of Agronomy, University of Almeria in Almeria, Spain. Her PhD at the University of Cordoba, Spain evaluated the agronomic performance and water relations of the new cereal tritodeum. She conducted a two year postdoc in CSIRO, Perth, Western Australia examining the physiology of legumes in response to drought. Subsequently, she did a three year postdoc at the University of California-Davis working on irrigation scheduling and modelling of lettuce. That crop growth model is being used in a current irrigation and N recommendation system for lettuce in California. In Almeria, her research deals with N and irrigation management of vegetable crops grown in plastic greenhouses. This work is focused on developing combined modelling and monitoring based management approaches for both N and irrigation. For N, various monitoring approaches including the use of proximal optical sensors (chlorophyll meters, reflectance, fluorescence) and agronomic approaches (sap and soil solution analysis). For irrigation, various soil moisture sensors and also stem diameter measurements have been evaluated. Her research group has worked with various crop simulation models and has developed the VegSyst model, with minimal input requirements, for determining crop N uptake and ETc of greenhouse-grown vegetable crops. VegSyst is being incorporated into user-friendly VegSyst-DSS decision support system that calculates daily N and water requirements for the seven major vegetable species grown in greenhouses in south-eastern Spain.