

3rd International Conference on **Agriculture & Horticulture**

October 27-29, 2014 Hyderabad International Convention Centre, India

Partial root zone drying (PRD): Water saving irrigation techniques in fruit crops

K Venkata Subbaiah, Manjula R, Lenin Kumar Y and Sharath E
Central Research Institute for Dryland Agriculture (CRIDA), India

Water shortage is the most important constraint in agricultural production especially in arid and semi-arid areas of the world. Irrigation is necessary to ensure stable yields of high quality. Meanwhile, climate change and expanding land use in horticulture have increased the pressure on water resources. For sustainable water use in horticulture, crop-septic and water-saving irrigation techniques that do not negatively affect crop productivity need to be adopted. Successful attempts have been documented regarding the use of deficit irrigation methods, namely regulated deficit irrigation (RDI) and partial root zone drying (PRD) to improve water use efficiency (WUE) in various fruit crop species. The PRD irrigation is a novel improvement of deficit irrigation in which half of the root zone is irrigated alternatively in scheduled irrigation events. In the last decade, scientists across the world, especially from arid to semi-arid countries, have extensively evaluated this irrigation as a water-saving irrigation strategy on agricultural and horticultural plants. Overall, under limited water resources where water is precious, PRD is a successfully alternative irrigation compared to full irrigation (FI) that can save irrigation water up to approximately 50% without significant yield loss; it may also improve the yield quality.

venkathort@gmail.com