



Challenges for implementation of water saving irrigation techniques in humid climates

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Understanding farmer's practice is essential to finding lasting solutions for implementation of water savings practices. Key drivers for water savings irrigation techniques are water scarcity and costs, which have not been prominent factors in humid and semi-humid areas. For arid and semi-arid zones there are several studies in which the influence of controlled deficit irrigation on cultivation of annual and perennial crops has been researched, predominantly for drip irrigation. Plants are variably sensitive to water deficit. Key factors for deficit irrigation management are growth stage, extent of water deficit, nutrient regime and irrigation strategy (e.g. partial root drying). Depending on the plant, know-how and growth stage on which the water deficit was imposed, variation in yield quantity and quality was recorded.

Traditionally, agricultural production in Slovenia did not require or had developed implementation of irrigation as a tillage measure. Recent experiences show that more frequent prolonged periods with high temperatures and no precipitation cause substantial reduction in yields, and more farmers are inclined to apply irrigation. Application of water saving irrigation techniques faces several challenges. Farmers, used to cultivation under rain-fed conditions, have little or no relationship to water losses due to over irrigation. Education on proper irrigation know-how is essential. Additionally, a relatively low price of water is not expected to stimulate farmers to adopt water saving irrigation technologies. In spite of sufficient annual precipitation amount, it is difficult to ensure steady water supply during high water demand due to poor water retention during rainy season. Furthermore, regulations to ensure environmentally sustainable practices (e.g. used drip lines waste) hamper application of water savings techniques, resulting in farmers applying sprinkler irrigation instead.