

Water Management for Horticultural Crops in Dry Areas

Chapter



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ABSTRACT

Water is a fundamental factor to maintain normal physiological activity of horticultural crops. Arid and semiarid regions are most affected by water scarcity. To cope up with the increased competition for water from other sectors, intensive water management planning is required. Successful strategies to increase crop production in arid areas involve an integrated approach involving soil and water conservation measures and nutrient inputs. The water requirement of crops depends upon a number of factors viz. crop characteristics, climate of the region, prevailing local conditions, efficiency of cultivation methods etc. The water requirement mainly has two aspects i.e. demand and supply. The demand of crop water can be accessed using different methods viz. lysimetric technique, water balance techniques, soil water depletion method etc. The supply of adequate, timely and assured water is an important factor for increased horticultural productivity. Irrigation methods are thus critical to water management planning for horticultural development in the country. Drip and sprinkler irrigation are such technology in which the water saving for vegetable crops varies from 12 percent to 84 percent per hectare over the conventional method of irrigation. Similarly, water saving varies from 45 percent to 81 percent per hectare in fruit crops. Drip and sprinkler method of irrigation is highly suitable for fruit and vegetable crops respectively, especially in arid and semiarid regions.

1 INTRODUCTION

Water demand has been growing globally at more than twice the rate of population increase in the last century. Essentially, demographic growth and economic development are putting hard

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