

Grapes

Irrigation

Grapes in India are mostly grown in semi-arid dry areas with inadequate rainfall and high evapotranspiration losses. Therefore supplementary irrigation becomes a necessity. Water requirement of vines is different during different stages of growth.

Vines are irrigated immediately after pruning and fertilizer application. During the berry growth stage, irrigation is given at intervals of 5-7 days. Water is withheld for at least 8-10 days prior to harvesting to improve the fruit quality. Irrigation is resumed after pruning. During the period from summer pruning to the onset of rains irrigation is given at weekly intervals and thereafter at 10-12 days intervals until winter pruning depending upon the soil moisture condition. Excessive irrigation should be avoided during 45-50 days after summer pruning as it adversely affects the flower initiation by promoting vegetative growth. Similarly too frequent and heavy irrigation from flower opening to pea size stage of the berries should also be avoided as they aggravate the problem of downy mildew disease.

The most common irrigation methods followed by the growers to irrigate their grapevines are furrow or ring method. However in recent years, where the available water for irrigation is very less and the soils are medium to heavy clay soils drip irrigation is being practiced. This system envisages the economic and efficient use of irrigation water. Quantity of water to be given per day, rate of discharge, placement of emitters and their clogging are important considerations in drip irrigation of grapes.