

Título: EFECTO DE DÉFICIT HÍDRICO SOBRE LA MADURACIÓN Y LA COLORACIÓN DE LA BAYA EN ESQUEJES FRUCTÍFEROS DE DIFERENTES CULTIVARES DE VID (VITIS VINIFERA L.)

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El fichero de tesis no ha sido incorporado al sistema.

Resumen: Efecto del déficit hídrico sobre la maduración Y la coloración DE la BAYA EN esquejes fructíferos DE diferentes cultivares DE vid (vitis vinifera L.)

resumen:

An increased attention is being addressed to grapevine irrigation due to the importance of a rational use of water without reducing grape yield and wine quality. Thus, there are many studies dealing with the physiological response of grapevine to water deficit with the aim of improving quality of wine. However, physiological responses are frequently contradictory due to complex interactions between grapevine varieties and climatic and soil conditions. In order to minimise the effect of the environmental variability the present research was carried out with fruiting cuttings obtained from different grapevine cultivars growing under controlled conditions. This technique allows to get fruiting plants by controlling vegetative growth. The study had two different objectives. Firstly, we have analysed the effect of water deficit on photosynthesis, growth and berry colour development during fruit ripening in Tempranillo. Two levels of drought (moderate and severe) were imposed in two phenological stages: pre and post-veraison. Results showed that pre-veraison water stress had the highest effects on photosynthesis, growth and berry colour development. However, no significant differences in measured parameters between the two levels of drought were observed. The second objective of the study was focused on the effects of controlled water irrigation in Tempranillo and Cabernet Sauvignon during fruit ripening and its possible relation with the plant abscisic acid (aba) content. Two water irrigation techniques were used: partial root drying (PRD) and regulated deficit irrigation (RDI). Results indicate that PRD tended to maintain yield

and to improve berry juice quality at harvest. This was especially true for PRD-treated cabernet Sauvignon plants, which showed higher levels of berry skin anthocyanins. In general, ABA content markedly changed during berry development in both cultivars. At veraison, ABA leaf decreased while ABA berry increased. These results suggest that during veraison, berry becomes the main ABA sink in the vine. It was concluded that different irrigation procedures in grapevines might affect berry colour and quality linked to increased ABA concentration, which plays an important role in triggering veraison.