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Characterization of Physical-Chemistry Changes of Cabernet Sauvignon Grapes in Function of Cluster Thinning Per Plant

Ventura, D. W.[1*]; Amarante, C. V. T.[2]; Santos, H. P.[3]

[1]Centro de Ciências Agroveterinárias – CAV Departamento de Fitotecnia CP 281, CEP 88502-970, Lages, SC, Brazil E-mail: daviwerner@yahoo.com.br;

[2]Centro de Ciências Agroveterinárias – CAV Departamento de Fitotecnia CP 281, CEP 88502-970, Lages, SC, Brazil E-mail: amarante@cav.udesc.br ;

[3]EMBRAPA Uva e Vinho, Bento Gonçalves, RS, henrique@cnpuv.embrapa.br

The market competition has stimulated the winery to improve the management of vineyards and consequently the enological quality of grapes. In this scenario, winery from Serra Gaúcha Region have recently been recommended the used of clusters thinning. However, do not exist any criteria, according to cultivar and region conditions, that could refer the best level of cluster thinning to improve the enological quality and economic benefits. To verify the effect of this practical, was conducted an experiment in Bento Gonçalves-RS, cycle 2004/2005, using a vineyard of Cabernet Sauvignon, 8 year old, grafted onto the Paulsen 1103 rootstock, 1,5 x 3m spaced and trained in a head system with mixed pruning method (spur and cane). The treatments of thinning grapes were handily performed at the beginning of maturation (50% of the color change), leaving 5, 10, 20 and 30 clusters per plant and following the block-type delineation with 5 repetitions of 6 plants. With the reduction of cluster number per plant, a significant increase in the weight of clusters was promoted (+42.4%), but without changes in the skin/pulp relation and diameter and weight of

berries. In the chemical analyses of berries, the thinning treatments favored the increase of pH and °Brix of must. In general way, although the reduction reached 83,3% in the number of clusters/ plant, the maximum increase observed in the enological parameters of the grapes was only 3,4% in °Brix. Thus, this isolated practical of manage, based on trellis system, cultivar, and thinning levels used, we can concluded that it does not provide great improve in the enological quality of the grapes.

keywords: *Vitis vinifera*, management, enological quality.

*Corresponding author: daviwerner@yahoo.com.br