

EFFECTS OF NITROGEN FOLIAR SPRAYING ON NITROGEN LEAF CONTENT AND NITROGEN AND CARBOHYDRATES RESERVES OF GRAPEVINE SHOOT BUDS

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Nitrogen foliar spraying in grapevines in Southern Brazil is used to complement to soil fertilization, without any information about leaves nitrogen content and or the perennial parts reserves. The experiment was carried out in 2004/2005, with objective to evaluate the effect of nitrogen foliar spraying on leaf N content and yolks of shoots carbohydrates reserves of Chenin Blanc grapevine, grafted on 101-14 rootstock, located at Bento Gonçalves city (area of the Serra Gaúcha, 640 m altitude, in Rio Grande do Sul State, Southern Brazil). Grapevine were planted in 1986 with plant distance of 1.5 (between rows) x 2.5 (along the row) m on Udorthent soil. The climate is subtropical with rainfall annual averages 1736 mm. The treatment was three foliar spraying of nitrogen 0 (water); 1.11; 2.23; 3.31; 4.41g N grapevine⁻¹. Leaves were picked, oven-dried and total nitrogen analyzed. In the last pick up of leaves, three shoots were picked in each plant, picked six buds, prepared and determined starch, total soluble carbohydrates, carbohydrates reducers, total amino acids and total proteins. The results showed that nitrogen content increased in the leaf and spraying of nitrogen decreased starch content and total soluble carbohydrates in shoots buds, but did not affect carbohydrates reducers and totals of amino acids and proteins.

Keywords: amino acids, foliar fertilization, starch, *Vitis Vinifera*