THREE FOLIAR FERTILIZERS IN 'MERLOT' SEEDLINGS

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Contex and purpose of this study - The nutrition of the vine is of paramount importance for a production with quality. In this sense, the objective was to evaluate the effect of three different foliar fertilizers on 'Merlot' seedlings conducted under greenhouse conditions.

Material and methods - The study was carried out by the Nucleus of Study, Research and Extension in Enology (NEPE²), of the Bachelor's Degree in Oenology of UNIPAMPA. The 'Merlot' cuttings were pretreated with Auxin [5ppm Indolyl Acetic Acid (AIA) for 24 hours]. Subsequently, they were placed in plastic bags (19 cm x 5 cm x 8 cm), filled with 50% medium sand (not sieved) and 50% commercial substrate (H. Decker®). The experiment was conducted in completely randomized blocks, with four treatments and 50 replicates (seedlings) for each treatment (fertilizer). The following foliar fertilizers were used: a) Cae 50; b) Biozyme® TF, consisting of Nitrogen (N) 1%; Potassium oxide (K_2O) 5%; Boron (B) 0.08%; Iron (Fe) 0.40%; Manganese (Mn) 0.1%; Sulfur (S) 1%; Zinc (Zn) 2% and Organic Carbon 3.5% e; c) Folhas® Codipa, contsisteng of N (10%), P (10%),(10%), K (10%), Mg (1%), S (1.9%), Zn (1.0%), Fe , 5%) and B (0.5%). The treatments were: T1- without foliar fertilizers (control); T2 - leaf fertilizer Cae50; T3 - foliar fertilizer Biozyme® TF e; T4 - Folhas® Codipa leaf fertilizer. The treatments began to be applied 60 days after the cutting (DAC), biweekly for a period of 60 days, in doses of 4 mL L^{-1}. Total chlorophyll assessments were performed non-destructively (at 60 and 120 DAC). It was evaluated at the end of the experiment (120 DAC): the height of the shoot (cm) and the length of the root (cm) and the percentages of fresh mass of shoot and root. The data were submitted to the Tukey averages comparison test at 5% probability.

Results – After application of foliar fertilizers, Total Chlorophyll in leaves of T4 (Folhas® Codipa) were significantly superior to Total Chlorophyll in leaves of T1 (control) seedlings. The variables responses of plant height, root compliance and percentage of shoot dry matter did not present statistical differences among all treatments tested. On the other hand, the percentages of root dry mass of T3 treatments (Biozyme® TF) and T4 (Folhas® Codipa) were significantly higher than T1 (control).

Key words: *Vitis vinifera* L., Macronutrients, Micronutrients, Photosynthesis, Viticulture.

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