

SUMMARY

“EVALUATION OF THE BEHAVIOR OF FOUR VARIETIES OF ROSES, (*Rosa sp.*) IN THREE MOISTURIZING SOLUTIONS WITH AND WITHOUT VASCULAR BUNCH OPENING PROMOTER”

The study was carried out in the floriculture company “Santa Mónica” in Quinche parish, Quito canton, Pichincha province. The objectives were to determine which of the four varieties have longer life duration in a vase with and without vascular bunch opening promoter determining the best nutritive solution in the moisturizing process of the roses as preserving solution and to analyze the cost of the treatments in the study.

The completely at random design was used with the factorial arrangement AxBxC, Tukey signification proofs at 5% for treatments, varieties, solutions and interactions and DMS proofs at 5% for the vascular bunch promoter 24 treatments with three repetitions were evaluated. The evaluated variables were: consumption of moisturizing solution in a cooling chamber, consumption of water in a vase, the life during in a vase (until 25% of the flower stalks started to bends the flowers, with maximum 12 days) and the financial analysis of the treatments. For the first variable, a four-hour moisturizing in a cooling chamber at a temperature of 4°C with the varieties Charlotte, Gold Strike, Peckoubo, Amelia was performed in wich the variety Gold Strike with an average of 159,44 ml and the Peckoubo with an average of 138,89 ml showing that these two varieties stand out from the other varieties, that means, they obtained the best moisturizing in the cooling chamber. The second variable quantified the water consumption in a vase. For this the stalks of the varieties were put into plastic vases containing 1400 ml of water, taking the data when 25% of the stalks started to bend the flowers. The treatment V3P1S2

(Peckoubo, with promoter, Tiogen 30[®]) was the best water consumption in a vase, it presented an average of 1306,67 ml.

In the third variable, the number of days of life in a vase of the varieties under study was counted. The variety Gold Strike obtained the best results in the variety life duration in a vase, taking in range between 1 to 12 days with an average of 11,5 days. Due to the characteristics of this variety, such as vigorous stalks, stalk length which fluctuates between 40 to 70 cm and a thick stalk. Besides, the moisturizing solution Tiogen 30[®] (0.35ml/l) was the moisturizing solution with the best results in the moisturizing in a cooling chamber with an average of 178,13 ml in the water consumption in a vase, a higher moisturizing of the stalks increased and the life duration in a vase was extended up to 12 days, the highest time of the experiment. These results are attributed to the fact of being a bactericide and algacide product which eliminates the microorganisms in the water.

The vascular bunch opening promoter Floralife Quick Dip[®] had direct influence on the absorption of the moisturizing solution in a cooling chamber with an average of 150,42 ml. It does not influence like this on life duration of the varieties in the vase as there was no notable difference. Based on the economical result Tiogen 30[®] is the moisturizing solution with the best average cost with 5,706 dollars. It should be mentioned that this is a relatively low value in the cost-profit relationship taking into a higher effectiveness in moisturizing and life duration in a vase which is what clients and the foreign market are looking for. Moreover Tiogen 30[®] is a good flower preserver which should be used in moisturizing chains in the areas of post-harvest of roses as it is not only organic, but also a product which hydrates better in less time so that it can be used for the exportation of the flowers on the same day when they were cut obtaining advantages such as: higher exportation volume of flowers, faster sending and shipping, better flow in the packing process, higher energy saving in cooling chambers.