3097 - Agronomy

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NUTRIENT CONTENT IN LEAVES OF STRAWBERRY PLANTS TREATED WITH UV-C RADIATION DURING STRAWBERRY CROP

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The use of UV-C radiation in post-harvest has developed excellent results, as the rotting prevention and activation of cellular defense mechanisms. However, few studies have proposed the use of UV-C in fruit and plants pre-harvest and there is not much information on literature about how plants would react when exposed to those stressing agents. Therefore, this study aimed to assess the nutrient content in leaves of strawberry plants treated with ultraviolet (UV-C) during cultivation. Strawberry plants, cv. Aromas were treated as follow: the first treatment (T1) - using UV-C lamps ("Phillips" ® 30W) and incidence of 39 µW/S², with applications every three days for 10 minutes at dusk; the second treatment (T2) - plants without applying UV-C. By the time the 24th application was completed, the leaves collection started, being selected only the 4th leaf without petiole of plans for T1 and T2 of both cultivars, the samples were collected randomly in six plants of each treatment. These leaves were dehydrated in the microwave for a period of 15 minutes, the leaves were crushed and the material went to perform the N, P, K, Mg and Ca analysis. Experimental design followed a model entirely randomized, with three biological and two analical repetitions. From the results obtained it was possible to compare the nutrients levels withinthe plant leaves of this study with the levels considered suitable by the literature. It can be seen that there are nutrient deficiency, and other nutrients in excess in the leave, in both T1 and T2 by comparing to literature. The averages among treatments were compared by Tukey test (P ? 0.5). Potassium levels (T1: 2,24a and T2: 2,06b), calcium (T1: 1,74b and T2: 2,38a) and nitrogen (T1: 2,26a and T2: 2,34a) were the nutrients within the requirements by literature in both treatments, but the levels of potassium and calcium differed between the treatments, and calcium levels were lower in T1 and higher nitrogen for T1. The nutrient phosphorus levels (T1: 0,66a and T2: 0,69a) were considered high, magnesium presented low levels (T1: 0,38a and T2: 0,36a), which does not affect the plant tolerance to diseases and pests, except viruses. Thus, it is concluded that the application of UV-C in pre-harvest might be raising the potassium content and reducing the calcium content in plants of strawberry..