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C0381 EFFECT OF SUBSTRATE ON THE INITIAL DEVELOPMENT OF CEDRELA FISSILIS VELL. (MELIACEAE) SEEDLING

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1 Key words

Cedro-rosa. Morphological parameters. Initial growth.

2 Introduction

Cedrela fissilis Vell. is a specimen native of Brazilian arboreal forest known as cedro-rosa belonging to Meliaceae family. It is a specimen that has rapid growth, presenting economical and landscape importance, being a producer of high quality wood. In order to generate quality products, cedro-rosa exploitation requires several care at all production stages. Seedling quality is one of the main factors that affects production. The objective of this work is to evaluate the effect of different substrate combinations on the initial development of *Cedrela fissilis* Vell. (Meliaceae) seedling.

3 Material and Methods

In order to evaluate the initial growth of cedro-rosa, different substrates were used: vermiculite, shell from urucum fruit (non-carbonized) and earthworm casting. Seven treatments were performed: T1 – vermiculite; T2 – shell from urucum fruit; T3 – earthworm casting; T4 – shell from urucum fruit + earthworm casting (1:1 v/v); T5 – shell from urucum fruit + vermiculite (1:1 v/v); T6 – vermiculite + earthworm casting (1:1 v/v); T7 – shell from urucum fruit + vermiculite + earthworm casting (1:1:1 v/v). In order to evaluate initial growth, the following parameters were analyzed: stem diameter, plant height (aerial and root parts), dry mass and Dickson's quality index. Measurements of morphological parameters were made 90 days after seedling. Experimental procedure consisted in randomized block design with 7 treatments and 4 repetitions, along with 25 plants by plot.

4 Results/Conclusions

There was no significant difference at morphological parameters solely at root length. Higher seedling quality index (SQI) occurred at treatments T2, T3, T4, T6 and T7. T1 and T5 treatments did not attained minimum value of 0.20, therefore its seedling quality was inferior (HUNT, 1990). It was noticed that morphological parameters and SQI were indispensable in order to determine morphological quality of the plants, which guaranties the success of foresting program.

Earthworm casting, isolated and combined, provided the best results regarding initial growth of *Cedrela fissilis* plants. Inclusion of shell from urucum fruit as a provider of nutrients in order to compose substrates formulations aiming production of natives plants represented a good alternative to diminish production costs of this product.

HUNT, G. A. Effect of styroblock design and cooper treatment on morphology of conifer seedlings. In: Target seedlings symposium, meeting of the western forest nursery associations, general technical report rm-200. Roseburg. **Proceedings...**, Fort Collins: United States Department of Agriculture, Forest Service, 1990.