

**Title: EVALUATION OF THE INITIAL DEVELOPMENT OF ROOT SYSTEM THROUGH THE MICROBIOLIZATION OF ONION SEEDS WITH NATIVE**

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**Abstract:**

Onion (*Allium cepa*) is considered the third oleracea culture of economic importance to Brazil, losing just for the tomato and potato. In Santa Catarina stands out as the main cultivated vegetable, concentrating mainly in the cities of Ituporanga e Alfredo Wagner. Microorganisms can establish relations with plant roots and promote their development. The Native is a conditioner product of soil that helps to increase and control the soil pathogens, containing a mixture of *Trichoderma harzianum*, *T. viride*, *Trichoderma* sp., *Rosea clonostachys*, *Bacillus subtilis* and *Paenibacillus lentimorbus*. With the objective to evaluate the effect of microbiolization of onion seeds with Native solution in the initial development of the root system of onion seedlings, an experiment was conducted at the Instituto Federal Catarinense – IFC / Campus Rio do Sul. In a completely randomized design with four repetitions constituting 10 plants each, onion seeds Bola Precoce were microbiolized for 24 hours in suspension containing Native 1 e 2 % and the control treatment immersed in saline solution (NaCl 0,85 %). After microbiolization, the seeds were placed in trays containing non-sterile commercial substrate and wrapped in plastic greenhouse at 25°C ( $\pm$  2°C). After a period of 30 days it was conducted an evaluation of fresh and dry mass of roots. The results showed no statistically significant difference between the parameters evaluated. However the Native 2% had a gain of 29% in fresh mass and 23% in dry mass of the root system when compared to the control treatment, providing a considerable gain in roots of seedlings. Although treatments Native 1 e 2% did not provide a gain in the height of onion seedlings, we can see that inoculations led to a considerable increase in root system of plants, which can be a determining factor in the growth of seedlings, since this is determining factor for a good productivity of onion. New researches will be conducted to find the effect of biological formulated during the onion crop cycle.

**Keywords:** *Allium cepa*, biological formulated, root system.