

**Title: EVALUATION OF *Trichoderma harzianum* IN THE INITIAL DEVELOPMENT OF ONION SHOOT SYSTEM**

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Abstract:

The onion crop is one of the main crops and agricultural source of income in the region of Alto Vale do Itajaí / SC, representing 70% of onion grown in the state. The initial development of the crop is one of the requirements for crop establishment. *Trichoderma harzianum* is a fungus that can be naturally found in all soils in the world and it feeds on organic materials or other microorganisms and can interact with the cultivated plant. According to the mentioned, this research presented as a goal to evaluate the initial development of the root system of onion, with the application of suspension of *Trichoderma harzianum* spores and formulated commercial Trichodermil® SC. In a completely randomized design with four repetitions constituted for 10 plants each, onion seeds from the cultivar Bola Precoce were inoculated suspension with (2,2x10<sup>6</sup>) spores of *Trichoderma harzianum* from the formulated of concentrated suspension of Trichodermil®, and the control plants were immersed in a saline solution (0.85% NaCl). After the inoculation the seeds were placed in trays containing non-sterile commercial substrate, and then, conditioned in greenhouse at 25 ° C ( $\pm$  2 ° C). After a period of 30 days were evaluated the height and number of leaves, fresh and dry matter of the shoot. In the treatment with Trichodermil® there was not seed germination, so it was unconsidered from the statistical evaluation. There was not difference in the number of leaves and although it was not significant, the application of Trichoderma compared to the control, the treatment had an increase of 12.8% more on plant height and 12.8% more in fresh matter of shoot, and thus it is superior in dry matter with 15.7%. New evaluations are necessary to realize the effect of *Trichoderma harzianum* in the development of onion shoots.

Key words: *Allium cepa*, *Trichoderma harzianum*, developing growth.