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Seedling Emergence and Initial Growth of Different Plants after Trichoderma sp. Inoculation

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Abstract : The use of plant growth promoting fungi (PGPF) has significantly increased in the last decade mostly due to their multi-level properties, and their expected success as biofertilizers in agriculture. Beneficial fungi with broad-host range undergo long-term interactions with a large variety of plants thereby playing a significant role in managed ecosystems and in the adaptation of crops to global climate changes. Trichoderma spp. are promising fungi toward the development of sustainable agriculture. The aim of our experiment was to investigate the effect of seed inoculation of sunflower, maize, soybean, paprika, melon, and watermelon seeds with Trichoderma sp. on early seed germination energy and initial growth of the plant. The seed inoculation with Trichoderma sp. increased the seedling emergence from 7, 85% in melon to 156,70% in watermelon. The inoculation had the best effect on initial growth of maize shoot (+23,80%) and soybean root (+106,30%). The different response of seed and young plants on Trichoderma sp. inoculation implicate the need for future investigations of successful inoculation systems and modes of their integration in sustainable agriculture production systems.

Keywords : initial growth, inoculation, seedling, Trichoderma sp.
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