Trichoderma in Brazil: history, research, commercialization and perspectives

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In 1987, thirty-seven years since the first publication on biocontrol of plant diseases by Trichoderma in Brazil (R.Forster, Bragantia 10(5):139-148, 1950), a pioneer product arrived in the market against Phytophthora cactorum in apple trees. At this time, the biocontrol agent (BCA) was supplied in polypropylene bags containing 24g of sorghum seeds colonized by T. viride. The first enterprise specialized in production and commercialization of Trichoderma started to operate in 1992. Since then, other products came out and nowadays there are more than ten commercial trademarks. In April, 2008 we did a survey to check the state-of-the-art of the use of Trichoderma in Brazil and verified: 1-main species in the market: T. asperellum, T. harzianum, T. stromaticum, T. viride; 2-pathogen target includes Fusanum, Pythium, Rhizoctonia, Macrophomina, Sclerotinia, Sclerotium, Botrytis; Crinipellis perniciosa; 3recommended crops: bean, soybean, cotton, tobacco, strawberry, tomato, onion, garlic, ornamentals, cacao; 4-Trichoderma are mostly produced by solid fermentation on rice or millet grains (approximately 550 ton/year); 5-formulations includes WP, WG, SC, EC, grain+spores, dry spores. The average cost of treatment, for example, against bean white-mold with Trichoderma is US\$ 54.00/ha while with fungicides is about US\$ 92.00/ha. The treated area with Trichoderma is highly increasing in the last three years. The recent organization of a Brazilian Biocontrol Association and the enhancement of the legislation for registration and commercialization of BCAs are boosting the market, particularly for Trichoderma that is in frankly expansion.