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Effect of Soil Management on Suppressions of *Rhizoctonia solani* in Agroecosystems of Santa Clara, Cuba

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Abstract

Disease suppression can be seen as a feature to determine healthy soil. From an ecological standpoint, soil health implies ecosystem stability, diversity, functional connectivity and resilience in response to a disturbance or stress. Previously suggested indicators to evaluate soil health and disease suppression have been mainly lists variables that correlate with the more or less disturbed soils (ranging from conventional and organic agricultural soils) or favourable conditions to eradicate the disease. This paper suggests that indicators of soil health and disease suppression could be found by monitoring the responses of *Rhizoctonia solani* in common bean and nutrient availability for the application of a disturbance or stress. Generally these results show a greater impact on systems (state and private) conventional handling and less impact on those systems had an agro-ecological management. This approach illustrates the responses of this fungus with respect to soil management in calcareous soils brown, after incorporation of a crop on this soil. In this research, the incidence was higher when incorporated into the soil more of external products and disturbances in the soil was higher, depending on these soil management in each of the evaluated systems. Rot caused by *Rhizoctonia solani* was less severe in agroecological systems compared to conventional systems which showed most affected although all soils tested cobdujeron disease greater or lesser degree. These results suggest that the proposed finding indicators of soil health and disease suppression and resistance to disturbance or stress approach is promising.

Keywords: Beans, disease, manage, *Rhizoctonia solani*, suppression

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