INVITRO INHIBITION OF RADIAL GROWTH, SPORULATION AND GERMINATION OF ALTERNARIA SOLANI BY SOME FUNGICIDES

*Ugwuja¹, F. N., Maduewesi², J. N. C, Ugwoke,³ K. I. and Mbadianya⁴, J. I.
¹Department of Plant Science and Biotechnology, Michael Okpara University of Agriculture, Umudike.
   E-mail: njideka712@yahoo.com
²Department of Plant Science and Biotechnology, University of Nigeria, Nsukka.
³ & ⁴Department of Crop Science, University of Nigeria, Nsukka.
Corresponding author’s e-mail

ABSTRACT

One laboratory study was carried out at the Department of Plant Science and Biotechnology, University of Nigeria, Nsukka to test the efficacy of these three fungicides; Antracol, Benlate and Captan in the control of Alternaria solani with a view of recommending the potent ones to farmers for use in the control of disease caused by Alternaria species. Cultures of A. solani isolated from diseased tomato plants were used for the study. Effects of the fungicides on radial growth and sporulation were investigated. The cultured plates were set up in a completely randomized design in four replicates. Radial growth measurements were determined by taking the diameter of the colony in each cultured plate along two equatorial axes of the plate and their average recorded for all four replicates of a given concentration to the nearest millimeter. Antracol, Benlate and Captan inhibited radial growth, sporulation and germination of A. solani. Captain was the most effective of the fungicides in inhibiting radial growth causing 46.80, 63.29, 68.94 and 73.75 percent inhibition at 10, 100, 200 and 500 ppm respectively. These inhibitions were significantly greater (p=0.05) than those of Benlate and Antracol at the same levels followed by Benlate while Antracol was the least. Therefore, the percent inhibition in vitro clearly showed that among three fungicides tested, Captan was the most effective and has the best potential of being employed in the control of A. solani in the field or in the green house.

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