Effect of Mineral Nutrition and Abiotic Stress on Rice Stem Rot caused by *Sclerotium oryzae* Catt.

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ABSTRACT

Stem rot of rice caused by *Sclerotium oryzae* (Catt.) is an emerging disease with a potential to cause significant yield loses. An attempt was made to know the effect of mineral nutrition and abiotic stress is on the stem rot development under artificial inoculated conditions. Among the mineral nutrition applied, treatment T8 i.e., N+P+K+Zn+Fe (Recommended dosage of fertilizers (RDF)) had recorded the lowest mean per cent disease index of 18.52 with 55.88 per cent disease reduction over control at 66DAS, which indicated minor role of mineral nutrients in disease development. The highest PDI (39.51) with 429.22 AUDPC units^2 was recorded in the treatment T5 which received no potassium fertilization. There was no significant difference between treatments T2 receiving 2 x RDF NPK (24.69; 288.06 AUDPC units^2), T6 -1x NPK + Fe (24.69; 259.26 AUDPC units^2), T7 -1x NPK + Zn (23.46; 257.82 AUDPC units^2) and T9 -2 x NPK + Zn + Fe (23.46; 283.75 AUDPC units^2), denoting no significant role of Zn and Fe in stem rot development. Among the abiotic stresses, the highest mean stem rot PDI (24.69) and 273.66 AUDPC units^2 was recorded in water stagnation whereas lower PDI was recorded in drought and alkalinity (9.26; 90.04 AUDPC units^2).

Key words: *Mineral nutrition, Rice and Stem rot*