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EFFECT OF MECHANICAL COMPOSITION OF SOIL ON POPULATION OF *Pythium aphanidermatum* IN SOIL

Although population dynamics of several soil-borne Plant Pathogens under altered chemical and physical soil conditions have been studied, no attempt has so far been made to find out the role of mechanical soil fractions on populations of plant Pathogens in soil. Therefore, the present investigation was undertaken to study the effect of mechanical composition of soil in the population of *Pythium aphanidermatum*, the incitant of the soft rot disease of ginger. A clayey soil mixed with pure river sand in the proportion of 0: 100, 25: 75, 50: 50, 75: 25 and 100: 0 were selected as different treatments. Each was artificially infested with *P. aphanidermatum* in petridishes kept at field capacity and at laboratory temperature ($28^{\circ}+1^{\circ}\text{C}$). Samples were collected at the end of second and fourth weeks and population of *P. aphanidermatum* was determined (Singh and Mitchell 1961). Population of *P. aphanidermatum* was detectable only when the clay content of soil was high. At the time of first observation colonies were observed in two treatments (proportion of clayey soil:sand 100:0 and 75:25) while at the time of second observation colonies could be detected only in the treatment having 100:0 proportion of clayey soil and sand. Thus the increase in sand fraction suppressed the growth of pythium. This observation is in line with Garrett's (1956) finding that light textured soils, being poor in nutrient capacity and acidic in reaction, do not favour the development of many soil-borne diseases.

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