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GROWTH OF *PYTHIUM APHANIDERMATUM* IN OIL-CAKE AMENDED MEDIUM

The suppression or stimulatory activity of soil-borne phytepathogenic fungi by organic amendments of soil has been discussed by many workers. However, only little information is available on the direct nutritional effect of organic substances on the growth of plant pathogens. In the present study growth of *Pythium aphanidermatum* was measured in a nutrient medium into which oil-cakes were added.

Fifty ml. of peptone-dextrose medium filled in flasks to which coconut Sesamum, margosa and groundnut cakes were added each at 0.1%, 0.5%, 1.0% and 2.0% alongwith a control. Flasks were autoclaved and inoculated with uniform bits of mycelium of *P. aphanidermatum* and incubated for 4 days under laboratory conditions. Afterwards, the fungal growth was filtered, dried and weighed. Data were subjected to statistical analysis (Table 1.)

Table 1

Growth of *Pythium aphanidermatum* in Oil-cake amended medium

Treatments	Dry weight of mycelial mat (mg.)
Check (no cake)	20.0
<i>Kinds of cake</i>	
Groundnut cake	156.7
Sesamum cake	96.7
Margosa cake	120.3
Coconut cake	200.7
C. D. 5%	18.4
<i>Quantities of cake</i>	
0.1%	99.2
0.5%	134.6
1.0%	180.4
2.0%	275.4
C. D. 5%	20.4

Mycelial growth of the fungus was increased significantly with addition of oil-cakes. Maximum dry weight occurred in medium containing coconut cake. With increasing quantities of oil-cakes, dry weight of the fungus increased. Results of the experiment indicate that all the oil-cakes stimulated growth of the fungus, although the degree of stimulation differed with the kind and quantity of cake. However when the same oil-cakes were added to soil, population of the fungus decreased depending on concentration and kind of cake and time after application (Singh and Pande 1967, Rajan, 1971). The attributable reasons for this differential response can be the possible toxic effect of decomposition product(s) of the cakes interfering with the growth of the fungus directly and/or the decomposition products encouraging preferentially the growth of certain soil saprophytes which might have helped in the prevention of increase of population of the fungus through competition.

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