CHAPTER VI

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Production of amino acids by fungi in their culture media has been studied for 151 isolates obtained from soil. Majority of the fungi screened were found to produce amino acids in little or significantly high amounts.

Fusarium solani (Mart.) Sacc. (IMI 192975) and Fusarium moniliforme Sheld. (IMI 192976) were selected for a detailed study.

Chromatographic analysis and the quantitative estimation, of the total amino acid composition and the major amino acid fractions, has been done from the cultural filtrates of both the organisms, for various cultural treatments carried out.

F. solani was found to produce 1.081 mg/ml of total amino acids with C/N = 2 %/2 % of sucrose and urea in 10 days of incubation in still cultures at pH 6.4 and at 30°C.

F. moniliforme was found capable of producing 1.274 mg/ml of total amino acids with C/N = 2.5 %/1.5 % of mannose and urea in 10 days of incubation in cultures shaken for 7 days and at pH 5.4 of the medium.
incubated at 30° C.

The major amino acids produced by both the

F. solani and F. moniliforme were alanine, valine,
leucine, glutamic acid and aspartic acid.

(The concentration of glutamic acid and aspartic
acid increased significantly in presence of Fe^{+++} in
the media. F. moniliforme did not produce alanine in
presence of Fe^{+++}, indicating the pathway shunt for
the biogenesis of aspartic acid and glutamic acid from
the normal biogenesis of alanine, valine, and leucine.)

In the medium of growth without Fe^{+++},
F. moniliforme was a very good producer of alanine and
to some extent/leucine.