Post-harvest Rots of Tomato Fruits.

Fakorede, Adekunle

M.Sc. Microbiology

Department of Microbiology

Obafemi Awolowo University Ile Ife, Nigeria

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Abstract:

In a study of post-harvest fruit rot disease of tomatoes in South western Nigeria, the soft watery rot was the most prevalent accounting for more than 60% of total fruit rots during the rainy season.
Aspergillus niger, Geotrichum candidum, Mucor hiemalis and Pichia kluyveri were organisms established as incitants of the rot. A. niger and G. candidum were major virulent pathogens while M. hiemalis and P. kluyveri were mild ratters.

Rotting was most serious at temperatures of 25 - 30°C which, in fact, coincides with the optimum temperature for growth of the pathogens. The pathogens thrived best in tomato decoction media and at high relative humidity levels of 85 - 95%.

Culture filtrates of the pathogens grown on different carbon substrates produced extracellular cellulase and Polygalacturonase (PG) enzymes. The production of cellulose was more pronounced than that of PG in all pathogens except niger which produced the two types of enzymes appreciably.

Brestan, Bordeaux mixture and Thiabendazole proved effective in controlling the growth of all the pathogens at low concentrations of 250 mg/dm^{-3} (a.i) while Benomyl and fundazol were effective against A. niger at concentrations of 500 and 1 50 mg/dm^{-3} (a.i.) respectively.

Keywords: Harvest/ fruit/ tomato / pathogens/ temperature/ rotting

Supervisor: S. K Ogundana

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