

## C426458 : MAJOR BIOTECHNOLOGY

KEY WORD: SPORULATION/GIBBERELLA FUJIKUROI

PRAYOONSRI WATTANAKOSOL : OPTIMAL CONDITIONS FOR SPORULATION OF GIBBERELLA FUJIKUROI. THESIS ADVISOR : ASSOC.PROF. NALINE NILUBOL, Ph.D. AND ASSOC.PROF. SONGSRI KULPREECHA, Ph.D. 220 pp.  
ISBN 974-584-941-3

The present work was to study factors and conditions affecting sporulation of 4 mutant strains of Gibberella fujikuroi which were capable to produce gibberellic acid at high level but few microconidia.

Comparative studies of sporulation on different solid media revealed that Corn Stalk Agar was the most appropriate medium for sporulation of these 4 strains. However each strain required different amount of solid contents of corn stalk extract for its optimal sporulation. Furthermore, the initial pH of the medium, temperature and illuminance value for incubation of some strains were also different as follows: Strain C sporulated maximum microconidia when cultivated on the medium containing corn stalk extract at the solid content of 5.58-8.83 gm/l with the pH value in the range of 5.0-6.0 and at 22 °C with 10000-12000 Lux of illuminance. Strain F4W-6(9) sporulated maximum microconidia when cultivated on the medium containing corn stalk extract at the solid content of 7.90-10.22 gm/l with the pH value in the range of 5.0-6.0 and at 22 °C with 12000-16000 Lux of illuminance. Strain N9-34 sporulated maximum microconidia when cultivated on the medium containing corn stalk extract at the solid content of 3.72-5.11 gm/l with the pH value in the range of 4.5-5.5 and at 22 °C with 12000-18000 Lux of illuminance. Strain N7-54 sporulated maximum microconidia when cultivated on the medium containing corn stalk extract at the solid content of 5.58-6.51 gm/l with the pH value in the range of 4.5-5.5 and at 18 °C with 18000-22000 Lux of illuminance.