

Manorat Sudsanguan 2012: Species and Distribution of Coprophilous Fungi in Central and Northeastern Thailand and Their Efficacy for Controlling Plant Pathogenic Fungi. Master of Science (Plant Pathology), Major Field: Plant Pathology, Department of Plant Pathology. Thesis Advisor: Associate Professor Leka Manoch, Ph.D. 144 pages.

Sixty-two dung samples from twenty-one animal including barking deer, deer, sheep, rabbit, buffalo, toad, elephant, bird, ostrich, goat, horse, zebra, giraffe, rhinoceros, eld's deer, donkey, cow, rat, lesser bandicoot, oryx, and civet were collected from Central and Northeastern Thailand. Moist chamber method as well as dilution plate method, alcohol and heat treatment techniques and Gochenaux's glucose ammonium nitrate agar were used for isolation of microfungi. Identification of the fungal isolates were based on morphological characteristics as colony growth on different agar media. Fruiting bodies and spore ornamentations were examined under stereo and light microscopes. The results revealed that 459 isolates of microfungi were found, comprising Hyphomycetes 216 isolates, Ascomycetes 208 isolates, Zygomycetes 25 isolates, Coelomycetes 5 isolates, Agonomycetes 2 isolates and Basidiomycetes 3 isolates. 119 isolates of true coprophilous were found in this study, comprising *Ascobolus*, *Ascodesmis*, *Cephaliophora*, *Cercophora*, *Chaetomium*, *Coprotus*, *Gelasinospora*, *Lasiobolus*, *Melanospora*, *Podospora*, *Pilobolus*, *Preussia*, *Saccobolus*, *Sordaria*, *Sporormia*, *Sporormiella* and *Thielavia*. Nothworthy coprophilous fungi representing new records for Thailand are *Ascobolus crenulatus*, *A. lineolatus*, *Chaetosartorya* sp., *Saccobolus verrucisporus* and *Sporormia fimetaria*.

*In vitro* antagonistic activity tests was conducted using 3 isolates of *Ascodesmis* spp., 3 isolates of *Gelasinospora* spp. and 3 isolates of *Sporormiella* spp. and seven species of plant pathogenic fungi including *Alternaria alternata*, *Colletotrichum capsici*, *Curvularia lunata*, *Pythium aphanidermatum*, *Phytophthora palmivora*, *Rhizoctonia oryzae* and *Sclerotium rolfsii*. The results indicated that tree isolates of *Ascodesmis* spp., three isolates of *Gelasinospora* spp. and three isolates of *Sporormiella* spp inhibited more than 80% of *P. palmivora*. Three fungi failed to inhibit mycelium growth of *R. oryzae* and *S. rolfsii*. *In vivo* assay using seed cucumber in spore suspension of *Gelasinospora* spp. showed more than 80% of seed germination.

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Thesis Advisor's signature