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Seed Mycoflora of eleven tree species of North-Eastern India

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Information on seed fungi of timber yielding forest tree species is meagre. In present work fungal species associated with the seeds of eleven important timber yielding forest tree species were studied.

Seeds of *Albizzia lebbek*, *A. lucida*, *A. procera*, *Cassia fistula*, *C. laevigata*, *C. nodosa*, *Eucalyptus* sp., *Polyalthia longifolia*, *Schima wallichii*, *Terminalia chebula* and *T. myriocarpa* were collected from different forests of Assam and Meghalaya (India) in winter months (November-February) of 1977–78. All the seeds were brought to the laboratory in polythene bags separately and stored in folded paper packets at room temperature. To ensure the isolation of as many fungi as possible in pure cultures agar plate method and blotter technique[1] were followed. In agar plate method seeds were sown on rose bengal agar medium[2] in triplicate (10 seeds in each plate). In blotter technique 30 seeds of each species were put in three layered sterilized moist blotter chamber. Both sets were incubated at 25 ± 1°C in BOD incubator for one week and two weeks for agar plate and blotter technique respectively.

Fourteen fungal species, viz., *Rhizopus stolonifer*, *Chaetomium spirale*, *Trichoderma viride*, *T. koningii*, *Penicillium citrinum*, *P. chrysogenum*, *P. oxalicum*, *Penicillium* sp. *Aspergillus candidus*, *A. flavus* *A. nidulans*, *A. niger*, *Trichothecium roseum*, and *Fusarium oxysporum* were isolated by agar plate method and ten fungi, viz., *R. stolonifer* *T. viride*, *P. citrinum*, *P. oxalicum*, *Penicillium* sp., *A. candidus*. *A. flavus*, *A. nidulans*, *Cladosporium cladosporioides* and *F. oxysporum* were isolated by blotter technique. *Penicillium* sp. and *Aspergillus* sp. were most dominant followed by *Rhizopus* sp. and *Trichoderma* sp. Somewhat similar finding is reported in oil seeds[3]. *A. niger* was found associated with all the seeds except *Eucalyptus* sp. The dominant seed fungi of *T. chebula* and *A. lebbek* were *P. chrysogenum* and *T. viride* respectively in agar plate method. In moist blotter technique *Penicillium* sp. were isolated from all the seeds except *T. myriocarpa*. Fungal flora was dominated by saprophytes and *F. oxysporum* was the only pathogenic fungus isolated. Except *T. myriocarpa* and *S. wallichii* all the seeds possessed hard seed coats which may function as mechanical barrier to certain fungi. The saprophytic fungi isolated, possess good decomposition capacity which may help in seed coat decomposition and breaking up the seed coat dormancy of seeds. Further studies would be useful in understanding the role of these fungi in seed biology.

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