Distribution of ectomycorrhizal fungi in pure stands of different age groups of *Pinus kesiya*

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A study on ectomycorrhizae and mycorrhizal fungi of *Pinus kesiya* (Royle ex Gordon) in 2-, 4-, 11-, and 17-year-old pine plantations was carried out. Thirteen mycorrhizal fungi forming ectomycorrhiza with khasi pine were observed. Diversity index of mycorrhizal fungi was directly proportional to the age of the pine stand. The maximum number of fungal species was observed in the oldest stand. Evenness of the sheathing mycorrhizal fungi was also increased with the increase in age of pine. The sporocarps of *Boletus luteus*, *Scleroderma aurantium*, *Tricholoma saponaceum*, and *Hygrophorus limacinus* were observed as an early colonizing fungi with *Pinus kesiya*. However, in older plantations *Russula lepida* and *Amanita phalloides* were observed as late stage fungi. *Boletus luteus* and *Scleroderma aurantium* were dominant species in all the pine stands. Sporocarps of mycorrhizal fungi were maximum during the rainy season and minimum during the winter months. A positive correlation was observed between the number of ectomycorrhizae and mycorrhizal infection with soil moisture, soil pH, total nitrogen, available phosphorus, exchangeable potassium, and organic matter of the soil. The number of sporocarps exhibited a positive significant correlation with soil moisture content in all the plantations.

**Key words:** ectomycorrhiza, fungi, physicochemical characters, *Pinus kesiya*. 