

Successful mycorrhization and fruiting of *Craterellus*

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*Cantharellus* and *Craterellus* species (chanterelles) are globally renowned as some of the most popular wild edible mushrooms. They are common ectomycorrhizal associates of various trees, and yet, cultivation has been unsuccessful. Recently, the authors succeeded in obtaining pure cultures of Japanese *Cantharellus* from mycorrhizal tips, and confirmed its fruiting in the pot culture with mycorrhizal host seedlings. Although the technique was desired to be applied to *Craterellus*, *C. aff. cornucopioides* (black trumpet) was difficult to establish pure culture. The objective of this study was to establish cultivation techniques for *Craterellus*. Mycorrhizal tips underneath the fruit bodies of black trumpet were sampled, washed and tested for direct inoculation to the root system of non-mycorrhizal pine seedlings. Inoculated seedlings were incubated in a growth chamber at 20°C for 5 months. As a result, tested seedlings formed ectomycorrhizas with characteristic yellow fungal sheath and Hartig net. The established mycorrhizal seedlings were used as mycorrhizal mother plants to produce another mycorrhizal pine and fir seedlings. One and a half years after the mycorrhization, multiple primordia formations were confirmed in the pot soil. When the pot was incubated at 15°C, fruiting of black trumpet was induced. Developed fruit bodies showed slightly wrinkled hymenia and produced basidiospores. This is the first report of successful fruiting of *Craterellus* mushroom.