



Successful domestication of *Lentinus sajor-caju* from an indigenous forest in Tanzania.

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ABSTRACT

Objective: Indigenous forests in Tanzania provide a good environment for saprophytic wild edible mushrooms (SWEM) to grow. In rural areas, mushroom eaters rely on seasonal collection of wild edible mushrooms during the rain seasons, which make them unreliable source of nutrients during dry seasons. The study aims to identify and domesticate SWEM so that it is available throughout the year.

Methodology and results: Eight types of SWEM were identified, collected; their germplasm isolated and experimented for domestication their biological efficiency. Three species out of eight were successfully isolated and included *Pluteus umbrosus*, *Lentinus sajor-caju* and *Panus conchatus*. Of the three isolates, only one species *L. sajor-caju* was successfully domesticated and formed fruit bodies at 18% biological efficiency. Furthermore, results on vegetative growth on mixed substrates of dried banana (70%) and wood shred (30%) administered at different inoculation rates of 1%, 3% and 5% in glass columns revealed different colonization rates with the highest record of 24.94 ± 0.38 mm/day at 3% spawn inoculation with *P. conchatus*.

Conclusion and application of results: The successful domestication of *L. sajor-caju* shows the potential of SWEM being cultivated and is a stepping-stone towards more domestication of indigenous mushroom species. More studies on optimizing its growth parameter are recommended for growing and introduction to mushroom growing industry.

Key words- Colonization, Domestication, Indigenous forests, *Lentinus sajor-caju*, SWEM