



International Conference on  
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## **TITLE: Potential and nutritional value of mushrooms using encroacher bushes as substrate in Namibia**

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### **ABSTRACT**

Humans need a wide range of nutrients to archive a healthy lifestyle, by keeping a well-balanced diet. However, this is a challenge to developing countries such as Namibia due to high rate of poverty, unemployment and limited education. Namibia is a dry country which is greatly affected by bush encroachment. The invasion of bush encroachers reduces the availability of fodder/grass for livestock consumption which most of the farmers depend for an income. The loss due to bush encroachment has resulted in economical loss of more than N\$ 700 million in Namibia. The situation provoked actions such as land clearing to free grazing area from the predominant (*Senegalia mellifera*, *Terminallia serecea*, *Combretum collinum* etc.) bush species. Since then, various organizations such as GIZ, RUFORUM in collaboration with the University of Namibia and the Namibian Government have initiated projects to combat bush encroachment problems. Mushroom cultivation could be among the solutions to overcome these problems. Mushrooms have high nutritional and therapeutic values. They have bioactive compounds such as phenolic compounds, polysaccharides, triterpenes, proteins, amino acids and more. Furthermore, Mushrooms are well known for their strong antioxidant properties, rich in vitamins, protein and crude fibre. Mushrooms have therapeutic effects including anticancer properties and the ability to treat

different illnesses. It is believed that mushroom cultivation can contribute to the combating of bush encroachment by making use of bush encroachers as substrate for mushroom mycelium to feed on. Bush encroachers tends to be neglected to decompose or burnt down to clear lands for animal grazing. Different encroacher bushes can be studied to identify the variation of mushroom nutrition and therapeutic properties that feeds on different substrates. Initiatives like training of local people about mushroom cultivation could have significant impact on the economy of Namibia by targeting unemployed youth and women.

**Keywords:** Mushrooms, bush encroachment, antioxidants, therapeutic, nutrition, unemployment

### **BIOGRAPHY**

Kristine Haukongo is a senior cultivator holding a Bachelor of Sciences degree in Biochemistry, with at least 3 years work experience. She started off her career as student assistant at the University of Namibia taking care of laboratory in mushroom production in 2019. Towards the completion of her studies, she got the opportunity to work for Standard Bank Myco-hab Project as a senior cultivator in 2020 until present. Kristine is in her final year of studies enrolled in a MSC in biochemistry at the university of Namibia and at a point where she feels ripe to take up new challenges and opportunities in her career to grow to the expert/professional level.



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