

## Associated Mycoflora AF *Mucuna Sloanei* Seeds and Their Effects on Nutritional and Phytochemical Contents of the Seeds

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**Abstract :** Mycoflora associated with the seed rot disease of *Mucuna sloanei* and their effects on nutrient and phytochemical composition of the seeds were investigated. The fungal pathogens implicated in the seed rot disease were *Rhizopus stolonifer*, *Aspergillus flavus*, *Aspergillus niger*, and *Fusarium oxysporum*. The fungal isolates were aseptically inoculated into healthy *M. Sloanei* seeds and incubated for 7 days at room temperature of  $25 \pm 30^{\circ}\text{C}$ . The results of the proximate and mineral analysis in mg/100g of fungal infected and non-infected (control) seeds that were carried out revealed that there was an increase in Moisture and Carbohydrate content of the fungal infected seeds relative to the non-infected seeds (control). However, there was a decrease in Ash, Fibre, Lipid, and Protein content of the fungal infected seeds relative to the non-infected (control). It was observed that moisture had increased from  $10.50 \pm 0.16$  in the non-infected seeds to  $17.60 \pm 0.20$  in the infected samples and Carbohydrate content had also increased from  $49.6 \pm 0.25$  in the non-infected to  $52.50 \pm 0.29$  in the infected seeds. The following parameters decreased in the infected than in the non-infected seeds. They include Ash  $2.60 \pm 0.12$ , Crude fibre  $1.9 \pm 0.08$ , Lipid  $6.50 \pm 0.16$ , and Protein content  $18.50 \pm 0.06$ . Similarly, Calcium  $2.50 \pm 0.12$ , Phosphorus  $1.80 \pm 0.12$  and Potassium  $1.80 \pm 0.09$  increased in the infected than in the non-infected seed, while iron  $0.20 \pm 0.05$ , Sodium  $0.02 \pm 0.01$  and Magnesium  $0.06 \pm 0.02$  decreased in the infected seeds. All phytochemical contents analyzed increased in the infected seeds viz Tannin  $0.50 \pm 0.12$ , Oxalate  $1.60 \pm 0.05$ , Hydrogen cyanide  $1.82 \pm 0.06$ , and Saponin  $2.50 \pm 0.28$ . However, the nutrient compositions and Phytochemical between the infected and non-infected seeds are not significantly different ( $p > 0.05$ ).

**Keywords :** Mycoflora, *mucuna sloanei*, seeds, phytochemical, nutrient composition

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