

ALTERNATIVE TO CONVENTIONAL METHOD OF NITRITE ELIMINATION OF BIRD NEST (SWIFTLET)



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PATENT

NATURAL SWIFLET AROMA (IN REVIEW)

Publications

Che Mohd C.M.A., Tajuddin S.N., Tan L.L., Yusoff M.M., Jalila A. and Idris A. 2014. Sustainable factors for edible bird's nest ranching in Malaysia.

PAPER IN REVIEW

Partnership

AWESOME SWIFLET ENTERPRISE



RDU131407– Development of Novel Technology Using Effective Microorganism for NO₂ Elimination in Edible Bird Nest (Swiftlet)

Introduction

Swiftlet farming industry is a very profitable investment for those that are successful. The demand for edible bird's nest from China, Hong Kong, Taiwan, Japan, South Korea, India and the Middle Eastern countries is increasing. Swiftlet industry in Malaysia is facing difficult time since August 2011 because Chinese government has banned on edible bird's nest and its products from Malaysia. This is due to high level of nitrite (NO₂) spotted in edible bird's nest (AQSIQ, 2011). As the consequences, the edible bird's nest and swiftlet ranching industry in Malaysia has been hit hard. So, to meet the standard of Chinese government, an investigation is proposed by using indigenous microorganisms (IMO) technology for nitrite elimination in edible bird's nest of swiftlet.

Preliminary Results

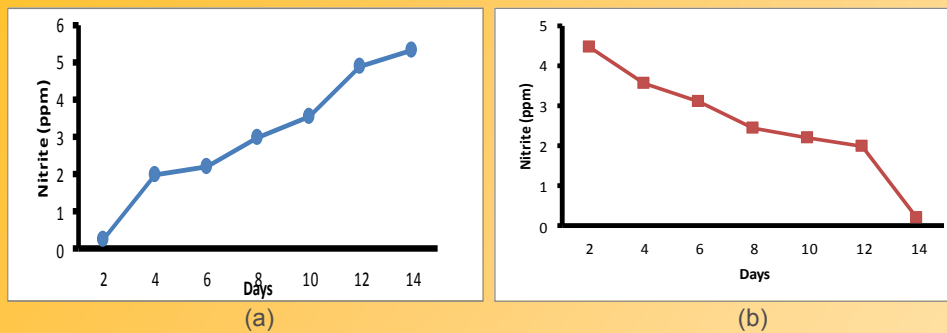


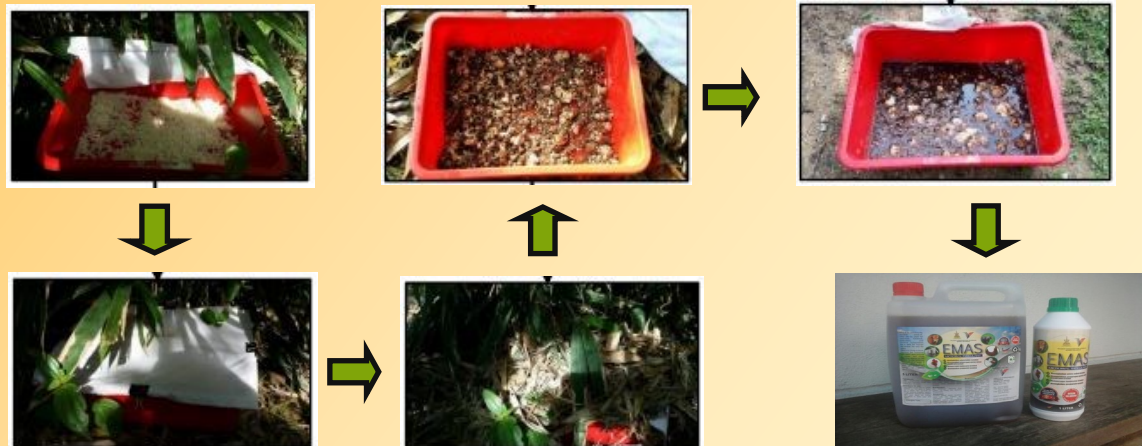
Figure 1: (a) Nitrite levels of bird soil for 14 days; (b) Nitrite level of bird soil treated with ElimiNit for 14 days.



Figure 2: (a) Color changes of EBN induced by bird soil on day 14; (b) No color changes of EBN after 14 days.

The contamination of NO₂⁻ in EBN mainly comes from the bird-soil, which involved enzymatic reaction by bacteria in natural environment at certain temperature, and humidity. Color of EBN also would become an indicator of NO₂⁻ level. The higher the level of NO₂⁻, the color of EBN changes from white to yellowish and brownish.

Preparation of ElimiNit



CHALLENGES IN SWIFLET RANCHING

The source of bird soil is a contributing factor as swiftlet house bird soil has a lower nitrite and nitrate contents compared to cave guanos that contain bird or bat droppings mixed with other organic materials rich in nitrite and nitrate. There is evidence that EBNs from cave generally contained higher nitrite and nitrate levels compared to those from swiftlet houses.

NOVELTY

- ⇒ Novel finding of nitrite elimination for swiftlet ranching.
- ⇒ Usage of totally organic material.

BENEFITS

- ⇒ Water-based product support green chemistry.
- ⇒ Cheaper price due to easy production process.