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Conversion of Food Waste via Two-Stage Fermentation to Controllable Chicken Feed Nutrients by Local Isolated Microorganism



INTRODUCTION

Food waste can be described as edible food materials that are produced and made available to be consumed by human but left uneaten. Each year, there is an estimated 1.3 billion tons of food for humans is lost and wasted globally. Recovering food waste for animal feeding (ReFeed) - solve problems faced in waste management such as food waste. For instance, producing animal feed from food waste can reduce food waste problem effectively.

PROBLEM STATEMENT

- In 2015, the food waste in Malaysia reached 15,000 tonnes daily
- Therefore, there is a need for an appropriate management of food waste
- Directly feeding animal with food waste can lead to animal disease.
- Current process to recycle food waste to animal not practical, not able to commercialize and the process too expensive

NOVELTY AND INVENTIVENESS

Inventiveness

- Using specific microbes and process to convert food waste to become animal feed and fulfil Malaysia and International Standard for Chicken Feed.
- Chicken feed from this process also completed with probiotic and sufficient to MS20:2008.

Novelty

- The process conversion food waste to become chicken feed via double stage fermentation. Currently not have any record from any sources about this method. This process allows supportive probiotic to growth in this chicken feed.
- Process of control raw material to get the consist of nutrient for every batch at the end products (chicken feed).



INTELLECTUAL PROPERTY (IP) STATUS

Copyright: Food Waste To Probiotic Chicken Feed via double stage fermentation
 Trade Secret: Microorganism and probiotic to convert food waste to chicken feed

USEFULNESS AND APPLICATION

Poultry feed is expensive. This product will reduce feed cost and consequently will reduce chicken price

STATUS OF INVENTION

TRL 8 - First of a kind commercial system

COMMERCIAL POTENTIAL

This product has higher crude protein, fat and others. commercial chicken feed and cheaper RM 0.43/kg) as compared to (RM 2-2.50/kg). The quality of chicken meat which is feeding with this chicken feed is higher quality compared with commercial chicken meat.

POTENTIAL PARTNERS

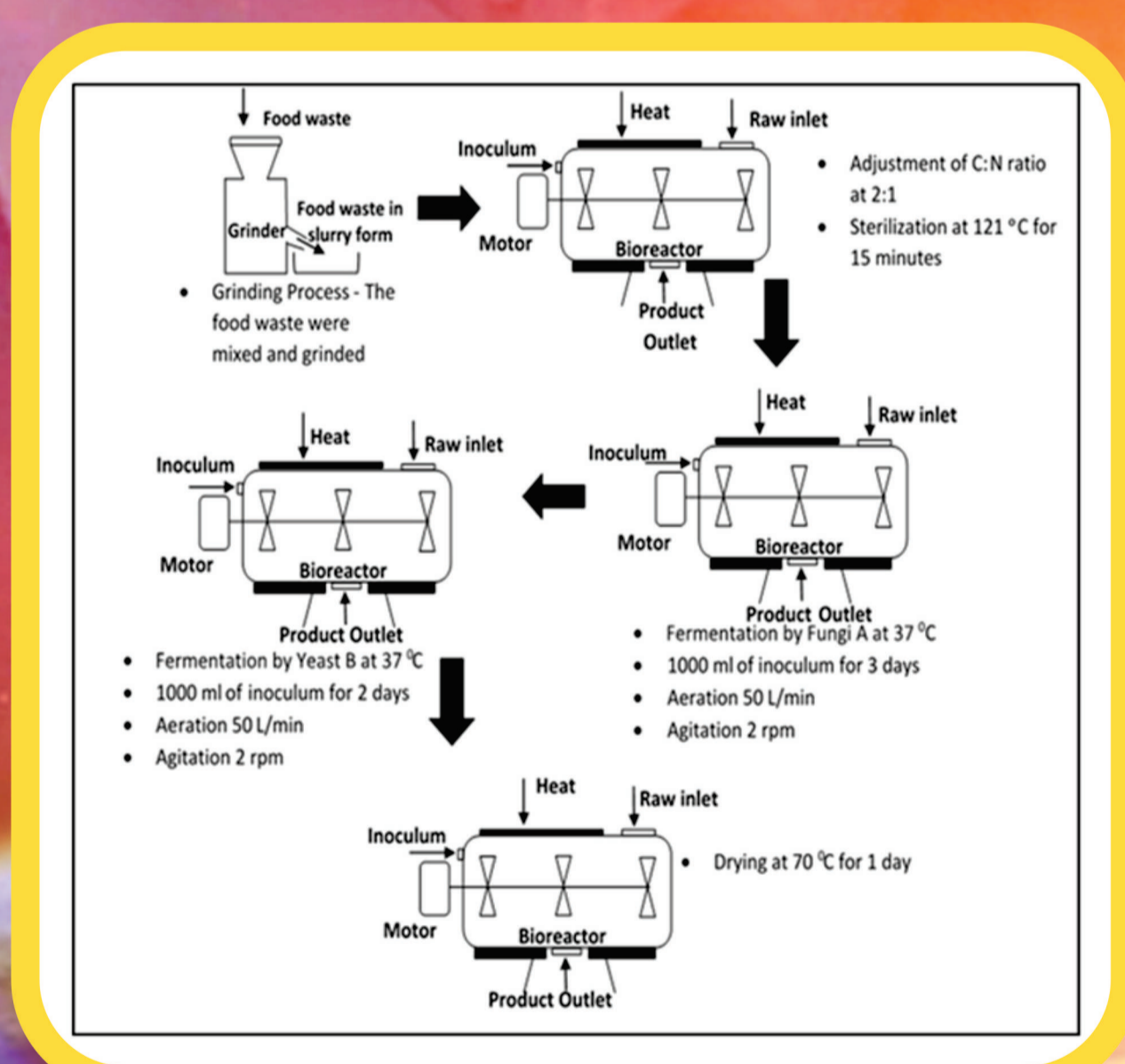
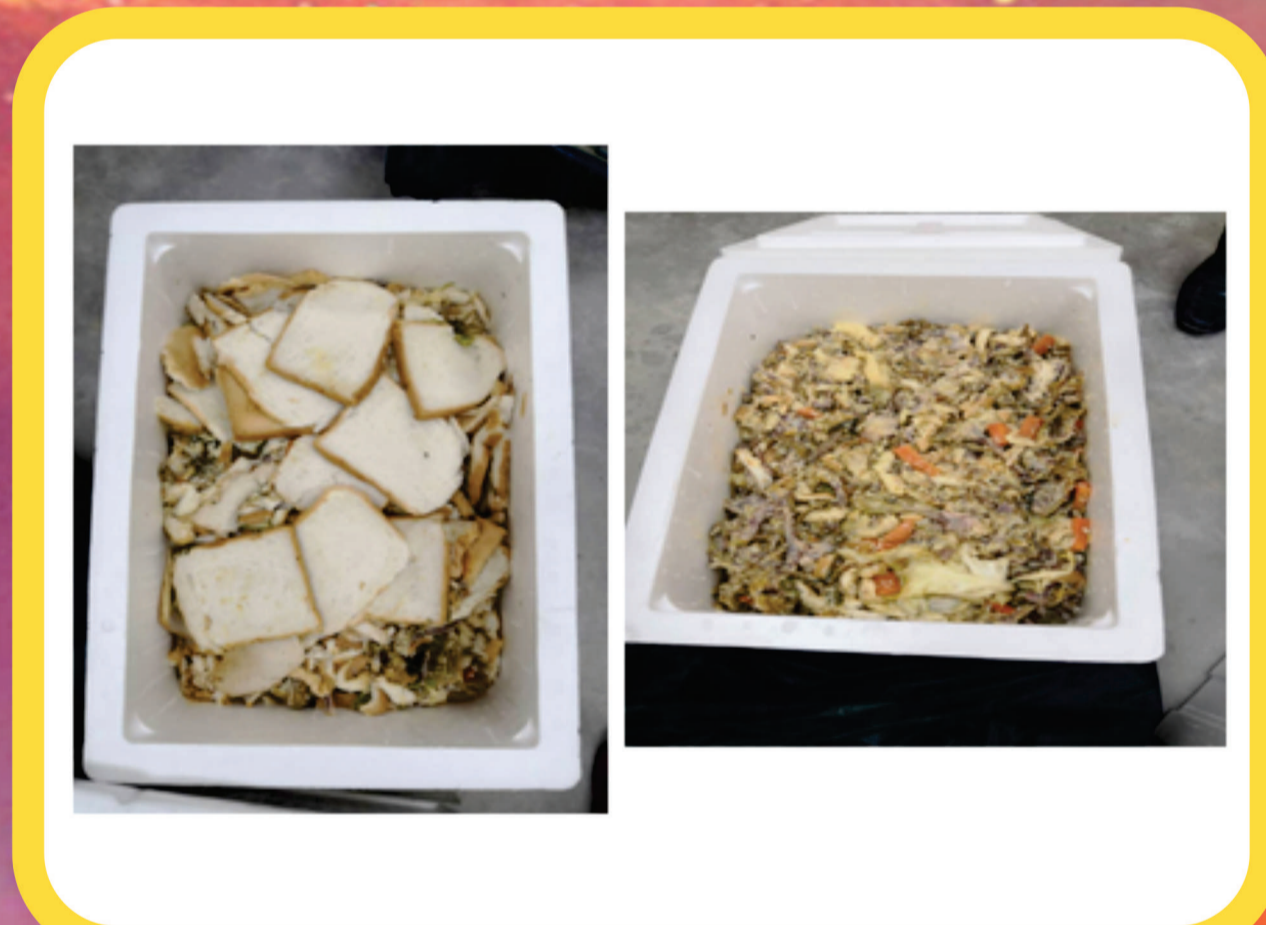
- 1) E-Idaman Sdn Bhd
- 2) Al-Ansar Sdn Bhd
- 3) Persatuan Peladang Pulau Pinang
- 4) NAFAS

KNOWLEDGE MANAGEMENT

- 2 Industrial grant from E-IDAMAN Sdn Bhd
- i) Utilization of food waste as animal feed via two stage fermentation
- ii) Pilot Scale Testing on Broiler Feed from Fermented Uneaten Food towards broiler growth, sensory and meat quality

IMPACT OF THE PRODUCT

- The main raw material used for this process is food waste. Conversion of food waste into animal feed can reduce environmental problem, particularly the huge amount of food waste dumped in the landfill.
- The broiler meat which feeding with this chicken feed has a high quality and not contaminated with antibiotic.



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