ATLANTIS PRESS
Advances in Health Sciences Research, volume 19
International Society for Economics and Social Sciences of Animal Health - South East Asia 2019 (ISESSAH-SEA 2019)

A Proposed Method To Assess Safety and Health Impact Of Expired Sausage As Alternative Feed In Traditional Fish Farm

Fuad Wahdan Muhibuddin
School of Business
IPB University (Bogor Agricultural University)
Bogor, Indonesia
fuadwahdan@apps.ipb.ac.id

Nimmi Zulbainarni
School of Business
IPB University (Bogor Agricultural University)
Bogor, Indonesia
nimmiz_reims@yahoo.com

***Abstract*—A recent trend of alternative feed made from expired sausage in traditional fish farm could reduce 20%-25% of production cost. However, expired sausage suspected as hazardous food since it contains pathogenic microbes that cause a serious problem in farmed fish health and it can be carried to human health. This paper aims to propose a method to map a relation between feeding management and farm productivity in relation to the potential risk of expired sausage as an alternative feed to fish and human health. The study was conducted by reviewing available literature of fish feeding management, alternative feed and its pathogenic microbes related to fish farm productivity. Then we linked and mapped the results with the potential risk in fish and human health using hazard analysis.**

***Keywords*— Alternative feed, Expired Sausage, Fish and Human Health, Hazard Analysis**

I. INTRODUCTION

The growth of alternative feed usage for fish farm has increased along with the increase in commercial feed costs [1]. One of them is expired sausage. The use of expired sausage as an alternative feed is an option because it can reduce costs by 20-25%.

However, expired sausage suspected as hazardous food since it contains pathogenic microbes that cause a serious problem in farmed fish health and it can be carried to human health.

This paper aims to propose a method to map a relation between feeding management and farm productivity in relation to the potential risk of expired sausage as an alternative feed to fish and human health

II. MATERIALS AND METHODS

A. Definition of Expired Sausage as Alternative Feed

Alternative feed is defined as feed used in fish farming enlargement apart from commercial pellet feed. Expired sausage is expired sausage that cannot be sold for human consumption.

B. Definition of Traditional Fish Farm

Fish farm is similarly to aquaculture. World Health Organization (WHO) [2] defined aquaculture as farming in water is the aquatic equivalent of agriculture or farming on land. Aquaculture covers the farming of both animal (including crustaceans, finfish, and mollusks), and plants (including seaweeds, and freshwater macrophytes). No specific definition about traditional fish farm, but we can use definition by [3]. Traditional fish farm defined as fish farmer who conduct conventional fish farming which low technology fish farm, limited capital, and low education level.

C. Risk Assessment Method

The study will conduct by reviewing available literature of fish feeding management, alternative feed and its pathogenic microbes related to fish farm productivity. Then we linked and mapped the results with the potential risk in fish and human health using hazard analysis.

III. DISCUSSION

Hazard analysis has been widely applied in various field, including fishery sector. Hazard analyses are performed to identify and define hazardous conditions/risks for the purpose of their elimination or control. Analyses examine the system, subsystems, components, and interrelationships [4].

The increment usage of expired sausage in traditional fish farm should be our concern, that expired sausage suspected contained any pathogenic microorganism. It might impacted to farm productivity due to fish health, and human health.

REFERENCES

[1] Nasution, EZ. 2006. Studi Pembuatan Pakan Ikan dari Campuran Ampas Tahu, Ampas Ikan, Darah Sapi Potong, dan Daun Keladi yang Disesuaikan dengan Standar Mutu Pakan Ikan. Jurnal Sain Kimia.13(1), pp . 40-45

[2] [WHO]. World Health Organization. 1998. Rural Aquaculture: Overview and Framework for Country Review. Avalilabe at : http://www.fao.org/3/x6941e/x6941e00.htm#Contents

[3] Lazard, J., Baruthio, A., Mathe, S., Valette, HR., Chia, E., Clement, O., Aubin, J., Morissen, P., Mikolasek, O., Legendre, M., Levang, P., Blancheton, JP., Rene, F. 2010. Aquaculture System Diversity and Sustainable Development: Fish Farm and Their Representation. Aquatic living Resources. 23, pp. 187-198

[4] Regidor, S. and Dabbadie, L. HACCP in Aquafarm : A Practical handbook. Unpublish. Access at [2019 October 10]. Availabe at: https://uved-formation-aquaculture.cirad.fr/content/download/4311/32058/version/5/file/HACCP+in+aquafarms.pdf