

Development of Capra Hircus Feed from Waste to Wealth by Utilize Artocarpus Heterophyllus Leaves and Palm Acid Oil (PAO) from Palm Oil Mill Effluence (POME)

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ABSTRACT

Palm acid oil (PAO) is product from last portion of converted crude palm oil (CPO) in the end of that consist free fatty acid (FFA) over 50%. The chemical properties in PAO make it be a part of animal feed as it is low in FFA and cheaper than CPO [1]. To reduce the environmental pollution from palm oil mill, PAO can be used for producing laundry soap. However, it also can be served as an important ingredient in making goat feed formulations. This study is to develop goat feed from nutritious waste to reduce the increasing cost in feeding production in order meet the policies of green technologies. The wastes used are PAO from POME, jackfruit leaves and soybean waste. The nutrient of all material is identified to fulfil the need by animal for growth performance. In addition, development of goats feed by utilize PAO from POME can reduce the environmental caused by effluents coming from palm oil mill. It is following the policies of green technology that conserve environment by developing evolution and application of product and system [2]. The feed formulations are based on Department of Veterinary Services Feeding Guide book. This study is focus on reducing the negative impact to the environment by utilizing the waste to wealth. Three formulations were tested on goats to determine the most suitable formulation. The formulations have different amount of each material. The nutrient in each formulation was calculated based on feeding guides by Department of Veterinary entitled nutrient composition of Malaysian feed materials and guides to feeding of cattle and goats [3]. Three goats involved in this study. Two goats were fed with new formulations, meanwhile the other one was fed with its regular feeds which is Napier grass Taiwan and commercial pellet that act as control. The results obtained were compared with control goat. The feed intake of each goat was recorded. As results, the suitable formulation of the composition of waste material had been choose as it can increase the weight and performance of Asian domestic

goats. The uses of waste proved that development of waste to wealth in animal feed meet the green technology and Malaysia Industrial revolution in livestock industries.

KEYWORDS

Goat feeds; Palm Acid Oil (PAO); Napier grass, Jackfruit leaves (*Artocarpus heterophyllus*); soybean waste (*Glycine max L.*)

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