

Improving Water Stability of Fish Feed with Cassava Peel Coatings

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A group of UGM students has successfully created a new innovation in animal husbandry by inventing a pellet fish coating made from cassava peel. The innovation can improve the effectiveness of feeding farmed fish.

“Edible coatings reduce the water absorption level of fish feed to make the consistency and the physical form last longer,” said Muhammad Burhanuddin Fauzi, Thursday (6/28).

Fish feed coatings create a longer time for the fish to eat, hence it improves the feeding effectiveness. In addition, fish feed with a good durability can reduce water pollution due to excess feed.

The innovation named as EATING PAKU (Edible Coating Pati Kulit Ubi Kayu) was created from the UGM Student Creativity Program 2018. Fauzi developed the product with fellow students from Agricultural and Biosystems Engineering Department, Faculty of Agricultural Technology, namely Ahadian Ansor and Mochammad Idris Ramadana, under the guidance of Dr. Sri Rahayoe, STOP., MP.

“The result showed that the coated pellets have better durability and water stability. Moreover, the coatings can preserve the pellets in the water up to five to seven hours,” he said.

The use of cassava peel as the basis for making edible film was chosen because it was safe and relatively cheap compared to other materials, such as protein and lipid. Also, the material can be easily found in the community. In fact, cassava peels are often wasted and underutilized.

The making of pellet coatings begins with the processing of cassava peel into starch. After that, the starch is then formulated by mixing it with glycerol, CMC (carboxymethyl cellulose), and aquades using the stirring process. Then, the obtained solution is sprayed on homemade pellets to obtain fish feed with a better water stability.

The three students invented the feed coatings as a response to the complaints of the community, especially fish farmers in Sleman. The fish farmers often complain about the poor quality of homemade fish feed compared to fish feed on the market.

Therefore, they tried to create a solution for the problem and found a method that successfully improve the water stability of homemade fish feed.

“The addition of coatings from cassava peel waste can influence the fish farming yields and it is expected to improve the economic condition of fish farmers,” he concluded.

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