ABSTRACT

TABITA NAOMI RALAHALU. Potential of Sago Waste and Shrimp Waste as a Source of Fiber in the Ration and their Effect on Swine Cholesterol Level and Carcass Quality. SUPERVISED by KARTIARSO, AMINUDDIN PARAKKASI, KOMANG G. WIRYAWAN, and RUDY PRIYANTO

Cholesterol is required for the proper function of the body. However, if it is excessive in the body, it will cause atherosclerosis. This experiment was conducted in three stages: (1) fermentation of sago waste consisting of six treatments namely 0, 3, 4, 5, 6 and 7 weeks. (2) giving of sago waste, shrimp waste and their combination at different levels in ration of white rat, namely: R0, 10% of sago waste, 20% of sago waste, 10% of shrimp waste, 20% of shrimp waste, 10% of fermented sago waste and 20% of fermented sago waste (experiment IIa). Experiment IIb: R0, 2.5% of sago waste + 17.5% of shrimp waste, 5% of sago waste + 15% of shrimp waste, 7.5 of sago waste + 12.5 % of shrimp waste, 10% of sago waste +10% of shrimp waste, 12.5% of sago waste + 7.5% of shrimp waste, 15% of sago waste + 5% of shrimp waste, 17.5% of sago waste + 2.5% of shrimp waste, 20% of sago waste + 0% of shrimp waste and 0% of sago waste + 10% of shrimp waste; (3). giving of sago waste, and shrimp waste at different levels in swine ration consisting of six treatments namely R0, 0% of sago waste + 10% of shrimp waste, 10% of sago waste + 10% of shrimp waste, 12.5% of sago waste + 7.5% of shrimp waste, 17.5% of sago waste + 2.5% of shrimp waste, 20% of sago waste + 0% of shrimp waste. The results showed that fermentation time has a significant effect (P<0.05) on all parameters measured. In conclusion, the content of crude protein, true protein and cellulose of sago waste increased for 5 weeks of fermentation. The results of experiment Iia showed that the treatments had significant effects on live weight gain, feed efficiency and blood cholesterol (P<0.05). It can be concluded that the use of sago waste up to 20% in the ration results in high live weight gain and feed efficiency, and low blood cholesterol. The results of experiment IIb indicated that the treatments affected blood cholesterol and triglyceride significantly (P<0.05). It can be concluded that ration supply of 15% of sago waste + 5% of shrimp waste affects blood cholesterol and triglyceride. The results from experiment III showed that the treatments had effect on the rate of passage, carcass weight and carcass percentage of swine. It can be concluded that ration 0% of sago waste + 10% of shrimp waste results in faster rate of passage, rations R0 and 17.5% of sago waste 2.5% of shrimp waste result in greater carcass weight. The higher carcass percentage result from ration of 10% of sago waste + 10% of shrimp waste. The use of sago waste as much as 20% results in the highest level of unsaturated fatty acid.

Key words: sago waste, fermentation, Pleurotus ostreatus, shrimp waste, rat, swine.