

## **ABSTRACT**

### **THE EFFECT OF HIDROLYZED POULTRY FEATHER AND ORGANIC MINERAL SUPPLEMENTATION IN INCREASING VFA AND NH<sub>3</sub> VALUE IN RUMEN LIQUID OF COWS**

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This study aimed: 1) to optimize the use of agroindustry by-product through the hydrolyzed poultry feather and organic mineral supplementation in ration to increase the digestion of cows; 2) to determine the best effect of hydrolyzed poultry feather and organic mineral supplementation level to VFA and NH<sub>3</sub> value in rumen liquid of cows.

This study was conducted in August until October 2013 located in the Stall of Animal Husbandry Department, Faculty of Agriculture Lampung University. The analysis of feed stuff, VFA and NH<sub>3</sub> was conducted in Laboratory of Animal Feed, Animal Husbandry Department. This study used Latin Square Design with 3 treatments and 3 replications. R0 = Basal Ration, R1 = Basal Ration + 3% hydrolyzed poultry feather, R2 = R1 + macro-organic Mineral (0,5% organic Ca, 0,04% organic Mg) and macro-organic Mineral (40 ppm organic Zn, 10 ppm organic Cu, 0,10 ppm organic Se, dan 0,30 organic Cr). Data obtained was statistically tested to determine the effect of treatments to the variables observed by variance analysis. Then, it was continued by using Least Significance Difference on significant level of 5% and or 1%.

The result of this study showed that: the hydrolyzed poultry feather and macro-organic mineral supplementation (0,5% organic Ca, 0,04% organic Mg) and macro-organic Mineral (40 ppm organic Zn, 10 ppm organic Cu, 0,10 ppm organic Se, dan 0,30 organic Cr) were significantly different ( $P > 0,05$ ) to VFA and NH<sub>3</sub> value in rumen liquid of cows.

**Key words:** hydrolyzed poultry feather, organic mineral VFA and NH<sub>3</sub>