



## **Effect of palm kernel meal in Holstein lactating cows rations on milk yield and composition**

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In order to evaluate the effect of feeding palm kernel meal versus wheat bran on yield and composition of milk, eight Holstein lactating cows were used in a replicated 4×4 Latin square design in 15 d periods. Wheat bran was replaced by palm meal in ratios of 0, 33, 66 and 100% in rations 1, 2, 3 and 4 respectively. Diets contained 60:40 ratio (DM basis) of concentrate and forage. Samples of milk, diets, blood, urine and feces were taken from day 11 to 15 of each period. Samples of milk were analyzed for fat, protein and lactose, feces and diet samples were taken for determination of digestibility and blood samples were taken for analyzing blood factors and urine and feces samples were taken for pH determination. THE results of this study showed that, there were no significant differences ( $P>0.05$ ) in DMI, fat percentage, milk yield fat (kg) and blood factors. Apparent digestibility of DM was lower for diet 4 compared to others ( $P<0.05$ ). Milk yield was different in diet 4 compared to diets 1 and 2 ( $P<0.05$ ). Yield of 3.2% FCM was significantly different among diets 2 and 4 compared to diets 1 and 3 ( $P<0.05$ ). Protein percentage was higher for diet 2 compared to other diets ( $P<0.05$ ). Yield of protein (kg) were lower for diet 4 compared to other diets ( $P<0.05$ ). Lactose percentage was significantly different among diets and percentage of milk lactose decrease with increasing palm meal in diets ( $P<0.05$ ). Urine pH was different in diet 1 compared to other diets in (0, 2, 4, 6, 9 and 12) h post feeding ( $P<0.05$ ). Also, feces pH was different for diets 3 in 6th and 12th h and for diet 4 in 6th h post feeding and pH of feces was low in both diets ( $P<0.05$ ). Result of this study showed that no negative effects on yield and nutrition would be observed by inclusion of 66% palm meal instead of wheat bran in diet of Holstein lactating cows.

**Keyword:** Palm kernel meal, Milk production, Milk composition, Dairy cows

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