

Improvement of Adaptive Saanen Goat Milk Production and Reproduction Fed Diet Supplemented with Indigofera zollingeriana Leaf Meal

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Abstract	<p>The objective of this research was to examine the effect of the addition of Indigofera zollingeriana leaf meal (IZLM) in diets on milk production and fermentation products of adaptive Saanen goat. The research was conducted at Balai Besar Pembibitan Ternak Unggul dan Hijauan Pakan Ternak (BBPTUHPT) or or the Center for Superior Animal Breeding and Forage Animal Feed, Baturraden, Central Java. A total of 18 first lactating adaptive Saanen goats with a body weight of 34.83\pm7.13 and aged 20-24 months were used in this study. The goats were kept in individual pens and grouped into 6 groups based on body weight and each group were randomized to receive three kinds of concentrate substitution with IZLM of 0%, 10% and 20 % of dry matter (DM) concentrates, for A, B and C treatments, respectively. Therefore, this research was designed according to randomized block design. Dry matter intake (DMI) of each goat was 4.5% of live weight with dry matter (DM) ratio of forage and concentrate were 60:40. The variables measured were DMI, partial volatile fatty acid (VFA), energy conversion efficiency of glucose into VFA (ECEVFA), methane gas, total protozoa, milk production and the first estrus after kidding. Analysis of variance showed that the treatment had a significant effect ($P < 0.05$) on propionate, milk production and fat, but no significant effect ($P > 0.05$) on consumption of DM, acetate, butyrate, EKVFA, methane gas, lactose and protein milk. Increasing the IZLM substitution level enhanced linearly ($P < 0.05$) on production of milk and milk fat, while the propionate concentrate responded to quadratic ($P < 0.05$). Milk production increased at IZLM level of 20%, while goat in this group resulted only 16.70% estrous after birth compared to goat group received 10% IZLM level resulting 50% of estrus goat. The results of this study concluded that the recommended level of using IZLM as a concentrate substitute was only 10%.</p>
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