

The Effect of Substitution Concentrate with Leguminose Indigofera Zollingeriana in Lactation Goat Ration of Dry Matter, Organic Matter Intake, Milk Production, PUFA and CLA Content of Milk

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Abstract : The purpose of this study is to formulate a ratio that an increased concentration of bioactive compounds in the form of conjugated linoleic acid (CLA) and polyunsaturated fatty acids (PUFA) in milk to produce functional milk that is beneficial for health. It has been proven that forage-based feeds (grass and legumes) are able to increase the presence of polyunsaturated fatty acids and, in particular, conjugated linoleic acid CLA in milk. The presence of bioactive compounds in product fat of ruminant origin these have generated great interest because they are associated with their potential as anti-carcinogenic, anti-diabetogenic and stimulant of the immune response. PUFA and CLA and especially n-3 fatty acids, only 4% of the fatty acids present in milk. For that, efforts need to be made to change the fatty acid composition of milk to increase the nutritional value for consumers through increasing the concentration of PUFA and CLA. This is very important in the midst of the covid pandemic 19, which is increasing, it is necessary to drink and food that can improve the system body immunity. The study was conducted in vivo using a randomized block design with 4 treatments and 4 replications. This experiment used 16 heads of 40-55 kg lactating goats. Goats were fed a basal diet containing (dry matter basis) 60% native grass and 40% concentrate. The treatment was A. 60% native grass + 40% concentrate, B. 60% native grass + 30% concentrate + 10% I. zollingeriana C. 60% native grass + 20% concentrate + 20% I. zollingeriana, D, 60% native grass + 10% concentrate + 30% I. zollingeriana. The results showed that the use of I. zollingeriana until 30% in ration gave the same result with using a concentrate of nutrient intake and milk production but increased the CLA dan PUFA content in milk. The results of this study concluded that I. zollingeriana could increase the content of CLA and PUFA at the use of 75% substitute concentrate in the diet of lactating goats

Keywords : Indigofera zollingeriana, lactation goat, milk production, CLA, PUFA

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