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Corresponding author:

1. Supreena Srisaikhram,
E-mail: supreena.sr@buu.ac.th
2. Quanjai Rupitak,
E-mail: quanjai@buu.ac.th

Research article**A Preliminary Study on Growth, Yield and Nutritive Value of Four Varieties of Alfalfa and the Utilization of Alfalfa Dehydrated Pellets in a Total Mixed Ratio in Meat Goat Diet****Supreena Srisaikhram* and Quanjai Rupitak****Faculty of Agricultural Technology, Burapha University, Sa Kaeo Campus, Sa Kaeo 27160, Thailand*

Abstract This study proposed to examine the alfalfa varieties suitable for further field experiments in Sa Kaeo province in order to cultivate alfalfa plants for a meat goat diet. Four varieties of alfalfa were collected from four distributors, source from the Republic of Turkey (coded as AC1), source from the United Kingdom (coded as AC2) and source from the United States of America (coded as AC3 and AC4, respectively). Their growth rate, yield and chemical composition were analysed in Sa Kaeo province. The results show that the plant height, the number of leaves per plant and the leaf width increased from 30 to 90 days after all the varieties were planted. There were significant differences between the varieties in their chemical composition after the first (90 days) and second (120 days) harvest times except for dry matter (DM) 90 days after planting. To determine the effects of increasing levels of alfalfa dehydrated pellets (ADP) in total mixed ration (TMR) on feed intake and productive performance of meat goat, a randomized complete block design experiment was conducted with 9 crossbred Native-Anglo Nubian goats, 3-4 months' old, with body weight ranging from 8-10 kg which were fed received 0%, 10% and 20% of ADP in a TMR. The results revealed that increasing levels of ADP with 10% and 20% in the diet had no effect on DM intake, average daily gain, nutrient digestibility and blood urea nitrogen.

Key words: Alfalfa, Plant height, Number of leaves, Total mixed ratio, Meat goats

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