

Nareerat Saardaium 2014: Influence of Crude Extract Product from Green Tea
(*Camellia sinensis* L.) Marc on the Nutritive Value of Soybean Meal and Productive
Performance of Growing Lambs. Master of Science (Animal Breeding and Production),
Major Field: Animal Breeding and Production, Department of Animal Science. Thesis
Advisor: Assistant Professor Lerchat Boonek, Ph.D. 85 pages.

Three experiments were conducted to study influence of crude extract product from green tea marc on the nutritive value of soybean meal and productive performance of growing lambs. Experimental 1 was to evaluate the effect of soybean meal (SBM) treated with 3 levels of crude extract product from tea marc (5, 10 or 15%) in comparison with soybean meal alone or treated with 10% tannic acid on kinetics of gas production *in vitro*. The results showed that there were no significantly different ($P>0.05$) among experimental groups in soluble fraction (a), insoluble fraction (b), potential degradability ($|a|+b$) and the gas production rate (c). The cumulative gas production at 48 h of soybean meal treated with 10% tannic acid and 15% of crude extract product from tea marc were lowest with mean value of 80.38 and 83.05 ml respectively compared to control and others group ($P<0.05$). Experimental 2 was to determine the effect of soybean meal treated with crude product from tea marc in diet of lambs on nitrogen retention. 9 lambs were randomly allocated to 3 experimental groups in Completely Randomized design trial. The experimental animal received total mixed ration containing corn silage as roughage source and concentrate comprised with either soybean meal (TMR1) or soybean meal treated with 5 and 10 % crude extract from tea marc (TMR2 and TMR3). The results showed that N retention of experimental lambs was not significant different among experimental groups ($P>0.05$). However it was noticed that percentage of nitrogen retention of lambs received TMR1 was numerically lower than TMR2 and TMR3 with the average value of 70.40, 73.26 and 75.53% respectively. Experimental 3 was carried out to investigate the effect of soybean meal treated with crude product from tea marc in diet of lambs on values of blood thiobarbituric acid reactive substance (TBARs), glucose and urea nitrogen and productive performances. The results showed that there was no statistically significant difference among treatments in all parameters observed.

Student's signature

Thesis Advisor's signature