

Optimization of protein requirement for dairy goats during rearing period with local protein feed stuff from bioethanol production and best roughage

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Optimal diets for dairy goats are very important for high performance and healthy animals. To get a high milk yield the animals must be fed according their requirement during rearing period. In this time the use of concentrate is necessary. Because of high cost of concentrate the amount in the ration must be considered well. Also the protein component in concentrate is a question. In Austria mostly soybeans are used, but this must be imported from other countries.

With the building of a factory for ethanol production from corn dried distillers grains (DDG) are available for feeding ruminants. The use DDG in the diet for goats a feeding experiment was carried out. The aim was to replace soybeans as protein component in the concentrate with DDG. Three different concentrates was offered: group K-0 with 11.8% soybeans and no DDG, group K-50 with 5.9% soybeans and 9.4% DDG and group K-100 without soybeans and 18.7% DDG. The protein content was the same in all 3 groups, 15.6%, the energy content was 12.26, 12.15 and 12.04 MJ ME/kgDM. Additionally to the concentrate the animals had ad libitum access to good quality hay. The experiment was carried out with 36 female Saanen goats with a body weight of 21 kg at the begin and a final body weight of 51 kg. Animals where housed individual in small pens on straw. Water was available for free intake. Body weight was measured once a week. Daily hay and concentrate intake was recorded.

The results showed no significant differences in average daily gains (191, 201 and 198 g/d), in daily feed intake (1.21, 1.19 and 1.21 g DM/d) and in feed conversion (6.71, 6.36 and 6.55 gDM/kg gain).

In conclusion DDG is an internal feedstuff and as a protein component in the diet for rearing kids well useable. Additionally, these data indicate that soybeans can be replaced by 100 % in the concentrate by dried distillers grains.