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Comparative study of intake, digestion and growth in Barbarine lambs fed oaten hay and winter Triticale-Hairy Vetch Mixture hay (TVM)

Sourour Abidi, Salah Benyoussefa and Gharbi Faten

Institut National de Recherche Agronomique de Tunis, Tunisia

In a national context characterized by an increasing demand for food, the use by ruminants of a large quantity of concentrate can be seen as an important waste. The low nutritive value of forage produced mainly as oaten hay (70%) is the main cause of this failure. In this context, an association between triticale and hairy vetch was developed and compared to conventional hay on lamb's performances. 12 Barbarine lambs (20 ± 2.0 kg) were allocated into two equal groups and housed in individual crates. Each group received either oaten hay or triticale (20%) hairy vetch, (80%) mixture hay (TVM) and 300 g of barley grains. Results showed a higher nutritive value of mixture hay in term of CP (15.2% DM vs. 6% DM in oaten hay). Mixture hay intake was significantly higher (30%). DM and OM digestibility did not show a significant difference. However, CP and NDF digestibility of mixture hay were higher than those of oaten hay. The same trend was observed with digestible organic matter intake and digestible crude protein intake. Nitrogen intake and urinary and fecal loss, thus N retention ($P=0.0014$) increased with mixture hay intake. Diet digestibility increased, the increase of feed intake and N retention ($P=0.028$) could explain the important increase of lamb's growth rates (111 and 71 g/d for mixture and oat hay, respectively). Economically, the cost of one kilogram of meat produced by mixture hay was the half of that of meat produced with oaten hay. It is concluded that the higher nutritive value of the winter triticale-hairy vetch mixture hay affected positively the performances of lambs.

sourour.abidi@yahoo.fr