Sixteen pure and crossbred Arabian mares averaging 15 months of age and 257 kg of body weight were used to evaluate the substitution of Rhodes grass hay (Chloris gayana, Kunth) by napier grass green chop (Pennisetum purpureum, Schum) on feed intake weight gain and nutrient digestibility. A concentrate (40% ground corn, 40% cottonseed meal and 20% wheat bran) made up 40% of the ration offered. The animals (8) were grouped to the two treatments (60% of the ration as green chop or hay) according to their age and body weight; the mean differences were tested by the "t" test. The digestibility of nutrients was estimed by use of chromium oxide, and the samples were analysed according to the Weende and Van Soest procedures. There was no difference in dry matter intake, although the animals receiving hay as roughage showed a significantly higher (P<0.05) daily weight gain (0.469 kg vs. 0.453 kg respectively). Also the animals receiving hay showed a significant higher digestibility of crude protein (84.01 vs. 69.52) and energy (72.12 vs. 58.21), although for all nutrients (dry matter, crude fiber, ether extract, NFE, cellulose, ADF, hemicellulose and NDF) no differences were detected. It is suggested that green chop cannot replace grass hay for growing mares.

KEY WORDS: Equine performance, roughage, hay, green chop, digestibility