



The Effect of Environmental Variation on Feed Consumption and Some Physiological Parameters of Arabi Sheep and Local goats

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Abstract

9309

The experiment was conducted in the animal field of the College of Agriculture - University of Basra between 1 October to 29 December 2021, to investigate the effect of environmental variation on growth, food and water consumption and some biochemical parameters of Arabi sheep and local goats. A total of twelve animals (6 lambs and 6 kids) aged between 7 and 8 months and weighed (20.85, 20.30) kg respectively, were divided into two groups (each type in one group). The results showed a significant ($P < 0.05$) increase in body weight, daily and total weight gain, food consumption, total protein, albumin and cholesterol concentration, but there was a significant ($P < 0.05$) decrease in water consumption and glucose concentration in sheep compared to goats. Body weight increased significantly ($P < 0.05$) when the temperature decreased to below 36.42 C°, while the greatest daily weight gain was recorded at the temperature of 19.56 C°. Globulin levels decreased significantly ($P < 0.05$) at high temperatures (36.42 C°). The concentration of cholesterol and glucose gradually increased when the temperature decreased from 36.42 C° to 12.33 C°.

Keywords: Temperature, humidity, sheep, goats, growth, Physiological trails.

DOI Number: 10.14704/nq.2022.20.8.NQ44951 **NeuroQuantology 2022; 20(8): 9309-9319**

Introduction

The Arabi breed is located in the central and southern regions of Iraq, including Basra province, and is smaller in size than the Al-Karadi & Al-Awassi breeds (Abdel Nour, 2011). This breed is characterized by rapid growth, when good quality feed is available, and resistance to

variation in temperatures, whether high or low in arid and desert areas of Iraq (Herdmann et al., 2010; AL-Hello et al., 2007). The local black goat is a small, double-purpose breed as it is used for

milk and meat production (Ismail, 2004). Recent studies have shown that goats are a good model for climatic animals because

