

COMPARATIVE STUDY OF LOCAL SHEEP REARED IN DIFFERENT ENVIRONMENTAL AND FEEDING CONDITIONS ON SOME HEMATOLOGICAL AND BIOCHEMICAL TRAITS

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(Received 29 September 2019, Revised 12 December 2020, Accepted 20 December 2020)

ABSTRACT : This study was conducted to study the effect of rearing area and feeding regime on the concentration of some trace elements (copper, zinc) and some biochemical and hematological characteristics of local sheep. Eighty-eight blood samples (44 samples from Haditha city and 44 samples from rural areas of Haditha district) were collected during the study period (from 2/10/2018 to 3/1/2019). The results showed that there were significant differences ($P \leq 0.05$) in the concentration of zinc of animals that rearing in the rural area compared with city area. While the result of the number of white blood cells, the volume of packed blood cells and hemoglobin concentration showed significant increasing ($P \leq 0.05$) in animals that reared in the city area compared with rural area. From other hand, non-significant differences were observed in ALT and AST activity and protein, albumin and globulin concentration in serum between the two-rearing area during the study period, from results can be concluded that the area of rearing can be affect the animal health.

Key words : Sheep, nutrition, environmental, hematological and biochemical.

INTRODUCTION

The livestock is important parts for its role in providing local food security. The main source of meat that provide protein and minerals for human that has high biological value. The importance of meat production through the balancing between actual production and consumer consumption. The meat production in Iraq suffers from a continuous deficit in providing the required quantities. The animals feeding is one of the important causes of direct influence on the productive efficiency of animals' production, especially Iraqi sheep because of the low quantity and quality of feed available. In addition of Inaccuracies in the provision of some nutrients, especially those related to roughages and pastures. Furthermore the lower animal feeding has a direct effect on the productivity of animals and therefore should be diversified and improved by non-traditional additions to the diets in order to improve their nutritional value so that they show an important role in improve the growth, reproduction and immunity of animals (Steen *et al*, 2008; Khan *et al*, 2010). Through the experience of the deteriorating reality of sheep breeding from the deterioration of production (fertility, milk, wool production)

and poor growth in animals and their births and the emergence of signs of disease related to the deficiency of minerals, the most important retarding of growth and falling wool and weak immunity and other matters related to the deficiency of some minerals. From other hand, the copper and zinc has effectiveness role in improvement production and support immunity system (Abdulrazzaq *et al*, 2019; Wuehler *et al*, 2005). The current study was conducted to investigate the concentration of copper and zinc blood of sheep in different areas in Haditha district and their relationship with some blood characteristics.

MATERIALS AND METHODS

This study was conducted to investigate the concentration of copper, zinc and study the some physical, biochemical and immunological characteristics of blood of different ages local sheep from different area of Haditha district, Al-Anbar province, Iraq. Eighty-eight blood samples (44 samples from Haditha city (reared as intensive) that sheep were fed by concentrate ration with alfalfa and 44 samples from rural areas for Haditha district city that sheep were fed by grazing on natural pasture with concentrate ration) were collected during the study