

Introduction

Livestock population of the Sudan was estimated to be 104 million head (Anon, 2011), which is well adapted to the harsh environment and often trekked for long distances in search of feed and water. The livestock sector in the Sudan is an important contributor to the national economy, contributing by 46% to the Gross Domestic Product (GDP), 27% to the foreign exchange earnings (FEE) other than oil revenues, and employing 40% of the country's population. Livestock is used for a lot of different purposes in the Sudan. Statistical information shows that 80% to 90% of the Sudan's households own livestock, with perhaps one-third to one-half of all households reliant upon livestock for their livelihood (Yassir, 2011). The Sudan began to export livestock to the Arabian countries in the beginning of the previous decade. In spite of the fact that the government directed more care towards exports sectors, especially sheep, the exportation of the latter appeared to be profitable and competitive, but was suffered from taxes imposed by the Sudanese Government (Abda and Mohammed 2011).

From 2005 to 2010 the Sudan exported 6,984,015 live animals with an income of USA \$677.680 million of the export, \$6,158,252 were sheep, 454,812 goats, 361,985 camels, and 8.966 other animals, with a revenues of \$567.922, 15.942, 90.520 and USA \$ 3.306 million, respectively. Also, 583,451 metric tones of meat with a revenue of 53.812 million and hides and skins US\$ 75.031 million were exported in the same time. The total return from trading livestock, meat, and hides and skins in 2011 was US\$ 806.523 million (Yassir, 2011).

Sheep are reared throughout the country separately or often mixed with goats and coexist in the same conditions with cattle and camel under sedentary, semi- nomadic and nomadic husbandry methods. Under such circumstances, brucellosis was found to be widely spread in different domestic animal species. *B. abortus* was isolated from cattle and sheep (Musa, 1995) and goats (Buthina, 2009) and *B. melitensis* from a mixed flock of sheep and goats. Brucellosis constitutes a major public health hazard in many countries.

Sheep contributes effectively to the economy of the country by exportation to the Arabian Peninsula. Occasionally, the occurrence of infectious diseases including brucellosis curtail sheep trade and many consignments are rejected because of claims of detection of the disease within them. Consequently sheep destined for export are examined for freedom from brucellosis and other transboundary diseases (Musa, 2005).

According to the Food and Agriculture Organization (FAO), the World Health Organization (WHO) and the International Organization for Animal Health Office International des Epizooties (OIE), brucellosis is still one of the most important and widespread zoonoses in the world. Infections are caused by different *Brucellae* which tend to infect a specific animal species (Lopes *et al.*, 2010).

Objectives of the study:

The objectives of this study were to investigate:

- 1- Prevalence of brucellosis in sheep in Khartoum State.
- 2- Risk factors which predispose sheep to the disease.

