

# ANTHELMINTICS AND ANTHELMINTIC RESISTANCE AGAINST GASTROINTESTINAL NEMATODES OF SMALL RUMINANTS

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Received : 17.03.2014

Accepted : 19.01.2015

## ABSTRACT

*Gastrointestinal nematode parasitism is one of the major factors limiting sheep production worldwide because they cause heavy economic losses in meat and wool production. Gastrointestinal parasitism is the major cause for morbidity and mortality in ruminants. Severe anemia, reduction in functional gastric gland mass, severe damage to gastric mucosa and villous atrophy caused by these worms are responsible for the death due to parasitic gastroenteritis. In India, the common nematode species encountered is Haemonchus contortus in small ruminants. This review throws light on the different mechanisms and contributory factors affecting the development of anthelmintic resistance, the diagnosis and means to prevent the resistance at field level. The emergence of multi-resistant nematode has shown that the previously used control strategies is no longer a chemically success method. The interpretation of fecal egg count reduction test has been modified and suggestions are made on its use with persistent anthelmintics.*

**Keywords :** *Gastrointestinal nematode parasitism, small ruminants, anthelmintic resistance.*

## INTRODUCTION

According to AHDF report (2012) there are 65.1 million sheep and 135.2 million goats in India with a large genetic diversity as reflected by 40 species of sheep and 20 species of goats which account for 0.5 to 5 per cent of the value of total output of the livestock sector (Singh, 1995). Indian goats have adapted to the variety of climatic and agro-economic situations prevalent in different parts of the country and cost little to maintain as they feed on harvested or fallow fields, canal banks or overgrazed

commons. Sheep in India are kept by people who have traditionally taken to sheep farming and are reared in the migratory system, which is dependent on season and availability of pasture to graze. The sheep breeding regions of India are classified as (1) The northern plains, (2) The semi-arid western region, (3) The southern humid region and (4) The temperate and sub-temperate mountains. Both sedentary and migratory system of sheep production are common in India.

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