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Control of Parasitic Infestation by Different Manage mental Strategies

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ABSTRACT

Grazing livestock are prone to parasitic infections due to a variety of geo-climatic conditions and various methods adopted for the livestock rearing in the country, which lead to severe economic losses to livestock industry. Therefore it is a burdensome task to control internal parasites in grazing livestock. Parasites are major cause of hindrance in animal production, as they ruin the production in addition to animal health status. GIT parasites are ubiquitous parasites of grazing animals, which are causes decrease in production, reproduction performance and many of other health issues. As Gastrointestinal parasites reduces feed intake and feed utilization efficiency and increase protein loss in affected animal. Animal as host might provide favorable environment to develop a parasite by offering resource rich habitats to a parasite. This review article is focused on how different management strategies hamperes parasitic infections in an effective way by means of enhancing immunity of an animal.

INTRODUCTION

The grazing animals are consistently exposed to parasites. Several worldwide reports have suggested that the parasitic diseases forces terrible economic losses on the livestock industry and adversely affect the health, production and reproduction of animals. The relationship between nutritional status and parasitic diseases is yet not so easy. Under-nutrition in energy, protein and minerals /trace elements has all been incriminate directly or indirectly in predisposing the animals to parasitic infection [9]. Changes in host nutritional status, both in appellation of quantity and quality, can have intense repercussions on the dynamics of infectious diseases [10, 12]. For a long time, nutrition has been identified as a key environmental component shaping immune defenses and host susceptibility to infection [13]. For a few pathogens, disease severity (the host damage persuades by the infection) arises from an overreacting immune response, preferably than direct parasite exploitation [14, 24, 25]. The nutritional status of hosts can directly influence pathogen survival and reproduction because well-fed hosts can dispense more resources to developing parasites [19]. A handful of studies have traversed the consequences of food availability and quality on the dynamics and the cost of infection [18, 19, 20, 21, 22, 23].

Parasite virulence can be sculpt by the host nutritional status and that parasite can adapt to the environment as long as by their hosts, possibly through genetic selection. Impact of host nutritional status on infection dynamics and parasite malignity in a bird-malaria [17].

DIFFERENT STRATIGIES

Here we discussed some type of management strategies that might be helpful for live stocks to oppose or to make strong against parasitic infections are followings:-

NUTRITIONAL MANAGEMENT

Different types of diet and availability of vitamins, minerals and other nutrients are related with animal susceptibility to the parasites. For developing the immunity against parasites prerequisite are Vitamin A, D and B complexes. Minerals like zinc, iron, cobalt, sodium, potassium, phosphorus, etc. are very necessity for proper functioning of immunological phenomenon going inside the animal's body to evolve functional immunity

against the parasites [16]. Animal nutrition is also an important component that affects its health and creating an environment for parasitic infection. Nutrition can affect the aptness of the host to cope with the outcomes of parasitism and to overcome the parasitism. The nutrition impact on the outcome of exposure of sheep to nematodes has been suspected for many years. Recent delight to know the interaction between the nutritional status of the animal and parasitism is restorative by the need to develop sustainable parasite control which is dependent on recurrent anthelmintic interventions [11].

Pasture Management

The scientific management of pasture is an effectual way to control internal parasites in grazing livestock [7]. Pasture rotation, or intensive grazing is optimal use of grass by distributing the pastures into parcels of land of varying sizes called paddocks and frequently moving the livestock from one paddock to another [6,8]. The prime objective of pasture rotation is not to put the animals back into the same field prior to the risk of infection has diminished. Accordingly, pasture rotation with optimal rest period is an important component to diminish internal parasites in grazing animals [5].

Housing Management

The animals having good living conditions endure or tolerate better against internal parasites as compared to animals kept under penurious housing conditions [1]. Animal shed must be well ventilated and lighted to maintain essential humidity and air circulation [3]. Always keep the manure by creating heap so that eggs, larvae, cyst, or other stages of parasites are killed due to heat generated in composting [4]. Application of nitrogen fertilizers like urea (1:25) to the exterior of manure also eliminate the parasites [2].

Conclusion

By keeping above managemental strategies in mind to prevent and control of various parasitic infections, results in improving animal health status and production performance effectively.

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