Local tree leaves for parasitic control in sheep of hilly areas Jammu and Kashmir ,India

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Abstract

The performance and productivity of sheep is adversely affected by helminthic infections. Infected sheep either don't gain well or lose weight, become lethargic, and may have diarrhea. Sometimes losses occur which are undetected because the signs of parasitism are not obvious. The control of helminth infections has always been a challenge. Till now, the main control methods of these infections are treatments with broad spectrum synthetic anthelmintics like ivermectin, albendazole, levamisole, etc. However, the drug residues in animal products and the development of anthelmintic resistance has restricted their usage in animals.So there is a need of an alternative and more sustainable approach to control these infections. In hilly areas of Jammu and Kashmir you can find many tree leaves with high condensed tannin content. Locally available tree leaves like Neem (Azadirachta indica) Guava (Psidium guajava),Mango (Magniferra indica) , Jamun (Syzygium Cuminii), nilotica), Amla (Emblica officinalis), found in hilly areas of Jammu and Kashmir can be used in Complete feed blocks to meet the protein deficiency as well as control the parasitic load of the sheep. Crude Protien content of these leaves are 20.00±0.44,10.58±0.54,11.02±0.11,25.56±0.48,10.62±0.57 respectively.

The study was carried out to assess the effect of Complete feed blocks and condensed tannins (CT) supplementation through leaf meal mixture (LMM) on feed intake, and faecal egg counts in Haemonchus contortus infected Sheep. 24 sheep were randomly divided into three groups (C, T1 and T2) of 8 animals in each group in a completely randomized block design for a period of 3 months. T1 group was supplemented with complete feed blocks without any leaf meal mixture whereas T2 group was supplemented with leaf meal mixture @ 1.5%. Body weights were recorded at 0th day and then 15th days interval for a period of 90 days. The faecal samples were collected at 0th ,7th ,15th day and thereafter at 15 days intervals for a period of 3 months for the assessment of feed intake, body weight changes, and H. contortus loads. Feed intake and weight gain was almost similar in both the treatment groups T1 and T2 but were comparatively better then the controlled group with normal feeding. The mean fecal egg counts was significantly ($P < 0.001$) higher in T1 group as compared to T2 group. It may be concluded that dietary supplementation of CT (1.5 %) through LMM improved the overall growth and production and thus can help poor hilly farmers in making sheep farming an economically viable enterprise. Supplementation of CT through leaf meal mixture could be used as an alternative sustainable method to control H. contortus infection.

Notes-This technology if properly disseminated can help in rejuvenating sheep and goat farming which due to low profit return is losing its popularity among rural youths.

Biography



Dr Mandeep Singh Azad working as scientist in Sher-e- Kashmir University of Agricultural Sciences and Technology of Jammu from last 8 years. .Firstly joined as Research associate in world bank funded project for dissemination of recent trends and technology among hilly farmers. From Last 5 years working as Scientist in animal sciences at Krishi Vigyan Kendra,Reasi .I have an experience of working in remote areas with specially small and marginal farmers. I had done my masters from National Dairy Reseaarch institute ,Karnal in animal genetics and breeding I have been a recipient 5 international fellowship and international scientific achievement award for year 2018. I had made around 100 research contribution in form of research papers, popular articles and abstracts in international and national Journals. Also have 3 books publications with international and national publishers. I had developed one mobile application for farmers use.

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