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Evaluation of Genetic Resistance to Haemonchus Contortus in Teddy and Beetal Goat Breeds of Punjab, Pakistan

Authors : Muhammad S. Sajid, Asim Shamim, Muhammad Nisar Khan, Ashfaq A. Chatta, Muhammad Saqib

Abstract : Goats (Capra hircus) are a valued asset for resource poor farmers globally. But the parasitic infection especially Haemonchus contortus (Trichostrongylid), impact the health and production of goats globally. The present study intended to evaluate resilient and resistance to Haemonchus contortus in indigenous goat breeds (Teddy and Beetal) of Punjab, Pakistan. Out of 60, 30 goats of each breed were divided into 6 groups and each group contain five goats. Two group of each breed received challenged infection with 12000 and 18000 L3 (third stage) larvae of Haemonchus contortus under two infection protocol that is early and trickle and remaining two group of each breed was kept as control. Resilient and resistance of each breed was then measured on the basis of their phenotypic markers like: faecal egg counts, packed cell volume, FAMACHA score system, body weight, total protein, albumin and worm count on 2nd, 4th, 6th, and 8th week of post infection. Variation in response of each goat breeds to Haemonchus contortus was observed. Teddy breed showed significant ($P < 0.05$)resistance as compared to Beetal. It is probably first attempt to report an evaluation of goat breed response towards Haemonchus contortus in Pakistan. It was concluded that Teddy goats have a greater genetic tendency to resist against to the Haemonchus contortus infection and this breed could be kept and bred from the economic point of view. Evaluation of genetic markers are like: gene, protein expression, Immunoglobulin, Histamines and interleukins determination are recommended for future studies which can be helpful to be fined resistant breed of goats.

Keywords : goat, beetal, teddy, haemonchus contortus, resistance, resilience, phenotypic markers
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