

ALLELE SPECIFIC PCR FOR DETECTION OF BENZIMIDAZOLE RESISTANCE IN *HAEMONCHUS CONTORTUS*

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A study was undertaken for assessment of benzimidazole resistance in *H. contortus* in nine places covering seven agro climatic zones of Tamil Nadu State . Allele specific PCR (AS-PCR) was used to confirm the benzimidazole resistance. Allele Specific PCR performed with established three primer protocols revealed the presence of resistant allele only of a molecular size of 250 bp in all the places studied. A new two-primer protocol with a new set of primers designed for resistant and susceptible alleles including the mutation site was followed using new set of primers, viz; HcResF - 5' GGT AGA GAA CAC CGA TGA AAA CAT A 3' HcResR - 5' AAA CCG GGC ATG AAG AAG TG 3' HcSusF- 5' CGA GCC TGG AAC GAT GGA CT 3' HcSusR -5' GAG CTT CGT TGT CAA TAC AGA 3'. A band size of 300 bp for resistant and 550 bp for susceptible allele was amplified in AS-PCR indicating the presence of heterozygous population (rS) of larvae in the six places studied This method was easy and repetitive in nature. The presence of susceptible allele could be confirmed in six samples from places namely Namakkal, Trichy, Yercaud, Tenkasi and two organized farms.