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TLR6 gene polymorphism and its effect on economic traits in swine

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The present study was conducted to see the effect of TLR 6 polymorphism on different economic traits of swine. DNA was extracted from 50 pigs from pig unit, AICRP, RVC, BAU, Ranchi, Jharkhand. Primers, forward (GCAGCTGACGGTTTTGAGA) and reverse sequences (GGGATGGCACAAGATTGTCT) of amplified fragment size 553 were used to amplify the pig genomic DNA. Polymorphisms were seen at the locus by SSCP technique, performed on the same amplified product. Total 6 haplotypes (namely A, B, C, D, E and F) were obtained. Observations were recorded for litter size at birth (lszB), litter weight at birth (LwtB), litter size at weaning (LszW), Litter weight at weaning (LwtW), Body weight at Birth (BirthBdwt), Weight at 7 days (7daywt), body weight at 14 days (14daywt), body weight at 28 days (28daywt), body weight at 42 days (42daywt) and body weight at 56 days (56daywt) for the selected 50 pigs. Analysis using least square Harvey's model was done with SPAB software to find the effect of haplotypes on the factors enlisted above. Results showed that out of all the factors, obtained haplotypes had significant effect on body weight at birth. In all other cases the effect was non-significant. In case of BirthBdwt, hap. D had maximum value with mean 1.3649±00.1960 and hap. F had minimum value with mean 01.0275±00.1492 with significant difference (P< 0.01) to each other. The study on TLR 6 gene, association with these traits was crucial to find its effect on other traits establishing the fact that it plays very vital role in innate immunity and hence further studies on the same aspect can be very helpful in marker assisted selection for disease resistance and that could be exploited for breeding strategies in swine.

Biography

Nandani Kumari is currently in 6th semester of PhD. She has been a good student with merit scholarship holder throughout BVSc. Her work during MVSc was also on molecular genetics. She has cleared CSIR as well as ICAR NET. She cleared ARS Prelims as well as Mains-2013. A distinction holder throughout her studies till date, she has a penchant for research and teaching. She feels that it's a beginning and she has a long way to go.

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