

2nd International Conference on **Animal & Dairy Sciences**

September 15-17, 2014 Hyderabad International Convention Centre, India

Detection of antisperm antibodies in serum of repeat breeding cows

S K Srivastava, S Mehrotra, Med Ram Verma and H Kumar
Indian Veterinary Research Institute, India

Investigation was carried out to ascertain the influence of antisperm antibodies in causing repeat breeding in cattle. Antibodies were detected by tube plate agglutination test in the serum of 9 repeat breeding crossbred cows and 14 heifers which served as control. Serum of 16 normal as well as 16 pregnant cows was also subjected for detection of antibodies. The animals were screened for specific (IBR and brucella) as well as nonspecific (uterine) infection before detection of antibodies to exclude the other causes of repeat breeding. The antibodies level was ascertained in 1:1, 1:5 and 1:10 serum dilutions. Frozen semen of crossbred bulls having 5 million spermatozoa and 50 percent progressive motility was used during investigation. Semen was mixed with diluted serum and clumping of spermatozoa was observed under phase contrast microscope after incubation at 37°C for 45 minutes. Number of clumped spermatozoa was 8.71 ± 1.42 ; 18.82 ± 1.33 ; 26.33 ± 1.77 and 14.06 ± 1.33 in 1:1 diluted serum in heifer, normal breeding, repeat breeding and pregnant cows respectively. It was 4.36 ± 0.82 ; 10.37 ± 0.77 ; 16.44 ± 1.03 and 8.06 ± 0.77 in 1:5 serum dilution whereas 2.78 ± 0.51 ; 8.15 ± 0.47 ; $10.33 \pm$ and 5.06 ± 0.47 in 1:10 dilution among above groups respectively. There was significant difference ($p < 0.01$) in the number of agglutinated spermatozoa of repeat breeding cows as compared to heifer, normal breeding and pregnant cows in all the three dilutions. Percent agglutinated spermatozoa were also calculated and value was 10.74; 21.28; 31.46 and 15.20 percent in 1:1 dilution. The percent agglutination was 6.50; 14.70; 19.31 and 9.38 in 1:5 dilutions as well as 4.06; 10.66; 12.56 and 6.33 in 1:10 dilutions in above groups respectively. Percent agglutinated spermatozoa in repeat breeding cows was also significantly different ($p < 0.01$) as compared to heifers and pregnant cows in all the dilutions. Thus it is concluded from the study that presence of antisperm antibodies in serum may be a reason of repeat breeding condition in crossbred cattle.

skivri6@gmail.com