# Seroprevalence rate of Bluetongue virus in sheep and goat populations of Fars province

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**Abstract**

World animal health organization (OIE) has introduced Bluetongue as an important infectious disease for its healthy and economic matters. The most of sheep and goat of Iran have risen in Fars province and this study was done to determine the seroprevalence of Bluetongue virus infection and related risk factors in this province. Blood samples were collected from 1782 sheep and 1569 goat in two regions with different annual precipitation (up or down 300 mm) from both male and females. Serum was detected from samples and evaluated for antibodies against Bluetongue virus. The results showed 2138 (63.8%) of samples had BTV antibodies. Seroprevalence was significantly ($p<0.001$) different between sheep (70.9%) and goat (55.7%). Associations between precipitation rate, age and sex and BTV infection were statistically significant ($p<0.001$). Breed and abortion history did not affect BTV infection significantly. Logistic regression showed higher odds ratio for animals with 6 months to 2 years old age (odds ratio=4.78). The females had a higher chance for contamination (odds ratio=1.78). Finally it can be concluded that bluetongue seroprevalence was high in sheep and goat in Fars province, then prevention and control programs establishment and research on distribution pattern of *Culicoides* vectors, virus isolation and genome sequencing of the isolated viruses are suggested.

**Key words**: Serology, Sheep, Goat, Bluetongue

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