# Biosurveillance study of Schmallenberg disease in Azerbaijan in 2012-2017

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## Objective

Schmallenberg virus (SBV) is an orthobunyavirus that primarily infects domestic and wild ruminants and causes symptoms such as transient fever, diarrhea, reduced milk production, congenital malformations and abortion. The first virus was identified in 2011 at the onset of a major outbreak in Europe (Germany, Hungary, and France).

## Introduction

In 2012 - 2017 in Azerbaijan there was an unexpected increase of abortions in cattle and sheep that was unrelated to brucellosis or chlamydia infection. The first confirmed case of Schmallenberg disease was received from Beylagan district of Azerbaijan in October 2012. The import of cattle from Europe to Azerbaijan has commenced in 2012. Therefore, the surveillance study was launched to determine spread of infection among cattle and sheep and to monitor the situation in the country.

## Methods

State Veterinary Control Service notified 42 Regional Veterinary Offices of Azerbaijan to commence the monitoring of Schmallenberg disease. Blood samples were collected from sheep, and cattle and biopsies of heads or necks from aborted fetuses were sampled too.. The collected samples were tested in the Republican Veterinary Laboratory. ELISA was used to investigate the presence of specific antibodies against Schmallenberg virus in the blood samples using IDEXX Schmallenberg Ab Test Kit. The commercially available real-time PCR kits (VetMAX™ Schmallenberg Virus Kit) were applied to test the biopsy samples. Both tests were recommended by the World Organization for Animal Health.

## Results

Total, 40,257 blood samples were collected from suspicious cattle and sheep. 671 biopsies samples were taken from fetuses. 4,281 cattle and 999 sheep with antibodies against SBVwere detected. The PCR results showed that the 77 biopsies samples were positive for SBV. The highest numbers of seropositive animals were found in Ganja, Aghdash, Barda, and Baku.

## Conclusions

This biosurveillance study determined SBV in the samples of cattle and sheep in Azerbaijan, therefore, it is important to carry out annual seromonitoring and start the vaccination program. It is essential to check the passport of imported cattle, which has the disease history and seroprevalence of SBV.

## References

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