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The comparison of somatic cell count and infection with *Streptococcus uberis* in dairy farms tank milk samples in Isfahan province

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Abstract

Streptococcus uberis is a Gram-positive bacterium and the major cause of mastitis in dairy cattle. This bacterium is one of the most important causes of economic losses in dairy herds with no ordinary monitoring program for mastitis. In order to evaluate the presence of this agent in the bulk tank milk of dairy cattle farms in Isfahan province and to find out its relationship with the total bacterial and somatic cells count, 100 tank milk samples were collected. The total bacterial and somatic cells were detected in the samples and the level of infection to *S. uberis* was evaluated by conventional culture and RT-PCR methods. The results of RT-PCR and culture showed infectivity of 20 and 16 samples to *S. uberis*, respectively. All culture positive samples were also positive in RT-PCR, but 6 samples were only positive in RT-PCR, indicating that RT-PCR is more sensitive than culture. Statistical analysis showed that there is a significant relationship between the infectivity to *S. uberis* and the total somatic cells, but the presence of this bacterium had no significant effect on the total number of bacteria in milk samples. It can be concluded that *S. uberis* is usually present in dairy farms of Isfahan province and it is necessary to pay more attention to the methods of monitoring and controlling the mastitis cows.

Key words: *Streptococcus uberis*, Mastitis, Real-Time PCR, Bacterial culture, Cattle

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