Fascioliasis (liver fluke disease) in Styrian dairy farms – prevalence and success of control measures

Introduction
Fasciola hepatica infestations are widespread in Austrian cattle and sheep herds and occur predominantly in humid and rainy regions. Animals suffering from fascioliasis (liver fluke disease) may develop chronic diarrhoea and show an increased incidence of metabolic disorders. Financial losses for dairy farms are mainly caused by milk quality problems and by a reduced milk production up to 10 - 15%. The economic damage to fattening farms mainly result from a reduced growth performance (up to 10%) as well as from an app. 4 - 6 weeks prolonged fattening period.

People can develop a fascioliasis after eating unwashed plants or windfalls, sporadically also by consuming uncooked infested livers of cattle and sheep. Due to the compliance with hygienic measures and the post-mortem inspection of all cattle at slaughter, the incidence of this disease in humans in Austria is very low. Only one or two human cases per year have been registered during the last 15 years.

In order to get an overview of the prevalence of liver fluke disease in Styrian dairy farms and to offer the farmers a basis for a required improvement of grazing management or a specific veterinary treatment, the Department of Veterinary Administration of the Styrian Government together with the Styrian Animal Health Service (AHS) implemented a monitoring program based on bulk milk serology.

Material and Methods
- bulk milk samples Jan. 2014
  - AHS-farms: 3,514
  - non-AHS-farms: 1,394
  - total number of farms: 4,912
- bulk milk samples Jan. 2015
  - AHS-farms: 3,437
  - non-AHS-farms: 1,269
  - total number of farms: 4,706
- methods: Svanova® Fasciola hepatica AK-Elisa

Results and Conclusions
According to the survey in January 2014 15.5% of the dairy farms showed a positive and 29.5% a low positive result. Comparing the test results from different districts, the highest number of positive results could be detected in the districts of Murau (38.5% and 42.2% respectively) and Liezen (26.7% and 46.5%). So as to determine, if appropriate treatment measures by contracted veterinarians in member farms of the AHS provided an improvement, the study was repeated in January 2015. In the total of 4,706 tested farms there was a reduction in the proportion of positive evidence by 2.9%, and of the low positive evidence by 4.6%. Comparing the results broken down by AHS membership, a significant reduction of 4.0% could be found in the 3,437 AHS-farms both in positive and low positive tank milk samples. In non-AHS-farms however no significant differences between the study passages were detected. The results show that the prevalence of liver fluke disease in cattle herds can be lowered by high quality veterinary advice and targeted control measures in the context of the Animal Health Service. This also helps to reduce the risk of human fascioliasis.