

Research project IZS VE 10/10

Assessment of a dose-response relationship between the antimicrobial resistant profile in commensal bacteria and the use of antimicrobials in dairy farms

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Antimicrobials are used in veterinary medicine for the treatment and prophylaxis of infectious diseases. The use of antibiotics, both in human and veterinary medicine has resulted in a spectacular improvement of the sanitary condition. In particular the use of antibiotics nowadays is considered essential in the management systems of intensive farming. However it is universally recognized that the intensive use of antibiotics in farm producing animals has resulted in the increased prevalence of antibiotic resistance both in commensal and pathogenic bacteria.

Aim of this study is to explore the use of antibiotics on dairy cattle farms located in the northern part of Italy in order to obtain information on the antimicrobial drugs usage according to the sanitary status of the animals and other relevant aspects; moreover antimicrobial resistance profiles in commensal bacteria isolated at farm level will be evaluated with the aim of find out a correlation between the use of antimicrobials and the antibiotic resistance profile.

It will be eventually possible to identify a tool that could allow the identification of farms that use antibiotics in a not prudent or proper way.