

# Use of complementary medicine in animal production systems – Baseline survey with focus on Swiss dairy farms

**GLAUS, Melanie.** University of Applied Sciences, School of Agriculture, Forest and Food Sciences

Antibiotic resistance is a growing problem due to excessive prophylactic and metaphylactic use in animal production systems. It has become a public health problem of global concern in human and animal health. Since the increased prevalence of intensive livestock farming, animal illness has increased between 24% and 69%. Novel options for treatment are needed to face the multi-antimicrobial resistance in pathogens. Notably, the use of complementary medicine in animal production systems in Switzerland has significantly grown over the past years. With this in mind, the main focus was to get an overview of alternative medicine used in milk production systems in Switzerland. The aim of this study was to carry out a baseline survey of health prophylaxis and management practices with focus on complementary medicine on Swiss dairy farms.

Swiss dairy farms, which regularly marketed milk during 2015 and 2016 with a minimum of 10 cows, were considered. Furthermore, seasonal alpine pasture holdings were excluded. The final target population was taking 17'864 dairy farms into account. A stratified random sample of 7'000 dairy farms was drawn from the available sampling frame using computer-generated random numbers. Due to privacy policy in Switzerland the survey was sent by Identitas AG. Analysis was performed using the statistical program R (3.5.1.). Categorical variables were described using counts and proportions while quantitative variables were presented as median and range. In total 1'185 farms were taken into account, of which 887 were German, 283 French and 15 Italian.

Out of the 70.46% farms that used complementary medicine treatments, 18.85% chose it as their primary option, before mainstream or school medicine. In contrast, 17.22% of farms never used complementary medicine either, because they were not convinced (36.42%), the therapies / treatments were unknown to them (21.09%) or veterinarians did not use these treatments (17.25%). Homeopathy (52.15%), home-made remedies (31.98%) and phytotherapy (22.45%) were by far the three most prevalent treatments (all farms). Homeopathic treatments were mainly used for mastitis (66.99%), injuries (64.08%) and post-partum problems (60.19%). Phytotherapy was mainly used for diarrhoea (55%), mastitis (52%) and injuries (38%). Other additional treatments (school medicine) of diseases cannot be excluded. For example, 4.6% of farmers used homeopathy only in combination with antibiotics to dry-off cows, or if the homeopathic mastitis therapy was not successful. 48.45% still relied on antibiotic treatments (veterinarian) or / and 31.22% on udder ointment.

The results from this survey have revealed, that even though the effectiveness of homeopathy is controversial, it is the most commonly used complementary medicine treatment in Switzerland. The main reasons to use complementary and alternative medicine were to avoid the use of antibiotics and to reduce costs. This shows, that farmers are well aware of the occurrence of antibiotic resistance and the growing concern of public health issues.

A reduction of antibiotic resistant bacterial strains can only be achieved if society, the industry, farmers, governments, veterinarians, health practitioners and universities work together to implement preventive measures to ensure animal health and wellbeing and thus ensuring the health and wellbeing of mankind.

**Key words:** Complementary and alternative medicine, homeopathy, phytotherapy, home-made remedies, dairy cows