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Book of Abstracts

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lameness. The samples were collected from 59 Italian farms from March 2015 to February 2017. For the detection of *D. nodosus* and *F. necrophorum*, two PCRs, one for *pnpA* and the other for *IktA* genes, respectively, were carried out. The *pnpA* gene was detected in 47.1% out of the 285 swabs ($n = 137$), 45.6% were positive for the *IktA* gene ($n = 130$), while 24.2% were positive for both *pnpA* and *IktA* gene ($n = 69$). Among the 59 farms investigated, 57.6% were positive for *D. nodosus* ($n = 34$), 74.6% for *F. necrophorum* ($n = 44$) and the co-infection was found in 52.5% of the flocks ($n = 31$). In Italy, few data are available about the epidemiology of ovine foot-rot. The study shows a high proportion of samples and farms positive for *D. nodosus* and *F. necrophorum*. These preliminary data could be pivotal to further investigate the prevalence and impact of foot-rot in sheep flocks in Italy. A proper management of the disease has not yet achieved in many farms, and in some cases, it seems obsolete. On the other hand, the control and eradication of foot-rot can be difficult and very expensive, once the infection is established in one flock. In this scenario, a prompt diagnosis is the first step towards improving an appropriate management, prophylactic and treatment protocol of foot-rot in sheep farms.

O163

Endoparasites in sheep and goats: prevalence and control strategies of mountain farms in Northern Italy?

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One of the major constraints for sheep and goat production are infections with endoparasites, in particular gastrointestinal nematodes (GIN), which are commonly controlled using medical treatments. However, its intensive use increases the risk for the development of resistant parasite populations. For mountain livestock farming, where small ruminants of various breeds are mainly kept in small herds, it remains questionable how effectively parasites are controlled. Therefore, the aim of the study was to: 1) assess the prevalence of endoparasitic infections of goats and sheep in South Tyrol and 2) evaluate the use of routinely conducted control measures. A total of 94 sheep and goat farms were surveyed with a questionnaire to collect data on farm management and control strategies against parasites. Additionally, more than 3400 individual faeces samples were collected in three consecutive seasons (autumn 2015, spring and autumn 2016) and faecal egg counts (FEC) were performed using a modified McMaster technique. Based on log-transformed FEC-values, a mixed model was used with the fixed effects of species, breed within species, age group, season and resulting two-way

interactions. Results are presented as LS Means of untransformed FEC values. According to the survey, 6% of the farmers do not treat their animals with anthelmintics, while 44% do it once and 50% twice per year. Commonly the whole herd is treated (75% of the farms), while 78% of the farms never determines the infection status using faeces samples. The most common active substances used were so far ivermectin (54%), albendazole (24%) and eprinomectin (8%). Overall, 16, 23 and 24% of the samples were FEC-negative in autumn 2015, spring and autumn 2016, respectively. Goats showed an average number of eggs per gram of faeces of 542 and sheep of 424 ($p = .05$). Lambs/kids as well as adult males showed higher infections ($p = .05$) compared with adult females. In both species, differences between the breeds were found ($p = .05$). The prevalence of tapeworm-positive animals was higher in autumn (9% in 2015 vs 13% in 2016) than in spring (2%). In conclusion, high infections warrant the intensive use of anthelmintics. Nevertheless, through a more sustainable use of medical treatments using faeces sampling to monitor the actual infection status of the animals the risk of the development of resistant parasite populations should be reduced.

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Growth and morphometry of farmed fallow deer (*Dama dama* L., 1758) from birth to six months of age

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The dynamics of animal growth have been widely studied in domestic species, primarily in relation to their productive potential, but have not been equally investigated in wild species, especially regarding the early weeks of life. The aim of this work was to examine some aspects of the morphometric growth in farmed Fallow deer (*Dama dama*) fawns, from birth to the age of six months. Three male and three female fawns were artificially fed ad libitum with acidified dried milk for lambs and, since the 8th week of life, also with weaning pellets and alfalfa hay. Body weight and several linear measurements were recorded weekly. The ratio trunk length/chest circumference (TC) was calculated. All data were analysed separately for the sexes using Linear Regression, with age as continuous variable. After logarithmic transformation of the data, the growth of measurements in relation to body weight and height at withers was investigated using the allometric function.

Male fawns displayed a more rapid increase of live weight: males and female attained 36 kg and 32 kg at six months of

age respectively. Stature increased by 60%, from on average 43 cm at birth to nearly 70 cm at six months of life.

Similar growth patterns for both sexes were observed in height at withers and at rump, chest length and circumference, rump length, shoulder and hip width. Rump resulted higher than withers, while shoulders and hip width had a comparable accretion; all these measures doubled their dimension in the six-months period. Differences between sexes resulted for head length, greater in males, and chest depth, greater in females; trunk length, similar among sexes at the age of six months, showed a different trend, linear in females and quadratic in males. TC ratio increased until the 3rd month of age and then reduced, expressing the

preliminary elongation of the trunk followed by the development of the transverse diameters.

The allometric analysis confirmed the precocity of the head accretion and of the body heights respect to trunk elongation and its development in transverse diameters. In females emerged a precocity in the rachis elongation and a belated development of transverse diameters, especially in pelvic bones.

In this early phase of life, the most rapid growth processes involve the elongation and the volumetric development of the trunk, similarly to physiologically related domestic species (eg. lambs).