Book of Abstracts of the 69th Annual Meeting of the European Federation of Animal Science
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Welcome

On behalf of the EAAP EAAP – 69th Annual Meeting held in the Val d’Orcia, Siena, Italy, June 23-26, 2018.

For decades, the animal welfare debate has shaped the European Union’s animal welfare policy and has been the subject of intense scientific discussion. The economic, social, and political challenges of the 21st century, however, have raised the need for a new, integrated view of the animal welfare concept. The EAAP’s 69th Annual Meeting on “Animal Welfare and Human Well-being,” June 23-26, 2018 in Val d’Orcia, Siena, Italy, will be the first meeting to bring together the European animal welfare science community to address the challenge of integrating animal welfare and human well-being through animal welfare science.

The main topics will be:
- Animal welfare in the human- animal relationship
- Animal welfare and human health
- Animal welfare and human productivity
- The role of animal welfare in animal science

We are delegating a new era of animal welfare science.

Assistant Prof. Zdravko Durak
Chairman of the Scientific Committee

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Session 15

Sainfoin pellets for preventive parasite control and improved protein efficiency in dairy goats
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The legume sainfoin (Onobrychis vicifolia) containing condensed tannins is often associated with beneficial effects when used in animal husbandry. We tested two potentially beneficial effects by feeding 700 g sainfoin or 700 g alfalfa pellets to 10 dairy goats each. Target parameters were nematode egg excretion per gram faeces (EPG) and daily milk protein and urea yields. Our hypothesis was that the diet with sainfoin pellets would reduce the EPG of the goats in order to reduce pasture infectivity and subsequently the severity of the infection level of the goats. Beyond that, we hypothesised that the condensed tannins will improve ruminal protein-efficiency indicated by lower urea and higher protein yields with the goat milk. During a trial period of 7 weeks, EPG, milk protein and urea yield per animal and day was measured regularly. Except for milking and pellet feeding, all animals were kept in one group and had access to pasture for approx. 5 hours daily. Beyond the experimental feeds and pasture, all goats had ad libitum access to non-tanniferous hay when stabled. Intake from pasture or hay was not determined. Concentration of condensed tannins in sainfoin and alfalfa was 4 and 0.3%, respectively. Crude protein content corrected for 100% dry matter was 18.2% for sainfoin and 20.1% for alfalfa. Even though arithmetic average of EPG in the sainfoin group was 18% lower compared to the control group, a repeated measurement analysis could not reveal significant differences (P=0.148). Likewise, total daily milk protein (P=0.700) and total daily urea (P=0.410) per animal did not differ between groups. In many cases, other studies making use of ad libitum sainfoin diets, resulted in reduced EPG. As a dose dependent effect for condensed tannins is assumed, and the 700 g sainfoin roughly corresponds to one third of the total daily dry matter intake, the total amount of condensed tannins in our trial might have been too low to provoke an effect. There were no indications of a sainfoin-effect on protein efficiency at all.

Session 15

More methionine in sows and piglets diets for better growth and immune response of weaned piglets
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The objective of this study was to determine the effects of an increased consumption of methionine either as DL-Met (DLM) or HMTBA (OH-Met) by sows and piglets on the ability of piglets to cope with an inflammatory challenge during the post-weaning period. Sows received during the last month of gestation and the lactating period three treatments: a control diet at the requirement in TSAA and two treatments supplemented with either DLM or OH-Met at 25% above the requirement. During the lactating period, protein and lactose contents in the milk were significantly increased with OH-Met in comparison to DLM and the Control. At postnatal d14, piglets fed OH-Met or DLM had higher body weights than control-fed piglets. Piglets were weaned at 21 and received three diets consistently with sows’ diets: a control diet at the requirement in TSAA (CON-P) and two treatments DLM (DLM-P) or OH-Met (OH-Met-P) supplemented 25% above TSAA requirement. After 2 weeks of feeding, 20 male piglets from each treatment were submitted to a Z×3 factorial design that included the dietary treatments and immunological challenge (saline and LPS) at d35. Growth performance of piglets were measured at d35, d49 and d63 respectively. At d35, piglets significantly heavier in OH-Met-P group (8.47±0.38 kg) than in CON-P group (7.66±0.24 kg), DLM-P group (8.25±0.27 kg) was intermediate. The LPS significantly affected piglet performance in all groups. However, OH-Met-P and DLM-P fed piglets showed the highest body weights following the LPS challenge at d49 and d63, compared to the CON-P. Moreover, body weight gain and feed to gain ratio were improved in the OH-Met-P treatment during and after LPS stress. OH-Met is known to be better trans-sulfurated than DLM, thus leading to more glutathione in comparison to DLM. This improved antioxidant status might explain the better growth performance observed with OH-Met under LPS stress.