ASPA 23rd CONGRESS
Sorrento, June 11–14, 2019

Book of Abstracts

Guest Editors: Fulvia Bovera (Coordinator), Marzia Albenzio, Mariangela Caroprese, Rosaria Marino, Gianluca Neglia, Giovanni Piccolo, Angela Salzano.
Acknowledgements

ANIMAL PHYSIOLOGY, HEALTH AND WELFARE – ANIMAL WELFARE I

O119
Time-based feed restriction and group size in growing rabbits: effects on health status and growth performance

Marco Birolo1, Angela Trocino2, Andrea Zuffellato2, Gerolamo Xiccato2

1Dipartimento di Agronomia Animali Alimenti Risorse Naturali e Ambiente, University of Padova, Legnaro, Italy
2Dipartimento di Biomedicina Comparata e Alimentazione, University of Padova, Legnaro, Italy
3A.I.A. Agricola Italiana Alimentare S.p.A., Verona, Italy
Contact: marco.birolo@unipd.it

The effects of the feeding programme (R, time-based feed restriction vs. L, ad libitum) and group size (from 6 to 32 rabbits/group) were evaluated on 368 crossbred rabbits from 31 to 73 days of age. In R group, the access time to feeders was reduced during the 1st week from 14 to 8 h/d, maintained at 8 h/d in the 2nd week, and then increased by 1 h/d during the 3rd and 4th week up to 24 h/d. Rabbits were housed in cages or pens with different dimensions and group sizes, i.e. conventional cages (8 rabbits/cage), small pens (8 pens of 0.50 m2, 8 rabbits/pen), medium pens (1.00 m2, 16 rabbits/pen), and large pens (4 pens of 2.00 m2, 32 rabbits/pen). Individual data of live weight (LW) and daily weight gain (DWG) were analysed by PROC MIXED (SAS), with the feeding programme, the housing system and their interaction as main effects and with the cage or pen as a random effect. Cage and pen data for feed intake (FI) and feed conversion (FC) were analysed by PROC GLM (SAS), with the feeding programme, the housing system, and their interaction as main effects. Mortality and morbidity rates, and health risk index (HRi) (mortality + morbidity) were analysed by the PROC GENMODE (SAS). L rabbits evidenced epizootic enteropathy (ERE) during the first two weeks on trial, whereas R rabbits fell ill only in the following two weeks during refeeding. In the whole trial, however, R rabbits reached a higher HRi as compared to L rabbits (16.3% vs. 11.9%; p<.05). During restriction, R rabbits exhibited lower FI (94 vs. 123 g/d), DWG (47.4 vs. 56.2 g/d), and FC (3.04 vs. 3.12), as well as lower DWG (46.5 vs. 47.7 g/d) and final LW (2695 vs. 2750 g) than L rabbits (.001<p<.05). Mortality rate tended to increase with increasing group size (3.4% in cages and pens with 6 and 8 rabbits vs. 10.9% in pens with 16 and 32 rabbits; p=.06) without effects on growth performance. In conclusion, time-based feed restriction significantly improved feed efficiency but had some negative effects on health status and reduced final live weight of group-housed growing rabbits.

O120
Veal calves’ abomasal lesions and rumen mucosa alterations investigated post-mortem: is there any way to differentiate ‘good’ from ‘bad’ farms?

Marta Brscic, Luisa Magrin, Giulio Cozzi

Dipartimento di Medicina Animale, Produzioni e Salute, University of Padova, Legnaro, Italy
Contact: marta.brscic@unipd.it

Several years of research on abomasal lesions and rumen mucosa alterations and on the predisposing and risk factors in intensively reared veal calves have not overcome the problem. Abomasal lesions, in particular, are the most frequent post-mortem findings (70–93% of animals). Since this problem is one of the major welfare concerns, this study aimed at assessing the prevalence of abomasal lesions and rumen mucosa alterations at a commercial slaughterhouse as strategic observation point and at differentiating ‘good’ from ‘bad’ farms.

The post-mortem assessments were carried out by a veterinarian who evaluated abomasum and rumens after their emptying, without interfering with the regular procedures and schedule of the slaughterhouse. Abomasum and rumens of the first 15–16 animals per batch were evaluated. The occurrence of lesions on torus pylorus and in the pyloric area of the abomasum was recorded as a binary. Lesions in the pyloric area were also classified according to 3 size classes: 1 = lesions with diameter <0.5 cm², 2 = 0.5–1 cm², and 3 = >1 cm². The presence of plaques (multiple patches with coalescing papillae covered by a sticky mass and hair), hyperkeratosi (hardened rumen papillae), and underdeveloped rumen mucosa (almost no papillae in atrium and ventral and dorsal rumen) were recorded as binary. Herd-level prevalence were calculated and submitted to descriptive statistics.

Results of this study regard a total of 653 abomasum and 653 rumens (15.9 ± 3.1 organs/batch (mean ± SD)) from 41 batches slaughtered in 13 days. The slaughter batch size was 60.6 ± 21.5 and carcass weight 162.7 kg ±23.4. Lesions on torus pylorus and in the pyloric area were present in 84.7±15.1 and in 92.5±10.0 of abomasum observed, respectively. Over 77% of abomasum presented at least a large lesion (size class 3). Plaques,