

Dimitar Nakov, PhD., DVM
Assistant Professor
Faculty of Agricultural Science and Food - Skopje
University "Ss. Cyril and Methodius" in Skopje
Republic of Macedonia
nakovd@fzhn.ukim.edu.mk

REPORT SUMMARY: Short Term Scientific Mission GroupHouseNet 2016

RESEARCH TITLE: „ASSESSMENT OF BEHAVIOUR QUALITY PROTOCOL IN GROUP HOUSED PIGS RELATED TO PHYSICAL HEALTH (TAIL BITING)”

Under the influence of economics and increased yield per animal, pig welfare and behaviour were neglected. Pig farming became more intensive and controlled which resulted in rearing animals under confinement. Regarding the health problems of modern pig production systems, tail biting is probably the most serious behaviour problem in pigs having a major influence on pig's welfare, occurring commonly in a high incidence.

The main objective of this scientific mission under the GroupHouseNet was to become acquainted with Qualitative Behaviour Assessment (QBA) protocol and get opportunity for on-farm practical protocol assessment under supervision of trained assessor. Another objective was identifying of tail biting in group housing pigs as indicator of good health according the Welfare Quality protocol for pigs. Also, there was paid attention on damaging behaviour as result of tail biting in growing and finishing pigs.

The on farm assessment of QBA for growing pig's resulting in data used for QBA score calculation. This data represent the inter observer practical assessment of QBA protocol. In order to make proper interpretation of the final score, we should classify the indexes for positive and negative terms. The higher level of positive mood, as characterized by high score for QBA items, is indicator for better emotional state of animals. The inter-observer reliability was high and there was high positive statistical significant correlation between observer 1 and observer 2 during assessment of QBA in growing pigs. Possible disagreements in gained QBA data and reasons for disagreements were discussed. Revealing the literature data, the QBA data should be

analyzed using a principal component analysis (PCA). PCA reduces the number of original variables (descriptive terms) into a fewer dimensionality (principal components) explaining as much of the variability between farms as possible. Based on the video materials damaging behavior of pig's victims of tail biting was observed.

QBA could potentially function as an integrative welfare assessment tool, complementing existing tools that focus on specific aspects of behavior and welfare. Receiving this respective training for QBA assessment is crucial moment for my future research career. As result, the first report for emotional state of pigs in Macedonian pig breeding farms should be publishing in the near future. Further, the open call for fruitful collaboration was offered by Prof. Anna Valros and Dr. Camilla Munsterhjelm in the field of animal welfare and animal behaviour.

Further, the benefit from my STSM will have authorities and farmers in Macedonia who need experts that will help them for identification of animal-based welfare and damaging behaviour indicators for pigs.



Figure 1. Assessment of QBA protocol on-farm

Sincere regards,

Dimitar Nakov,

Skopje, 5th of January 2017