

# **SHORT TERM SCIENTIFIC MISSION (STSM) SCIENTIFIC REPORT**

**Action number: CA15224**

**STSM title: Behavioural observation in laying hens using method of continuous recording system - BORIS**

**STSM start and end date: 25/11/2019 to 29/11/2019**

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Host: Prof. Dr. Manja Zupan Šemrov, Department of Animal Science, University of Ljubljana, Slovenia.

## **PURPOSE OF THE STSM:**

The aim of the STSM is to develop knowledge in the field of diagnostics behavioural problems in laying hens, problems with keel bone damage, learn how to use BORIS online system for behavioural observation in laying hens, coding off videos and recognize symptoms of keel bone damage.

## **DESCRIPTION OF WORK CARRIED OUT DURING THE STSMS:**

This STSM started at campus Rodica, on Department of Animal Science, University of Ljubljana, Slovenia. I worked under the supervision of Prof. Dr. Manja Zupan Šemrov. The first day I visited campus Rodica and Dr. Manja introduced me with investigations on welfare project. She showed me the experimental poultry farm at the campus and introduced me with their everyday activities on the project. I saw every experimental unit on the farm and cooperate with Dr. Manja in diagnostic behavioural problems in laying hens. We observed hens in pens into the farm and pens in the outside. After introduction, I analyzed videos about behaviour in hens on the experimental farm using Boris program with Dr. Manja. For this behavioural studies each pen was continuously recorded using AXIS P14-E Network Camera Series to collect data for 2 hours in the morning (6:00 – 8:00) and evening (16:00 – 18:00) repeated 2 times a week for 3 weeks. For the purpose of this study hens were tested until first egg was layed in the flock

(between 15 and 18 weeks of age). Boris program have used for behaviour analysis, which was performed according to specified ethogram. We analyzed only comfort behavior. It manifests as a wing flapping, dustbathing, preening, stretching, drinking, flying up and flying down.

### **DESCRIPTION OF THE MAIN RESULTS OBTAINED**

We got preliminary behaviour results after analyzed videos with Boris system. We recorded hens in pen into the farm. Hens were marked with non-toxic coloured spray (green and blue markings) for individual recognition of each animal on the recordings. The preliminary behaviour results suggest that there was good comfort behavior. A lot of hens showed preening as a one of the most frequent indicator of comfort behaviour. Hens used her beak to clean wing and body feathers. Related behaviours include head scratching, wing stretching, feather ruffling and feather erection. The next frequent indicator was wing flapping. Hens repeated extension and movement of wings while standing upright in a stationary position. Dustbathing also was frequent indicator. The manipulation of hens with the wings, feet, tail, and break while lying in the litter with some or all feathers fluffed. Some of hens showed stretching. It spreaded a wing on one side of its body straight outwards and at the same time extends the leg on the same side. A lot of hens showed flying up and flying down. The first, hens moved directly from the ground to the perch by flapping its wings repetitively. After that, it moved from perch to ground while flapping continuously with their wings.

These results gave me a new knowledge about the behaviour in laying hens, especially about comfort behaviour. It will be very important for my daily activities when I go to the field on poultry farms.

These are just the preliminary results and we are still under process of decoding the other behaviour observations using BORIS software.

### **FUTURE COLLABORATIONS**

In the future, the planned exchange of knowledge, experiences and possible visits from Ljubljana to Novi Sad. This STSM was a great opportunity for me to expand professional networks and we are planning to pursue continued collaboration between our two institutions.

## ACKNOWLEDGEMENTS

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## PICTURES FROM THE EXPERIMENTAL FARM



