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## **Substrate choice by turkeys differing in 3-point gait-scoring system in a mobility test**

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Assessment of pain in poultry flocks' production is one of the biggest welfare concerns. The aim of this study was to evaluate the walking ability and preferences for three types of substrates by turkeys with different degrees of lameness, in order to verify if birds with higher gait score experience pain and how their choices differ from healthy birds. An experimental test was conducted with 16 male-turkeys 116-day-old (B.U.T.6). Nine birds (56.25%) were considered normal (score 0) whereas 7 (43.75%) were evaluated as having mild to severe lameness (scores 1 or 2) according to 3-point gait-score assessment. A familiar (A: wet litter) and unfamiliar (B: plastic slat) substrate were distributed into three horizontal lines (L1, L2, and L3; each one measuring 150cm length x 60cm width) separated by three concrete empty areas of the same measures. L1 was divided into 75cm of A substrate and the same dimensions of B; L2 had 100cm of A and 50cm of B, while L3 had 50cm of A and 100cm of B. The turkeys' motivation to pass through the lines was triggered by the presence of conspecifics located at the end of the experimental area. Data were analyzed using ANOVA. There were no significant differences between normal and lame turkeys to the total time spent on three lines (215.00±61.59s), (233.57±74.81s); the total time spent on the empty area (385.22±83.70s), (557.71±124.04s) and the total time to cross the testing areas (581.3±91.72s), (791.2±154.44s), respectively. Substrate A was chosen by 71.4% of lame birds even in L1 as L2, while 55.6% of normal turkeys preferred substrate B in L1 and 77.8% chose substrate A in L2. All birds walked on substrate B in L3. According to these preliminary results, it seems that lame birds have no difference in substrate choice, or on the time spent in each part of the experiment.

# Substrate choice by turkeys differing in 3-point gait-scoring system in a mobility test

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## Introduction

This is a preliminary study which aims to evaluate the walking ability and preferences for three types of substrates by turkeys with different degrees of lameness.

## Materials and Methods

• 16 male-turkeys 116-day-old (B.U.T. 6) were distributed into 2 groups according to 3-point gait-score assessment:

-Group 1: nine birds (56.25%) were considered normal (score 0);

-Group 2: seven birds (43.75%) were evaluated as having mild to severe lameness (scores 1 or 2).

• Experimental area was designed as shown in the fig. 1a.

• The turkeys' motivation to pass through the lines was triggered by the presence of conspecifics located at the end of the experimental area.

• Data, such as the latency to entering the testing area and time elapsed to cross each of the lines until the tested bird stepped outside L3 or maximum 20 minutes elapsed, were analyzed using ANOVA.

## Results

• Familiar substrate (A:wet litter) was chosen by 71.4% of lame birds even in L1 as L2 (fig. 1b), while 55.6% of normal turkeys preferred unfamiliar substrate (B:plastic slat) in L1 and 77.8% chose substrate A in L2. All birds walked on substrate B in L3.

• There were no significant differences between normal and lame turkeys to the total time spent on three lines; the total time spent on the empty area and the total time to cross the testing areas (Fig. 2).

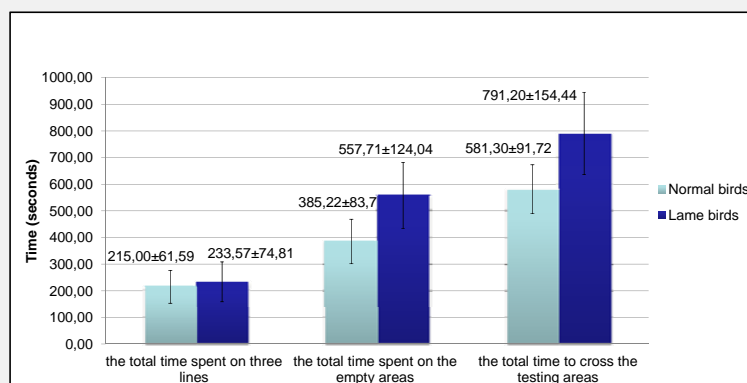


Figure 2. Means ± SE of the total time spent on three lines; the total time spent on the empty area and the total time to cross the testing areas between healthy and lame turkeys.

## Conclusion

According to these preliminary results:

1. it seems that lame birds have no difference in substrate choice, or on the time spent in each part of the experiment;
2. this lack of significance might infer that this test was unable to elucidate the consequence of painful states in turkeys with leg problems;
3. high individual variability among the turkeys was observed.

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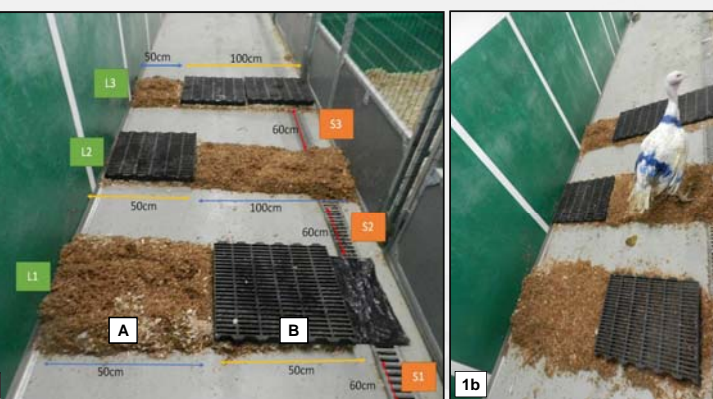


Figure 1. Experimental area. (1a) A familiar (A:wet litter) and unfamiliar (B:plastic slat) substrate were distributed into three horizontal lines (L1, L2, and L3; each one measuring 150 cm length x 60 cm width) separated by three concrete empty areas of the same measures (S1, S2 and S3). L1 was divided into 50 cm of A substrate and the same dimensions of B; L2 had 100 cm of A and 50 cm of B, while L3 had 50 cm of A and 100 cm of B. (1b) Lame turkey chose to pass on the wet substrate in L2.