awin
ANIMAL WELFARE INDICATORS

Animal Welfare Indicators
3rd Annual Conference
Prague 13-15th May 2014

i-WatchTurkey: A smartphone application for on-farm turkeys health and welfare assessment

Inma Estevez[1, 2], Joanna Marchewka[1], Tatiane T. Negrão Watanabe[3], Roberto Ruiz[1], Alberto Carrascal[4], Valentina Ferrante[3]

[1]Neiker-Tecnalia, Akaute Agrifood Campus, Animal Production, Vitoria-Gasteiz, Spain.

[2]IKERBASQUE, Basque Foundation for Science, Bilbao, Spain.

[3] Università degli Studi di Milano , Dept. of Veterinary Science and Public Health Via G. Celoria 10, Milan, Italy

[4]Daia, Intelligent Solutions S.L., GOIEKI, Goierri Agency for Development, Ordizia, Spain.

iestevez@neiker.net

Current advances in mobile technologies open new possibilities for a more precise management of animals in commercial systems. Due to the large number of birds, and the fast turnover of the production cycles in meat poultry, flock health and welfare assessment is particularly difficult. Animal caretakers and company veterinarians conduct daily checks to determine flock health status. However, outcomes of the assessment are generally non-quantitative and are based on broad perceptions. Within the AWIN FP7 EU project, we have developed a free smartphone app for turkey health and welfare assessment (I-watchturkey) that in simple steps allows a standardized data collection of critical health and welfare indicators, based on the transect methodology (Marchewcka et al., 2013). This app includes the possibility of recording the frequency of birds (per transect) with relevant welfare and health deficiencies, such as severe lameness, wounds, unwanted behaviors or serious health issues in the flocks, without catching or disturbing the birds. Incidence of the health and welfare issues detected are automatically standardized (to percentages) by the number of birds in the flock at the time of assessment and the number of transects conducted. Data collection for assessment can be conducted at the time of a regular health inspection. In addition, the system records automatically the farm geographical location, climatic condition at the time of inspection, and allows enter relevant information, such as birds strain, birds age, housing and management conditions, expanding significantly the applications of the app and data analysis. The app will generate a report immediately after finishing data collection. Continuous, easy access to reliable, historical and current information on the health and welfare status of birds in relation to management and environmental factors, collected in a simple manner, would be an important asset for decision-making process of the companies, helping improving birds´ health and welfare and can be a useful tool for external welfare assessors. This tool will allow farmers and veterinarians to screen the performance of their flocks over time, motivating them for self-evaluation and providing better welfare to their animals. The main asset of this innovative solution is its simplicity of data entry, the option to get the report immediately after assessment and it is free of charge.

Key words: turkeys, welfare assessment, smart phone, app, mobile application, animal-based indicators, transect walks