

New environmental and nutritional model at broiler chicken farms in order to reduce non-infectious lesions

Summary

In the broiler chicken industry the quality of the end product and animal welfare are two aspects that are closely related and increasingly demanded by both end consumers and the industry itself. Current legislation on the protection and welfare of broiler chickens establishes contact dermatitis (food pad lesions, hock burn and breast blisters) as one of the main criteria for the assessment of the incidence of lesions.

The quality of the litter, nutrition and digestive health of the chickens are the key aspects to prevent pododermatitis. In fact, any of the factors that can increase the humidity of the litter, such as its material and quality, the water supply system, the digestibility of the chicken feed and the presence of diarrhoea, may contribute to its appearance.

The majority of detected cases of pododermatitis lesions are caused by wet litter and excessive amounts of ammonia released from the nitrogenous faeces of the birds.

Accordingly, in order to reduce the incidence of pododermatitis at farms, a study is proposed to determine: (1) which materials are most suitable for the litter and how they should be handled, and (2) a nutritional diet to improve the health of the chickens.

A broiler chicken farm (AGROBAIONA), a major agribusiness company (CORPORACIÓ AGROALIMENTÀRIA DE GUISSONA) and the Institute of Agrifood Research and Technology (IRTA) have joined forces to work on this project.

Objectives

The main objective of the project is to reduce the incidence of pododermatitis and improve animal welfare at intensive broiler chicken farms by means of a new management model based on different environmental and nutritional strategies. It will take into account various litter materials and handling methods and assess more digestible diets.

Description of initiatives outlined in the project

Three actions will be undertaken to reduce the incidence of pododermatitis:

- 1) The use of different litter materials (or combinations of materials) with different particle sizes in order to achieve optimal absorption and dryness.
- 2) Determination of the best litter handling method (periodically turning it over, sanitisation, nitrogen reducers...).
- 3) Improvement of intestinal health with more digestible diets with different sources of protein or lower energy density.

Finally, the results of the project will be disseminated and transferred to the broiler chicken industry.

Expected results and practical recommendations

Expected results:

- Significant reduction in the number of broiler chickens affected by pododermatitis at intensive farms.
- Improvement of the welfare and health of broiler chickens.

Practical recommendations:

- A set of environmental strategies (composition and handling of the litter) and nutritional strategies (more digestible diets) applicable to intensive farms.

Task force leader

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Typology of entity:
Agricultural company

Task force coordinator

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Typology of entity:
Agricultural company

Other task force members (grant beneficiaries)

Entity: **CORPORACIÓN ALIMENTARIA GUISSONA S.A.**

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Typology of entity:
Farm

Other task force members

Entity: **IRTA**

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Typology of entity:

Subject area(s) of application

Animal husbandry and welfare

Geographical area(s) of application

Province(s)
Barcelona

Region(s)
Anoia

Dissemination of the project *(publications, conferences, multimedia...)*

All three members will carry out project communication and dissemination activities, such as:

- Participation as speakers at dissemination seminars (DARP (Ministry of Agriculture, Livestock, Fisheries and Food), intersectoral and other events).
- Preparation of information sheets.
- Publication of the results on social media.
- Publication of scientific and technical articles on the actions carried out within the project.

Project website

More information on the project

Project dates

Starting date (month-year): June 2018

Completion date (month-year):

Current status: *Underway*

Budget approved

Total budget: €207,831.60

DARP funding: €84,891.31

EU funding: €64,040.81

Own funding: €58,899.48


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Resolution ARP/1868/2017, of 20 July, calling for applications for grants for the year 2017.

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