

# STUDY ON APPLYING OF SOME ADDITIONAL MEASURES OF BIOSAFETY IN FARM CHICKENS FOR EGG CONSUMPTION

Doina Leonte<sup>1\*</sup>, C. Leonte<sup>1</sup>, Lenuța Fotea<sup>1</sup>, C.E. Nistor<sup>1</sup>

<sup>1</sup> University of Agricultural Sciences and Veterinary Medicine Iasi, Romania

## Abstract

*Quality and safety production in farm animals are guaranteed by the proper application of bio security measures. Ignoring them is usually followed by an increase in production costs due to expenses against possible infections and infestations. The current paper studies the possibility of improving general bio security measures in fowls egg consumption farms. Through sanitation tests was checked the impact of crossing vehicles through the disinfectant road. Staphylococcal test was conducted at a specialized laboratory. From the 12 sanitation samples two were inadequate, which indicates that at one wheel, the decontamination was not performed properly. Following the measure of running the car at lower speed and to repeat the passing of the automotive-bunker through the disinfectant road, the staphylococcal test was negative. This results are highlighted by the analysis bulletins presented in this paper.*

**Key words:** bio security, decontamination, prophylaxis

## INTRODUCTION

Bio safety represents a guarantee of quality and safety of production and, particularly, a means of providing sanitation of animal origin foodstuffs and public health protection. Ignoring the bio security measures is usually followed by an increase in production costs due to expenses against possible infections and infestations

The current paper argues the responsible application of some bio safety measure in a fowls farm.

To demonstrate that it can reduce mortality and diseases rate and increase efficiency by improving decontamination and application of preventive measures, were followed and analyzed the mortality losses graph, the analysis report for decontamination efficiency control, the analysis report for surveillance health of the flocks, method of vehicles and personnel decontamination at the farm entrance, using work equipment by workers.

## MATERIAL AND METHODS

For this study were used and applied various materials. For following the efficiency of decontamination for the car wheels were used two decontamination solutions:

✓ -ALDEZIN solution for microbial decontamination.

✓ VIROCID disinfectant.

Additional application of the solutions was made with decontaminations pumps. To determine the efficiency of car's decontamination, were used sanitation pads together with neutralizing solutions and Petri dishes of different sizes, purchased from the veterinary laboratory from Galati.

To assess the incidence of diseases during a period were used equipments of single use, shoe coverings and caps.

## RESULTS AND DISCUSSIONS

The research was carried out between 08.09.2009 -25.03.2011 within S.C. Avihens Company SRL.

During this period were followed the possible vectors that manage the infectious pressure augmentation in exploration and were analysed the efficiency of biosecurity measures. Based on the obtained dates were

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\*Corresponding author: doinaleonte@gmail.com

The manuscript was received: 21.01.2012

Accepted for publication: 12.08.2012

established measures for improving these actions.

It was initial tested the efficacy of decontamination on the bunker`s wheels, after passing trough the disinfecting road.

Sanitation samples were collected from each wheel of the automotive-bunker, from two random spots (two per wheel x six wheels) [2].

Decontamination efficacy was tested by staphylococcal test. The analysis report (BA nr. 2341-2352/21.09.2009, fig. 1) highlighted that from 12 sanitation samples, 2 was misfit (sample no. 7 and 8 - the right front wheel), which shows that at a wheel the decontamination wasn't performed properly.

The test was repeated and the result was similar.

As a result, was applied the measure that the vehicle have to run with a lower speed and do another crossing through the disinfecting road every time whenever entering the farm. The analysis of gathered sanitation samples, highlighted that the decontamination was efficient at all objectives (12/12) exposed to decontamination (BA nr. 501-512/19.04.2010 fig. 2).



Fig. 2 BA Efficient decontamination 12/12, page 2

In total were collected 23 sanitation samples (23 x 12). Laboratory results shown that the decontamination was efficient at all objectives which were subjected to decontamination, concluding that the double crossing with a lower speed through the disinfecting road assure a good decontamination of car wheels`s and thus decreases the possibility of introducing in farm different pathogen microorganisms for fowls.

To reduce mortality was applied measure of wearing disposable throughout the survey.

The equipment was collected daily, at the end of the shift, placed in the filter room in single use bags located in the sanitary filter before the shower room and removed via a medical waste disposal and risk products company (SC ECO FIRE SISTEMLA SRL Galati) [3].

From the analysis of disease incidence and mortality evolution per farm during 15/03/2010 – 28/02/2011 period was highlighted the decrease of the curve with 0,6% (tab. 1).

In the fifth and sixth month the mortality rate was smaller due to the sanitary vacuum in the wake of halls depopulation, following the production cycle closure of the fowls effective.



Fig. 1. BA Inefficient decontamination 2/12, page 2

Table 1 Mortalities evolution between 15.03.2010 – 15.02.2011 in the two halls from the farm

Mortality	15. 04. 2010	15. 05. 2010	15. 06. 2010	15. 07. 2010	15. 08. 2010	15. 09. 2010	15. 10. 2010	15. 11. 2010	15. 12. 2010	15. 01. 2011	15. 02. 2011
heads	38	14	18	36	34	27	25	23	21	18	18
%	0.11	0.04	0.05	0.10	0.09	0.08	0.07	0.06	0.06	0.05	0.05

## CONCLUSIONS

The carried out study entitles us to say that, to reduce the incidence of diseases in poultry farms, additional measures which we proposed are highly efficient.

So:

- passing twice and with a lower speed through the disinfecting road, ensure a good decontamination of vehicle wheels and therefore is less likely to introduce in farms various pathogens for fowls;

- wearing disposable equipment by all personnel ensures the reduction of mortality by approximately 0.6%.

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