Measuring the costs of biosecurity on poultry farms in seven European countries

NetPoulSafe

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Introduction

Poultry farmers are looking to make their activities cost-effective: good production with few losses, which means healthy animals, that follow the regulations on biosecurity and production standards to provide safe food products. The NetPoulSafe project is an EU thematic network on supporting measures (SMs) to improve biosecurity compliance in poultry farming, designed to stimulate knowledge exchange between European stakeholders. Seven countries are part of this network: Belgium, France, Hungary, Italy, Poland, Netherlands and Spain. In this project, supporting measures validated during the project NetPoulSafe are being evaluated in regard to their economic benefits to poultry farmers.

Materials and methods

In order to evaluate the economic benefits to farmers, and to complete the work done on the improvement of the biosecurity levels collected in the project, we will gather information on:

- the **partial cost-effectiveness of the cost for the supporting measures implementation** versus the observed change in biosecurity compliance based on the adapted biocheck.ugent scoring tool;
- the **combined cost-effectiveness of both the cost of the SM and the additional farm-specific costs** for improving the biosecurity compliance based on the adapted biocheck.ugent scoring tool.

Data collection is ongoing:

- Concerning all costs and time associated with implementation and training on biosecurity measures;

- On the perception of the producer in relation to economic impact of biosecurity measures

Preliminary conclusions

Poultry farmers (or poultry integration companies) in most European countries are oftentimes reluctant on providing data on animal performance indicators such as mortality, end weight, feed conversion ratio (FCR), daily weight gain (DWG) or egg quality parameters (in case of layers) in which case a true estimation of the cost-benefit of implementing biosecurity and applying supporting measures cannot be done.

However, the partial and the combined cost-effectiveness will still be informative in regard to which biosecurity measures and supporting measures present the most promising results, in combination with the qualitative assessment of stakeholders perception of the economic impact of the biosecurity measures

Data collection protocol

Information concerning all costs and time associated with implementation and training on biosecurity measures

1. Personnel costs of NF/other facilitator= [hourly salaries (*hours per person) used in training].
2. Personnel costs of farmer = [hourly salaries (*hours per person) used in training and execution of changes on farm]
3. Personnel costs of other participants involved = [hourly salaries (*hours per person) used in training and execution of changes on farm].
4. Other costs of NF/other facilitator (€) spent in the implementation and training concerning supporting measures/biosecurity measures (e.g. materials, dislocation costs, registration fees etc.)
5. Other costs of farmer (€) spent in the implementation and training concerning supporting measures/biosecurity measures. (e.g. materials, dislocation costs, registration fees etc.)
6. Other costs of other participants involved) (€) spent in in the implementation and training concerning supporting measures/biosecurity measures. (e.g. materials, dislocation costs, registration fees etc.)

Questionnaire/Survey to assess the perception of the producer/veterinarian in relation to economic impact of biosecurity measures

1. Ask the farmer: In your opinion, on a scale of 1 to 5 (with 1 being no improvement, and 5 being great improvement) did you see an improvement in the technical parameters in your farm after the implementation of biosecurity measures? If you saw improvement, please specify in which way you saw improvement (e.g. lower mortality, etc.);
2. Ask the veterinarians/farm advisors: In your opinion, on a scale of 1 to 5 (with 1 being no improvement, and 5 being great improvement) did you see an improvement in the technical parameters in the farm after the implementation of biosecurity measures? If you saw improvement, please specify in which way you saw improvement (e.g. lower mortality, etc.);
3. Ask the farmer: In your opinion, was it easier to implement the biosecurity measures after following the implementation of the supporting measures (trainings, coaching, etc.)? If so, in which way? If no, what do you think was missing from these trainings that could help you improve biosecurity?
4. Ask the farmer: Do you feel sufficiently informed about what to do in the event of an outbreak of a notifiable disease and what are the costs associated with it?

Additionally:

Data collection is ongoing concerning the economic losses/penalties and compensations associated with outbreaks of notifiable poultry diseases, as an indirect way to estimate potential economic benefits of implementation of biosecurity by preventing incursion and spread of pathogens.

NetPoulsafe Partners:

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