

FACTORS AFFECTING POST-WEANING MORTALITY ON FARROW-TO-FINISH INDUSTRIAL PIG FARMS IN GREECE: I. BIOSECURITY MEASURES

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Introduction

Preventing introduction and spread of porcine pathogens into swine herds is integral part of on-farm disease control programmes. Biosecurity measures appear to influence occurrence and severity of several diseases on intensively housed pigs and as well as the mortality rates (1, 2). The objective of the present study, as part of a broader survey dealing with factors affecting mortality in weaning pigs, was to evaluate the potential effect of some biosecurity measures under greek conditions.

Materials and Method

The study was carried out on 27 farrow to finish industrial farm over 150 sows (with a total of 17,740 sows under production which represents 23.29% of the population in industrial farms over 150 sows or 14.41% of the overall sow population in Greece). The selection of farms was based on criteria such as full or part-time veterinary consultation, existence of production records and history of collaboration with our institutions involved in the study. Data concerning application of biosecurity measures in each farm were collected by questionnaires addressed to farm veterinarians. The influence of certain biosecurity-related risk factors on post-weaning mortality in over 349,785 weaned piglets (actual capacity of sampled farms) had been investigated. The biosecurity parameters that were studied were: a) production system (all in- all out vs continuous), b) routine cleaning and disinfection programmes, c) routine parasite control, d) regular control for mycotoxins in feed, e) enforcement of quarantine for newly entered animals, f) vehicle dip, g) vaccination of stockpersons against influenza and h) restricted policy for visitors. The chi-square analysis was performed in order to determine the associations between mortality rate and risk factors.

Results and Discussion

As presented in figure 1, there was a significant ($P \leq 0.05$) increase of post-weaning mortality when: a) a continuous flow system was applied instead of all in-all out, b) regular cleaning and disinfection programme were invalid, c) routine programme for parasite control was absent and d) the controls for mycotoxins in feed were not applied in the farm (Figure 1).

Parameters such as: a) quarantine for the incoming breeding stock, b) vehicle dip, c) vaccination of stockperson for influenza, and d) restricted policy for visitors did not significantly ($P > 0.05$) affect post-weaning mortality in the tested farms (Figure 2).

Figure 1: Post-weaning mortality rates (%) under different biosecurity factors

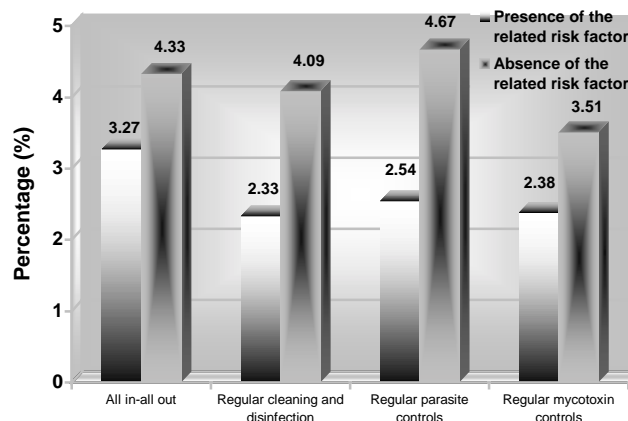
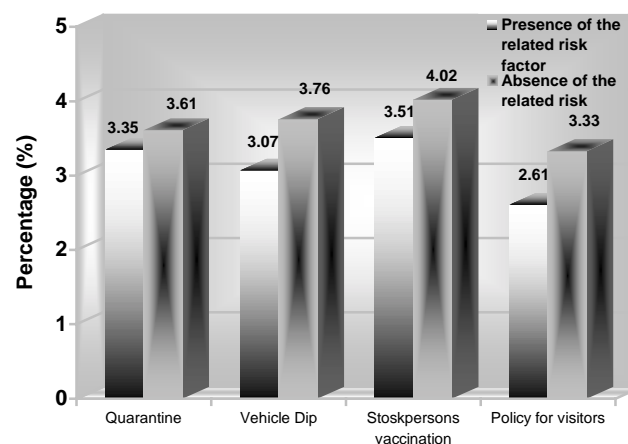


Figure 2: Post-weaning mortality rates (%) under different biosecurity factors



References

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