

FACTORS AFFECTING POST-WEANING MORTALITY ON FARROW-TO-FINISH INDUSTRIAL PIG FARMS IN GREECE: II. INFLUENCE OF HUMAN FACTOR

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Introduction

Highest degree of intensification in pig production requires highly controlled animal microenvironment, and thus increased dependence on man. Human factor may influence pig production either directly (source of zoonotic pathogens) or indirectly as microbial carrier, stress-inducer, manager and care taker. Therefore, critical participation of specialized personnel to each stage of production will be expected to have serious impacts on welfare, productivity and health status of pigs (1). The present study investigates the role of stockperson, veterinarian and farmer, the three most important categories in primary pig production, on post-weaning mortality of farrow-to-finish industrial farms in Greece.

Materials and Methods

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 the biosecurity measures in each farm were collected by questionnaires addressed to farm veterinarians. The influence of human factor-related risk factors on post-weaning mortality in over 349,785 weaned piglets (actual capacity of sampled farms) had been investigated. These factors include: a) veterinarian type of employment (part-time or full-time), b) hours of farmer's activity on farm (more or less than 4 hours per day), c) ratio of sows:stockpersons (more or less than 70 sows per stockperson) and d) stockpersons' education level (with or without high school education). The chi-square analysis was performed in order to determine the associations between mortality rate and risk factors.

Results and Discussion

The results of the study showed, that there were significantly ($P \leq 0.05$) higher death rates in weaning pigs when: a) veterinarian occupied on part-time basis, b) farmer's activity on farm was less than 4 hours per day, c) the ratio of sows:stockperson was lower than 70 and d) stockpersons were of low educational level (Figures 1, 2, 3, 4).

Although the above results do not necessarily imply that these risk factors were the direct causes of the increased mortality, however they do indicate areas where further attention should be warranted by researchers and farmers.

Figure 1: Post-weaning mortality rates (%) under different types of veterinarian's employment

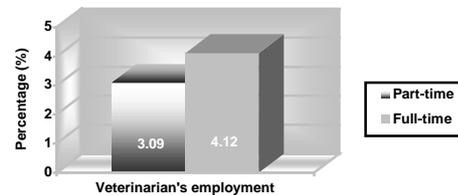


Figure 2: Post-weaning mortality rates (%) under different hours of farmer's activity on farm

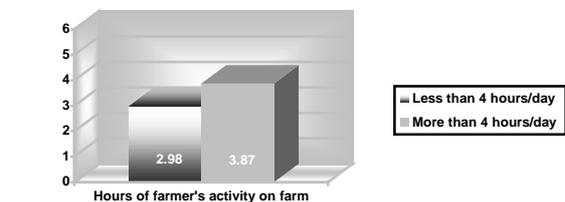


Figure 3: Post-weaning mortality rates (%) under different ratio of sows:stockpersons

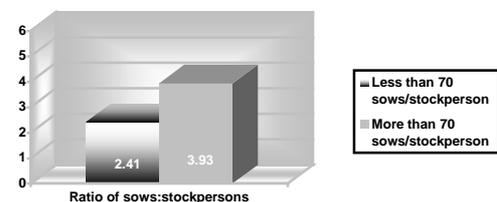
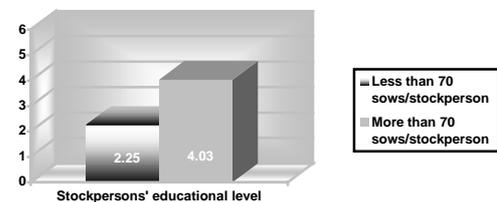


Figure 4: Post-weaning mortality rates (%) under different stockpersons' education level



References

1. Hemsworth P.H. and Coleman G.J. (1998). Human-Livestock interactions: The stockperson and the productivity and welfare of intensively-farmed animals. CAB International, Oxon, UK