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Assessment of footbaths in bio-security programme: Antibacterial Effectiveness of Foot Baths

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The right practice with disinfectants is a vital tool of an effective biosecurity program; footbath is a very simple form of biosecurity that helps preventing the potential spread of disease. Three experimental studies were conducted to evaluate the bactericidal effectiveness of five commercial disinfectants (CleanZix®, Zix-Virox®, Synergize®, GroundZero® and Halamid®) after only one min contact time (usual personnel time in foot bath in poultry farms). Besides, comparing the capacity of liquid and semi-solid foot baths to withstand and remain effective along the study duration for three successive days challenged daily against 12 cm2 contaminated rubber shoes with poultry deep litter. After one-minute contact time, all the disinfectants were not effective in reducing the bacterial load of the contaminated shoes. Otherwise, the chloramine-T disinfectant (Halamid®) in its first day of use (liquid form) showed the highest log reduction 4.17. The organic load of contaminated rubber shoes for three successive days had deleterious effects on the disinfectants efficacy with progressive increase in total viable aerobic bacteria. Remarkably, the chloramine-T disinfectant (Halamid®) liquid foot bath showed nearly constant log reduction for three successive days. Moreover, its semi-solid bath achieved 100% bacterial reduction and showed no viable bacteria along the whole experiment days. These results emphasized the need to use freshly prepared disinfectant with regular cleaning of the foot baths. Furthermore, the shoes should be strongly scrapped before foot bath immersion; otherwise, prolonged foot bath contact time should be applied, however this could not be controlled practically in the field.

Biography

Manal Moustafa Zaki is a Professor of Animal Hygiene & Management at the Faculty of Veterinary Medicine, Cairo University, Egypt. He is currently works as a lecturer of the curricular poultry, animal hygiene and epidemiology for to veterinary students at Faculty of Veterinary Medicine, Cairo University, Egypt

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