BroilerNet Factsheet AH1-C2-3

Disinfection after an HPAI outbreak

Intro to Good Practice

The management of a Highly Pathogenic Avian Influenza (HPAI) outbreak hinges upon evaluating its spread from the initial focus and the duration required to restore the initial situation. Effective management necessitates meticulous preparation and evaluation of all procedures in advance. These protocols encompass actions to take in case of suspicion, cleaning and disinfection measures, movement controls, safety precautions, personnel hygiene, and the handling of carcasses, faeces, feed, fomites, and other materials. Moreover, ensuring the availability of essential materials such as sampling equipment, personal protective gear (PPE), disinfectants, soap, and related supplies is imperative.

Figure 1. Disinfection inside the barn with calcium hydroxide.

Auxiliary facilities like changing rooms, machinery, and staff provisions should also be primed for swift deployment. This comprehensive readiness approach optimizes the response to HPAI outbreaks, minimizing their impact and facilitating a prompt return to normal operations. The proposed good practice in the field of animal health to fight against HPAI aims after an outbreak has been declared, focus on disinfecting all areas and elements that could be sources of virus dissemination or encounter disseminating elements. This includes disinfecting the entire external area of affected poultry barns and the entry and exit areas for people and vehicles. All vehicles entering and leaving the farm must be carefully disinfected.

Background & challenges

Highly Pathogenic Avian Influenza (HPAI) holds significant relevance in poultry production due to its potential to cause severe economic losses, public health concerns, and detrimental impacts on food security. HPAI outbreaks can lead to substantial mortality rates among infected poultry flocks, resulting in significant financial losses for poultry producers. Moreover, the high pathogenicity of the virus raises public health alarms as it can potentially transmit to humans, causing severe illness and even fatalities in some cases. Thus, the management and prevention of HPAI remain paramount priorities for the sustainability and resilience of the poultry production sector worldwide.

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Additional information

- After the birds are culled, solid disinfectant should be applied to the manure. It should be left for 2-3 days to maximize disinfection effectiveness. After this time, the manure can be removed and buried in a pit where disinfectant has also been applied. This pit can also be used to bury single-use materials used in the tasks. The recommended disinfectant for this purpose is calcium hydroxide or hydrated lime.
- If culling is performed within the house and the carcasses are managed along with the litter in burial pits, disinfectant should be applied to the animals once they are dead before removal from the house. Not only animals but also their carcasses and litter are sources of the virus. It is essential to prevent the transportation of these infective materials. This good practice aims to minimize and reduce the viral load of all this organic material before handling and transporting it to the burial or destruction site.
- When dealing with feathers, a potential virus reservoir, it is crucial to dampen them with water and disinfectant to mitigate their dispersal. Additionally, all equipment and machinery that could have come into contact with animals, manure, or other virus-carrying elements must undergo thorough disinfection. Both the disinfectant and the application machinery are indispensable for this task, which should be carried out by personnel either from specialized companies or individuals who have received proper training in the specific protocols and techniques required. This rigorous approach ensures effective containment of the virus and reduces the risk of its further spread within poultry production environments.

Figure 2. External area of the barn with calcium hydroxide.

Benefits

The primary benefit achieved is preventing the spread of the virus to other farms. It is crucial not only to consider the specific impact on farms, but also all the restrictions and conditions on poultry movement within the affected areas and potentially beyond, considering the implications for international trade. Additionally, the goal is to return to normalcy as soon as possible, which will be feasible by properly eliminating contamination sources. The use of calcium hydroxide has the advantage of being a common, low-cost product (approximately €200 per ton) with high disinfectant effectiveness in the presence of both organic and non-organic matter

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