

## Using the HACCP method for preventing introduction and spread of *Dermanyssus gallinae* in poultry facilities with a focus on monitoring methods

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Using the Hazard Analysis and Critical Control Point (HACCP) method, we identified hazards and associated risks for the introduction and spread of the poultry red mite, *Dermanyssus gallinae*, in poultry facilities. HACCP is a method to control hazards and reduce risks. It follows the following seven principles (Mayes, 1998): (1) conduct a hazard analysis, (2) identify critical control points, (3) establish critical limits for each critical control point (4) establish critical control point monitoring requirements, (5) establish corrective actions, (6) establish record keeping procedures and (7) establish procedures to ensure the HACCP system is working as intended (validation and verification). Monitoring of CCP's (the 4th principle) for introduction and spread of the poultry red mite is in this HACCP a matter of regularly checking for the presence of mites on possible routes of entry for mites, either related to the structure of the poultry facility (design of the barn and immediate surroundings, ventilation system etc.) or to all elements that regularly enter or leave the poultry facility (feed, manure, workers etc.). At present, infestations of *D. gallinae* in poultry houses are mostly noticed when farmers or workers are bitten by *D. gallinae*, mites are seen on the belt and feeders, clumped mites are seen or when blood spots on eggs are present. Effective and easy applicable monitoring methods are necessary for monitoring the flocks for presence of poultry red mites and a subsequent quick response. Effective monitoring is paramount to prevent an increase of the mite population and may reduce the negative effects of *D. gallinae* and costs of mite eradication. One method used for monitoring and to make farmers more aware of the problem in the Netherlands was by using PVC tubes provided with a wooden stick as an attractive hiding place for mites. During the last decade also other monitoring methods were introduced and tested. The different monitoring methods, their usefulness for research and for application in poultry facilities for control of the *D. gallinae* population is discussed.

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