

Prevalence and key figures for the poultry red mite *Dermanyssus gallinae* infections in poultry farm systems

O.A.E. SPARAGANO¹, A. PAVLIEVI², T. MURANO³, A. CAMARDA⁴, H. SAHIB⁵, O. KILPINEN⁶, M. MUL⁷, R. VAN EMOUS⁷, S. LE BOUQUIN⁸, K. HOEL⁹ and M.A. CAFIERO¹⁰

1 School of Agriculture, Food and Rural Development, Newcastle University, Newcastle upon Tyne, NE1 7RU, UK.

2 AVES Inc, Serbia.

3 Chiba Prefectural Livestock Research Center, He 16-1 Yachimata, Yachimata, Chiba, Japan.

4 Dipartimento di Sanità Pubblica e Zootecnia, Facoltà di Medicina Veterinaria. University of Bari, Italy.

5 Institut Agronomique et Vétérinaire Hassan II, Unité de Parasitologie et Maladies Parasitaires, Rabat-Institut, Morocco.

6 University of Aarhus, Danish Pest Infestation Laboratory, Lyngby, Denmark.

7 Animal Sciences Group of Wageningen UR, Lelystad, The Netherlands.

8 Unité EBEAC, AFSSA, Ploufragan, France.

9 Animalia, P.O Box 396 Økern, 0513 Oslo, Norway.

10 Istituto Zooprofilattico Sperimentale della Puglia e della Basilicata, Foggia, Italy.

E-mail: olivier.sparagano@ncl.ac.uk

The aim of this study was to investigate the prevalence of the poultry red mite *Dermanyssus gallinae* and the production parameters which could explain its proliferation. *Dermanyssus* mites are blood feeders and are responsible for anaemia and welfare problems in birds, dermatitis in humans and egg downgrading and blood spotting which imply a huge economic, welfare and epidemiological problem for birds and human populations. Furthermore *Dermanyssus gallinae* has been suspected and identified as a vector for some other pathogens bringing more animal health issues. On average the *Dermanyssus* infestation rate was between 60% and 65% for cage, free-range and organic systems while it was around 54% for barn production systems. However prevalence rates were variable between countries and between poultry production systems and so control methods would depend of the mite status in individual countries. Nevertheless it shows the endemic situation of *Dermanyssus gallinae* and the need to control such poultry pests. Ventilation, dust levels, acaricide misuse and repopulation cycles seem to have an impact on the mite development in poultry farms. The paper discusses the prevalence rates in different participating countries and for different farming systems.

Keywords: *Dermanyssus gallinae*, prevalence, infestation rates, control