

## *In vitro* evaluation of the effectiveness of commercially available acaricides against the populations of red mites (*Dermanyssus gallinae*) occurring in Poland

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The control of poultry red mites, *Dermanyssus gallinae* (De Geer, 1778), is very difficult because of high resistance of these parasites to acaricides. In order to be highly effective in disinfection, it is necessary to identify the susceptibility of the local red mite populations to the acaricide. In the years 2015–2017 an investigation was carried out in 34 battery cage farms of laying hens, localised in 13 Polish provinces. For the study, acaricides containing the active substances: avermectin, cypermethrin, permethrin, carboxylate, phenoxybenzyl, carbamate and silicon dioxide were used. The investigation was carried out by previously described method (Cencek *et. al.*, 2011; Zdybel *et. al.*, 2011). Acaricides containing bendiocarb FICAM 80 also preparations containing silica BIOBECK (silicon dioxide) and RECIDAL SIL (diatomaceous earth) demonstrated the highest efficacy against the majority of the red mite populations. Their mean efficiencies were 96.5%, 90.0% and 84.7%, respectively. In contrast with preparations containing pyrethroid compounds or the physical preparation based on 3D-IPNS (3D-Immobilizing Polymeric Net Structure) DERGALL.