

The current invasiological status of pigeon flocks in the vicinity of Lublin, based on coproscopic studies

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In Poland, pigeon breeding has been dynamically developing in the recent years. Pigeon breeders typically choose two types of bird for this purpose: homing pigeons, used for sporting events, and ornate pigeons. In both cases, group management causes parasites to be one of the most significant pathogens that affect breeding success. Therefore, parasitological monitoring and systematic deworming programmes are crucial for the successful breeding of pigeons. In practice, this boils down to the periodic use of anthelmintics. The relatively small range of drugs available to pigeon breeders from the pharmaceutical industry forces the use of the same active substances. This situation gives rise to drug-resistant strains and their persistence in selected flock invasions. The presented study aims to present the actual invasiological status of homing and ornamental pigeons in a selected region of Poland. Faecal samples were collected from 42 flocks (18 flocks of ornamental pigeons and 24 flocks of homing pigeons) with a total number of 3980 individuals. The number of individuals in individual flocks differed from 20 to 250 individuals. The samples were collected from around 10–20% of the analyzed populations. The samples were analyzed using the flotation method with supersaturated NaCl and sucrose solution. Moreover, the positive samples were analyzed using the McMaster method (4 g samples) to determine the abundance of invasion. In total, 57.4% of samples (72.2% for ornamental pigeons and 45.8% for homing pigeons) showed diarrheal symptoms.

In total, invasions of intestinal parasites were confirmed in 78.6% of the flocks (88.8% for ornamental pigeons and 70.8% for homing pigeons). The homing pigeons were infected with single-species invasions, whereas the ornamental pigeons were characterized by multispecies invasions. The most common infestation was by *Eimeria* spp. with an overall prevalence of 59.5% and mean OPG of 9400 (77.7%/OPG=12000 for ornamental pigeons, and 45.8%/OPG=6070 for homing pigeons), *Capillariasis* in 52.4% with mean EPG at 2830 (ornamental pigeons at 77.9%/EPG=2670, homing pigeons at 37.5%/EPG=3030), *Ascariasis* in 28.6% with mean EPG=1445 (ornamental pigeons in 50%/EPG=1240, homing pigeons in 12.5%/EPG=2070). Eggs of *Trichostrongylus* spp. nematodes were found in 4.8% of the examined flocks, with mean EPG at 500 (ornamental pigeons at 5.6%/EPG=400, homing pigeons at 4.2%/EPG=600). The prevalence of cestodes was 9.5% with a mean EPG of 600 (ornament pigeons at 16.6%/EPG=660, homing pigeons at 4.2%; EPG=600).