

DIVERSITY OF FORMS OF BAT PARASITES: GREATER MOUSE-EARED
BAT (MYOTIS MYOTIS), POND BAT (MYOTIS DASYCNEME), GEOFFROY'S
BAT (MYOTIS EMARGINATUS), LESSER HORSESHOE BAT
(RHINOLOPHUS HIPPOSIDEROS), BROWN LONG-EARED BAT
(PLECOTUS AURITUS), NOCTULE (NYCTALUS NOCTULA) DEPENDING
ON THE SPECIES AND GEOGRAPHICAL REGION OF OCCURRENCE IN
POLAND.

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Recently, a process of concentration of dairy cow husbandry has been observed in Poland. The number of farms producing milk is decreasing, while the number of cows in herds is increasing. There is also a dynamic increase in milk yield. In the 1970s, the cattle population in Poland reached 13 million heads, of which approximately 6 million were cows. After the changes in the political system, the national cattle herd was constantly reduced, to 5.2 million head in 2004. After Poland's accession to the European Union, a process of modernization of production facilities took place, with a simultaneous concentration of production. This led to a reduction in the number of dairy cattle herds in Poland. In December 2020, the total number of cows in Poland amounted to 2.4 million heads and was 14% lower than in 2004. Milk production is concentrated in central and eastern Poland, i.e. on the territory of the following provinces: Mazowieckie (23% of the total number of dairy cows), Podlaskie (20%), Wielkopolskie (13%), as well as Warmińsko-Mazurskie and Łódzkie (8% share of the national herd each), Kujawsko-Pomorskie (6%) and Lubelskie (5%). These regions account for approximately 83% of the national dairy cow population and 86% of milk deliveries. According to data from the Central Statistical Office (CSO), in Poland in 2020, an average of over 6 000 kg of milk was obtained from one head, compared to over 3 000 kg in the early 1990s. In 2020, domestic cow's milk production reached 14.8 million tonnes compared to 11.8 million tonnes in 2004 (an increase of 25%).

The apparent greater concentration and intensification of production can lead to an increase in the incidence of cattle diseases, as well as disorders in their reproduction, which affects the lifetime of the animals. These problems were the basis for a survey on dairy cow farms. The aim of the research was to answer whether planned veterinary care affects selected reproductive indices.

The surveys on which the results are presented in this paper were carried out between June

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ON THE SPECIES AND GEOGRAPHICAL REGION OF OCCURRENCE IN POLAND. 2018 and October 2021. Nine hundred and thirty-six questionnaires were used for the analysis, and responses regarding herd metrics (25 questions) veterinary care (13 questions) and reproduction (23 questions) were included in the study. In our study, for logistical reasons, we mainly included farms from the Kujawsko-Pomorskie Voivodeship, which accounted for 27.5% of the respondents, the Warmińsko-Mazurskie Voivodeship 13.73%, the Wielkopolskie Voivodeship 13.42%, the Podlaskie Voivodeship 6.33%, and the Pomorskie Voivodeship 5.13%. The analysis paid particular attention to the impact of the intensity of veterinary care on basic indicators such as the inter-calving period, postpartum downtime, percentage of cows and heifers in calf after first insemination, age at first calving and percentage of failure.

The herds surveyed were divided into two groups, A (372 herds representing 39.74%), where veterinary care was scheduled and check-ups were carried out once or twice a month, and group B (564 herds representing 60.26%), which included herds handled as and when required. The average size of Group A herds was 125.55 dairy cattle and 43.94 heifers. Group B herds averaged 42.79 heads of cattle and 12.83 heifers. The average inter-calving period was respectively in group A – 406.8 in B – 397 days, post-partum downtime: A – 61.3 days; B – 57.8, percentage of calving cows after first insemination: A – 56.8%, B – 43.8%, percentage of in-calf heifers after first insemination A – 81.3%; B – 61%. Age at first calving was similar in both groups (A – 24.7 months, B – 25.3 months). As for the percentage of failures, it was 8.6% in group A and 11.6% in group B.

The results do not provide a clear answer to the question posed. They do, however, give a better idea of the management strategies used in dairy cattle herds and indicate that planned management of veterinary care can improve selected reproductive indices.

Key words: dairy cows, survey, questionnaires