

The objective of this study was to determine relationships between sire effect, milk production in young cows, their performance in subsequent lactations, fertility, conformation and productive longevity. A total of 1724 cows that first calved between 2003 and 2005 were analyzed during 4475 lactations. The cows were kept in 10 barns located in the Provinces of Pomerania and West Pomerania, Poland. The analysis covered 1085 daughters of 145 local Polish Holstein-Friesian (PHF) sires and 639 daughters of 128 imported Holstein-Friesian (HF) sires, including 437 cows culled after the first lactation, 445 cows culled after the second lactation and 140 long-lived cows. More than 55% of daughters of HF sires and 48.75% of daughters of PHF sires were culled after the first and second lactation. Daughters of HF sires received highly significantly higher scores for overall appearance, body conformation (type), udder quality and frame size. The yields of milk and major milk components in the first lactation were significantly higher in daughters of HF sires, compared with daughters of PHF sires. High milk production levels, exceeding 8 000 kg milk in the first and second lactation, had an adverse effect on the productive life of cows. Cows that continued to be productive for five or more lactations produced less milk and milk components in the first lactation, in comparison with cows that were culled earlier. This suggests that there is a correlation between milk production in young cows and their productive longevity. The average productive life of daughters of HF and PHF sires was 2.77 and 2.43 years, respectively.

## **CATTLE MORBIDITY ON BOVINE ENZOOTIC LEUKEMIA IN THE KOLNO DISTRICT BETWEEN 2007 - 2012**

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The aim of this study was to carry out the characteristics of enzootic bovine leukemia (EBB), and demonstrate the incidence, frequency and effectiveness of the fight against the disease in the Kolno district in 2007-2012. The research material were the cows, that were used in the Kolno district in the analyzed period of time. The data for the analysis are located in the veterinary inspectorate in Kolno and the Agency for Restructuring and Modernisation of Agriculture, which concerned the incidence of leukemia of cows in the region and the total number of registered units in the county and individual communities.

Enzootic bovine leukemia is an infectious disease of cattle on the chronic course, caused by a virus (bovine leukemia virus - BLV) from the subfamily *Oncornaviridae*, family *Retroviridae*. The essence of the disease is reproduction of B lymphocytes of their formation spot or other organs. The main route of infection is primarily the sick animals contact with the healthy ones. The study found that the most of herds (1147) and animals (13 934 units) has been examined in 2010. A smaller part of the herds has been examined in 2011 (only 607) and animals (10 523 units). In all examined herd positive result have received 20 (in 2007), 14 (in 2008), 5 (in 2009), 4 (2011), 1 (in 2012). The year 2007 was a period, which the disease affected on many head of cattle in the county, including: the municipality of Kolno: 45 sick animals from 6 herds, in the municipality of Grabowo: 7 units in 3 herds, in the municipality of Mały Płock: 11 units in 3 herds, in the municipality of Stawiski: 1 unit in one herd and in the community of Turośl: 13 sick animals in 7 herds. The compensation covered 105 units, including: community Kolno (59 units), the municipality of Turośl (18 units), community (Grabowo 13 units), the municipality of Mały Płock (11 units) and the municipality of Stawiski (4 units). Based on these data, it is concluded that the problem of the incidence of bovine enzootic leukemia in the kolneński district is minimized, but the disease has not been fully eliminated.

## **THE CONDITIONING OF THE HYGIENIC QUALITY OF MILK AND ITS PRODUCTION ECONOMICS IN A CHOSEN DAIRY FARM IN THE MAZOVIA REGION IN 2011**

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The hygienic quality of milk along with the composition and productivity are the basic factors deciding about the production economics. The hygienic quality of milk depends on factors such as: preserving the cleanliness of the udder the milk containers and the milker's hands; a correctly conducted automatic milking process including pre- and post-milking activities; hygiene of the stick facilities.

Achieving high productivity and proper milk composition (i.e. protein, fat) is of great importance. The productivity and milk composition is influenced by many factors: genetic and non-genetic. The latter include: nutrition, season of calving, fertility, pregnancy, heat, drying, the cows' age,