The relationship between intercalving period and some milk production parameters in high yielding herds in Poland

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Introduction

Milk production of Black and White (Holstein) cows in the Poland has significantly increased during the recent years. Top sub-populations of high-production cows have become an object of scientific research; production and reproduction parameters have been especially analysed (Juszczak et al. 2001 and Chládek et al. 2000).

Material and methods

An analysis of milk performance of 1201 of Polish Black-and-White (Holstein) cows with minimum 3 and maximum 6 calving records (CR) and finished life-time production had been taken into account. Three groups of cows with short (S – less than 359 days), medium (M – from 360 to 390 days) and long (L-more than 390 days) intercalving period were distinguished. The effect of intercalving period of each group on length of lactation, lactation milk production, daily milk production (calculated only for lactation) was evaluated.

Key words

Cows, milk production, intercalving period, lactation,

Results and discussion

The length of lactation of group S ranged from 289,6 days (3 CR) to 296,1 days (6 CR), group M from 319,7 days (5 CR) to 320,4 days (6 CR) and group L from 362,9 days (6 CR) to 381,0 days (3 CR). All differences within groups (S versus M versus L) were statistic significant. The lactation milk production ranged at group S from 4701 kg (3 CR) to 5619 kg (6 CR), at group M from 5371 kg (3 CR) to 6095 kg (6 CR) and at group L from 6209 kg (3 CR) to 6841 kg (6CR). In this case the statistical difference within all groups (S versus M versus L) was significant too. Daily milk production at group S was minimum 17,6 kg (3 CR) and maximum 20,6 kg (6 CR), at group M was minimum 18,4 kg (3 CR) and maximum 20,5 kg (6 CR) and at group L was minimum 18,6 kg (3 CR) and maximum 20,7 kg (6 CR). The differences within all groups (S versus M versus L) ranged gradually from statically significance for all (3 CR) to non-significance for all (6 CR).

Based on the obtained results it seems that through the control of the length of

the intercalving period it may be possible to optimise milk production. The best reproduction scheme and level of reproduction traits should be chosen an individual basis of each herd. Our findings correspond with results Juszczak et al. (2001) and Chládek et al. (1999).

References

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