

EFFECT OF BODY CONDITION SCORE AT PARTURITION ON THE PRODUCTION PERFORMANCE, FERTILITY AND CULLING IN PRIMIPAROUS ESTONIAN HOLSTEIN COWS

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Summary. The objective of this study was to estimate the relation of body condition score (BCS) near calving to the body condition change in early lactation, the reproductive performance, milk yield and culling rate in the first lactation Estonian Holstein dairy cows. Cows were divided into three groups based on their BCS at calving; thin, BCS ≤ 3.0 (n=29); moderate, BCS 3.25–3.5 (n= 48); and fat, BCS ≥ 3.75 (n=27). During the first and second month of lactation the fat cow group had significantly higher ($P < 0.05$) fat corrected milk (FCM) production, milk fat percentage, and milk fat to protein ratio compared to thin cows. Thin cow group had significantly ($P < 0.05$) higher genetic merit index (GMI) compared to the moderate and fat group, but they could not realise their genetic potential as the 305-day fat corrected milk production, fat production, and milk fat + protein production was significantly higher ($P < 0.01$) in fat cows compared to thin cow group. No cows in the fat group conceived from the first service. In the thin group 14%, in the moderate group 25% and in the fat group 41% cows were culled during the first lactation respectively. We concluded that while taking into account besides milk production the aspects of health and fertility, the reasonable BCS at calving of first lactation Estonian Holstein cows in the present management and feeding conditions was 3.25–3.5 BC units.

Key words: body condition score, milk yield, fertility, primiparous Estonian Holstein cows.