COMPARISON OF GROWTH PERFORMANCE OF BEEF CALVES FROM DIFFERENT GENETIC STRAINS REARED UNDER ORGANIC CONDITIONS

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Abstract

The objective of the present study was to compare growth performance of 15 Danish Holstein bull (DHB) calves, 15 Limousine x Danish Holstein crossbred bull (CB) calves and 15 Limousine x Danish Holstein crossbred heifer (CH) calves reared under organic conditions. Spring-born calves were puchased at private farms and arrived at approximately 20 days of age with an average initial body weight of 52.9, 58.5 and 56.1 kg, (SEM 2.6) for DHB, CB and CH, respectively. Calves were kept indoor until weaning at 3 months of age. Calves were gradually introduced to a grass-silage based ration from 3 to 4 months of age. From 4 to 7 months calves were kept on mix grass pasture of ryegrass and white clover. There were significant differences between treatment groups in terms of average daily gain (ADGP1) during the first summer pasture period, average daily gain (ADGI) during the indoor winter period, and average daily gain (ADGP2) during the second summer pasture period (first 7 weeks). Thus, CB had significantly greater ADG than CH for all three periods with DHB being in between. CB had greater values than DHB and CH in terms of LWP1 144, 140 and 135 (SEM 4) kg, ADGP1 1.15, 1.04 and 0.95 (SEM 0.05) kg/d, LW Indoor 222, 213, and 201 (SEM 5) kg and ADGI 1.06, 1.02 and 0.95 (SEM 0.02) kg/d, LWP2 462, 445 and 414 (SEM 9) kg and ADGP2 1.24, 0.98 and 0.68 (SEM 0.04) kg/d for CB, DHB and CH, respectively. The final live weight were not different between CB and DHB but was significantly lower for CH than DHB and CB (483, 539 and 582 (SEM 8) kg, for CH, DHB and CB, respectively). Overall growth performance across all periods was 13% higher for CB than CH.

Keywords: Organic beef production, cross-breeding, growth performance