16 Hours photoperiod in holstein heifers in the subtropics: Effects in development and age to first estrus [

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text (article)

Analítica

Both growth and milk production in heifer calves are stimulated by a long photoperiod, though this has not been proven yet in subtropical areas. To evalúate the effect of 16 hr of light (L16) on calves suckling (LAC) and /or pre-pubertal stages (PP) in a subtropical area, 325 calves (36 " 0.4 kg) were randomized into two groups: L16 or natural photoperiod (LNAT). At seven months of age, 198 of these calves (195 " 2 kg) were randomly assigned to L16 or LNAT. The following were determined at the beginning and end of LAC and PP stages: Weight (PC, kg), height (AC, cm), thickness of back-fat (GG, cm) and of Longissimus dorsi (LD, cm); pelvic area (AP, cmp2(B), body condition (CC), age at first estrus, mammary gland depth (PGM, cm) and width (AGM, cm). The statistical analysis was made using ANOVA for a 2 X 2 factorial arrangement. At the end of LAC, GG was lower and LD greater in L16 animals, while, at the end of PP, L16 heifer calves had a greater PC (260 " 3 vs 250 " 3), AP (166 " 1.2 vs 153 " 1.2), LD (3.18 " 0.04 vs 2.90 " 0.04), and AGM (2.41 " 0.02 vs 2.21 " 0.02), but a lower GG (0.114 " 0.003 vs 0.139 " 0.003) as compared to LNAT heifer calves. More L16 animals (67 %) presented estrus versus LNAT (38 %) and the age of the rst estrus was lower in L1 (278 " 2 vs 288 " 2 d). Consequently, exposure to L16 during LAC promotes lean growth while lean growth and a bigger pelvis and mammary gland are prompted during PP. Hence, it may be concluded that PP heifer calves exposed to L16 have a higher production potential and lower risk of dystocia than LNAT animals
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