

Effect of artificial photoperiod on induction of estrus and conception of dairy does in non-breeding season ⁽¹⁾

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Abstract

The objective of this study is to assist the dairy goat industry to solve the problem of milk shortage in winter due to the anestrus of does in spring. A total of 1,855 multiparous dairy does were subjected to artificial photoperiod for 2 months, then returned to natural photoperiod for 1.5 month before the introduction of buck for mating. Does without any photoperiod treatment served as control. In artificial photoperiod group, partially does received I. M. injection of vitamin AD₃E at the termination of photoperiod control. The average percentage of estrous does was 84.8% (1,573/1,855) which was significantly ($P < 0.01$) higher than that of control group (32.1%). The average conception rate and kidding rate of estrous does were 85.4% (1,343/1,573) and 82.8% (1,303/1,573) respectively. After injected vitamin AD₃E, the average percentage of estrous does was 84.2% which was no significantly different to that of non-injection (82.3%). These results indicate that artificial photoperiod is an effective method to induce estrus and benefit to conception of dairy does out of season in Taiwan.

Key words: Dairy goat, Seasonal anestrus, Artificial photoperiod, Estrus induction.

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