

EFFECT OF FLUSHING ON REPRODUCTIVE PERFORMANCE AND SYNCHRONIZATION OF ESTRUS IN TELLICHERRY DOES

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ABSTRACT

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The study was undertaken in Tellicherry goats under uniform management and feeding regimen. A total number of 30 does were selected twenty days after kidding and utilized for the study in an organized goat farm at Chennai. All the selected goats were fed with 350 grams of concentrate which was 100 grams more than a normal ration. All does were supplemented with Injection. Sodium acid Phosphate, Vitamin AD₃EK and multi vitamin syrup containing folic acid and riboflavin. Intravaginal progesterone impregnated sponges were inserted on zero day. On 10th day, Cloprostenol 125 µg I/M was given and on day eleven, the sponges were removed and Inj. PMSG 200 IU I/M was administered. On day thirteen, the goats were allowed for fixed natural mating at 8 hours interval. All does were allowed for pen mating. Early pregnancy diagnosis was carried out by ultrasonography from the day after 30 days of mating. In the present study, the conception rate obtained in the present study was 93 per cent (28/30). It can be concluded that flushing before breeding and progesterone containing intra vaginal sponge, PMSG and PGF_{2α} combinations can be used for effective synchronization of estrus and improved conception rate in goats.

Key words: Tellicherry goat, Flushing, Estrus synchronization

Goats are used in countries around the world for both meat and dairy production and were the first species domesticated by man for the production of meat, milk, skin, and fiber (Boyazoglu *et al.*, 2005). It is widely accepted practice in goat husbandry to provide does with extra energy supply (flushing) for 2-3 weeks prior to and during breeding, for the purpose of increasing the number of lambs produced. Failure to flush the ewes may results in delayed estrus activity and ovulation (Gunn *et al.*, 1979), fertilization failure (Restall *et al.*, 1978) and embryonic mortality (Rhind *et al.*, 1989). The information on the effect of flushing and reproductive performance of does in farmer's fields is limited. The present study was therefore, undertaken to evaluate the flushing before breeding and progesterone containing intra

vaginal sponge, PMSG and PGF_{2α} combinations for synchronization of estrus in goats.

In an organized intensive goat farm, 30 numbers of Tellicherry goats at the age of 2-3 years were taken twenty days after kidding for this study. The goats were fed with 350 grams of concentrate which was 100 grams more than a normal ration (250 grams), 1.5 kg of green fodder, 0.25 kg of Bengal gram and red gram husk as a dry fodder. During the study period, tellicherry goats were maintained as per the routine vaccination and deworming schedule. All does were supplemented with Inj. Sodium acid Phosphate, Vitamin AD₃EK and multi vitamin syrup containing folic acid and riboflavin of a total dose of 2 ml on alternate days for thrice.

Intravaginal progesterone impregnated sponges was inserted on zero day. Cloprostenol 125 µg I/M was given on the 10th day and on day eleven the sponges were removed and Inj. PMSG 200 IU I/M was administered and on day thirteen, the goats were

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allowed for fixed natural mating at 8 hours interval (Evans and Maxwell, 1987; Iglesias *et al.*, 1997).

The percentage of singles, twins and triplets in flushed does were 6.6 (2/30), 46.6 (16/30) and 40 (12/30) respectively. The average body weight of flushed does was 29.75±0.635 kgs. Chaturvedi *et al.* (2000) reported that the conception rate (%) was higher (79.2) in flushed ewes as compared to that of nonflushed (66.7).

Intravaginal sponges have been the traditional treatment of choice for Estrus synchronization in small ruminants, during the breeding and anestrus seasons. They are impregnated with progestagens that are effective at lower dose levels than natural progesterone. Intravaginal sponges are usually inserted over periods of 9 to 19 days and used in conjunction with PMSG, particularly for out-of-season breeding, injected at time of sponge removal or 48 hours prior to sponge removal. Intravaginal sponges have high retention rates (> 90%), and females usually exhibited estrus within 24 to 48 h after sponge removal. The aim of injecting PMSG (300 I.U.) in treatment, was to synchronize and induce ovulation (Rosnina *et al.*, 1992). The use of PMSG in this study resulted in a more predictable occurrence of oestrus which was consistent with the observation of Bongso *et al.* (1982).

The results of the study concluded that flushing before breeding and progesterone containing intra vaginal sponge, PMSG and PGF_{2α} combinations can be used for effective synchronization of estrus in goats.

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