

ESTRUS INDUCTION IN ACYCLIC DOE'S UNDER FIELD CONDITION

PANKAJ LAVANIA*
Krishi Vigyan Kendra
Directorate of Extension Education
Maharana Pratap University of Agriculture & Technology, Sirohi (Rajasthan)
E-mail: lawaniap@yahoo.com

Received: 03.12.2013

Accepted: 27.12.2013

ABSTRACT

This study was undertaken to evaluate the efficacy of nutritional therapeutic management for induction of estrus in acyclic does in order to increase the kidding percentage at farmers flock. The results indicated that under field condition deworming with suitable antihelminthic, proper balance feeding, mineral supplement and vitamin AD₃E injection can be effectively used for induction of estrus in goats in semi arid environment.

Key words ; Estrus, acyclic, Goat.

Anestrus is one of the major problems in the development of animal husbandry sector in semi-arid regions due to scarcity of resources, lack of concentrate feeding practices and free range management coupled with poor health coverage. Animal performance, particularly in terms of reproduction is determined by feed availability, feed nutrient content, intake etc. Reproduction requires relatively small increases in nutrient requirements. Conception of females is enhanced by "Flushing" (Increased energy intake just prior to onset of breeding season). Nutrition of small ruminants effects reproduction through short and long term effects on body condition and body weight gain. The body condition in turn affects the onset of estrus and ovulation rate¹. Minerals play an important role in the metabolic process, as they are involved in the action of several enzymes and co-enzymes. Thus, their deficiency, excess or imbalance often leads to sub optimal growth and fertility³. A large number of goats remain unsettled in the farmer's field due to one or other

reproductive problems. The economically important most commonly occurring reproductive disorder of goat is anoestrus, which causes huge economic loss to the farmers mainly due to low fecundity.

Therefore, this study was undertaken to evaluate the efficacy of nutritional therapeutic management for induction of estrus in acyclic does in order to increase the kidding percentage in farmers block.

The study was conducted before the onset of the major breeding season (autumn) at the farmer's flock adopted villages of the Krishi Vigyan Kendra Sirohi. The farmers allowed their animals to graze 8-10 h daily on natural vegetation interspersed with seasonal shrubs and herbs. Adult does were screened during regular visit to the flock owners to identify post partum anoestrus/acyclic does. The acyclic does were subjected to deworming(5 mg per kg body weight), proper feeding (Concentrate @250g/day/ doe), Mineral supplement @ 5 g / doe / day for 30 day, vitamin injection Vitamin (AD₃E) @ 2ml / doe weekly for 2 weeks. (Vitadae, Sarabhai zyudus) The does that

*SMS (Animal Production), KVK, Sirohi (Raj.)

exhibited estrus were covered by natural mating and the data on conception rate and kidding rate were recorded.

Estrus response, conception and kidding rate in acyclic does after nutritional therapeutic treatment were studied in this on farm trial. A total of 80 does were screened in the farmer flocks, out of which 20 (25%) were identified as acyclic does.. In this study 20 does identified as anoestrus/ acyclic were ultimately supposed to be sold as per routine practice by the farmers due to the scarcity of fodders in the grazing field. After treatment 15 (75%) does exhibited estrus within 20 days. The conception (based on 40, 60 and 90 days non-return) and kidding rate were 100%. There are several reports available on the influence of body condition score on conception rate². The reason for the reduced conception in the low body condition score of the does might be due to the reduced gonadotrophin releasing Harmon (GnRh) in undernourished does, which in turn affects the pre-ovulatory Luteinizing hormone (LH) surge, fertilization

and early embryonic development. After nutritional therapeutic treatment 75 % does exhibited estrus within 20 days. This revealed that the treatment had impact upon ovarian functions enhancement in anestrus does, which were severely affected due to deficiency of minerals, vitamins, proteins and energy in the available fodder or shrubs in grazing field.

It may be concluded that kidding of all the acyclic treated does under the on farm trial indicates the efficacy of nutritional therapeutic management technique in increasing the production potential of farmers flock for fetching them more economic returns. The results indicated that under field condition deworming, proper feeding, mineral supplementation and vitamin injection can be effectively used for induction of estrus in goats in semi arid environment.

ACKNOWLEDGEMENTS

Author is thankful to programme coordinator kvk, Sirohi who give me to opportunity to do work on this aspect. Thanks are extended to project Director ATMA,sirohi for providing financial help.

REFERENCES

1. Landau,S. and molle, G.2006. Nutrition effects on fertility in small Ruminants and emphasis on Mediterranean sheep breeding system. CIHEAM Report PP 203-216.
2. Schneider, J.E. 2004. Energy balance and reproduction Physiology and behavior 81:289-31.
3. Smith, O.B. and Akinbamijo, O.O. 2000. Micronutrients and reproduction in farm animals. Animal reproduction science 60-61:549-560.

★ ★ ★