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Evaluation of the estrus synchronization and reproductive performance of Farahani ewes during the breeding season following treatment with letrozole

Mohammad Yahyaei[1*], Mahdi Khodaei Motlagh[2] and Sobhan Akarim Alamdar[3]

[1] Assistant Professor, Department of Animal Science, Faculty of Agriculture and Environment, Arak University, Arak, Iran
[2] Professor, Department of Animal Science, Faculty of Agriculture and Environment, Arak University, Arak, Iran
[3] MSc Student of Animal Science, Faculty of Agriculture and Environment, Arak University, Arak, Iran

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Abstract

This study investigated the efficiency of substituting conventional gonadotropin-based technique with letrozole based regimen in reproductive parameters and hormonal changes in Farahani sheep during the breeding season. For this this purpose, 40 Farahani ewes (3-4 years, 44±2.3 kg BW, BCS 3.12±0.5) were treated with intravaginal CIDR for 14 days and then were divided into four groups: one group was considered as the control, the other groups received eCG (400 IU, intramuscularly), hCG (400 IU, intramuscularly) and letrozole (7.5 mg, oral), respectively. Blood samples were taken from three days before CIDR removal. The reproductive parameters were calculated after parturition. Fecundity and multiple lambing were numerically higher in the eCG group; however, there was no significant difference in reproductive performance between treatments. Estrogen concentrations showed an increasing trend in all treatments. Results of this study showed that letrozole was not a reliable substitute for eCG to increase the ovulation rate in sheep.

Key words: Estrus synchronization, Farahani ewes, Letrozole, Reproductive performance

[*] **Corresponding Author**: Mohammad Yahyaei, Assistant Professor, Department of Animal Science, Faculty of Agriculture and Natural Sciences, Arak University, Arak, Iran
E-mail: m-yahyayi@araku.ac.ir

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