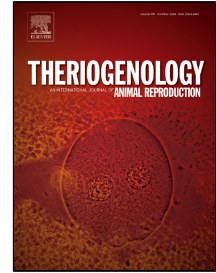


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Evaluating reproductive performance of three estrus synchronization protocols in Ghezel ewes



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Evaluating reproductive performance of three estrus synchronization protocols in Ghezel ewes

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ABSTRACT

Although estrus synchronization considered valuable management tools for improving reproductive performance of ewes, their high expenses and complicated usage prevent sheep farmers to apply these techniques. Therefore, the present study was designed to compare three protocols of estrus synchronization on reproductive performance of Ghezel ewes. For this reason, 27 Ghezel ewes were assigned to three estrus synchronization treatment groups based on a completely randomized design included: progestogen sponge for 12 days+500 IU eCG at the time of sponge withdrawal (P4eCG group, expensive synchronization), two doses of 75 µg cloprostenol with 12 days interval (CLO group, economical synchronization), and CLO +500 IU eCG at day 12 (CLOeCG group, moderately priced synchronization). Four consecutive blood samples were also collected during the experiment to evaluate progesterone concentrations. The results of the present experiment showed that pregnancy and lambing rates of the first estrus as well as blood progesterone concentration were not affected by the treatments ($P > 0.05$), though total pregnancy and lambing rates were higher in both P4eCG and CLOeCG groups ($P < 0.01$). Accordingly, both P4eCG and CLOeCG protocols successfully improved reproductive traits of ewes, though CLOeCG protocol is an advisable technique for sheep farmers through its moderate price, simple application, and high reproductive performance.

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2 1. Introduction

3 Sheep breeding is a major income of farmers in developing countries. As improving
4 reproductive performance can directly influence farmers' income, the use of protocols of
5 estrus synchronization improves reproductive performance of animals [1,2]. The
6 synchronization protocols use hormonal products that synchronize estrus for natural mating or
7 artificial insemination [3-7]. The common technique in sheep considered intravaginal
8 progestogen sponge [8] and the most of synchronization protocols use a combination of

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